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Cherry Orchard Point Phase 3 Environmental Report – Addendum to the Approved Phase 1 Parent EIAR

Volume 2: Main Report

(Addendum to the Environmental Impact Assessment submitted for the Cherry Orchard Point scheme approved planning permission under ABP Ref. 318607-23)

September 2026



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Non-Technical Summary

This Non-Technical Summary (NTS) of the Environmental Report – Addendum to Approved Phase 1 Parent EIAR prepared on behalf of Dublin City Council, in partnership with the Land Development Agency, in respect of a Proposed Development on lands located at Cherry Orchard, Dublin 10 (known as Development Site 5 in the Park West Cherry Orchard Local Area Plan 2019).

The overall Cherry Orchard Point Development 'Development' will be delivered across four Phases and will have a mix of residential, retail / commercial, community and art / cultural uses, including public, private, and communal open spaces, play areas and a creche facility. The current application represents Phase 3, which Phase 1 and Phase 2 under construction at the time of writing this NTS report.

A Non-Technical Summary of the EIAR has been prepared and submitted along with this volume. The EIA Directives includes the requirement for a non-technical summary, as one of the fundamental objectives of the EIA process is to ensure that the public is made fully aware of the environmental implications of any decisions about whether to allow new projects to take place. The EPA Guidelines on the information to be contained in Environmental Impact Assessment Reports (2022), the EPA Guidelines, note that the non-technical summary of the EIAR should cover the issues that arose in sufficient detail so that the key issues and their implications can be clearly understood. The EPA Guidelines also notes that, in the case of larger projects it can be useful to present the non-technical summary as a separate document, which can be widely distributed to the public who are likely to be affected by the project.

In that regard Volume 1 of this report contains the non-technical summary of all the updated technical chapters and subsequent details on any key issues and their implications arising from the Proposed Development on land located in Cherry Orchard, Dublin 10 (known as Development Site 5: Barnville Site in the Park West Cherry Orchard Local Area Plan 2019 or Cherry Orchard Point Phase 3) has been submitted alongside this Environmental Report. This Environmental Report has been prepared as an addendum to the parent Environmental Impact Assessment Report (EIAR) submitted as part of the approved Cherry Orchard Point Phase 1 development application (ACP Case Ref: 318607-23). This approach aligns with the strategy adopted and considered during the consent process for Phase 2 (ACP Case Ref.321931-25).

The parent EIAR assessed Phase 1 and all future phases of the overall Cherry Orchard Point scheme on Key Development Sites 4 and 5 within the Park West Cherry Orchard Local Area Plan (LAP) area. This planning application relates to Phase 3 of the overall Cherry Orchard Point development scheme located on Development Site 5: Barnville Site of the LAP. Therefore, this Addendum EIAR sets out any relevant updates / review of the surveys, baseline analysis, impacts and mitigation measures assessed and proposed under the Parent EIAR as a result of Phase 3 of the scheme. The updates within this Environmental Report focus on the environmental potential, cumulative, residual impacts and subsequent mitigation measures identified for Phase 3 of the scheme.

The structure of the non-technical summary follows a similar structure to this Environmental Report. All likely significant effects, where relevant have been detailed and included.

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1 Introduction

1.1 Introduction

This Environmental Impact Assessment Report (EIAR), addendum to Parent Environmental Impact Assessment Report (EIAR), has been prepared on behalf of The Land Development Agency (LDA), in respect of a Proposed Development at sites located on lands at Cherry Orchard, Dublin 10 (known as Development Site 5: Barnville Site in the Park West Cherry Orchard Local Area Plan 2019, as extended to 2029)

The subject site of circa 1.72 hectares is located on lands at Park West Avenue, Cherry orchard, Dublin 10, and forms Development Site 5 as identified in the Park West Cherry Orchard Local Area Plan 2019, as extended to 2029. The site is bound by Cedar Brook Way to the north, Park West Avenue to the west, Barnville Park to the east, and the Park West - Cherry Orchard railway station is located on the south of the site along with existing residential developments at Barnville. The Proposed Development represents Phase 3 of the overall planned development for Development Site 5: Barnville Site of the LAP lands.

1.1.1 The Overall Planned Development for Cherry Orchard

The subject site is located Site 5 of the Park West Cherry Orchard Local Area Plan 2019 (the Cherry Orchard Development Sites) known as the 'Barnville Site'. The overall Cherry Orchard Point scheme covers Development Sites 4 and 5 comprise c.11.17 ha in area and are located on lands at Park West Avenue, Cherry Orchard, Dublin 10.

The subject site is bounded by Cedar Brook Way to the north, Park West Avenue to the west, Barnville Park to the east and the Park West and Cherry Orchard railway station is located to the south of the site along with existing residential developments at Barnville. Figure 1.1 demarcates the Cherry Orchard Development Sites in context within the surrounding area.



Figure 1-1 Development Sites in the Context of the Surrounding Area

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The phasing plan for development of Cherry Orchard Point scheme divided the overall site lands into four distinct sections with Phases 1, 2 and 4 within Site 4 of the LAP and Phase 3 on Site 5 lands (see Figure 1-2).



Figure 1-2 Phasing Plan for the delivery of the Overall Proposed Development, as submitted with phase 2 application, under the Park West Cherry Orchard Local Area Plan 2019 (Source: Van Dijk Architects and Conroy Crowe Kelly Architects)

During the consenting process of Phase 1 scheme, the planning application accompanied with Parent EIAR which assessed the overall planned development at Cherry Orchard Point covering both Key Development Sites 4 and 5 using the project information available at that time, including indicative strategies for the future phases.

However, during the detailed design development of both the consented Phase 2 scheme which also accompanied an EIAR addendum report and now the proposed development on the subject site (Phase 3), the design and layout evolved through an iterative design process informed by ongoing technical assessments, stakeholder engagement, environmental and planning considerations. Based on the same approach, the proposed scheme on subject accompanies an EIAR Addendum report to the Parent EIAR and includes Chapter 4 of the Addendum EIAR which comprehensively outlines the design alternatives considered and the rationale underpinning the final design of the proposed development.

The alternatives considered were assessed having regard to the objectives and specific characteristics of the project, the site's planning context and the potential environmental effects of each option.

Additionally, Tables 1.1 and 1.2 have been included to clearly identify the changes between the design assessed as part of Phase 1 / the Parent EIAR (which set out an indicative strategy for future phases), the subsequently approved Phase 2 development, and the current Phase 3 proposal. This approach provides a transparent comparison of the evolving design and enables the environmental implications of the relevant changes to be clearly identified and assessed within this Addendum.

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Table 1-1 Break down of typology of overall residential units as originally presented in Phase 1/ Parent EIAR (indicative strategy for future phases) of the Cherry Orchard Point scheme.

Phase	Cost Rental	Social and Affordable	Total Units	Non-Residential Use
1	547	161	708	4,790sq.m
2	153		153	N/A
3	203	51	254	1,200sq.m
Total			**1,115**	**22,300sq.m**

Table 1-2 Break down of typology of overall residential units as approved in Phase 1 & Phase 2 and now includes proposed Phase 3 (subject planning application) of the Cherry Orchard Point scheme.

Phase	Cost Rental	Social and Affordable	Total Units	Non-Residential Use
1	547	161	708	4,790sq.m
2	-	137	137	-
3	244	68	312	1441 sq.m
Total			**1,157**	**-**

The comparison on the indicative residential yield assessed in the Parent EIAR, the combined approved Phase 1 and Phase 2 developments, together with the proposed Phase 3 development, result in a net increase of 42 residential units across the overall Cherry Orchard Point scheme (1,157 units compared to the indicative yield of 1,115 units).

The environmental implications of this increase have been considered by the relevant competent experts as part of the preparation of this Addendum EIAR. Having regard to the findings of the individual assessments, as set out in the relevant chapters of this Addendum EIAR, the increase in residential yield does not give rise to any significant adverse environmental effects beyond those previously identified and assessed.

Additionally, the non-residential uses comprising local retail and commercial now proposed form part of the overall mixed-use strategy for Cherry Orchard Point and have also been considered as part of the assessment by the relevant competent experts and are addressed within the Addendum EIAR.

The rationale behind this phasing approach for the overall development at Cherry Orchard Point scheme is centred on the need to deliver a fully integrated residential community in tandem with a variety of retail and employment opportunities. The approved Iarnród Éireann (Irish Rail) upgrades and the associated temporary compound located in the western portion of Site 4 and Southern portion of Site 5 (subject of this planning application) and diversion and undergrounding works of ESB electrical infrastructure and Train station on the south side have also influenced the phasing strategy of the wider development. Furthermore, the population growth generated through the earlier phases of development will contribute to establishing the critical mass necessary to support and sustain the planned scale of employment and enterprise uses at this location. These uses will, in turn, benefit from the enhanced accessibility afforded by the rail infrastructure upgrades, including increased service frequency and passenger capacity.

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1.1.2 Phase 1 Development and Parent EIAR

Planning approval (ACP Ref: 318607-23) was approved on 9th July 2024 under Section 175 of the Planning and Development Act 2000 (as amended) for the construction of a residential-led scheme comprising 708no. social affordable and cost rental units across 16 blocks within 9 buildings ranging in height from 4 to 15 storeys (the Phase 1 Approval). That application was accompanied by an Environmental Impact Assessment Report (Parent EIAR) which assessed the Cherry Orchard Development Sites 4 and 5, in their entirety on the basis that these lands are in the single ownership of Dublin City Council and that the future development intent for the entire development site was generally known. This enabled a comprehensive cumulative impact assessment of future phases of development to be undertaken as part of that assessment. This was also to enable future applications (such as this proposal) to rely on the Parent EIAR with updates to surveys and baseline analysis where appropriate and confine mitigation measures within the red line boundary of the specific phase of development. This approach was submitted to An Coimisiún Pleanála (formerly An Bord Pleanála) ("ACP")", in the Scoping Request and deemed acceptable in their assessment of the Phase 1 application.

All Chapters of the Phase 1 application (ACP Ref: 318607-23) Parent EIAR considered the study area as shown in Figure 1-3 below, in carrying out assessments of impacts, risks and in proposing any subsequent mitigation measures to address the same.



Figure 1-3 Parent EIAR Site Boundary

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Figure 1-4 Approved Phase 1 Site Layout, Approved by An Coimisiún Pleanála 9th July 2024

1.1.3 Phase 2 Development

Permission was granted on 22nd September 2025 for Phase 2 of the overall development (ACP Ref: ACP-321931-25) under section 175 of the Planning and Development Act 2000 (as amended) for the construction of 137 no. residential homes through a mixture of houses, duplex units, and own door apartments ranging in height from 2 to 3 storeys (the Phase 2 Approval) located immediately north of the approved Phase 1 scheme also within Site 4 of the Park West-Cherry Orchard LAP.

The Phase 2 application (ACP Ref: 321931-25) was accompanied by COP2 Addendum EIAR with updates to surveys and baseline analysis where appropriate and confined mitigation measures within the red line boundary of the specific phase of development.

Section 9.5 of the Inspector's Report for the Phase 1 application (ACP Ref. 318607-23) states that the Inspector was

> *"satisfied that the EIAR has been prepared by competent experts to ensure its completeness and quality, and that the information contained in the EIAR is up to date, adequately identifies and describes the direct, indirect, and cumulative effects of the proposed development on the environment, and complies with article 94 of the Planning & Development Regulations, 2001 (as amended)."*

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Figure 1-5 Approved Phase 2 Site Layout, Approved by An Coimisiún Pleanála 22 September 2025

The Phase 2 application (ACP Ref:321931-25), ACP Direction states that

> *"The Commission considered that the Environmental Impact Assessment Report, supported by the documentation submitted by the applicant, adequately identifies and describes the direct, indirect, and cumulative effects of the proposed development on the environment. The Commission agreed with the examination, set out in the Inspector's report, of the information contained in the Environmental Impact Assessment Report, and associated documentation submitted by the applicant, and submissions made during the course of the application."*

1.1.4 Phase 3 Proposed Development

The proposed development to which this addendum Environmental Report relates to is summarised below as:

The proposed development will consist of the construction of a residential led mixed-use scheme containing 312no. residential apartments comprising 244no. cost rental and 68no. social units, 8no. local retail and commercial units, landscaped public and communal open space. The proposed development includes a new principal access via Barnville Park to the south, providing entry to an internal undercroft parking court, upgraded pedestrian and cycle footpaths, Barnville link connecting the Park West Avenue and Cherry Orchard railway station and all associated site and development works. The proposed development represents Phase 3 of the overall planned development at Cherry Orchard Point scheme for Development Sites 4 and 5 of the LAP lands. Phase 1 of the overall planned development was granted permission in July 2024 (ACP Case Ref: 318607-23) and Phase 2 was granted in September 2025 (ACP Case Ref: 321931-25). The proposed development comprises the works to be undertaken on Development Site 5: Barnville, which forms the subject of this planning application.

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The proposed development (Total GFA of c. 28413 sq.m) involves construction of 312no. residential apartments (c. 24556 sq.m), across 7 core blocks consisting of 4 to 10 floors, comprising 16no. studio units, 146no. one-bed units, 139no. two-bed units (15no. two-bed three-person and 124no. two-bed four person), 9 no. 3-bed units (9no. three-bed five-person) and 2no. 4-bed units (2no. four-bed seven-person) together with 8no. Local Retail and Commercial units (c. 1441 sq.m GFA), and all ancillary and sundry accommodation (c. 2,416sq.m total GFA). The proposed development also includes the provision of landscaped public open spaces of c.1691 sq.m. and Communal open space of c. 2390 sq.m. The communal open space has been designed to provide a high-quality amenity area, incorporating a community garden with seating, play and fitness facilities, and associated landscaping. The scheme also provides private open space for all residential units.

The proposed development will involve the provision of car parking (including accessible and EV car parking spaces), car sharing spaces, bicycle parking spaces, motorbike spaces and loading bays. The scheme includes a Barnville link to the south of the site connecting Barnville Park with Park West Avenue and providing direct pedestrian access to the railway station, along with overall 4no. pedestrian crossing points connecting Park West Avenue, Barnville Park and New Cherry Orchard Park.

The development will also provide for all associated ancillary site development infrastructure including site clearance, boundary treatment, associated public lighting, internal roads and pathways, substations, switch room, water tank rooms, storage room, meter room, sprinkler tank room, bin storage, bicycle stores, hard and soft landscaping, play equipment, boundary walls, attenuation area, green and blue roof systems, photovoltaic panels and all associated works and infrastructure to facilitate the development including connection to foul and surface water drainage and water supply.

Refer to the enclosed statutory notices for a full description of development as part of this planning application.

The Application Site (or 'Subject Site') is part of Phase 3 of Cherry Orchard Point scheme in Cherry Orchard, Dublin 10 (known as Key Development Site 5: Barnville Site in the Park West Cherry Orchard Local Area Plan 2019).

The proposed scheme represents Phase 3 of the overall planned development and is proposed to the east of the granted Phase 1 and Phase 2 schemes located on Site 4. The subject site extends to circa 1.72 ha as defined by the redline boundary in Figure 1-5. The proposed Phase 3 development comprises 312 residential units, including 244 cost rental units and 68 social units, to be delivered across 7 apartment blocks (Core A-G) ranging in height from 4 to 10 Floors which includes 4 to 9 storeys along with parking storey. The development also includes 8 local retail and commercial units, and other ancillary accommodation as referred in statutory notices.

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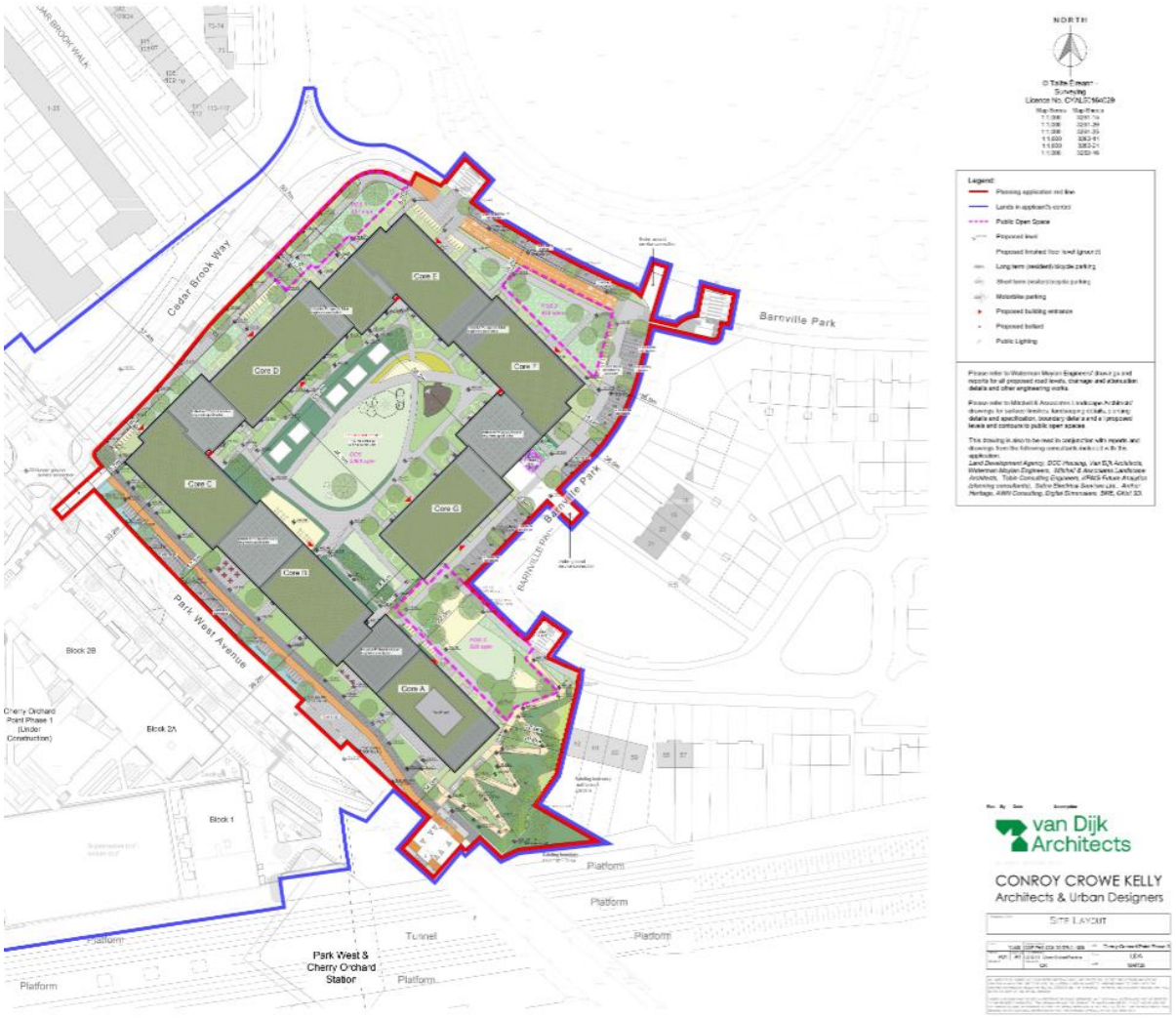


Figure 1-6 Site Layout of the Proposed Phase 3 Application (Source: VDA/CCK Drawing no. 2539-PA-003)

The Environmental Impact Assessment Report submitted with the approved Cherry Orchard Point Phase 1 development assessed the overall planned development of Sites 4 and 5, including the likely cumulative effects of the future phased development of those lands.

In line with the Addendum EIAR approach adopted in approved Phase 2. The Phase 3 EIAR Addendum report also updates and supplements the Parent EIAR having regard to the proposed Phase 3 development, current baseline conditions, updated surveys, the approved Phases of the overall d development, the evolving surrounding development context and the current environmental assessment.

The Parent EIAR and this EIAR Addendum report are intended to be read together. Collectively, they provide the environmental information necessary to assess likely significant effects, mitigation and monitoring measures and residual effects. of the proposed Phase 3 development. Where the Phase 3 assessment identifies a change to the baseline, predicted effects, mitigation, monitoring or residual effects previously described in the Parent EIAR, that change is expressly identified in this Addendum.

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1.2 Structure and Content of this Report

The structure of this Environmental Report is consistent with that of the Parent EIAR submitted as part of the Phase 1 approved application.

The content of the Parent EIAR was prepared in accordance with the requirements of Article 5(1) and Annex IV of the EIA Directive and the EPA Guidelines. The information to be contained in an EIAR is as follows:

a) a description of the project comprising information on the site, design, size and other relevant features of the project;

b) a description of the likely significant effects of the project on the environment;

c) a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;

d) a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment.

e) a non-technical summary of the information referred to in points (a) to (d); and

f) any additional information specified in Annex IV relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected. The EPA Guidelines describe the inclusion of the following, as good practice in the preparation of an EIAR:

- Key alternatives considered;
- Proposed project;
- Receiving environment;
- Likely significant effects; and
- Mitigation and monitoring measures and residual effects.

This Environmental Report updates the chapters of the Parent EIAR where relevant in the context of the Phase 3 Development This Environmental Report is to be read in conjunction with, and as a consolidated Addendum to, the Parent EIAR. Each Chapter, where relevant, sets out updates to the assessments carried out in the Parent EIAR, following a review of initial assessment in the Parent EIAR. The updated Chapters also review and clearly set out proposed mitigation measures, where applicable and considered necessary, for the Phase 3 Development.

The remaining Chapters of this Report are as follows:

Chapter 2 provides an overview/background to the proposed Phase 3 development.

Chapter 3 sets out relevant updates to the Planning Policy and Context since the Parent EIAR and subsequent COP2 Addendum EIAR was written and **Chapter 4** sets out the alternatives considered for Phase 3 of the scheme.

The updates to the environmental topics where there is potential for significant impacts to arise are addressed in Chapters 5 to 16 as follows:

- **Chapter 5** Air Quality
- **Chapter 6** Climate Factors
- **Chapter 7** Noise and Vibration
- **Chapter 8** Biodiversity
- **Chapter 9** Archaeological, Architectural and Cultural Heritage
- **Chapter 10** Landscape and Visual

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- **Chapter 11** Landscape, soil and Geology
- **Chapter 12** Water
- **Chapter 13** Population and Human Health
- **Chapter 14** Material Assets – Traffic and Transportation
- **Chapter 15** Material Assets – Waste Management
- **Chapter 16** Material Assets - utilities
- **Chapter 17** provides an overview of various interactions across environmental topics
- **Chapter 18** provides a Summary of Mitigation Measures and Residual Impacts

1.3 General EIAR Methodology

The methodology adopted for the preparation of the Parent EIAR comprised a systematic analysis of the impact of the Overall Scheme in relation to the existing environment. The assessment was set out under the following headings:

- Basis for assessment;
- Impact assessment and mitigation; and
- Significance of environmental issues.

The approach adopted for the impact assessment and preparation of the Parent EIAR was based on the Guidelines on information to be contained in Environmental Impact Assessment Reports (EPA, 2022). The proposed design was developed with careful consideration and the Parent EIAR carried out a detailed assessment of the potential impacts as a result of the overall scheme. Subsequent mitigation measures were identified, assessed, and incorporated into the design for the entire Cherry Orchard Development scheme (i.e., across all four phases). The assessment method followed a 'multi-criteria analysis' to evaluate significance – which included the consideration of the magnitude of the predicted effects and the sensitivity of the receiving environment.

Section 1.7 of the Parent EIAR sets out the full details of the assessment and preparation methodology for the EIAR. This Environmental Report will follow the same approach for the Phase 3 (subject of the planning application), to evaluate the significance of impacts of the proposed development on the receiving environment, in line with the Addendum EIAR approach adopted in approved Phase 2.

With regard to Class 10 Schedule 5, Part 2 of the Planning and Development Regulations 2001, as amended. In relation to the discretionary consideration of the requirement for an EIA., the following are noted:

> *"(b) (i) Construction of more than 500 dwelling units.*
>
> *(b)(iv) Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere."*

While it is acknowledged that the proposed development, with a site area of 1.72 ha and 312 residential units, would not, in isolation, trigger the relevant EIA threshold. However, the subject site (Phase 3) forms part of the overall development at Cherry Orchard Point. The Parent EIAR at Phase 1 planning stage assessed Phase 1 and all future phases of the overall Cherry Orchard Point scheme on Key Development Sites 4 and 5 within the Park West Cherry Orchard Local Area Plan (LAP) area. This planning application relates to Phase 3 of the overall Cherry Orchard Point development scheme located on Development Site 5: Barnville Site (subject site) of the LAP. Therefore, this Addendum EIAR sets out any relevant updates / review of the surveys, baseline analysis, impacts and mitigation measures assessed and proposed under the Parent EIAR as a result of Phase 3 of the scheme. The updates within this Environmental Report focus on the environmental potential, cumulative, residual impacts and subsequent mitigation measures identified for Phase 3 of the scheme.

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The section on Impact Assessment in each Chapter of this Environmental Report will set out in detail the impacts resulting from the proposed development and the extent of its significance on the receiving environment.

All mitigation measures set out within the Parent EIAR (as approved under Phase 1) including any additional measures identified in the approved Phase Addendum EIAR and this Addendum EIAR, which are applicable to construction and operation of the proposed development, will be adhered to. This includes any mitigation measures contained in any such planning permission, as may be approved.

The construction of the proposed development will be undertaken in accordance with the conditions as may be attached to any planning permission approved in respect of the proposed development. The final design and construction will comply with all relevant statutory approvals.

1.4 Contributors/ Subject Matter Experts: EIAR Team

KPMG Planning has coordinated the preparation of the EIAR Addendum and the integration of the specialist assessments on behalf of "The LDA". Each technical chapter has been prepared by a competent expert with appropriate qualifications and experience in the relevant environmental discipline. Responsibility for the technical methodology, assessment, mitigation and conclusions within each chapter rests with the identified chapter author and reviewer. Details of qualifications and relevant experience are provided in the introductory section of each chapter

The list below presents the subject matter experts who contributed to the preparation of the report and their qualifications:

Table 1-3 EIAR Team

EIAR Chapter Number/ Aspect	Company Name	Author Name	Qualifications
EIAR Author/Manager	KPMG Planning	Abis Zaidi	BE (Civil), MRUP
EIAR Co-Author/ Co-ordinator		Mae Ly Lim	BA, PGDip, MRUP
EIAR Reviewer		Stephen Purcell	BSc. (Hons) MRUP MSc. MIPI FSCSI FRICS
Chapter 5 Air Quality	AWN Consulting	Dr. Jovanna Arndt	Bsc, PhD, AMIES, AMIAQM
		Tanmay Gojamgunde	MSc, B.Eng, AMIEnvSc
Chapter 6 Climate Factors	AWN Consulting	Mobin Ud Din	BE (Environmental Engg.), MSc (Transition, Innovation and Sustainability Environments)
		Sarah Berry	Principal Environmental Consultant,BSc (Physical Geography)
Chapter 7 Noise and Vibration	AWN Consulting	Dan Boote	BSc (Hons), MIOA
Chapter 8 Biodiversity	Altemar	Emma Peters	BSc (Hons.) Environmental Science
		David Culleton	(B.Sc., M.Sc.)
Chapter 9 Archaeological, Architectural and Cultural Heritage	Archer	Maeve McCormick	BA MSc
Chapter 10 Landscape and Visual	Mitchell & Associates	Feargus McGarvey	BA (Hons) DipLA MILI HMGLDA

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Chapter 11 Land, Soil and Geology	Waterman Moylan	Penelope Ingle	Civil Engineer (BEng)
		Ian Worrell	Civil Engineer (BscEng, DipEng, CEng, MIEI, DipPhysPlg).
Chapter 12 Water	Waterman Moylan	Penelope Ingle	Civil Engineer (BEng)
		Ian Worrell	Civil Engineer (BscEng, DipEng, CEng, MIEI, DipPhysPlg).
Chapter 13 Population and Human Health	KPMG Planning	Abis Zaidi	BE (Civil), MRUP
		Stephen Purcell	BSc. (Hons) MRUP MSc. MIPI FSCSI FRICS
Chapter 14 Material Assets – Traffic and Transportation	Waterman Moylan	Brian McCann	BE, MSc (Eng), DIC, CEng, FIEI, MIStructE, MConsEI
Chapter 15 Material Assets – Waste Management	AWN Consulting	Chonaill Bradley	BSc, PG DIP, MCIWM
Chapter 16 Material Assets – Utilities	Waterman Moylan	Penelope Ingle	Civil Engineer (BEng)
		Ian Worrell	Civil Engineer (BscEng, DipEng, CEng, MIEI, DipPhysPlg).
Chapter 17 Interactions	All above (Compiled by KPMG)	All above (Compiled by KPMG)	All above (Compiled by KPMG)
Chapter 18 Summary of Mitigation Measures, Residual Impacts and Cumulative Impacts	All above (Compiled by KPMG)	All above (Compiled by KPMG)	All above (Compiled by KPMG)

Further details on the background and experience of the subject matter experts are set out in the introductory sections of the relevant Chapters.

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2 Background to the Proposed Development

2.1 Introduction

The Chapter 2 of the EIAR sets out the background to the proposed development and site location in accordance with the requirements set out in the EIA Directive and EPA Guidelines on the preparation and content of EIAR. This Chapter has been prepared by KPMG Planning (Chartered Planning and Development Consultants).

2.2 Proposed Development – Phase 3

The proposed application site for Phase 3 corresponds to Site 5 'Barnville Site' of the Park West Cherry Orchard Local Area Plan (2019), the application site is indicated in Figure 2-1 an extract of the Site Location Map

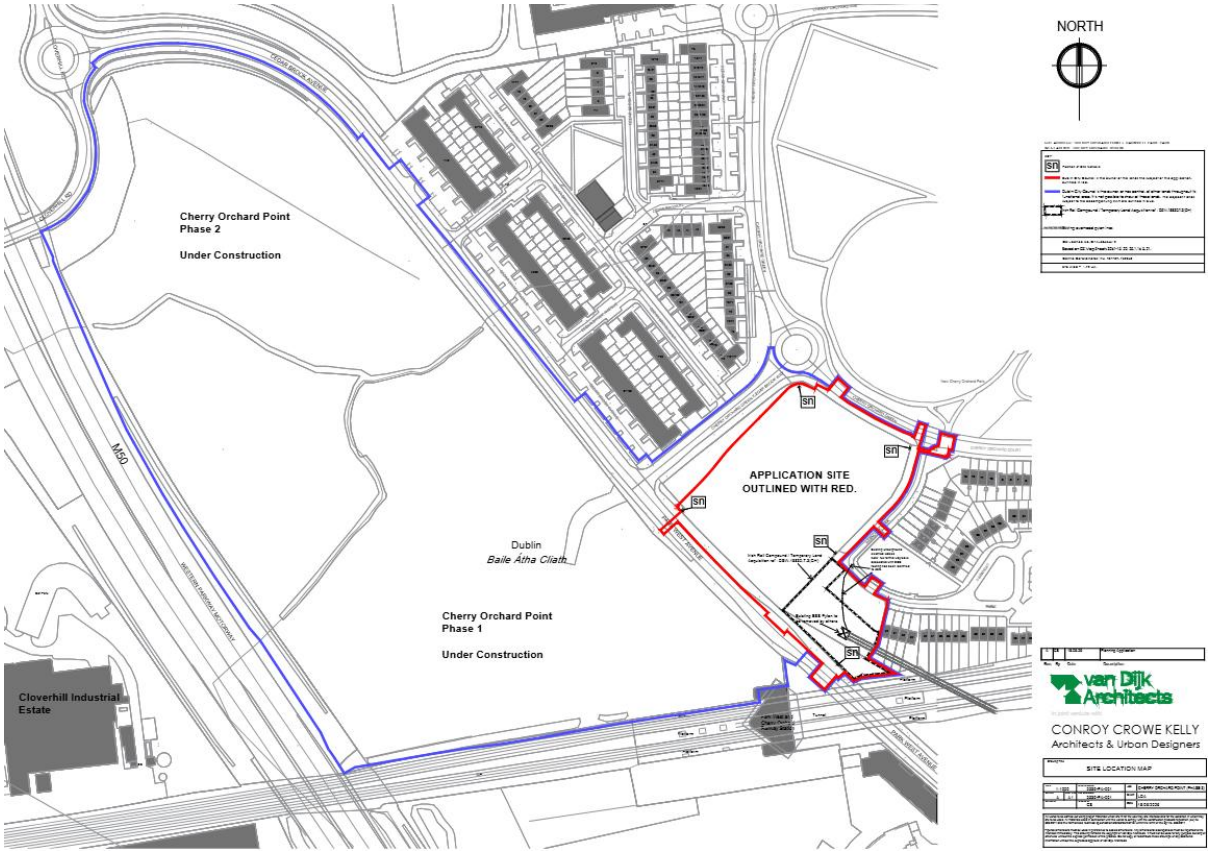


Figure 2-1 Site Location Map showing subject site in red and overall landownership in blue (Source: VDA/CCK).

The proposed development will comprise Site 5 to the east of Site 4. Phase 3 will comprise appropriately for medium to high-density development in alignment with the LAP by providing cost rental and social housing. The subject site is currently vacant greenfield site and is located between two existing housing estates.

The site is strategically positioned bounded by the Cedar Brook Way to the north, Park West Avenue to the west, Barnville Park to the east and the Park West Cherry Orchard rail station to the south which provides excellent accessibility and connectivity opportunities. The site also benefits from direct access via Barnville Park which connects with Park West Avenue and is served by the No.60 and G1 bus routes providing direct linkages to Dublin City Centre and the Docklands to the east, and Red Cow Luas to the south which provides access to Tallaght and Saggart.

The proposed development site is part of the wider area identified under the Dublin City Development Plan 2022-2028 for regeneration which is reflected in the lands' designation as a Strategic Development

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Regeneration Area. The Park West Cherry Orchard Local Area Plan for the area was adopted in 2019 and identified 8 no. Key Development Sites within the wider LAP lands that offer the potential to deliver approximately 2,000 residential units in tandem with employment and commercial development. The Subject Site represents Site 5 and presents the third of four phases of development, Phase 1 and phase 2 are now approved, aimed at delivering the aspirations of the LAP for the redevelopment of these lands.

The proposed development comprises a perimeter block arrangement enclosing a high-quality communal open space at podium level and incorporates a series of public open spaces that connect with the adjoining Cherry Orchard Park and Barnville Park. The development will provide multiple pedestrian crossing points and deliver a key pedestrian link to the railway station, thereby enhancing accessibility, connectivity and permeability throughout the area. As an important element of urban infill development, the proposed scheme will contribute to the integration of the site within the surrounding urban fabric while reinforcing and expanding the existing network of public and communal open spaces.

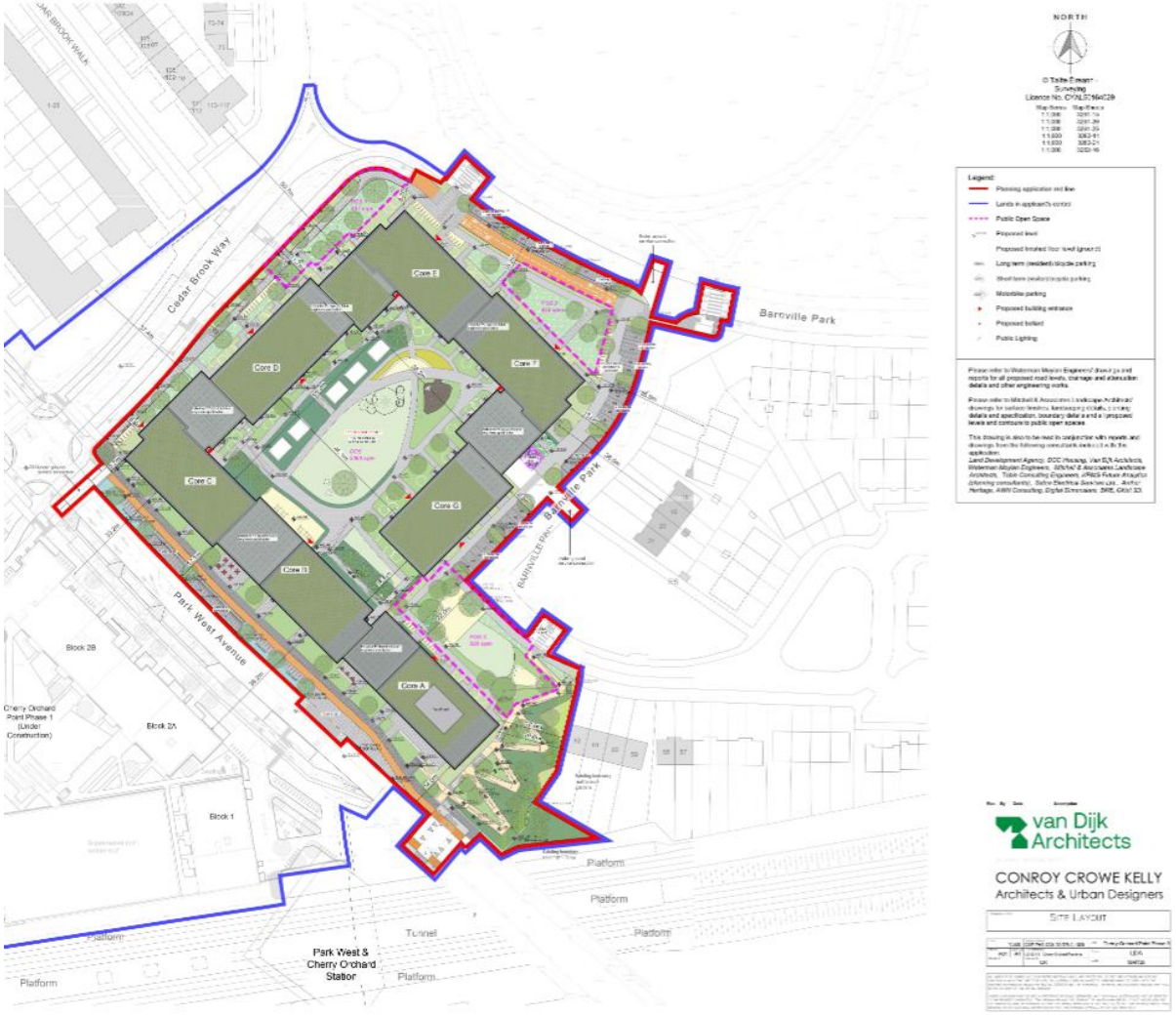


Figure 2-2 Site Layout of the Proposed Phase 3 Application (Source: VDA/CCK Drawing no. 2539-PA-003)

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2.2.1 Description of Development in Statutory Notices

Planning approval is being sought for the following proposal:

"In accordance with Section 175(4) of the Planning and Development Act, 2000 (as amended) Dublin City Council, in partnership with The Land Development Agency, gives notice of its intention to make an application for approval to An Coimisiún Pleanála under Section 175(3) of the Planning and Development Act, 2000 (as amended) for a 7 year approval to carry out the following proposed development on a site of c. 1.72 hectares, located on lands at Cherry Orchard, Dublin 10 (known as Development Site 5: Barnville Site in the Park West-Cherry Orchard Local Area Plan 2019). The site is bound by Cedar Brook Way to the north, Park West Avenue to the west, Barnville Park to the east, and the Park West and Cherry Orchard railway station is located on the south of the site. The proposed development will consist of the construction of a residential led mixed-use scheme containing 312no. residential apartments comprising 244no. cost rental and 68no. social units, local retail and commercial units, landscaped public and communal open space, a new principal vehicular access via Barnville Park, Barnville link, new pedestrian and cycle infrastructure, and all associated site and development works. The proposed development represents Phase 3 of the overall planned development at Cherry Orchard Point scheme for Development Sites 4 and 5 of the LAP lands. Phase 1 of the overall planned development was approved permission in July 2024 (ACP Case Ref: 318607-23) and Phase 2 was approved in September 2025 (ACP Case Ref: 321931-25). The proposed development comprises the works to be undertaken on Development Site 5: Barnville Site, which forms the subject of this planning application.

The proposed development (Total GFA of c. 28413 sq.m) involves construction of 312no. residential apartments (c. 24556 sq.m residential GFA), across 7 apartment blocks (Core A-G) ranging in height from 4 to 10 Floors, comprising 16no. studio units, 146no. one-bed units, 139no. two-bed units (15no. two-bed three-person and 124no. two-bed four person), 9 no. 3-bed units (9no. three-bed five-person) and 2no. 4-bed units (2no. four-bed seven-person) together with 8no. Local Retail and Commercial units (c. 1441 sq.m non-residential GFA), and all ancillary and sundry accommodation (c. 2,416 sq.m combined GFA).The proposed development is described on a block-by-block basis as follows:

- *Core A (c. 3904 sq.m Total GFA) within a block of 3 to 6 storeys (Total 6 Floors), consists of 44no. apartments comprising 4no. studio units, 30no. one-bed units, 10no. two-bed four person, together with 3no. Local Retail and Commercial units (c. 292 sq.m GFA), and all ancillary and sundry accommodation (505 sq.m GFA).*
- *Core B (c. 3757 sq.m Total GFA) within a block of 3 to 6 storeys above car parking storey (Total 7 Floors), consists of 39no. apartments comprising 4no. studio units, 27no. one-bed units, 8no. two-bed four person, together with 2no. Local Retail and Commercial units (c. 670 sq.m GFA), and all ancillary and sundry accommodation (c. 231 sq.m GFA).*
- *Core C (c. 5791 sq.m Total GFA) within a block of 3 to 9 storeys above car parking storey (Total 10 Floors) consists of 61no. apartments comprising 3no. studio units, 23no. one-bed units, 35no. two-bed four person, together with 3no. Local Retail and Commercial units (c. 479 sq.m GFA), and all ancillary and sundry accommodation (c. 303 sq.m GFA).*
- *Core D (c. 3930 sq.m Total GFA) within a block of 6 storeys (Total 6 Floors), contains 48no. apartments comprising 27no. one-bed units, 20no. two-bed units (9no. two-bed three person, 11no. two-bed four person), and 1no. four-bed seven person, and all ancillary and sundry accommodation (c. 298 sq.m GFA).*
- *Core E (c. 5069 sq.m Total GFA) within a block of 4 to 7 storeys (Total 7 Floors), contains 60no. apartments comprising 3no. studio units, 24no. one-bed units, 33no. two-bed four person, and all ancillary and sundry accommodation (c. 407 sq.m GFA).*

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- *Core F (c. 3682 sq.m Total GFA) within a block of 3 to 5 storeys (Total 5 Floors), contains 40no. apartments comprising 2no. studio units, 11no. one-bed units, 27no. two-bed four person, and all ancillary and sundry accommodation (c. 402 sq.m GFA).*
- *Core G (c. 2280 sq.m Total GFA) within a block of 4 storeys (Total 4 Floors), contains 20no. apartments comprising 4no. one-bed units, 6no. two-bed three person), 9no. three-bed five-person, 1no. four-bed seven-person), and all ancillary and sundry accommodation (c. 270 sq.m GFA).*

The proposed development also includes the provision of landscaped public open spaces of c.1691 sq.m. and Communal open space of c. 2390 sq.m. The communal open space has been designed to incorporate a community garden, seating areas, play facilities, fitness areas and associated landscaping. The private open space is also provided for all residential units. The existing boundary treatment is a retained rear boundary wall to the neighbouring back gardens and a steel fence to the railway station towards the south of the scheme.

The proposed development will include provision of 156no. car parking at undercroft (Ground level) and surface level throughout the development, of which 142 no. spaces are dedicated to residential use, 2no. car parking for local retail and commercial uses, 4no. car sharing spaces and 8no. designated accessible spaces for both public and residents. The overall car parking provision includes 78no. indicative EV parking spaces (50%), 8no. motorcycle spaces (5%) are also provided in the undercroft area to serve the development. 2no. loading bays are also provided to serve the proposed development. A total of 658no. secured bicycle parking spaces are proposed as part of the development. 631no. of these spaces are designated for residential use including the provision of 475no. long term and 156no. short stay / visitor spaces. 27no. bicycle parking spaces are provided for the local retail and commercial units.

The main vehicular access to the proposed development will be through a new access junction via Barnville Park leading to the undercroft parking court. The proposed development includes new pedestrian and cycle link along the northwestern end of the site, linking New Cherry Orchard Park and Park West Avenue with the train station. The scheme includes a Barnville link to the south of the site connecting Barnville Park with Park West Avenue and providing direct pedestrian access to the Park West and Cherry Orchard railway station, along with overall 4no. pedestrian crossing points connecting Park West Avenue, Barnville Park and New Cherry Orchard Park.

The development will also provide for all associated ancillary site development infrastructure including site clearance, boundary treatment, associated public lighting, internal roads and pathways, substations, service connections, switch room, water tank rooms, storage room, meter room, sprinkler tank room, bin storage, bicycle stores, hard and soft landscaping, play equipment, boundary walls, attenuation area, green and blue roof systems, photovoltaic panels and all associated works and infrastructure to facilitate the development including connection to foul and surface water drainage and water supply.

2.3 Planning and Development Pipeline

This section provides an overview of the planning and development pipeline which has been assessed to inform the current application. This section identifies residential schemes within the Cherry Orchard LAP area, identifies retail and commercial schemes within the Cherry Orchard LAP area, provides an overview of the DART + South West Project as it impacts the current application, the Greater Dublin Area Cycle Network and concludes with an overview of the BusConnects Corridor.

Table 2-1 summarises planning applications for Key Development Sites and other lands in the Cherry Orchard LAP Area, as illustrated in Figure 2-2.

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Table 2-1 Planning History - Residential Schemes within the Cherry Orchard LAP

Reg. Ref.	Address	Summary Development Description	Decision and Date
Planning History for the Subject Lands known as Key Development Sites 4 and 5 under the Park West Cherry Orchard Local Area Plan 2019:			
Extant Planning Permission on designated Key Development Sites within Park West Cherry Orchard Local Area Plan (2019) Boundary			
4313/22 (Part 8)	Key Development Site 1	The proposed construction of a residential development comprising 172 no. homes (141 no. 3-bedroom two-storey terraced houses and 31 no. 2-bedroom two-storey terraced houses), 2 public open spaces approx. 0.83 ha /14% of site area, associated site infrastructure works/ supporting infrastructure, landscaping, public lighting, access roads/pavements, boundary treatments and provision for a link road/ pavements and cycleways to Ballyfermot. The Development also consists of a pocket park and children's playground and 172 no. private parking spaces (1 no. in-curtilage parking per house) 14 no. on-street public car parking (includes 2 no. accessible parking spaces) and 20 no. public bicycle parking spaces.	Granted 03-10-2022
3490/25 (Part 8)	Key Development Site 2	Construction of a mixed-use development of 171 residential units and neighbourhood centre on a site of c.3.64 ha bound by Cherry Orchard Meadow, Blackditch Road, Croftwood Crescent and Cherry Orchard Avenue, Cherry Orchard, Dublin 10, which will consist of the following: • Construction of new neighbourhood centre block at the corner of Blackditch Road and Cherry Orchard Avenue, ranging in height from 4 to 5 storeys comprising; 4 no. retail units (599 sqm retail space) and 3 no. community, arts and cultural space units (total 615 sqm) at ground floor level; and 107 'Older Persons' apartment units (94 no. 1-bed and 13 no. 2 bed) on all floors; and stores, bin and bicycle storage and a plant room; • Construction of 64 no. 2 storey semi-detached/terraced houses (13 no. 2-bed and 51 no. 3-bed) arranged in 3 clusters facing adjoining roads and new internal streets; • Provision of a new central park extending from Cherry Orchard Meadow to Cherry Orchard Avenue comprising 0.76 ha public open space which includes a restored watercourse feature from the daylighting of the Blackditch Stream (currently culverted underground), play area, civic plaza, pedestrian bridge and walkways along the stream;	City Council – Approved 13 Apr 2026

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Reg. Ref.	Address	Summary Development Description	Decision and Date
		• A total of 638 sqm communal open space; • Provision of 91 no. car parking spaces, 4 no. motorcycle spaces and 1 no. loading bay; • Provision of 228 no. bicycle parking spaces; • Three vehicular accesses are proposed from Blackditch Road, Cherry Orchard Meadow and Cherry Orchard Avenue; • Road works and public realm improvements along Cherry Orchard Avenue between Blackditch Road, Croftwood Crescent comprising; demolition of roundabout at junction of Cherry Orchard Avenue and Cherry Orchard Grove and replacement with a T-junction; new pedestrian crossings and relocation of 2 no. existing bus stops (Stop ID:2909 and Stop ID: 7507); • Site clearance works including removal of existing fencing surrounding the site; • Boundary treatments, public lighting, drainage works, traffic calming measures, new pedestrian crossings, internal roads and footpaths, landscaping and ESB substation; and • All ancillary site services and development works above and below ground.	
N/A	Key Development Site 3a	None	N/A
N/A	Key Development Site 3b	None	N/A
318607 (Part 10)- LDA on behalf of DCC	Key Development Site 4	The proposed development (GFA of c. 66,399sqm) involves the construction of a residential led mixed use scheme across 16 blocks contained within 9 buildings ranging in height from 4 to 15 storeys. The development includes the provision of 708no. residential apartments comprising 547no. cost rental and 161no. social / affordable units, 7no. retail / commercial units (totalling 373sq,m GFA), community, arts and cultural spaces delivered across 13no. community and arts / cultural units (totalling 1,222sq.m GFA), and associated external events space and community gardens (1,157sq.m) and a childcare facility (672sq.m GFA) with associated external playing space (200sq.m) and all ancillary accommodation including sub stations, plant, refuse stores, cycle	Granted 01/07/2024 Commenced

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Reg. Ref.	Address	Summary Development Description	Decision and Date
		stores, and metre / comms rooms. The proposed development also includes the provision of landscaped public open space of 6,123 sq. m. including a public plaza, play space, outdoor fitness trail, communal amenity space of 5,596 sq. m. Private open space for the apartment units is achieved through the provision of balconies or terraces for all individual apartments. aThe proposed development will also involve the provision of sufficient car parking (including accessible car parking) and bicycle parking spaces at undercroft and surface level throughout the development. The development will also provide all associated ancillary site development infrastructure. (As applied)	
321068 (Part 10)-LDA on behalf of DCC	Key Development Site 4	Proposed alterations to the previously granted ABP-318607-23, construction of a residential led mixed use scheme across 16 blocks within 9 buildings ranging in height from 4 to 15 storeys. (As applied)	Granted 11-03-2025
321931 (Part 10)- LDA on behalf of DCC	Key Development Site 4	The proposed development on a site of c. 3.185 hectares, located on lands at Cherry Orchard, Dublin 10 (known as Development Site 4 in the Park West Cherry Orchard Local Area Plan 2019). The development will consist of the construction of a residential scheme containing 137no. residential homes (comprising 31no. 2-bedroom units, and 106no. 3-bedroom units) through a mixture of houses, duplex units and own-door apartments. The proposed development also includes the provision of 2,133sqm landscaped public open space, in addition to 2,050sq.m of public open space as approved under the Phase 1 permission (Bord. Ref: ABP-318607-23). The proposed development will also involve the provision of 141no. car parking spaces at curtilage and street level throughout the development, of which 7no. are accessible spaces and 71no. EV charging points (representing 50% of the total parking spaces). A total of 306no. bicycle parking spaces, of which 18no. are visitor spaces accommodated through a mixture of bike stores and external cycle parking stands. A total of 7no. motorbike parking spaces are also provided. Vehicular, pedestrian and cycle access routes to serve the proposed development are provided via the approved Phase 1 entrance to the east of the site along Park West Avenue with further connections provided to the north and to the south to the approved Phase 1 scheme. Provision is also made for the installation of a signalised access junction with associated traffic	Granted 22-09-2025

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Reg. Ref.	Address	Summary Development Description	Decision and Date
		lights and below ground infrastructure and the relocation of bus stop and shelter along Park West Avenue. (As applied)	
	Key Development 5 (Subject site)	None	
312290 – Greenseed Limited.	Key Development Site 6	The proposed development on a total site of 9.4 hectares will consist of 750 residential units in 7 separate blocks, ranging in height from 2 to 15 storeys, 6,175 sq. m of communal amenity space and 14% public open space. 522 no. car parking spaces and 1,676 bicycle spaces. The development also includes: Retail Unit – 156 sqm Crèche – 410 sqm (84 child spaces) Community Space – 48 sqm Café/bar – 91 sqm	Granted 16-06-2022 Commenced
	Key Development Site 7	None	
	Key Development Site 8	None	

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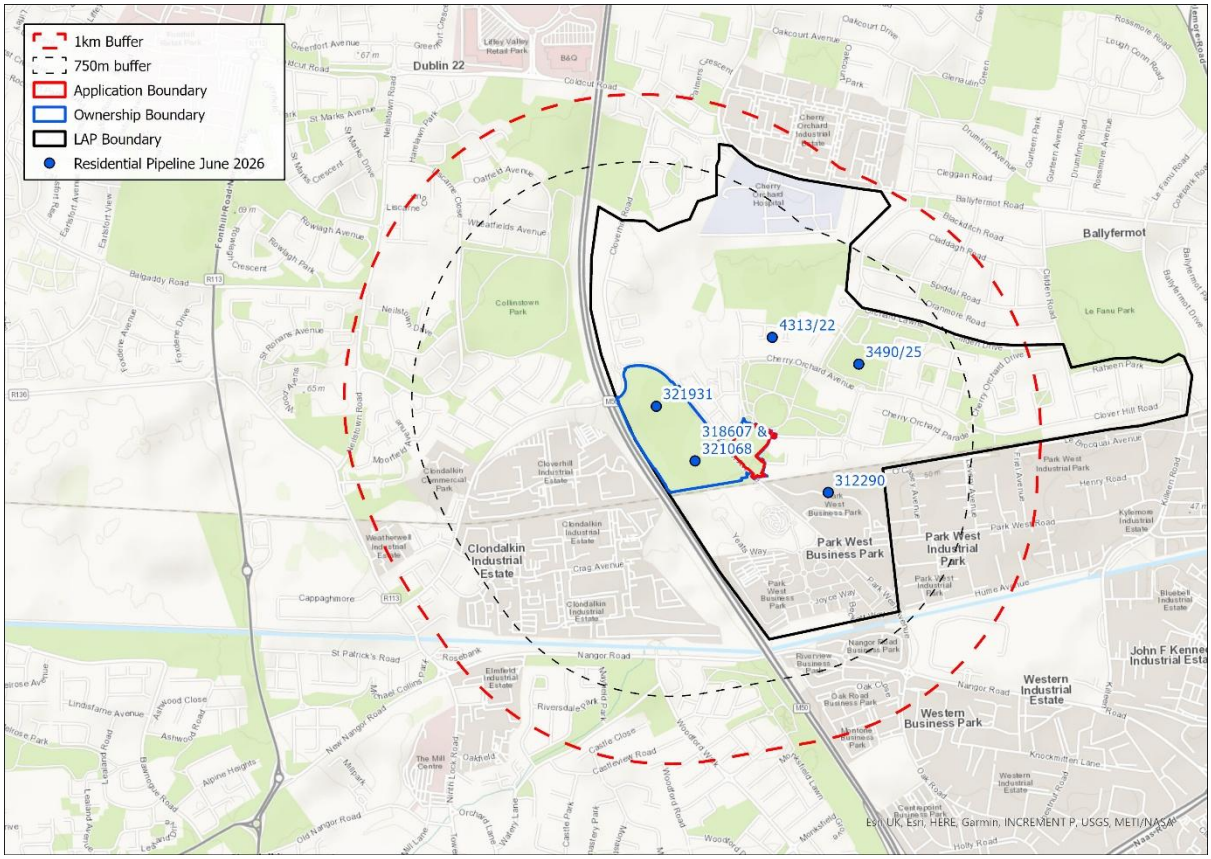


Figure 2-3 Extant Residential Schemes Granted Planning Permission within and bordering the LAP (2019) Boundary

Table 2-2 Planning Permission for Residential Schemes within and bordering the Local Area Plan (2019) Boundary

Reg. Ref.	Address	Summary Development Description	Decision and Date
Other Extant Planning Permission for Residential Schemes within and bordering the Local Area Plan (2019) Boundary			
3403/21	Site (1.26 ha) at Blocks 70 and 72 Park West Avenue and Park West Road, Park West, Dublin 12	Planning permission for the proposed development will consist of modifications to the permitted residential development of 86 no. residential units over retail/restaurant uses (reg. ref. 3798/18, 3941/20, 2517/21) within blocks 70 and 72 as follows: modifications to the private amenity spaces attached to 65 no. residential units at ground, first second and third floor levels to provide winter gardens in lieu of previously permitted balconies including alterations to the existing curtain walling and permitted elevations. The floor area of the apartments and private amenity spaces remains unchanged form that previously permitted. Omission of previously permitted canopy at fourth floor level. The total number of apartments (86 no.), designated car parking spaces (86 no.) bicycle parking spaces	Granted 6/12/2021

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		(167 no.) and gross floor area of blocks 70 and 72 all remain as previously permitted	
SD188/0006* (Part 8)	New Nangor Road, Clondalkin, Dublin 22.	Social Housing Development comprising of two and three storey housing and apartment units (44 units in total) on a site located at New Nangor Road, bounded by Riversdale Estate & Mayfield Park, Clondalkin, Dublin 22. The proposed development shall consist of: 19 3-bed, two storey houses, 1 two storey specially adapted unit and 24 2-bed apartments in 3 storey building. The works include: Landscaping works to boundaries and new park/play area, new pedestrian access routes to adjacent shopping facilities and transport, ancillary works to landscape housing areas, and all necessary associated ancillary works on the site and adjacent areas. The housing provision includes two storey houses in terraces and adjacent to the existing two storey housing, and three storey own door apartments of 3 units addressing the new Nangor Road.	Granted 08/10/2018 Commenced

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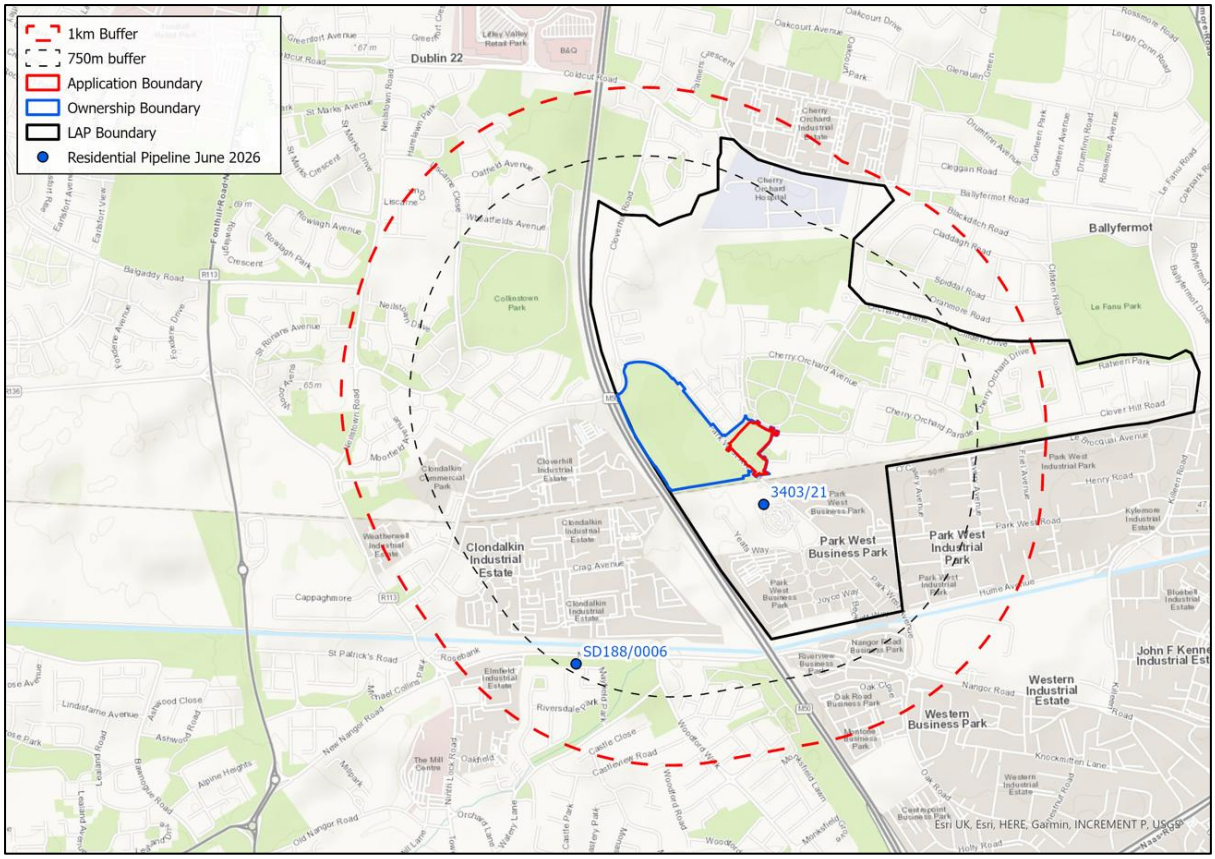


Figure 2-4 Other Extant Residential Schemes Granted Planning Permission within and bordering the LAP (2019) Boundary

Table 2-3 Planning History – Retail / Commercial related Schemes within and bordering the Cherry Orchard LAP Area

Reg. Ref.	Address	Summary Development Description	Decision and Date
SD19A/0185 *	3-4 Crag Avenue, Clondalkin Industrial Estate, Clondalkin , Dublin 22	Alterations to approved plans (Grant of Permission ref PL06S.243151 and PA Reg Ref SD13A/0271 and SD18A/0068) to the previously granted planning permission for the construction of an ESB 110kV Gas Insulated Substation for the use by Crag Digital Limited in support of the development and to incorporate an ESB Network Substation to improve and upgrade power supply to Clondalkin and adjoining areas; the proposed ESB 110kV Gas Insulated Substation is a two storey building of gross floor area of 1,586sq.m and Client Control Room building of an area of 116sq.m; single storey 2MV ESB Substation of 38sq.m floor area is proposed to be constructed to facilitate the construction of the already granted development until completion and commissioning of the proposed ESB 110kV GIS Substation, including for 3 ESB external transformers and 3 Crag Digital Limited external transformers; alterations include for the relocation on site of previously granted client transformers, control building and energy centre ancillary building to facilitate the revised ESB 110kV Substation building layout; ESB	Granted 31-07-2019 Commenced

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Reg. Ref.	Address	Summary Development Description	Decision and Date
		Substation and client control building and transformer compound are to be secured with a 2.6m and 3m high palisade fence and access gates; all landscaping and ancillary site works as per previously granted planning permission SD18A/0068.	
SD20A/0034	KN Group HQ, Cloverhill Industrial Estate, Cloverhill Road, Raheen, Dublin 22	Office accommodation extension to the rear of the existing office building (455sq,m at ground floor, 33.2sq.m at first floor); covered bicycle parking area to the front of the existing building 25.2sq.m; all necessary associated ancillary ground and drainage works.	Granted 30 Jun 2020
SD20A/0309 ; SD22A0093 *	3-4 Crag Avenue, Clondalkin Industrial Estate, Clondalkin , Dublin 22	Provision of 4 new information and communications technology (ICT) Facility buildings and associated development at the subject site, superseding elements of the extant planning permissions on site (Reg. Ref.: SD18A/0068 and Reg, Ref.: SD19A/0185). The application site is subject to an EPA Industrial Emissions Licence (Ref. No,: P1113-01) relating to the Energy Centre permitted on site, The single storey Energy Centre, gas pressure reduction station, and 110kV Gas Insulated Switchgear (GIS) substation permitted under Reg, Ref.: SD18AI0068 and Reg. Ref.: SD19AI0185 will be constructed as previously approved and are not affected by the current application. The proposed development will comprise the following: The construction of 4 ICT Facility buildings (ICT Facilities 1, 2, 3, and 4) with a combined total gross floor area {GFA) of c. 47,564.5 sq.m, Each ICT Facility building includes associated external plant areas, totalling c, 20,649.5 sq,m, ICT Facilities 1, 2, and 3 will be located in the eastern portion of the site, and each comprise a GFA of c. 15,196 sq.m (including ancillary office and administration space) over part two and part three levels with a maximum height of c, 25 metres and a parapet height of c, 19.5 metres, Each of the ICT Facilities will include an associated external plant area of c, 6,624 sq,m, ICT Facility 4 will be located in the southern portion of the site and comprises a GFA of c, 1,976.5 sq,m (including ancillary office and administration space) over two levels with a maximum height of c, 15 metres and a parapet height of c. 10.5 metres, This ICT Facility includes an associated external plant area of c. 777.5sq.m, Each ICT Facility building will accommodate ICT equipment halls, associated electrical and mechanical plant rooms,	Granted 23-03-2021 Commenced

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Reg. Ref.	Address	Summary Development Description	Decision and Date
		loading bays, maintenance and storage space, office administration areas, and screened plant. Construction of internal road network and circulation areas, footpaths, provision of 153 no. car parking spaces and 54 no, cycle parking spaces. Connections to vehicular access routes, roads, services and permitted infrastructure relating to the Energy Centre and 110kV GIS substation permitted under Reg, Ref.: SD18A/0068 and Reg, Ref.: SD19A/0185. Provision of emergency generators with associated flues, water storage tanks and associated pump rooms (comprising 150 sq,m in total) to serve each of the proposed ICT Facility Buildings. Hard and soft landscaping and planting, lighting, and all associated works, including underground foul and storm water drainage network, boundary treatments and security fencing, attenuation areas, and utility cables.	
SD21A/0100 *	Unit 15, Cherry Orchard Industrial Estate, Ballyfermot Road, Dublin 10	Construction of a revised two storey mono-pitched Discount Foodstore (with ancillary off-licence use), with an increased total gross floor space of 2,415sq.m and an increased net retail sales area of 1,650sq.m (2,144sq.m and 1,400sq.m respectively permitted under SD19A/0286); Associated reconfiguration of site layout and all other associated and ancillary modifications to SD19A/0286 above and below ground level, including modifications to pedestrian access and a new electricity substation and switch room building.	Granted 17-06-2021 Commenced
3999/21	Unit 55, Park West Road, Park West Industrial Park, Dublin 12	PERMISSION AND RETENTION: The development will consist of extension to the existing office space at second floor level resulting in an overall office floorspace increase of 125 sqm approximately, construction of a new mezzanine level in the warehouse area (circa 257 sqm) and a new stairwell. Creation of 2no. openings to the south elevation and 1no. opening to the west elevation and associated site development works. The development will also include the retention of the existing office space at ground and first floor level of 250 sqm approximately.	Granted 04-02-2022
SD22A0060 *	Cloverhill Industrial Estate, Cloverhill Road, Dublin 22	Change of use of 464sq.m of warehouse mezzanine storage, approved under planning reference SD18A/0031, to office use, as well as associated and ancillary internal works, elevational changes and external ground works to facilitate this new use.	Granted 19/07/2022

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Reg. Ref.	Address	Summary Development Description	Decision and Date
5311/22	Block 7, Parkwest Business Campus, Parkwest, Dublin 12	The development will consist of the change of use of the ground, first and second floors from class 3 office use to class 8 for use as a health centre / clinic along with all associated works.	Granted 05-04-2023
SD24A/0125 W*	Unit 10, Clondalkin Business Centre, Crag Cres, Clondalkin Industrial Estate, Dublin 22, Co. Dublin	Gabor Construction Limited are applying for Permission for partial change of use as constructed under Reg. Ref. S99A/0146, from Warehouse to Office use (29sqm) to include for internal alterations and extension of current office floor areas on ground and first floor level.	Granted 04-07-2024 Commenced
SD24A/0106 *	Block 1, Units 10-13 Weatherwell Industrial Estate, Neilstown, Clondalkin Industrial estate, Dublin 22, Co.Dublin	The construction of new office space at first floor level including enclosing the existing access stairs (total area @ 87.915 sq./mts), all works proposed are ancillary to the use of the existing building and business.	Granted 12-09-2024

**These applications are in the administrative area of South Dublin County Council*

Since the completion of the Parent EIAR, the DART+ South West Project has been granted permission and will provide a sustainable, electrified service with increased capacity and frequency for services between Park West Cherry Orchard and Dublin City Centre.

ABP Reference	Development Description	Status	Date
316119	DART+ South West Electrified Heavy Railway Order - Hazelhatch & Celbridge Station to Heuston Station, and Hesuton Station to Glasnevin	Make Railway Order w cons	**13/11/2024**

The planned infrastructure improvements include:

- 20 km of electrification and re-signalling of the Hazelhatch and Celbridge Line to Heuston and the south city via Phoenix Park Tunnel.
- Construction of a new station at Heuston West to serve the community of Clancy Quay and Island Bridge.
- Four-tracking of the rail line from Park West and Cherry Orchard Station to Heuston to enhance capacity.

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- Civil, bridge and ancillary works as necessary to accommodate the project.
- Upgrading of the Phoenix Park Tunnel.
- New electric DART carriages for the DART+ Programme will be deployed on Hazelhatch and Celbridge services

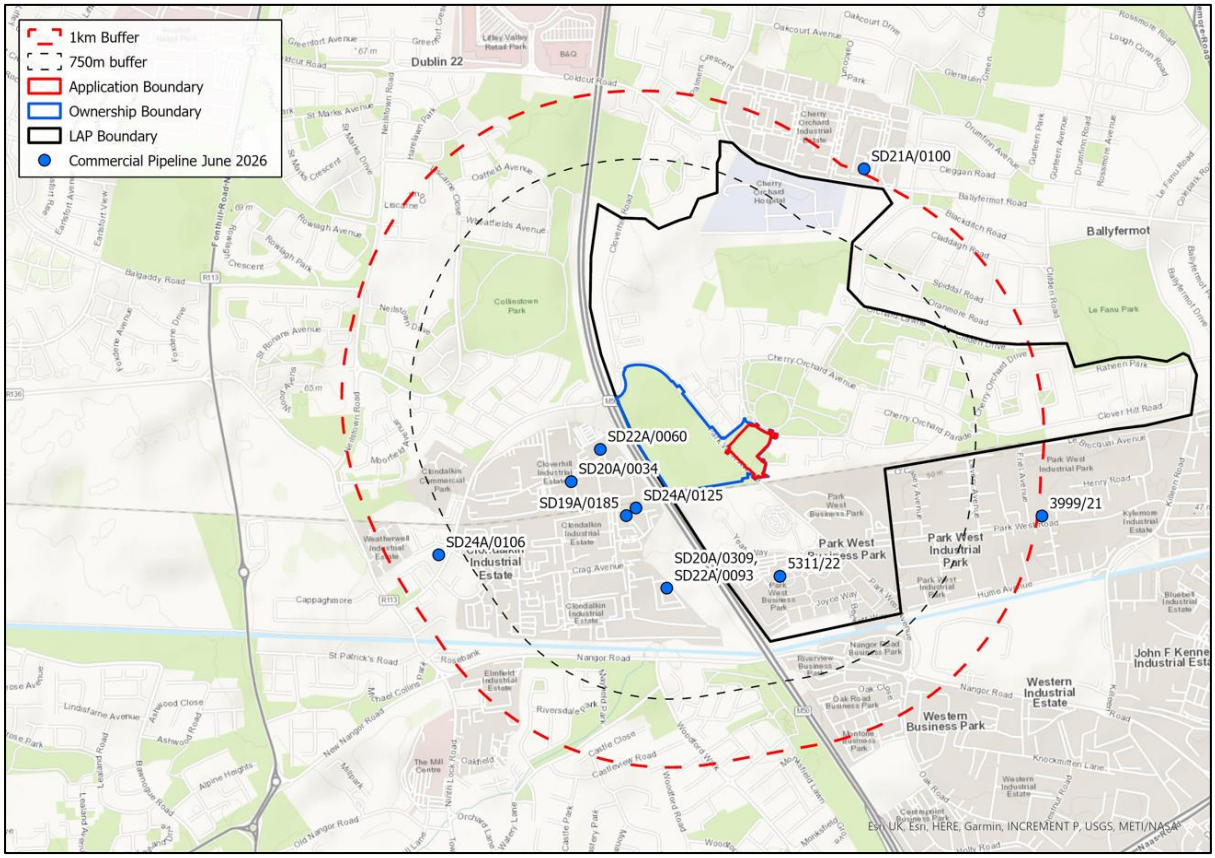


Figure 2-5 Extant Retail / Commercial Schemes Granted Planning Permission within and bordering the LAP (2019) Boundary

2.4 Site 5: Barnville Site

A review of the planning history of the Subject Lands confirmed that there are no extant or previous planning permissions of relevance and no notable features on the site. The subject currently includes a large ESB pylon and associated overhead power lines are located in the southern corner of the site as shown in Figure 2.6.

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Figure 2-6 View of the site showing the existing network of Pylon and Overhead lines (Source: Google maps).

To facilitate the comprehensive development of the lands, the existing electrical infrastructure will be relocated underground in consultation with Iarnród Éireann (Irish Rail) and ESB, both of whom have provided letters of consent and confirmation respectively, in support of the proposed undergrounding of the overhead line and Pylon (referred to as Mast 26), to facilitate the proposed development.

Additionally, as confirmed by ESB in their attached letter that the underground diversion of the existing overhead lines (38KV) is feasible and the Mast will remove once the line is de-energised. The existing underground cables will also be deenergised in tandem with the overhead line and will be marked as abandoned. A de-energised and abandoned cable could be removed by a contractor before any sub structure works commence under supervision from ESB.

The measures necessary to facilitate this relocation are already being progressed by Harcourt Developments as part of the development of Site 6. These works include the diversion and undergrounding of the electrical infrastructure traversing the subject area. Specifically, all 11 existing pylons within the wider Park West area are to be undergrounded as part of Phase 1A of the permitted Greenseed development, in accordance with Compliance Condition 4 of ACP Ref. 312290.

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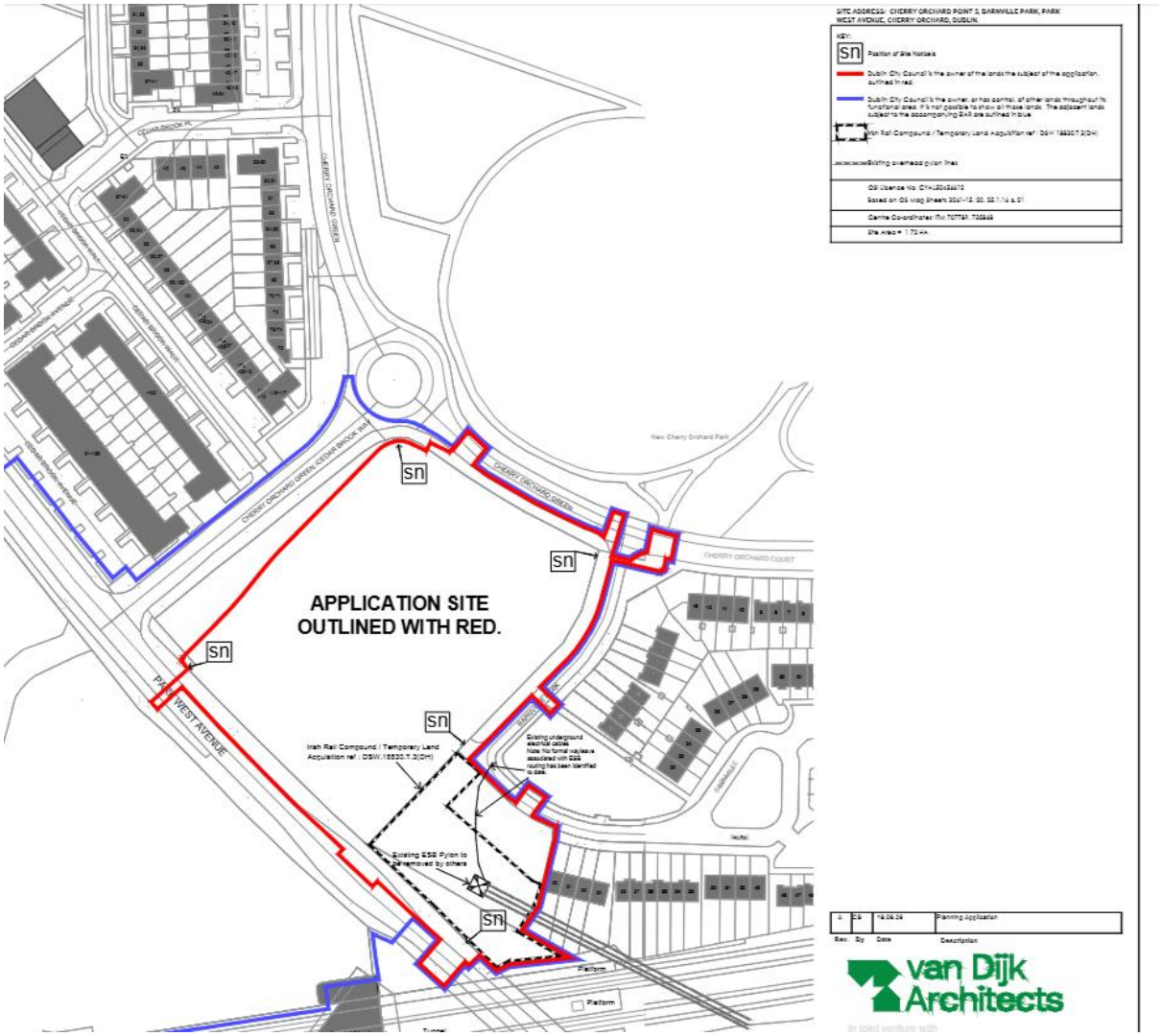


Figure 2-7 Site Location Map showing subject site in red and overall landownership in blue (VDA / CCK).

Furthermore, the approved Parent EIAR considered the potential cumulative effects arising from the proposed development in combination with the rail upgrade project and identified, where necessary, appropriate mitigation measures to avoid, reduce or minimise potential environmental effects. The electrification of the rail corridor, together with the increased capacity and frequency of rail services, will deliver significant benefits for future residents by enhancing connectivity to the city centre and wider metropolitan area while supporting a cleaner, more sustainable mode of public transport.

For the purposes of environmental assessment, the proposed development has been assessed as a single construction and operational phase. The assessment has had regard to the potential interaction of the development with consented Phases of the scheme, DART+ South West infrastructure works, utility diversions and other permitted developments in the area. Any sequencing or interface requirements associated with those projects do not alter the overall assessment approach and have been considered, where relevant, within the cumulative impact assessments contained in this EIAR Addendum.

In addition, the Subject Lands have long been identified as a strategic growth location within the planning framework for the area. The lands were zoned for strategic development and regeneration under the Dublin City Development Plan 2016-2022 and were designated as a key development site within the Park West-Cherry Orchard Local Area Plan 2019 (as extended). This strategic objective is reinforced in the current Dublin City Development Plan 2022-2028, which continues to prioritise the

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comprehensive regeneration and redevelopment of the Park West-Cherry Orchard area. A central objective of the Local Area Plan is the integration of new development with the existing and emerging community to create a sustainable, inclusive and well-connected neighbourhood. The proposed development directly supports these objectives by facilitating the delivery of high-quality residential accommodation, associated amenities and supporting infrastructure within a coordinated regeneration framework.

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3 Planning Policy Context

This Chapter of the Addendum Environmental Report describes the proposed development in the context of the relevant planning policy as it relates to the environment.

The Parent EIAR sets out, in detail the National and Regional planning policies and Local Objectives and Development Standards in context and the interaction of the policy context with other specialists Chapters and Reports, as submitted under ACP Ref. 318607-23.

3.1 Policy Overview

The proposed development site is currently undeveloped and is zoned for regeneration as a Strategic Development and Regeneration Area (Z14) under the Dublin City Development Plan 2022-2028. The proposed residential use is permitted in principle on the site and therefore is compliant with the ascribed land use zoning objective for the lands. It is submitted that the development layout strategy for the proposed scheme follows a systematic approach in alignment with the requirements of the Park West Cherry Orchard Local Area Plan 2019 (LAP) and the relevant Strategic Development Regeneration Area (SDRA) Guidelines for this location, as set out in the Dublin City Development Plan 2022-2028 (the Development Plan).

The Proposed Development will minimise the potential environmental impacts as set out in various Chapters of this Environmental Report, which should be read in conjunction with the Parent EIAR. Any additional risk management interactions between environmental factors as a result of Phase 3 which have not been considered within the Parent EIAR have been assessed and a programme of mitigation and monitoring measures have been described.

The overall scheme was assessed under the Parent EIAR having regard to the following policy and guidance documents:

- National Planning Framework First Revision (April 2025)
- Revised National Development Plan
- Delivering Homes, Building Communities: An Action plan on Housing Supply and targeting Homelessness, 2025-2030
- Sustainable Residential and Compact Settlement Guidelines
- Climate Action Plan
- Regional Spatial and Economic Strategy for the Eastern and Midlands Region (2019)
- Park West Cherry Orchard Local Area Plan 2019

This Chapter provides policy updates since the Parent EIAR and subsequently sets in context, policy implementations in relation to the Phase 3 development. **This Chapter should be read in conjunction with Chapter 3 of the Parent EIAR and the Planning report.**

3.2 National Planning Framework First Revision

The National Planning Framework (NPF) is the Government's high-level strategic plan for shaping the future growth and development of the country out to the year 2040. The NPF was, in April 2025, formally revised and updated to take account of changes that have occurred since 2018 and to build on the existing framework. Since its original publication in 2018 there have been a number of significant and critical developments in relation to planning policy, guidance, and legislation, as well as governance and institutional change. Also, within this time, unprecedented, unforeseen events have occurred with ongoing consequences, such as the impacts of Covid-19 particularly in relation to trends in commuting patterns and the emergence of blended home-office working.

The Revised NPF reflects updated projections on population growth, which will increase to approximately 5.7 million by 2030 and to 6.1 million by 2040, based on demographic and econometric modelling undertaken by the Economic and Social Research Institute (ESRI).

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3.3 National Development Plan

The implementation of the revised NPF outlined above will continue to align with the National Development Plan and form as one single vision for Ireland under 'Project Ireland 2040'. The National Development Plan (NDP) sets out the investment priorities that will underpin the successful implementation of the NPF. This will guide national, regional, and local planning and investment decisions in Ireland over the next two decades to cater for an expected population increase of over 1 million people.

The National Development Plan 2021-2030 (or "NDP") was published in 2021 as an updated version of the previous National Development Plan 2018-2027. As part of Project Ireland 2040, the NDP set out the Government's over-arching investment strategy and budget for the period 2021-2030.The Document sets out funding to underpin key Government priorities, including housing and infrastructure. The NDP underpins the overarching message of the National Planning Framework ("NPF"). The revised version of the NDP was published in 2025 to enhance the delivery of *"transformative, critical and growth-enhancing infrastructure".*

The NDP was revised most recently in July 2025 to include for the largest ever investment in the State's history of €275.4 billion between 2026 and 2035 to unlock housing delivery, upgrade water and energy infrastructure and improve roads and public transportation.

The revised NDP placed significant emphasis on the acceleration of the delivery of housing. To support this, the Housing Activation Office (HAO) has now been established, with an overall allocation of €1 billion. €205 million has been provided for 2026. The first call for the Housing Infrastructure Investment Fund was delivered on the 21st of January 2026, opening for applications for grants that are focused on the delivery of critical infrastructure projects between 2026-2028 that will activate the early delivery of housing. The revised NDP also provides for a substantial increase in social and affordable housing. Social Housing Programmes over the lifetime of the NDP seek to increase social housing delivery from the current average of 8,000 per year to 12,000 per year between 2025-2030.

3.4 Delivering Homes, Building Communities: An action plan on Housing Supply and targeting Homelessness

Delivering Homes, Building Communities 2025-2030: An Action Plan on Housing Supply and Targeting Homelessness, referred to as the Housing Plan hereafter, aims to speed up the deliver of new homes and tackle homelessness. The Housing Plan targets the construction of 300,000 homes, 72,000 social homes and 90,000 affordable housing support, building upon the previous housing plan, Housing for All.

The proposed Phase 3 development on Site 5 comprises a mixed-use residential scheme incorporating local retail and commercial uses, together with high-quality landscaped public and communal open spaces. The development will also deliver a key pedestrian connection, namely the Barnville Link, which will provide direct access to the railway station and significantly enhance connectivity for both existing and future residents of the area. The proposed development will significantly contribute towards achieving the housing targets under the Housing for All programme.

3.5 Sustainable Residential and Compact Settlement Guidelines

The Sustainable Residential and Compact Settlement Guidelines for Planning Authorities were published in January 2024, under Section 28 Ministerial Guidelines. The Guidelines set out guidance in relation to the planning and development of urban and rural settlements with a focus on residential development and the creation of sustainable and compact settlements. The Guidelines have a new focus on the renewal of existing settlements and on the interaction between residential density, housing standards and quality design and placemaking to support sustainable and compact growth.

With regard to densities in general, the guidelines provides recommended density ranges for Cities, Metropolitan Towns, Regional Growth Centres, Key Towns and Large Towns (5,000+ population),

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Small and Medium Sized Towns (1,500 to 5,000 population) and Rural Towns and Villages (<1,500 population).

For Dublin and Cork City, the designated area considered for density ranges include:

- *City Centre comprising the city core and immediately surrounding neighbourhoods;*
- *City Urban Neighbourhoods includes: (i) the compact medium density residential neighbourhoods around the city centre that have evolved overtime to include a greater range of land uses, (ii) strategic and sustainable development locations, (iii) town centres designated in a statutory development plan, and (iv) lands around existing or planned high-capacity public transport nodes or interchanges (defined in Table 3.8) – all within the city and suburbs area;*
- *City Suburban/Urban Extension include suburban areas are the lower density car-orientated residential suburbs constructed at the edge of cities in the latter half of the 20th and early 21st century, while urban extension refers to the greenfield lands at the edge of the existing built up footprint that are zoned for residential or mixed-use (including residential) development.*

The proposed development of Phase 3 on Site 5: Barnville site at Cherry Orchard Point scheme falls within the Metropolitan Area of Dublin City and is defined in Table 3.1 of the Compact Settlement Guidelines as '*City - Urban Neighbourhoods'.* These are highly accessible urban locations as per the guidelines. Table 3.8: Accessibility provides details on High Capacity Public Transport Node or Interchange as under:

- *Lands within 1,000 metres (1km) walking distance of an existing or planned high capacity urban public transport node or interchange, namely an interchange or node that includes DART, high frequency Commuter Rail, light rail or MetroLink services; or locations within 500 metres walking distance of an existing or planned BusConnects 'Core Bus Corridor'12 stop.*
- *Highest densities should be applied at the node or interchange and decrease with distance.*
- *'Planned public transport' in these Guidelines refers to transport infrastructure and services identified in a Metropolitan Area Transport Strategy for the five cities and where a public authority (e.g. National Transport Authority, Transport Infrastructure Ireland or Irish Rail) has published the preferred route option and stop locations for the planned public transport.*

The Guidelines identify *City – Urban Neighbourhoods* as strategic and sustainable locations for development, as outlined in the Dublin City Development Plan 2022–2028. In this regard, Chapter 13 (p.22) sets out the Strategic Development and Regeneration Areas (SDRAs), which are intended to accommodate significant growth and regeneration. This is particularly relevant to the proposed development, as the subject site is located within SDRA 4, thereby supporting the strategic planning objectives for the area.

Table 3.1 of the Guidelines notes that it is a policy objective of these Guidelines that residential densities in the range 50 uph to 250 uph (net) shall generally be applied in urban neighbourhoods of Dublin and Cork., which relates to the application lands.

It is further submitted that the Dublin City Development 2022-2028 also sets out a density range for SDRAs between 100-250 uph. Given that the subject site falls within SDRA 4 as detailed in Chapter 13 of the Development Plan, the scheme is in compliance with the overall Settlement Strategy for SDRAs and hence, the core strategy for the Development Plan. Section 8.5.3 of this Report further set out the rationale for density and its subsequent compliance with the wider development objectives of both the Development Plan and the Local Area Plan for these lands.

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3.6 Climate Action Plan 2025

The Climate Action Plan, CAP, 2025 is the third CAP to be prepared under the Climate Action and Low Carbon Development (Amendment) Act 2021 and the fifth assessment overall. The plan builds upon Climate Action 2024 by refining and updating the measures and actions required to deliver the carbon budgets and sectoral emissions ceilings and provides a roadmap to halve Ireland's emissions by 2030 and achieve net-zero by 2050.

The purpose of the Climate Action Plan is to lay out a roadmap of actions which will ultimately lead Ireland to meeting its national climate objective of pursuing and achieving, by no later than 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy.

Climate mitigations and adaption have been core considerations in the design of the proposed scheme overall. The proposed development incorporates SuDs and sustainable façade design and provides services and facilities that contribute to the energy efficiency, biodiversity, and green infrastructure services.

3.7 Regional Spatial and Economic Strategy for the Eastern and Midlands Region (2019)

The Regional Spatial and Economic Strategy for the Eastern and Midland Region (RSES) is a high-level strategic plan and investment framework that seeks to shape the development of the Eastern and Midland region up to 2031 and beyond, supporting the implementation of the NPF by providing a long-term strategic planning and economic framework for the development of the region.

The RSES translates the NPOs of the NPF to key Regional Policy Objectives (RPOs) to inform and guide the relevant local authorities with respect to the preparation of the City and County Development Plans, Local Area Plan, and other plans and in their assessment of planning applications. The vision for the RSES is,

> *"To create a sustainable and competitive Region that supports the health and wellbeing of our people and places, from urban to rural, with access to quality housing, travel and employment opportunities for all."*

Key RPOs are detailed below, and it is firmly considered that the proposed development is consistent with these objectives and their principles:

- RPO 4.3: Support the consolidation and re-intensification of infill/brownfield sites to provide high density and people intensive uses within the existing built-up area of Dublin city and suburbs and ensure that the development of future development areas is co-ordinated with the delivery of key water infrastructure and public transport projects.
- RPO 4.8: Support the regeneration of underused town centre and brownfield / infill lands along with the delivery of existing zoned and serviced lands to facilitate significant population growth and achieve sustainable compact growth targets of 30% of all new homes to be built within the existing built-up urban area.
- RPO 5.3: Future development in the Dublin Metropolitan area shall be planned and designed in a manner that facilitates sustainable travel patterns, with a particular focus on increasing the share of active modes (walking and cycling) and public transport use and creating a safe attractive street environment for pedestrians and cyclists.
- RPO 5.4: Future development of strategic residential development areas within the Dublin Metropolitan area shall provide for higher densities and qualitative standards as set out in the 'Sustainable Residential Development in Urban Areas', 'Sustainable Urban Housing; Design

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Standards for New Apartments' Guidelines, and 'Urban Development and Building Heights Guidelines for Planning Authorities'.

- RPO 5.5: Future residential development supporting the right housing and tenure mix within the Dublin Metropolitan Area shall follow a clear sequential approach, with a primary focus on the consolidation of Dublin and suburbs, and the development of Key Metropolitan Towns, as set out in the Metropolitan Area Strategic Plan (MASP) and in line with the overall Settlement Strategy for the RSES. Identification of suitable residential development sites shall be supported by a quality site selection process that addresses environmental concerns.
- RPO 9.3: Support local authorities, approved housing bodies and other sectoral agencies in the provision of a greater diversity of housing type and tenure, including social and affordable housing and exploring new models of low-cost rental and affordable homeownership.
- RPO 9.4: Design standards for new apartment developments should encourage a wider demographic profile which actively includes families and an ageing population.
- RPO 9.10: In planning for the creation of healthy and attractive places, there is a need to provide alternatives to the car and to prioritise and promote cycling and walking in the design of streets and public spaces. Local authorities shall have regard to the Guiding Principles for 'Healthy Placemaking' and 'Integration of Land Use and Transport' as set out in the RSES and to national policy as set out in 'Sustainable Residential Development in Urban Areas' and the 'Design Manual for Urban Roads and Streets (DMURS)

3.8 Dublin City Development Plan 2022-2028

At present, 11 variations of the Dublin City Development Plan 2022-2028 have been adopted. The local policy impacts/landscape insofar as the EIAR is concerned remains as per the Parent EIAR. A summary overview through a strategic lens has been provided below for ease of reference.

Core Strategy:

The Dublin City Development Plan 2022-2028 (Development Plan) is the statutory framework application for the Dublin administrative boundary where the proposed development site is located. The proposed development site located in Cherry Orchard falls within an area designated as a Strategic Development and Regeneration Areas (SDRAs) under the Development Plan. The Development Plan notes that SDRAs are a key part of delivering compact growth, capable of delivering significant quantities of homes and employment for the city. The Development Plan sets out that SDRAs are considered a critical component to the core strategy. All SDRAs have been examined to determine capacity for future housing growth, considering sustainable densities and relevant SDZs and LAPs where relevant. The SDRAs targeted for housing growth in the Development Plan are aligned to existing and planned public transport corridors and guided by national policy set out in the National Planning Framework (NPF) and Regional Spatial and Economic Strategy (RSES). They provide for planned, integrated and sustainable growth over a number of development plan periods for Dublin City Council. Most of the land targeted for new housing in the city is in SDRAs, which are for the most part, brownfield, and regeneration sites.

The proposed development will provide 312 no. homes together with 8no. local retail and commercial units which will be essential in delivering upon the objectives for SDRA lands under the current Development Plan.

Zoning Objective:

The subject site is designated Z14 – Strategic Development and Regeneration Areas (SDRAs), with the zoning objective,

> *"To seek the social, economic and physical development and/or regeneration of an area with mixed-use, of which residential would be the predominant use."*

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Chapter 14, Section 14.7.13 of the Development Plan sets out the Land Use Zoning Objective for SDRA (Z14) Lands, with a list of 'Permissible' and 'Open for Consideration' Uses. Permissible uses under this designation includes:

> *"Assisted living/retirement home, beauty/ grooming services, bed and breakfast, buildings for the health, safety and welfare of the public, Build To Rent residential, café/ tearoom, childcare facility, community facility, conference centre, craft centre/ craft shop, cultural/recreational building and uses, delicatessen, education, embassy office, embassy residential, enterprise centre, financial institution, guesthouse, halting site, home-based economic activity, hotel, industry (light), live-work units, media-associated uses, medical and related consultants, mobility hub, office, off-licence, off-licence (part), open space, park and ride facility, place of public worship, primary health care centre, public house, public service installation, residential, restaurant, science and technology-based industry, shop (local), shop"*

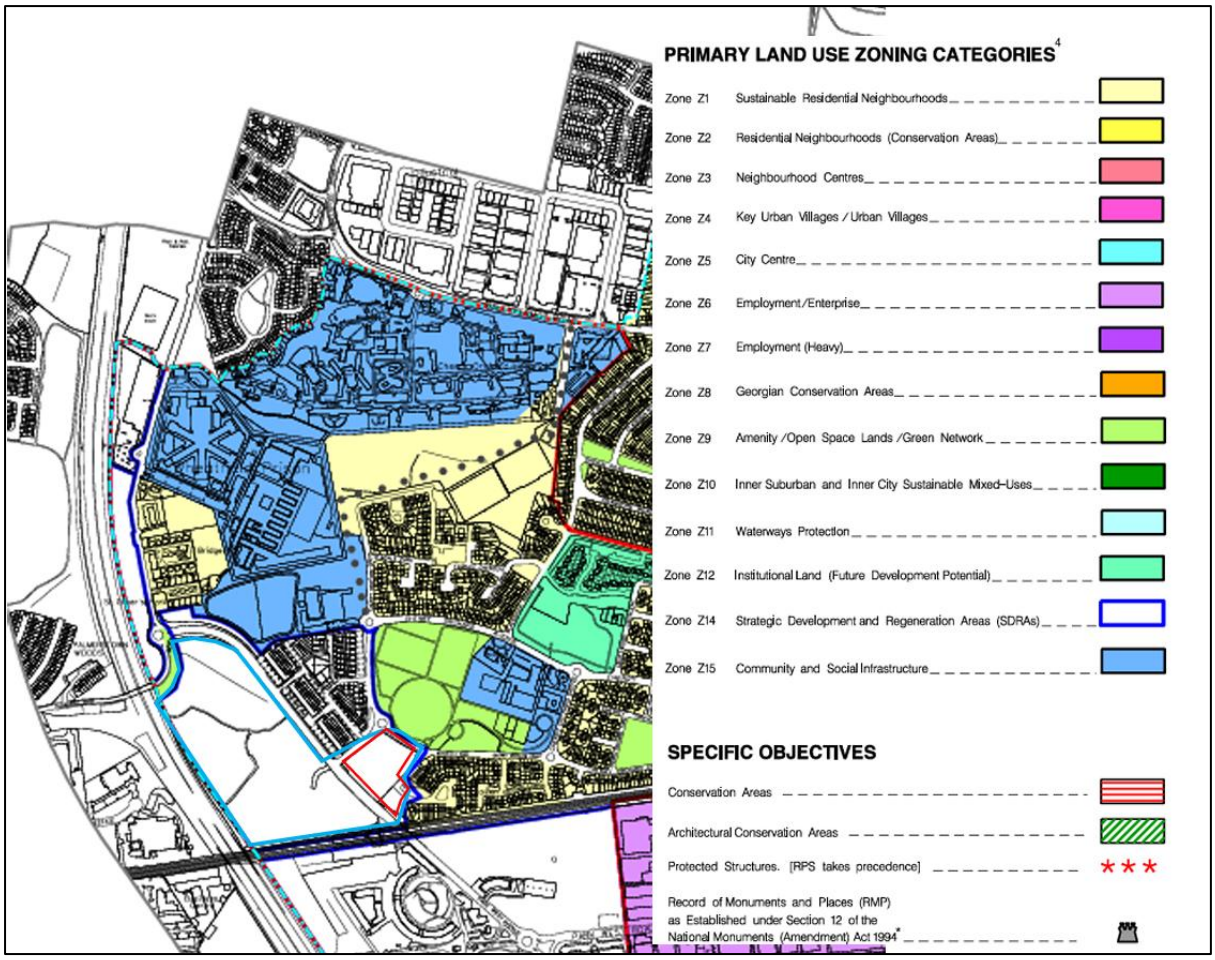


Figure 3-1 Zoning Map as per Dublin City Development Plan 2022-2028 (Ownership (blueline) and Application Boundary (red) indicated)

The proposed development involves a residential-led mixed use scheme with local retail and commercial units, landscaped public and communal space and associated ancillary infrastructure all of which are permissible under the Z14 zoning objective ascribed to the subject site. The proposed scheme would therefore, be acceptable in principle and is in accordance with the proper planning and sustainable development of the area.

3.9 Park West-Cherry Orchard Local Area Plan 2019

Dublin City Council adopted the Park West-Cherry Orchard Local Area Plan 2019 (LAP) in October 2019. The vision of the Plan is to make Park West Cherry Orchard an attractive and identifiable place

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with a vibrant and active community. To provide a good mix of residential typologies that will cater for all people and residents will benefit from the provision amenities including local shops, schools, parks and community and recreational facilities. The LAP establishes statutory planning framework to allow future development to be managed in a co-ordinated and sustainable manner, providing for the needs of existing and future communities.

The LAP has since been extended until November 2029 as the current LAP remains consistent with the Core Strategy of the Dublin City Development Plan 2022-2028, and with development still to take place on several of the key sites, it is clear that there are objectives of the LAP that remain to be secured.

The objectives for the lands as set out in the LAP have been incorporated into the Development Plan, specifically through the area's identification as a Strategic Development Regeneration Area (SDRA 4).

The LAP sets out individual site briefs for 8 key development sites, which set out the vision, aspirations, and development objectives for each. The Subject Site corresponds to Site 5 'Barnville Site' as part of the wider development at Cherry Orchard Point which consists of the entirety of Development Sites 4 and the Subject Site, Site 5 of the LAP.

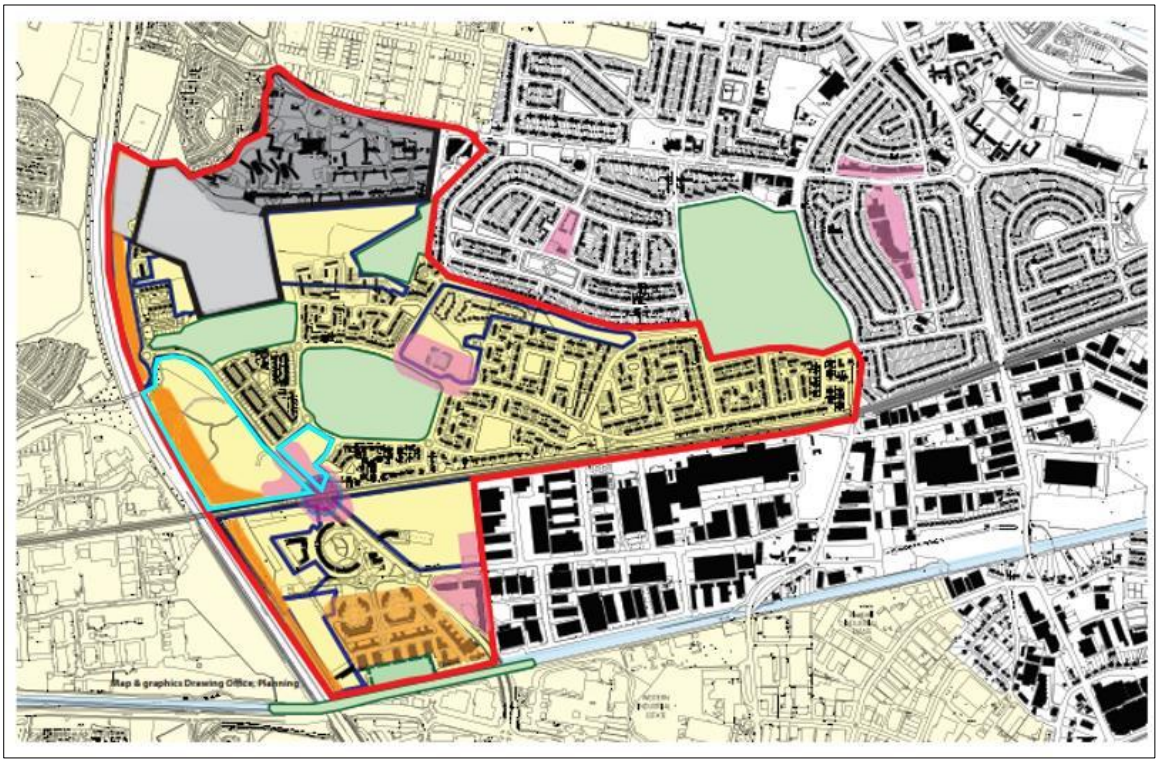


Figure 3-2 Proposed Land Use Strategy with proposed development sites 4 & 5 in blue.

The approved Phase 1 Development followed a systematic approach in alignment with the requirements of the LAP and SDRA Guidelines for the Cherry Orchard Development lands. The Phase 1 application sought to provide a new, large scale, mixed-use residential development located on lands alongside Park West Avenue and adjacent to the Park West Train Station. The approved Phase 2 development represented a coherent and logical extension of the Phase 1, providing a mixture of housing typologies and options delivered across the wider Site 4 and 5 land banks. Phase 3 aims to build upon the vibrant, sustainable urban neighbourhoods approved under Phase 1 and Phase 2 whilst retaining a distinctive character which will enhance the overall Cherry Orchard area. The wider Cherry Orchard Point scheme across all phases of development is envisaged to sustain quality public transport, such as the approved DART+ South West extension to the rail line and the BusConnects project. The wider scheme, in that regard proposes a mix of uses including retail, commercial, community and art / cultural uses across four Phases.

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Furthermore, An Coimisiún Pleanála, in approving the Phase 1 Development stated that,

> *"…**the proposed development would be consistent with the development objectives and other provisions of the Park West Cherry Orchard Local Area Plan 2019, with the zoning objectives and other policies and objectives of the Dublin City Development Plan 2022-2028, would positively contribute to compact growth and would make efficient use of an appropriately zoned greenfield/brownfield site within the urban area of Dublin City in an area served by public transport,** would positively contribute to an increase in housing stock and commercial / retail floorspace, would be acceptable in terms of urban design and layout and building height, would be acceptable in terms of pedestrian and traffic safety, and would provide an acceptable form of residential amenity for future occupants…"* [emphasis added, Board Order, p. 9]

Subsequently, An Coimisiún Pleanála, in approving the Phase 2 Development concluded that,

> *"…**the proposed development would be consistent with the development objectives and other provisions of the Park West – Cherry Orchard Local Area Plan 2019, with the zoning objectives and other policies and objectives of the Dublin City Development Plan 2022-2028, would positively contribute to compact growth and would make efficient use of an appropriately zoned greenfield/brownfield site within the urban area of Dublin city in an area well served by public transport, would positively contribute to an increase in housing stock and commercial/retail floorspace, would be acceptable in terms of urban design and layout and building height, would be acceptable in terms of pedestrian and traffic safety, and would provide an acceptable form of residential amenity for future occupants**. The proposed development would not seriously injure the residential or visual amenities of the area or significantly increase traffic volumes in the area. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area."*

The proposed Phase 3 development is compliant with the requirements of the LAP and will connect seamlessly with the approved Phase 1 and Phase 2 development, securing Cherry Orchard Point as a fully functional integrated development. For a comprehensive assessment of planning policy compliance and development management considerations, this Addendum Report should be read in conjunction with the accompanying Planning Report.

3.10 References

- National Planning Framework First Revision (2025)
- Revised National Development Plan (2025)
- Delivering Homes, Building Communities: An Action plan on Housing Supply and targeting Homelessness (2025-2030)
- Sustainable Residential and Compact Settlement Guidelines (2024)
- Climate Action Plan (2025)
- Regional Spatial and Economic Strategy for the Eastern and Midlands Region (2019)
- Dublin City Development Plan 2022-2028
- Park West Cherry Orchard Local Area Plan 2019 (As extended)

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4 Alternatives Considered

4.1 Introduction

This chapter of the Environmental Impact Assessment Addendum Report has been prepared by Van Dijk Architects and Conroy Crowe Kelly Architects with support from KPMG Planning and contains a description of the reasonable alternatives considered during the evolution of the Proposed Development from that assessed in the Parent EIAR.

The project aims to deliver Phase 3 (Site 5) of Cherry Orchard Point in accordance with the criteria for high-quality, sustainable urban development and the objectives of the Dublin City Development Plan 2022–2028 and the Park West–Cherry Orchard Local Area Plan 2019.

The scheme design is a continuation of the high-density approach approved for Cherry Orchard Point Phase 1 and builds on the theme of sustainable urban development and encompasses both local, strategic and national policies with regard to the promotion of active travel, a reduction in private car ownership and trips, enhanced accessibility to public transport and the integration of a natural, bio-diverse scheme that places pedestrians and cyclists first.

The site constraints, objectives and client brief were established at the beginning of the Cherry Orchard Point project which meant that the main alternatives explored through the pre-planning design process generally comprised variations on unit mix, massing, building height and plot size. However, the assessment did not rely solely on dwelling yield or planning policy compliance. Consideration was also given to the comparative effects on land use, landscape and visual amenity, residential amenity, biodiversity, mobility, noise exposure, water management, construction activity, resource use and population and human health.

The preferred and final scheme for Phase 3 proposes a total of 312 homes together with local retail and commercial and all ancillary and associated works.



Figure 4-1 Proposed Development Site Layout (Architect's 3D model view)

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4.1.1 Summary Description of the Overall Proposed Development

Cherry Orchard Point is a new large mixed-use residential development to be located on a greenfield site beside Park West Avenue and the Park West/Cherry Orchard railway station.

The overall site has a combined area of c.11.17 ha. It is zoned for development under the Dublin City Council Development Plan 2022-2028 and is governed by the objectives of the Park West-Cherry Orchard Local Area Plan 2019. The proposed development will provide a vibrant and sustainable urban neighbourhood with a distinct character. It will be of sufficient density to sustain quality public transport, such as the planned DART upgrade to the rail line and Bus Connects project, and to sustain a mix of retail and commercial uses on Park West Avenue. The new neighbourhood will have a permeable and legible street network with an emphasis on pedestrian and cycle-friendly paths and will enable safe and well-overlooked links to existing residential estates and public parks.

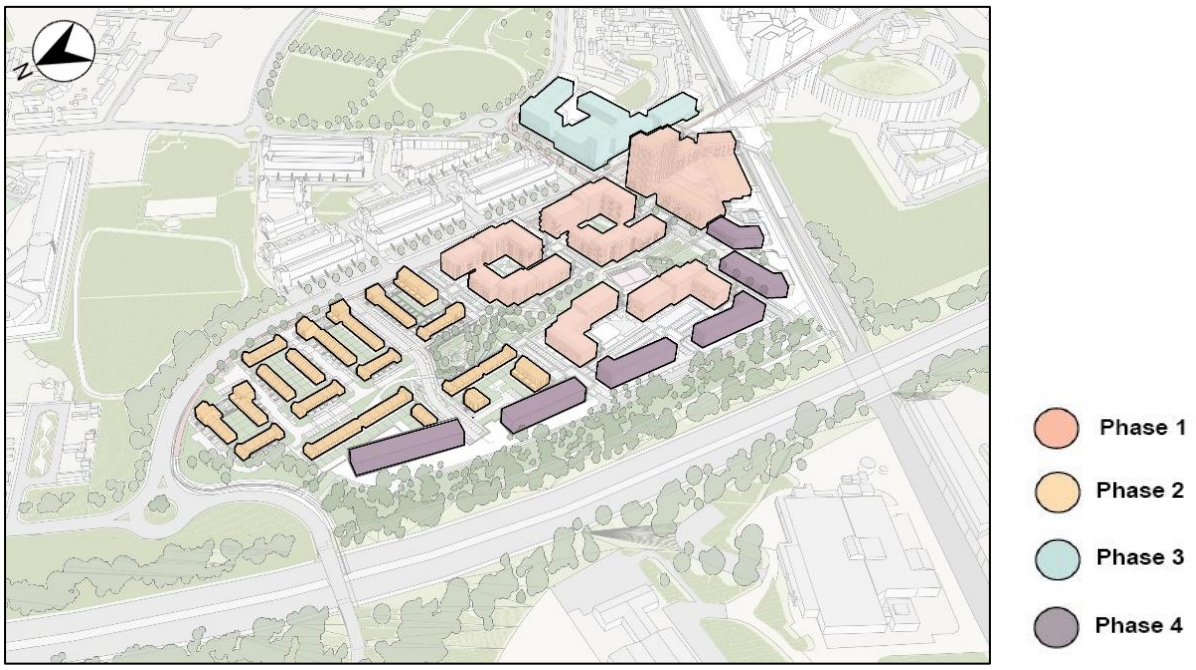


Figure 4-2 Proposed Development Phasing Diagram of Cherry Orchard Point scheme (Source: VDA/CCK)

Phase 1 of the Cherry Orchard development was approved by An Coimisiún Pleanála (formerly An Bord Pleanála) ("ACP")" on the 9th July 2024, subject to a Part X application Ref ACP-318607-23. This phase comprises 708 homes in a mix of medium and high-density apartment buildings, generally in heights of 4 to 6 storeys, and up to 15 storeys on a landmark corner. There will be a mix of social and cost-rental homes, ranging in size from 1 to 3-bedroom apartments. Universal Design standards for accessible homes to accommodate people with disabilities and older people have been applied in 10% of the homes, making this scheme suitable for a broad demographic group.

Central to the scheme is its green infrastructure. A continuous car-free open park through the centre of the scheme has been approved, linking all buildings and homes to the wider pedestrian and cycle network, and to the bus/rail public transport hub on Park West Avenue. This central park will provide different passive and active uses, to suit all ages and needs.

The overall scheme seeks to locally restructure Park West Avenue as a ‘Place’, with a Main Street in the traditional sense that is shared by and accessible to the surrounding neighbourhoods as well as the future residents. A series of measures will be undertaken to enable the transformation of what is currently a hostile and unwelcoming environment; continuous street frontage close to the carriageway, multiple front doors and active edges (balconies, terraces, residential windows), mixed-uses at street level which will increase footfall, wide pavements, street trees and planters, off-street cycle paths,

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pedestrian and cycle priority crossing to Site 5 and New Cherry Orchard Park, bicycle parking and well-overlooked bus and rail stops.

Provision for a new supermarket, shops and civic space on Park West Avenue will create activity and a 'buzz' around the station and encourage active travel (car-free) for short trips and local errands. Parking for the supermarket and shops will be located in an off-street car park, under a landscaped podium, and on-street bays shall be provided for bus stops, taxi-bays, drop-off, EV charging, loading bays and short-stay visitor parking. A slender 15-storey landmark building on the corner of Park West Avenue and the 'New Street' leading into the development will reinforce the identity of this new quarter.

Phase 2 development is located on a site of c.3.185 ha on Development Site 4 in the Park West Cherry Orchard Local Area Plan 2019, located North of Phase 1 of the development. The scheme approved under ACP-321931-25 in September 2025 principally involved the construction of a residential scheme comprising of 137no. residential homes consisting of 31no. 2-bedroom units, and 106no. 3-bedroom units through a mixture of houses, duplex units and own-door apartments, together with a new access road as approved under the Phase 1 scheme, new internal streets, landscaped public and communal open space, a new pedestrian connection to Cloverhill Road, an ESB Substation, and all associated site and development works. The scheme also involves the provision of 141no. car parking spaces (including 7no. accessible spaces and 71no. EV charging points) at curtilage and street level, and 306no. bicycle parking spaces (including 18no. visitor spaces and 7no. motorbike spaces). Off street cycle lanes will connect the development to the Rail station to the Southeast, and Cherry Orchard Park to the East.

The built elements involve the construction of both singular housing units and duplex blocks that range from 2-3 storeys. The design and layout of the scheme are structured so that the 3 storey buildings along Park West Avenue establish an appropriate urban edge to the street while providing a sensitive transition from this lower density component of the development to the medium and higher density blocks permitted in Phase 1. The internal pathways provide a direct connection to the Phase 1 scheme through dedicated public open space, resulting in a fully integrated and connected development.



Figure 4-3 Approved Phase 2 Development Site Layout outlined in Red

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Phase 3, the subject of this EIAR addendum, is the third of the four development phases for Cherry Orchard Point. Phase 3 is situated on a site of c. 1.72 hectares located on lands at Cherry Orchard, Dublin 10 known as Development Site 5: Barnville Site in the Park West Cherry Orchard Local Area Plan 2019. Phase 3 will provide 312 no. residential apartments composed of 244 no. cost rental and 68 no. social units, local retail and commercial units, landscaped public and communal open space including a new pocket park with both passive and active play space. Building heights will range from 4 to 10 storeys.

The scheme has been designed by a multi-disciplinary team and consideration has been given to delivering a sustainable, efficient, and attractive urban neighbourhood to the highest standards.

The summary schedule of accommodation proposed for Phase 3 of Cherry Orchard Point is as follows, arranged in 7 core blocks:

- Core A: 6 no. floors, 44 no. apartments
- Core B: 7 no. floors, 39 no. apartments
- Core C: 10 no. floors, 61 no. apartments
- Core D: 6 no. floors, 48 no. apartments
- Core E: 7 no. floors, 60 no. apartments
- Core F: 5 no. floors, 40 no. apartments
- Core G: 4 no. floors, 20 no. apartments

A range of apartment typologies are proposed, with 29% of units exceeding the minimum floor area standards by more than 10%. Of the overall unit mix, 50% will be designed as Universal Accessible Dwellings. All units will comply with the minimum floor area and internal space standards set out in Appendix 1 of the Planning Design Standards for Apartments: Guidelines for Planning Authorities (2025). The breakdown and proportion of each unit type is set out in the table below.

Table 4-1 Breakdown and proportion of each unit type

Apt Type	Net Area	No. of Units	%
Studio	39 sqm	16	5.1%
1B2P	47 sqm	99	31.7%
1B2P + 10% UD	50 sqm	47	15.1%
2B3P	69 sqm	15	4.8%
2B4P	74 sqm	124	39.7%
3B5P	90 sqm	3	1.0%
3B5P UD	94 sqm	6	1.9%
4B7P	138 sqm	2	0.7%
Total		312	100%

The main vehicular access to the proposed development will be through new access junction via Barnville park leading to an undercroft parking court. The proposed includes new pedestrian and cycle link along the northwestern end of the site, linking the new Cherry Orchard Point park and Park West Avenue with the train station to Cherry Orchard Park and its amenities. The scheme also includes a strategic Barnville pedestrian link to the south, providing access to the railway station, together with 4no. pedestrian connections linking Cherry Orchard Park and Barnville Park with Parkwest avenue. These connections establish critical north–south permeability through the site and integrate with Phases 1 and 2 of the Cherry Orchard Point scheme, along with all associated site access and development works.

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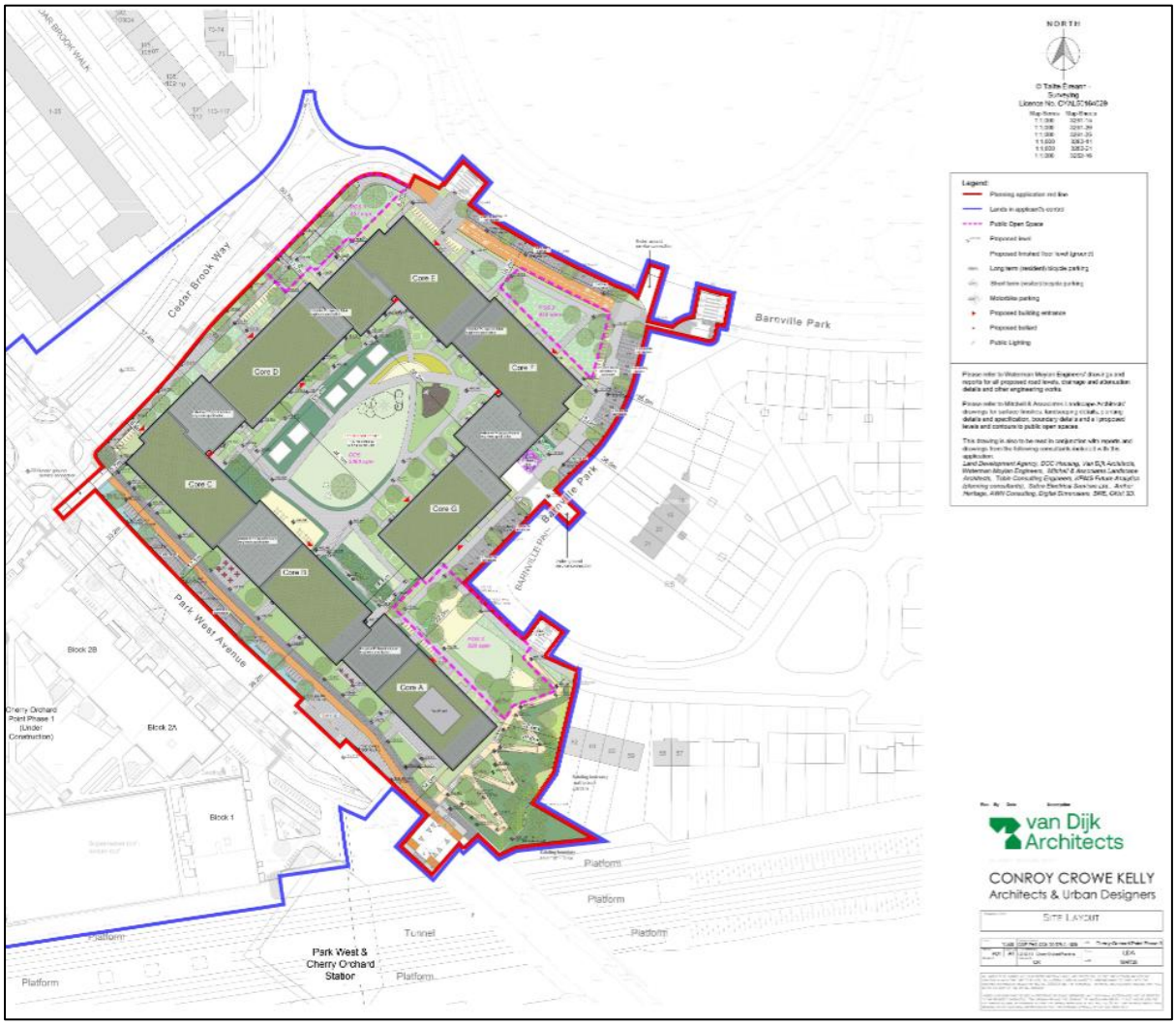


Figure 4-4 Site Layout of the Proposed Phase 3 Application (Source: VDA/CCK)

4.2 Design Evolution

The Parent EIAR assessed the four-phase Cherry Orchard Point development based on the indicative design information available in 2023, including approximately 1,100 homes, 5,990 sq. m of retail and community floorspace, and future commercial or enterprise uses. As the design and unit yields have since evolved through detailed design and the planning process, this Addendum compares the Parent EIAR assumptions with the approved Phases 1 and 2 and proposed Phase 3 position, as described in detail in Chapter 1 and Chapter 2 of this Addendum EIAR.

The current design has evolved in tandem with the continuously evolving policy landscape in Ireland which has developed since the publication of the Park West-Cherry Orchard Local Area Plan in 2019, this is addressed in detail in Chapter 3 of this Addendum EIAR Report.

The currently Proposed Development is guided by established best-practice principles for high-quality urban design. As set out in the Architectural Design Statement prepared by vDA and submitted with the current application, the key Urban Design Principles are as follows:

1. **Key Urban Design Principle 1:** Delivering a clear urban boundary
2. **Key Urban Design Principle 2:** Strengthening of the civic plaza's public realm
3. **Key Urban Design Principle 3:** Strengthening links to Cherry Orchard Park
4. **Key Urban Design Principle 4:** Delivering Sustainable Homes

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The current Phase 3 Proposed Development is strategically located between the railway station and Cherry Orchard Park, a significant public amenity. The design has evolved in response to the site's relationship with Cherry Orchard Park and its regular, broadly square form, which provide favourable conditions for a sustainable and attractive apartment development.

Following a review of the site's location, shape and levels, together with its relationship to Park West Avenue, a 'perimeter block' approach evolved. The proposed development has been designed to ensure an appropriate relationship with surrounding residential development, achieving generous face-to-face separation distances of approximately 36-41m to the approved Phase 1 development, 38m to the existing Cedarbrook Apartments, and 37m to the existing dwellings at Barnville Park. These setbacks, together with the stepping of building heights, careful apartment and balcony layout, and compliance with the accompanying Daylight and Sunlight Assessment, ensure that residential amenity, privacy, outlook, and access to daylight and sunlight are appropriately protected within the context of the proposed development and subject site location. The introduction of parking beneath a landscaped podium unlocks the site's full potential, allowing for an efficient development layout while creating high-quality residential and communal spaces above.

The landscape design aims to contribute to healthy placemaking and is based upon community and sociability, connection with nature and healthy lifestyles. The proposed development will provide approximately 1,691 sq.m of public open space and 2,390 sq.m of communal open space, creating a high-quality landscape framework that supports recreation, biodiversity, active travel and community wellbeing. The public realm includes landscaped green links and open spaces that connect with the wider Cherry Orchard green infrastructure network, while the communal courtyard provides a range of resident amenities including seating areas, play space, community gardening opportunities and biodiversity-focused planting. Extensive tree planting, pollinator-friendly landscaping and nature-based SuDS measures are integrated throughout the scheme, contributing to climate resilience, ecological enhancement and the creation of a healthy, inclusive and sustainable neighbourhood.

A key consideration for the design evolution is variation in terms of building heights, form and materials in addition to tenure mix with social and affordable units. Variation in building height, form, texture and colour will further reinforce the architectural character of the development, create visual interest and a coherent identity while respondingp positively to the surrounding context.

4.3 Alternative Locations

The subject site is owned by Dublin City Council and is one of several undeveloped sites in the Park West-Cherry Orchard locale. The subject lands form part of a larger freehold title (DN798) held by Dublin City Council and constitutes Phase 3 of a four-phase development envisaged to deliver the objectives of the LAP with the LDA engaged to facilitate the progression of the current application.

There are 8 large development sites within the Park West-Cherry Orchard Local Area Plan that have been zoned for residential and/or mixed-use development. Five of these sites are owned (all, or the majority part thereof) by Dublin City Council and all 5 sites are available for development, which could be considered as suitable alternative locations for the proposed development.

The Proposed Development is for a medium to high density development on Site 5 of the Local Area Plan. The development is appropriate to the site in question and while consideration could be given to locating such a development elsewhere within the Local Area Plan lands or indeed elsewhere within the jurisdictional boundary of Dublin City Council, there is no material requirement to relocate the development given the identified need for additional housing supply.

The approval for Phase 1 and Phase 2, provides a level of certainty for the delivery of a mixed-use centre in the vicinity of the railway station. This will be the focal point of the development for Local Area Plan's Key Development Sites 4 and 5 and it is logical that the mixed-use centre, plus the future investment by Irish Rail into the upgrade of the railway service to DART.

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The proposed Phase 3 development on Site 5 comprises a mixed-use residential scheme incorporating local retail and commercial uses, together with high-quality landscaped public and communal open spaces. The development will also deliver a key pedestrian connection, namely the Barnville Link, which will provide direct access to the railway station and significantly enhance connectivity for both existing and future residents of the area.

The proposed DART+ South West Expansion Project, promoted by Irish Rail as part of the wider DART+ Programme, will deliver a significant upgrade to the existing rail network and should be supported by appropriately dense residential development inclusive of the Phase 3 development.

Due to the nature of the proposed development, and demand for similar large-scale residential development within the LAP lands, and across the city and county environs, there is no material requirement to consider an alternative location.

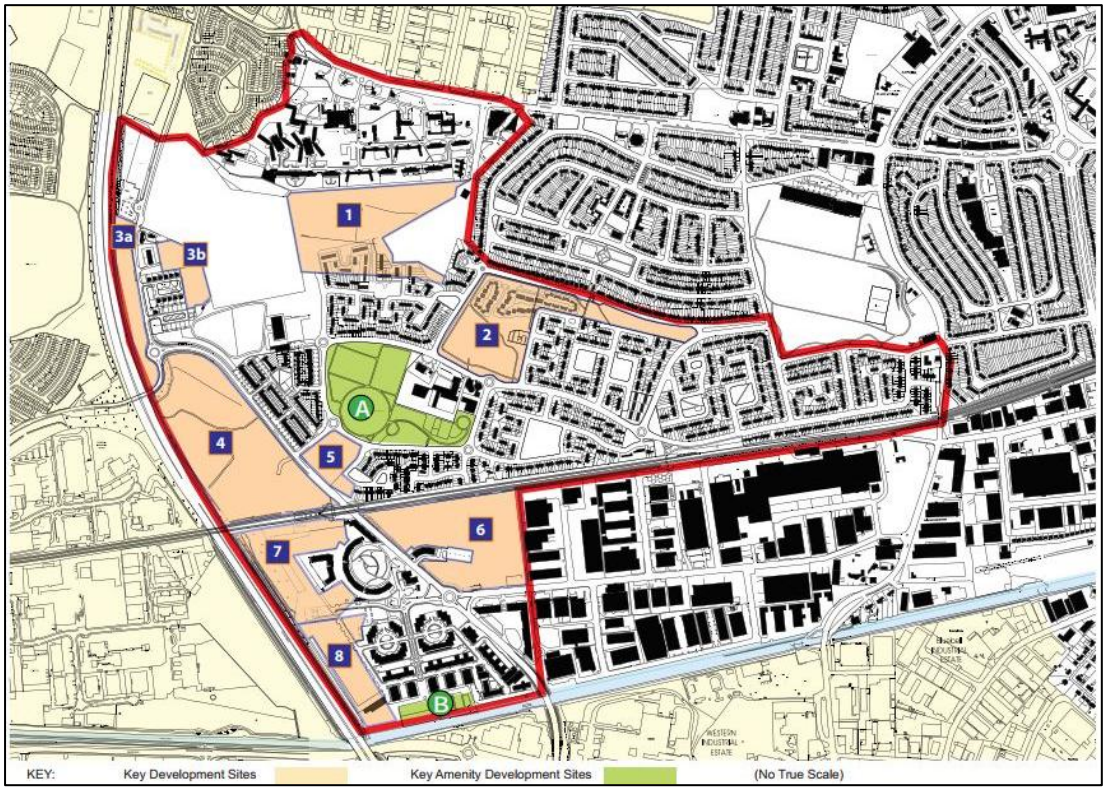


Figure 4-5 Extract from Park West-Cherry Orchard Local Area Plan 2019 (Key Development Sites)

4.4 Do Nothing Alternative

The 'Do-Nothing' alternative is not to progress the proposed development and to leave the site as it is.

'Doing-Nothing' would be an inefficient and unsustainable use of zoned and serviced lands, particularly ones that are owned by Dublin City Council.

The opportunity to deliver affordable, high-quality, N-ZEB homes beside excellent railway and bus connections, a future mixed-use centre and an improved public realm would be lost. The opportunity to provide the proposed Barnville Pedestrian link to the south of the subject site, connecting Cherry Orchard Park and Barnville Park with Parkwest Avenue and the associated benefits for mobility and permeability would not be realised.

This alternative scenario would be a setback for the existing and future residents of Cherry Orchard and Ballyfermot at a time of great housing need, and the existing community would continue with inadequate social infrastructure in a road-dominated environment. The subject stie is presently categorised by an enclosed green field which provides no amenity or leisure use to the surrounding area. The realisation

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of the Barnville Link for pedestrians will greatly improve the permeability of the site and encourage the use of public transportation.

The site is currently greenfield and is vulnerable to trespassers, vandalism and anti-social behaviour, which poses an ongoing source of concern for nearby residents and An Garda Síochána. The subject site is presently not performing in any capacity as it is entirely undeveloped greenfield land which is not accessible to the public.



Figure 4-6 View towards the southwest from Barnville Park showing view towards the Park West and Cherry Orchard Train Station



Figure 4-7 Existing photographs (1 photograph by architect, photograph 2 courtesy of google street view)

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Figure 4-8 Existing Site Photographs (courtesy of Sisk 'Evercam' Phase 1 tower crane mounted camera)

4.5 Alternative Land Uses

It is submitted that the Proposed Development is the appropriate use for the Subject Site given the zoning objective and associated vision as set out in the Development Plan, the specific site designation within the Local Area Plan and the overall site conditions.

The site is zoned under the Dublin City Development Plan 2022-2028 as Z14 Strategic Development and Regeneration Area (SDRA). SDRA's are sites considered to be capable of delivering significant quantities of homes and employment for the city, with an overarching framework and individual sets of guiding principles to promote the delivery of compact and sustainable growth under the headings of Architectural Design and Urban Design, Phasing, Access and Permeability, Height, Urban Greening and Biodiversity, Surface Water Management, Flood Risk, River Restoration, Sustainable Energy, Climate Change and Cultural Infrastructure.

In addition to the SDRA zoning, the subject site is located within the boundaries of a Local Area Plan zoning objective, and the Park West-Cherry Orchard Local Area Plan (LAP) which was adopted by the elected members in 2019 and extended until November 2029. The LAP addresses overall strategies relating to broad issues such as urban function, land use, access, movement, development, and 'place'. Site briefs for 8 key development sites are set out in the LAP, and the subject lands are located within Site 5 the "Barnville Site".

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Site 5: Barnville Site

Site Area:	**1.5Ha**
Ownership & Availability:	**Dublin City Council owned and available immediately**
Proposed Use:	**Mixed Use – Predominantly residential with options for local retail and commercial uses (c. 80/20 split)**
Density :	**100 – 125 DPH**
Heights:	**Ranging from 4-6 storeys up to 7-8 storeys**
Estimated Capacity	**150 -200 no. units subject to detailed design**
Supporting Infrastructure Requirements:	**Site to provide pedestrian access through site towards Train Station. Opportunity for civic space / civic plaza (subject to detailed design)**

Figure 4-9 Extract from park West Cherry Orchard Local Area Plan 2019 (Site Brief for Site 5)

Alternative land uses to *'Mixed Use: Predominantly Residential'*, such as *primarily*Commercial/Employment across the entire site, would be in direct contravention of the objectives of the SDRA and the LAP and are not a feasible design solution.

The full suite of Development Objectives for Site 5 has been considered as part of the current proposed design, and credible design solutions have been proposed to meet each stated objective.

The Proposed Development has been informed by a detailed assessment of the Cherry Orchard Local Area Plan (LAP) and the guidance for Site 5 cognisant of the site's strategic location adjacent to Park West and Cherry Orchard Railway Station, the wider regeneration objectives for Cherry Orchard Point, and the significant evolution of planning policy since the adoption of the LAP in 2019 (as extended). While the Site Brief identifies indicative development parameters of 4-8 storeys, residential densities of 100-125 units per hectare and a capacity of approximately 150-200 residential units, a review of the indicative site layout and massing strategy and proposed density strategy as per the Compact settlement guidelines and DCC Development Plan, that allows for a more intensive form of development than is reflected by the stated density and unit yield parameters in the LAP Site brief.

The proposed density of the final scheme, c. 200 UPH, is in line with the relevant density range outlined in the Dublin City Development Plan 2022-2028 for Strategic Development and Regeneration Areas (SDRAs). This uplift in proposed units proposed by the currently Proposed Development, comprising 312 units in comparison to the capacity range of 100-125 DPH outlined in the LAP, reflects the current national planning policy focus on the delivery of compact growth, transit-oriented development and the efficient use of serviced land within the built-up area of urban centres. The proposed scheme continues to deliver the key objectives of the LAP, including high-quality public realm, strategic pedestrian connectivity, a mix of residential and supporting uses, and the creation of a sustainable and well-integrated urban neighbourhood. Accordingly, the evolution of the design represents a refinement and optimisation of the LAP vision, responding to contemporary planning policy while remaining consistent with the overarching strategic objectives for the regeneration of Cherry Orchard.

The LAP's illustrative site layout and brief for Site 5 envisages a scale of development that is not fully reflected in the numerical guidance, with a disparity between the height specified in the Site 5 brief shown in Figure 4-9 and the indicative site layout and massing model shown in Figure 4-10. The proposed scheme resolves this disparity through a comprehensive design-led approach that realises the LAP's placemaking, urban design and regeneration objectives, whilst responding to the strategic direction of current national, regional and local planning policy in support of compact growth and sustainable development.

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4.6 Alternative Layouts & Design

4.6.1 Alternative A: Indicative Site Layout as per Local Area Plan

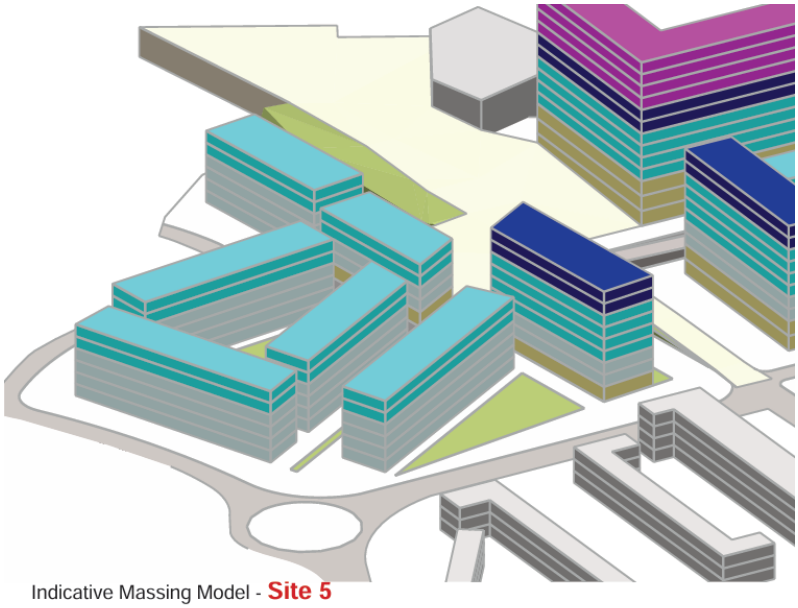
The Park West-Cherry Orchard Local Area Plan provides 'indicative' site layouts and massing models for each of the 8 key development sites.

The LAP's indicative site layout for Site 5 shows 6 no. 5-8 storey rectilinear blocks and 1 no. 9-10 storey blocks located to the southwest of the subject site facing onto Park West Avenue.

The execution of a very literal interpretation of the indicative LAP site layout was considered at the outset of the detailed scheme design but was deemed to be inappropriate or unfeasible on environmental grounds for the following reasons:

- Initial detailed design identified that quality place-making is best achieved with 'legible streetscapes', 'passive surveillance' and appropriate 'relationship to the site context' on all four sides of the site, Park West Ave, Cedar Brook Way, Cherry Orchard Park and Barnville Park. Alternative A was found to fail to achieve these goals in an optimal manner, and this was better achieved through the inclusion of a perimeter block to define the street edge.
- The perimeter block approach was found to improve access to high-quality Sunlight/daylight, serving external amenity space and the opportunity to best take advantage of Site levels at Park West Avenue to integrate car parking, bikes, bins and plant spaces.
- The indicative layout arranged 7 separate building blocks which by its nature did not embrace 'efficiency of design' when considering location of and number of stair cores, and LDA unit typologies.
- The context of the site in relation to the adjacent railway and the public park suggests a more compact and denser development would better fulfil the opportunity for delivery of cost-effective apartments in a perimeter block design.
- Pursuing a layout with separate blocks would lead us to identifying blocks by tenure, and the LDA would prefer to have a more integrated, tenure blind scheme.

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Indicative Massing Model - **Site 5**



Indicative Site Layout - **Site 5**

Key

- Existing Building
- 0-4 Storey Residential Building
- 5-8 Storey Residential Building
- 9-10 Storey Residential Building
- Landmark Building
- 0-4 Storey Commercial / Enterprise / Non Residential Use
- 5-8 Storey Commercial / Enterprise / Non Residential Use
- Public Plaza

Figure 4-10 Extract from Park West - Cherry Orchard Local Area Plan 2019 (Indicative Site Layout and Indicative Massing Model)

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4.6.2 Alternative B: Rectilinear Scheme

Based on the current policy landscape as guided by the LAP and DCC CDP, the initial design scheme comprised a geometry which promoted more legible streetscapes of separated blocks loosely arranged along the site's perimeter, establishing a new urban edge which responds to the surrounding context of Barnville Park and Cedarbrook. The details of the initial design scheme, Alternative B, are as follows and as indicated in Figure 4-11.

- Client brief was to achieve 254 no. units in line with the site potential for the Subject Site in line with the density ranges set within the National Planning Framework (NPF) and as set out in table 4-1 above.
- The blocks are arranged in a rectilinear format along the site's perimeter, establishing a new urban edge while responding to the surrounding context of Barnville Park and Cedarbrook.
- Gaps between blocks are considered to promote good sunlight to the scheme
- Completing the street edge along Park West Avenue and creating a new hub for Cherry Orchard.
- Site levels facilitate the idea of a centrally located on-grade car parking court.
- Standalone blocks would have different tenancies.

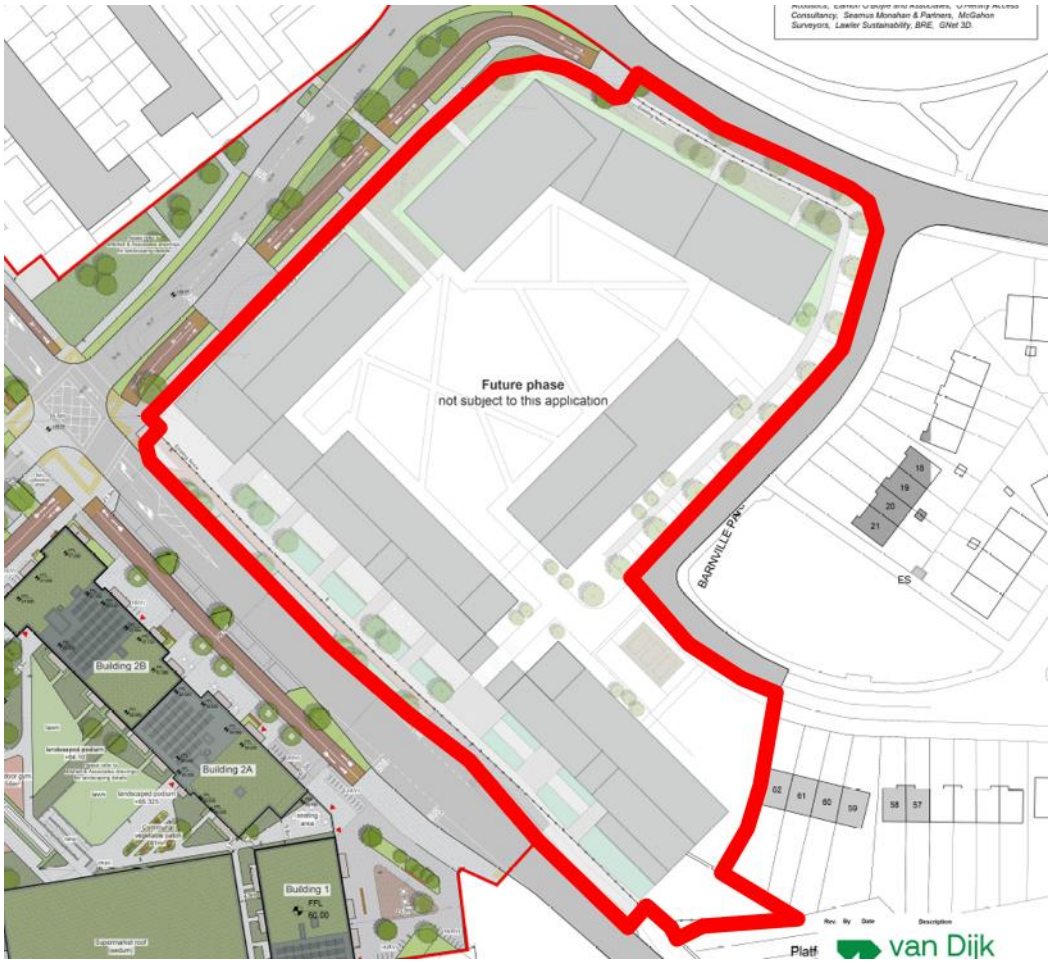


Figure 4-11 Alternative B: Rectilinear Scheme (Source: VDA/CCK) New pedestrian link between Park West Avenue and Barnville Park.

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As part of the design development process, careful consideration was given to the provision of the Barnville Link as included in the LAP and the introduction of a pedestrian connection to Park West & Cherry Orchard Railway Station.

Alternative B's approach of splitting residential blocks was decided against due to urban design and accessibility concerns. It was considered that the introduction of separate blocks would have resulted in inactive and potentially blank elevations facing the pedestrian route, creating a less attractive and potentially less safe environment.

Alternative B was considered to introduce challenges in accommodating the site's level changes, potentially introducing challenges for users with limited mobility. Furthermore, the layout of Alternative B was considered to result in a poor relationship between the Subject Site and Barnville Park with spaces created between buildings lacking a clear function or spatial coherence when assessed through three-dimensional modelling.

By creating a perimeter block, this freed up space in the centre of the site, allowing for a more meaningful Communal open space.

4.6.3 Alternative C: Perimeter Block

Following on from the initial design option, an alternative design scheme which further evolves from the initial rectilinear format to a more consolidated scheme was explored in light of the policy context as informed by the DCC Development Plan and compact settlement guidelines (see Figure 4-12). The proposed design for the scheme was then revised and proposed increase in 275 no. units and provided the following:

- The blocks are arranged in a perimeter block format along the site's perimeter, better use, establishing a new urban edge while responding to the surrounding context of Barnville Park and Cedarbrook.
- There were found to be ongoing issues for sunlight access between buildings blocks.
- The blocks along Park West Avenue are proposed as the tallest, reaching six storeys. The corner block at the junction will serve as a feature building, reflecting the design approach established in Phase 1.
- A Podium was added to the centralised area above parking to provide communal open space for the residents. Half of the blocks would have direct access onto the podium

The Alternative C Perimeter Block design was ruled out for the following reasons:

- The LAP allowed for 9-10 storey at the corner of the junction, and we were not achieving this indicative height. Additionally, it was desired for the corner feature building to reflect the massing proportions and design to the feature building across the road in Phase 1A.
- The communal open space at ground level would be overshadowed by the podium structure.
- The increased car parking provision required as per the high-density design scheme would necessitate additional car parking provision, which had to be accommodated for in the centralised area where the grade level community open space is located and diminish the use of the space.
- The childcare capacity required for this phase will be accommodated within the crèche currently under construction as part of Phase 1 (Site 4), which will be delivered in advance of the proposed scheme. Thus, allowed for further adjustments to the proposed scheme.

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Figure 4-12 Alternative C: Perimeter Block (Source: VDA/CCK)

4.6.4 Alternative D: Evolving Scheme

The evolving scheme for the subject lands addressed various issues that arose during the design process. The urban framework plan was broadly unchanged from the earliest design sketches, following the same principles:

- The density of the development was increased to 312 no. units in line with the evolving national policy landscape and focus on the delivery of housing at pace at suitable locations as per the DCC CDP and the Compact Settlement Guidelines.
- The gap in the block along Cedarbrook Way has been infilled, and a step has been introduced in the elevation to increase the width of the adjacent public open space

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- The southern block has been reconfigured with a cranked form, creating a new plaza along Park West Avenue. This new public space is designed to function as an extension of the plaza located opposite the site at the train station.
- The podium extended to cover the entire centralised area, with the community open space now located on the podium

Design proposals that required additional attention:

- All blocks must have direct access onto the communal open space on the podium level. The southern block has no direct access to the communal open space.
- It was concluded that the additional plaza and the cranked southern block did not provide a suitable building edge along Park West Avenue. Instead, a linear plaza along the entire northern side of Park West Avenue felt more appropriate.
- The gap in the blocks created by the pedestrian link between Park West Avenue and Barnville to be relocated. Eliminating these gaps along Park West Avenue creates a stronger, more continuous street edge while maintaining the same urban design language established in the Phase 1 development across Park West Avenue.



Figure 4-13 Alternative D: Evolving Design Solution

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4.6.5 Final Scheme

The final and preferred design solution complies with:

(i) The intention of the Site Briefs and Development Objectives set out in Chapter 5 of the Local Area Plan;
(ii) the Developer's brief for cost rental and social housing; and
(iii) the policies and objectives of the Sustainable Residential Development and Compact Settlements Guidelines.

Density

The proposed density of 200 UPH is acknowledged to exceed the indicative density range of 100-125 UPH stated for Site 5 in the Park West Cherry Orchard Local Area Plan (LAP). However, the subject site forms part of the overall development scheme at Cherry Orchard Point, reference should also be made to he approved Phase 1 application has a net density of 145 uph and approved Phase 2 application which has a density of 40uph. Collectively, the consented phases together with proposed scheme will deliver an overall density of approximately 118 uph (net density) and are consistent with both the Cherry Orchard Local Area Plan and the Sustainable and Compact Settlements Guidelines for Planning Authorities.

The proposed Phase 3 development seeks to optimise the development potential of a highly accessible site within the Park West-Cherry Orchard Strategic Development and Regeneration Area (SDRA). The site is located immediately adjacent to Park West & Cherry Orchard Railway Station and is therefore capable of accommodating a higher density of development consistent with national and local policy objectives promoting compact growth and transit-oriented development. The Park West-Cherry Orchard LAP remains the operative statutory local area plan and has been extended to November 2029. The later Compact Settlement Guidelines revised National Planning Framework and Dublin City Development Plan provide an updated policy context that must be considered alongside the LAP. These documents support the efficient use of highly accessible urban land while requiring an appropriate response to site context, infrastructure capacity, environmental effects and quality of place.

Regarding density, Figure 4-14 illustrates the indicative density levels across the LAP area as follows:

- Higher density areas (in excess of 100 units/ha) located within the immediate vicinity of the train station.
- Medium density areas (50-100 units/ha) are located within a c. 500 metre catchment of the train station.
- Lower density areas (up to 50 units/ha) are located further from the train station. Here lower densities are reflective of the need to integrate with adjoining low-density housing developments, and/or the desire to provide for “kick-start” housing

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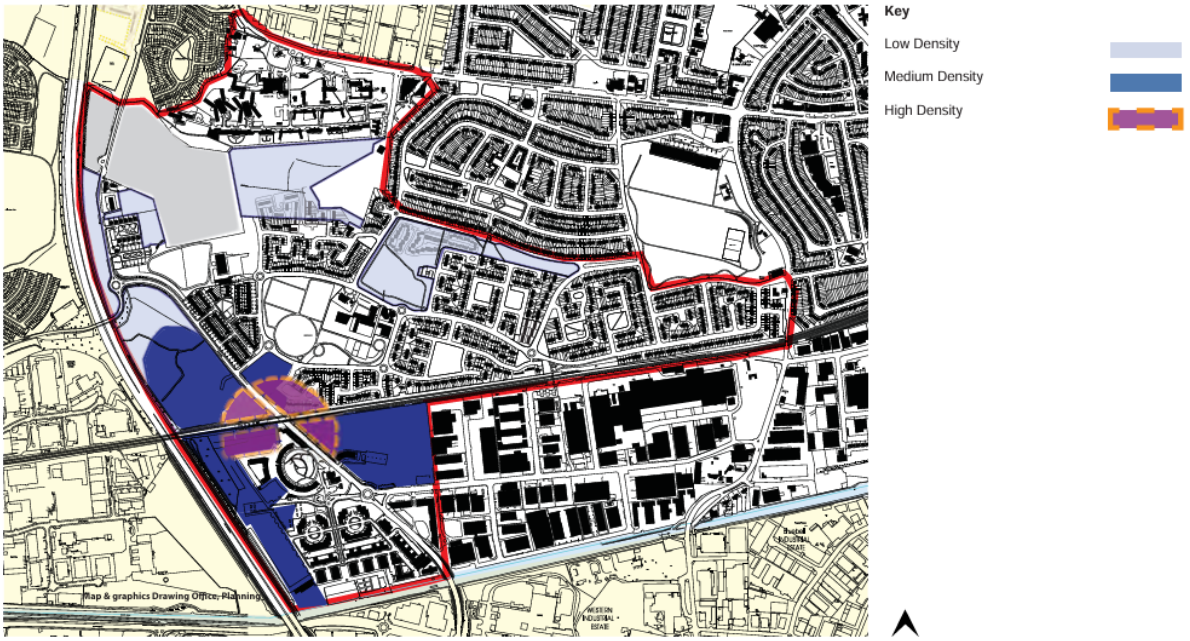


Figure 4-14 Proposed Density Strategy (Source: Park West Cherry Orchard Local Area Plan 2019)

Table 4-1 below identifies the relevant density ranges for the Subject Site as provided by the following three policy documents (as discussed in Section 8.1.5 and 8.4.3 of the Planning report):

- Park West Cherry Orchard Local Area Plan 2019 (LAP)
- Dublin City Development Plan 2022-2028 (DCC CDP)
- Sustainable Residential Development and Compact Settlement Guidelines 2024 (SRDCSGs)

Table 4-2 Density Range Comparison

Current Proposal	LAP	DCC CDP	SRDCSGs
200 UPH	50-100 UPH (Medium) In excess of 100 UPH)	100-250 UPH	50-250 UPH

The compact guidelines identify an appropriate net residential density range of 50 UPH to 250 UPH for the Subject Site, defined as a *'City - Urban Neighbourhood'* site due to its highly accessible urban location. Furthermore, Appendix 3 of the Dublin City Development Plan 2022-2028 identifies a density range of 100-250 UPH for Strategic Development and Regeneration Areas (SDRAs). As the subject site is located within SDRA 4 (Park West-Cherry Orchard), the proposed density is fully consistent with the density parameters established by the Development Plan. Having regard to the location of the site adjacent Park West and Cherry Orchard Railway Station, with its exceptional accessibility by existing and planned public transportation, the final scheme as proposed is aligned to the Sustainable Residential Development and Compact Settlements Guidelines (2024), the Dublin City Development Plan 2022-2028 and, when contextualised within the wider Cherry Orchard Point, the LAP. It is submitted that the proposed density represents an appropriate and sustainable pattern submitted of development.

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Height

The proposed development comprises 312 no. residential apartment units across 7 apartment blocks (Core A-G) ranging in height from 4 to 10 Floors which includes 4 to 9 storeys along with parking storey. Having regard to the site's varying topography and level changes, the scheme has been carefully designed in accordance with the height strategy set out in the LAP. The proposed height strategy follows the transition principles established for the site and reflects the built-form hierarchy illustrated within the LAP indicative layout. This approach facilitates an appropriate integration with the surrounding urban context, provides a coherent transition in scale across the development, and avoids abrupt changes in building height or massing.

Core C forms the tallest element of the scheme, reaching an overall height of c. 32m, comprises 3 to 9 storeys over a parking storey, responding appropriately to site topography and level changes. Core C is strategically positioned at the junction of Cedar Brook Way and Park West Avenue. Active frontage is provided through retail and commercial uses at ground-floor level within the south-western portion of the site, adjacent to the railway station and principal public transport infrastructure. Overall, the proposed building heights are consistent with the prevailing height framework envisaged by the LAP and the Dublin City Development Plan building height strategy, as set out in Section 3.1 of Appendix 3.

Therefore, the proposed height strategy should be considered in the context of significant changes in the national and local planning policy environment since the adoption of the LAP in 2019 (as extended). The revised National Planning Framework, Compact Settlement Guidelines and the Dublin City Development Plan all place greater emphasis on optimising residential development within highly accessible urban locations, particularly those within walking distance of rail infrastructure and strategic transport investment. The application site represents one of the most sustainable development locations within the Cherry Orchard area and is therefore capable of accommodating an enhanced scale of development consistent with these objectives. Having regard to the strategic context of SDRA 4, the site's immediate proximity to Park West & Cherry Orchard Railway Station, the objectives of the Park West Cherry Orchard LAP 2019, and the guidance contained within Appendix 3 of the Dublin City Development Plan 2022-2028, the proposed building heights of 4 to 10 Floors are considered appropriate and justified.

Capacity

The Proposal under Phase 3, which is the subject of this planning application will deliver 312 units on part of the Site 5. This is resulting in a higher quantum of housing than that projected in the LAP. However, it is submitted that given its SDRA designation and locational context next to a Bus and Rail corridor with future upgrades envisaged for both, the proposal would be considered appropriate, can easily integrate within the existing infrastructure, and support future growth while ensuring that suitable physical, social, and community infrastructure is provided in tandem with the residential development.

The final scheme’s response to intent and vision of the LAP regarding land use, density, and building height parameters has been outlined above with clear reference to the evolving policy and site context since the LAP’s adoption in 2019. The scheme also delivers the Developer's preferred unit mix and apartment typologies at a sustainable and efficient residential density of 181.4 units per hectare (Gross density).

The Phase 3 proposal provides a diverse range of apartment typologies, including own-door access apartments at ground-floor level, offering variety and choice for future residents. Local retail and commercial uses are concentrated along Park West Avenue, creating an active street frontage. The layout establishes a green link between Phase 1 and New Cherry Orchard Park, while also introducing a new pedestrian connection from the area in front of the train station to Barnville Park. The scale and height of the buildings have been designed in response to the surrounding context, including Cedarbrook Way, Barnville Park, the approved Phase 1 development currently under construction and approved Phase 2. The final proposed site layout is shown in Figure 4-15.

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Figure 4-15 Final Phase 3 Scheme, Proposed Site Layout Plan (Source: VDA/CCK)

The preferred scheme was selected because it provides the most balanced response to the project's objectives and environmental constraints. The perimeter-block arrangement establishes active and well-overlooked edges, accommodates the site's level changes, consolidates parking and servicing, provides a substantial communal amenity space, delivers the Barnville Link and concentrates greater height towards the railway station. The relevant environmental effects of the preferred scheme are assessed in the topic chapters of this Addendum.

The Subject Site conditions are well positioned to support residential development and apartment dwellings. The site is bounded by established residential areas to the north and southern boundary, with green space located to the east and an established thoroughfare to the west. Public facilities including a new supermarket under construction as part of Cherry Orchard Point Phase 1.

The Subject Site is well positioned to support the principles of transit-oriented development with Park West and Cherry Orchard Railway Station located to the south with well-established rail connectivity. Park West and Cherry Orchard Railway Station provides approximately 9-11 minutes to Heuston Station and 40-45 minutes to Grand Canal Dock.

Together, these features provide the site with excellent access to public transport, local amenities, open space and established residential communities, making it a highly suitable location for sustainable, higher-density apartment development.

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It is submitted that the final scheme addresses the issues identified through the assessment of the alternative design options and represents the optimum design solution for the Phase 3 development.

Table 4-3 Final Scheme Rationale

Final Scheme Rationale	
Commentary and Consideration	**Environmental Considerations**
A literal interpretation of the LAP layout has issues place making, lack of legible streetscapes and inappropriate relationship to the site context. A continuous perimeter block stepping in mass responding the neighbouring context. The pedestrian link is located to the southern corner of the site, which provides a separation from the southern block and 62 Barnville Park. This location also better aligns with the train station and Plaza across the Park West Avenue Road. Opportunities exist to develop a detailed scheme design that meets the LAP Site Brief objectives and address these issues, particularly since the publication of the Sustainable Residential and Development Compact Settlements, Guidelines for Planning Authorities (the Compact Guidelines).	• New pedestrian link provides improved pedestrian access to the train station Barnville Park. • The proposed public open space beside Barnville Park acts as an extension of the existing public open space in Barnville Park. • Improved green link between Park West Avenue and Cherry Orchard Park. • Active frontage around the full perimeter of the development with commercial / local retail on Park West Avenue, and own door access units on ground floor along Cedar Brook Way, Cherry Orchard Park and Barnville Park.

4.6.6 Summary of Alternatives Considered

Table 4-4 Summary of Alternatives Considered

Alternative	Commentary and Consideration	Environmental Considerations
Alternative A: Indicative Site Layout as per Local Area Plan	A very literal interpretation of the LAP layout raises concerns around place-making and the provision of high-quality external spaces. The resulting block configuration may also be unsuitable for achieving appropriate levels of daylight and sunlight. Opportunities exist to develop a detailed scheme design that meets the LAP Site Brief objectives and address these issues, particularly since the publication of the Sustainable Residential and Development Compact Settlements, Guidelines for Planning Authorities (the Compact Guidelines).	• Compliance issues with DMURS and Compact Settlement Guidelines • Public/communal amenity spaces overshadowed • Implementation of safe and well-overlooked green routes as per LAP Development Strategy.
Alternative B:	A perimeter block does appear to work best for the site, however adding a pedestrian link and gaps in the blocks	• The delivery of a lower-density scheme would not provide the critical mass necessary to support existing and

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Rectilinear Scheme	would result in negative outcomes regarding blank elevations and lack of passive surveillance.	planned public transport infrastructure, including rail and quality bus services. Given the site's proximity to frequent public transport links, a lower-density form of development would constitute an inefficient use of appropriately zoned and serviced lands. • Quality communal open space located in the centre of the scheme sacrificed for car parking. • Multiple gaps in the perimeter blocks would result in blank elevations with a lack of passive surveillance
Alternative C: Perimeter Block	Although a proposal to evolve from medium to higher overall density was implemented, the massing proportions, particularly at the junction corner, were considered inconsistent with the requirements of the LAP. The introduction of a podium within the central area of the site also overshadowed the northern section of the communal open space, reducing its overall quality and amenity value.	• The application of high-density blocks would be homogenous and potentially over-bearing on the existing surrounding neighbourhoods. • The proposed communal open space would be adversely affected by the proposed design. Overshadowing from the podium structure would reduce sunlight access, while the increased car parking requirements associated with the higher-density scheme would necessitate the use of centrally located areas for car parking, resulting in a reduction in both the extent and functionality of the communal open space. • High-density blocks do not provide the fine-grained and active frontage that high-quality medium-density own-door units create. However own-door access units have been introduced where appropriate.
Alternative D: Evolving Scheme	The evolving options for the site development plan addressed issues raised by both the Client and Local Authority during the design process. The principles of the scheme were established subject to the finalisation of certain details, mostly concerned with determining the location of the pedestrian link, massing of blocks in relation to existing neighbouring residential developments and optimum dwelling mix for an affordable scheme.	• The additional plaza to the south of the site weakened the streetscape and reduced the sense of arrival to ‘Park West Avenue’. • The location of the pedestrian link created and additional unnecessary gap along Park West Avenue.

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4.7 References

Dublin City Development Plan 2022-2028

Park West – Cherry Orchard Local Area Plan 2019 (as extended to 2029)

Sustainable Residential and Development Compact Settlements, Guidelines for Planning Authorities (2024)

Design Standards for Apartments, Guidelines for Planning Authorities (2025)

Design Manual for Urban Roads and Streets (DMURS)

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5 Air Quality

5.1 Introduction

This chapter assesses the likely air quality impacts associated with the proposed development Cherry Orchard Point Phase 3 on lands at Park West Avenue, Cherry Orchard, Co. Dublin. This report assesses the baseline air quality conditions at the site and evaluates the potential effects of the proposed development's construction and operation. Where required, appropriate mitigation measures to limit any identified likely significant adverse impacts to air quality are recommended.

A full description of the development is available in Chapter 1. This chapter should be read in conjunction with Chapter 14 – Material Assets (Traffic and Transport) submitted with the planning application.

This chapter was prepared by Tanmay Gojamgunde. Tanmay is an Environmental Consultant in the Air Quality & Climate section of AWN Consulting, a Trinity Consultants Company. He is an Associate Member the Institution of Environmental Sciences (AMIEnvSc). He has experience in the field of air quality and holds both a MSc in Air Pollution Management and Control from the University of Birmingham and BTech in Environmental Engineering. Tanmay has contributed to several key environmental projects in Ireland, air quality monitoring programs, air quality and traffic planning assessments and Environmental Impact Assessment Report (EIARs). He also specialises in conducting air dispersion modelling assessments of emissions, emission inventories, R programming and knowledge extending to broader aspects of environmental engineering. He has prepared air quality and climate impact assessments as part of EIARs for several residential developments some of which include Ennis LRD (Planning Application Ref. 17495), Cherrywood M1 Phase 2A LRD (Planning Application Ref DZ22A/0017), Maglin LRD (Planning Application Ref. LRD 2544222). He has also prepared air dispersion modelling assessments of emissions as part of EPA Industrial Emissions Licences.

This chapter was also prepared by Dr. Jovanna Arndt. Dr. Jovanna Arndt is a Principal Environmental Consultant in the Air Quality & Climate section of AWN Consulting. She has been specialising in the area of air quality and climate over 9 years and has prepared air quality and climate assessments for inclusion within EIARs for residential developments such as Twenties Lane (Planning Application Ref: 22713), Cherrywood T13 (Planning Application Ref: DZ23A/0028), Corballis Donabate LRD (Planning Application Ref: LRD0017/S3), commercial and industrial developments by Dublin Airport Authority, Zoetis, Ipsen, Merck Millipore, Greener Ideas Limited and Abbvie, as well as renewable energy developments such as Codling Wind Park and the Cúil Na Móna Anaerobic Digestion Facility. She also specialises in assessing air quality impacts using air dispersion modelling of transportation schemes such as BusConnects Dublin, major Highways England Road schemes and major rail infrastructure in the form of High Speed 2 (HS2 in the UK). She has prepared air dispersion modelling assessments of emissions from data centres, energy centres and the chemical industry as part of EPA Industrial Emissions Licences for Microsoft, Greener Ideas Limited, Merck Millipore, Lilly Limerick, Chemifloc, Takeda, Kingspan and Kilshane Energy. She has also provided Air Quality Action Plan (AQAP) and Air Quality Management Area (AQMA) support to several UK councils and assessed the air quality impacts of potential Clean Air Zones in the UK

5.2 Methodology

5.2.1 Relevant Legislation & Guidance

The principal guidance and best practice documents used to inform the assessment of potential impacts on air quality are summarised below.

- Guidance on the Assessment of Dust from Demolition and Construction v2.2 (Institute of Air Quality Management [IAQM] (hereafter referred to as the IAQM Guidelines) (IAQM, 2024);

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- A Guide To The Assessment Of Air Quality Impacts On Designated Nature Conservation Sites (Version 1.1) (IAQM, 2020); and
- PE-ENV-01106: Air Quality Assessment of Specified Infrastructure Projects (Transport Infrastructure Ireland [TII], 2025).
- In addition to specific air quality guidance documents, the following guidelines were considered and consulted in the preparation of this chapter:
- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (hereafter referred to as the Environmental Protection Agency (EPA) Guidelines) (EPA, 2022);
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning & Local Government, 2018); and
- Environmental Impact Assessment (EIA) Directive Guidance on the Preparation

5.2.2 Criteria for rating impacts

5.2.2.1 Ambient Air Quality Standards

National and European statutory bodies, the Department of the Environment, Heritage and Local Government in Ireland and the European Parliament and Council of the European Union, have set limit values in ambient air for a range of air pollutants to reduce the risk to health from poor air quality. These limit values or *"Air Quality Standards"* are health or environmental-based levels for which additional factors may be considered. For example, natural background levels, environmental conditions and socio-economic factors may all play a part in the limit value which is set.

Air quality significance criteria are assessed on the basis of compliance with the appropriate standards or limit values. The applicable standards in Ireland are set out in Directive (EU) 2024/2881 *of the European Parliament and of the Council of 23 October 2024 on ambient air quality and cleaner air for Europe (recast)*. This directive supersedes EU Directive 2008/50/EC *of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe* (CAFE Directive). It sets out new air quality standards for pollutants to be reached by 2026 and by 2030 0.

The Ambient Air Quality Standards Regulations 2022 (S.I. 739 of 2022) (the Air Quality Standards Regulations 2022) further transposed the CAFE Directive and revoked the Air Quality Standards Regulations 2011, as amended. With the adoption of Directive (EU) 2024/2881, Ireland must similarly transpose this directive into national law within the statutory two-year period, i.e. update the Air Quality Standards Regulations, before December 2026.

The ambient air quality limit values for pollutants are set out in Annex I of Directive (EU) 2024/2881. Table 1 of Annex I in Directive (EU) 2024/2881 sets out the updated air quality limit values for pollutants to be achieved by 1 January 2030, these are more closely aligned with the Interim Target 4 of the 2021 WHO air quality guidelines. Table 2 of Annex I in Directive (EU) 2024/2881 sets out the limit values for air pollutants which are to be achieved by 11 December 2026 and are also applicable up to 2030. The limit values in Table 2 of Annex I are the same as the limits set under Directive 2008/50/EC and the Air Quality Standards Regulations 2022.

In relation to the proposed development, the applicable limit values are for nitrogen dioxide (NO_2) and particulate matter (PM_{10} and $PM_{2.5}$). Table 5-1 outlines the limit values pre-2030 and post-2030 for the specified pollutants. For the purposes of this assessment the post-2030 limit values set out in Table 5.1 of Annex I of Directive (EU) 2024/2881 have been applied. This is in line with the TII PE-ENV-01106 guidance (2025) and ensures a conservative approach to the assessment.

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Table 5-1 Ambient Air Quality Limit Values

Pollutant	Directive (EU) 2024/2881 Annex I Table 2		Directive (EU) 2024/2881 Annex I Table 1	
	Limit Type	**Limit Value (to be attained by 2026 and applicable until 2030)**	**Limit Type**	**Limit Value (to be attained by 2030)**
Nitrogen Dioxide (NO_2)	Hourly limit for protection of human health - not to be exceeded more than 18 times/year	200 µg/m^3	Hourly limit for protection of human health - not to be exceeded more than 3 times/year	200 µg/m^3
	N/A	N/A	24-hour limit for protection of human health - not to be exceeded more than 18 times/year	50 µg/m^3
	Annual limit for protection of human health	40 µg/m^3	Annual limit for protection of human health	20 µg/m^3
NO_X	Annual limit for protection of vegetation	30 µg/m^3	Annual limit for protection of vegetation	30 µg/m^3
Particulate Matter (as PM_{10})	24-hour limit for protection of human health - not to be exceeded more than 35 times/year	50 µg/m^3	24-hour limit for protection of human health - not to be exceeded more than 18 times/year	45 µg/m^3
	Annual limit for protection of human health	40 µg/m^3	Annual limit for protection of human health	20 µg/m^3
Particulate Matter (as $PM_{2.5}$)	N/A	N/A	24-hour limit for protection of human health - not to be exceeded more than 18 times/year	25 µg/m^3
	Annual limit for protection of human health	25 µg/m^3	Annual limit for protection of human health	10 µg/m^3

5.2.2.2 WHO Air Quality Guidelines & Clean Air Strategy

In April 2023, the Government of Ireland published the *Clean Air Strategy for Ireland* (Government of Ireland, 2023), which provides a high-level strategic policy framework needed to reduce air pollution. The strategy commits Ireland to achieving the 2021 WHO Air Quality Guidelines Interim Target 3 (IT3) by 2026, the IT4 targets by 2030 and the final targets by 2040 (Table 5-2). The strategy notes that a significant number of EPA monitoring stations observed air pollution levels in 2021 above the WHO targets; 80% of these stations would fail to meet the final $PM_{2.5}$ target of 5 µg/m^3. The strategy also acknowledges that "*meeting the WHO targets will be challenging and will require legislative and societal change, especially with regard to both $PM_{2.5}$ and NO_2*".

Annex II of Directive (EU) 2024/2881 gives assessment thresholds which align with the clean air strategy final 2040 WHO targets. Directive (EU) 2024/2881 states that *"Member States shall endeavour*

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to achieve and preserve the best ambient air quality and a high level of protection of human health and the environment, with the aim of achieving a zero-pollution objective as referred to in Article 1(1), in line with WHO recommendations, and below the assessment thresholds laid down in Annex II."

These assessment thresholds relate to monitoring of ambient air quality by Member States, where "*exceedances of the assessment thresholds specified in Annex II shall be determined on the basis of concentrations during the previous 5 years where sufficient data are available. An assessment threshold shall be deemed to have been exceeded if it has been exceeded during at least 3 separate years out of those previous 5 years.*"

Table 5-2 WHO Air Quality Guidelines 2021

Pollutant	Limit Type	IT3 (2026)	IT4 (2030)	Final Target (2040)
NO_2	24-hour limit for protection of human health	-	-	25 µg/m^3
	Annual limit for protection of human health	20 µg/m^3	-	10 µg/m^3
PM (as PM_{10})	24-hour limit for protection of human health	75 µg/m^3	50 µg/m^3	45 µg/m^3
	Annual limit for protection of human health	30 µg/m^3	20 µg/m^3	15 µg/m^3
PM (as $PM_{2.5}$)	24-hour limit for protection of human health	37.5 µg/m^3	25 µg/m^3	15 µg/m^3
	Annual limit for protection of human health	15 µg/m^3	10 µg/m^3	5 µg/m^3

The applicable air quality limit values for the purposes of this assessment are those set out in Table 5-2.

5.2.2.3 Dust Deposition Guidelines

The concern from a health perspective is focused on particles of dust that are less than 10 microns (PM_{10}) and less than 2.5 microns ($PM_{2.5}$). The EU ambient air quality standards outlined in Table 5-1 have set ambient air quality limit values for PM_{10} and $PM_{2.5}$.

With regards to larger dust particles that can give rise to nuisance dust, there are no statutory guidelines regarding the maximum dust deposition levels that may be generated during the construction phase of a development in Ireland. Furthermore, no specific criteria have been stipulated for nuisance dust in respect of this development.

With regard to dust deposition, the German TA-Luft standard for dust deposition (non-hazardous dust) (German VDI, 2002) sets a maximum permissible emission level for dust deposition of 350 mg/m^2/day averaged over a one-year period at any receptors outside the site boundary. The TA-Luft standard has been applied for the purpose of this assessment based on recommendations from the EPA in Ireland in the document titled *Environmental Management Guidelines - Environmental Management in the Extractive Industry (Non-Scheduled Minerals)* (EPA, 2006). The document recommends that the TA-Luft limit of 350 mg/m^2/day be applied to the site boundary of quarries. This limit value can be implemented with regard to dust impacts from construction of the proposed development.

5.2.2.4 Air Quality Significance Criteria

The Transport Infrastructure Ireland (TII) guidance document *Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106* (TII, 2025) details a methodology for determining air quality impact significance criteria for road schemes which can be applied to any project that causes a change in traffic. The degree of impact is determined based on the percentage change in pollutant concentrations relative to the Do Nothing scenario. The TII significance criteria are outlined in Table 4.9 of *Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106* (TII, 2025) and reproduced in Table 5-3 below. These criteria have been adopted for the proposed development to predict the impact of NO_2, PM_{10} and $PM_{2.5}$ emissions as a result of the proposed development.

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Table 5-3 Air Quality & Traffic Significance Criteria

Long-term average concentration at receptor in assessment year	**% Change in concentration relative to Air Quality Limit Value (AQLV)**			
	1%	**2-5%**	**6-10%**	**>10%**
75% or less of AQLV	Neutral	Neutral	Slight	Moderate
76 – 94% of AQLV	Neutral	Slight	Moderate	Moderate
95 – 102% of AQLV	Slight	Moderate	Moderate	Substantial
103 – 109% of AQLV	Moderate	Moderate	Substantial	Substantial
110% or more of AQLV	Moderate	Substantial	Substantial	Substantial

As per Table 5-3 a neutral effect is one where a change in concentration at a receptor is:

- 5% or less where the Opening Year, without the proposed development, annual mean concentration is 75% or less of the standard; or
- 1% or less where the Opening Year, without the proposed development, annual mean concentration is 94% or less of the standard.

Where an effect does not meet the criteria for neutral, as described above, the effect can either be positive or negative. The TII guidance (TII, 2025) states that "*the evaluation of significance of effects for the operational phase should be undertaken for the Opening Year only as the Design Year is likely to show lower total pollutant concentrations and changes in concentration*" (TII, 2025).

Non-significant effects (i.e. of local importance only) are 'neutral' or 'slight' changes in concentrations while significant effects can be changes in pollutant concentrations that are either 'moderate' or 'substantial'. However, the TII guidance (TII, 2025) states that these must be considered in the context of the project and 'moderate' or 'substantial' increases are not necessarily always significant effects.

The impact descriptors in Table 5-3 are used to describe the impact at each modelled receptor location, and the significance of the impacts is then determined, aligning with the terminology in the EPA guidelines (EPA, 2022). Whilst it may be determined that there are 'slight', 'moderate' or 'substantial' impacts at one or more receptors, an overall judgement should be made of whether the proposed development is 'significant' or 'not significant' in terms of air quality. Factors to consider when determining the overall significance of a proposed development are provided in Table 4.10 of the TII guidance (TII, 2025).

5.2.3 Construction Phase

5.2.3.1 Construction Dust Assessment

The Institute of Air Quality Management in the UK (IAQM) guidance document '*Guidance on the Assessment of Dust from Demolition and Construction*' (IAQM, 2024) outlines an assessment method for predicting the impact of dust emissions from construction activities based on the scale and nature of the works and the sensitivity of the area to dust impacts. The IAQM methodology has been applied to the construction phase of this development to predict the likely risk of dust impacts in the absence of mitigation measures and to determine the level of site-specific mitigation required. The use of UK guidance is recommended by Transport Infrastructure Ireland in their guidance document *Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106* (TII, 2025).

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The major dust generating activities are divided into four types within the IAQM guidance (IAQM, 2024) to reflect their different potential impacts. These are:

- Demolition;
- Earthworks;
- Construction; and
- Trackout (transport of dust and dirt from the construction site onto the public road network).

The magnitude of each of the four categories is divided into large, medium or small scale depending on the nature of the activities involved. The criteria for determining the category for the works involved are outlined in Table 5-4, these are based on the IAQM guidance (IAQM, 2024). The magnitude of each activity is combined with the overall sensitivity of the area to determine the risk of dust impacts from site activities. This allows the level of site-specific mitigation to be determined.

Table 5-4 IAQM Criteria to Determine Dust Emissions Magnitude

Small	Medium	Large
Demolition		
• Total building volume <12,000 m^3 • Construction material with low potential for dust release (e.g. metal cladding or timber) • Demolition activities < 6 m above ground • Demolition during wetter months	• Total building volume 12,000 - 75,000 m^3 • Potentially dusty construction material • Demolition activities 6 – 12 m above ground level	• Total building volume >75,000 m^3 • Potentially dusty construction material (e.g. concrete) • On-site crushing and screening • Demolition activities >12 m above ground level
Earthworks		
• Total site area < 18,000 m^2 • Soil type with large grain size (e.g. sand) • <5 heavy earth moving vehicles active at any one time • Formation of bunds <3 m in height • Earthworks during wetter months	• Total site area 18,000 - 110,000 m^2 • Moderately dusty soil type (e.g. silt) • 5– 10 heavy earth moving vehicles active at any one time • Formation of bunds 3 – 6 m in height	• Total site area >110,000 m^2 • Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size) • >10 heavy earth moving vehicles active at any one time • Formation of bunds > 6 m in height
Construction		
• Total building volume <12,000 m^3 • Construction material with low potential for dust release (e.g. metal cladding or timber)	• Total building volume 12,000 - 75,000 m^3 • Potentially dusty construction material (e.g. concrete) • On-site concrete batching	• Total building volume >75,000 m^3 • On-site concrete batching • Sandblasting

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Small	Medium	Large
Trackout (Truck Movements)		
• <20 HDV (>3.5 t) outward movements in any one day • Surface material with low potential for dust release • Unpaved road length <50 m	• 20 – 50 HDV (>3.5 t) outward movements in any one day • Moderately dusty surface material (e.g. high clay content) • Unpaved road length 50 – 100 m	• >50 HDV (>3.5 t) outward movements in any one day • Potentially dusty surface material (e.g. high clay content) • Unpaved road length >100 m

The sensitivity of the area must then be assessed as outlined below. Both receptor sensitivity and proximity to proposed works areas are taken into consideration. For the purposes of this assessment, high sensitivity receptors are regarded as residential properties where people are likely to spend the majority of their time. Commercial properties and places of work are regarded as medium sensitivity while low sensitivity receptors are places where people are present for short periods or do not expect a high level of amenity.

Dust emissions also have the potential to impact sensitive ecology. Dust can affect vegetation through chemical means such as chemical changes like increased acidity in soils or watercourses. Physical effects include reduced photosynthesis, respiration and transpiration through smothering. These changes are likely to occur only as a result of long-term demolition and construction works adjacent to a sensitive habitat. Often impacts will be reversible once the works are completed, and dust emissions cease. High sensitivity ecological receptors are those with international or national designation (SPAs, SACs, NHAs) and where the designated feature is dust-sensitive. Effects to ecology can occur up to 50 m from the source.

Table 5-5 outlines the criteria for determining the sensitivity of the area to dust soiling, dust-related human health effects and dust-related ecological effects as per the IAQM guidance (IAQM, 2024).

Table 5-5: Criteria for Determining the Sensitivity of the Area

Sensitivity of the Area to Dust Soiling Effects on People and Property						
Receptor Sensitivity	**Number of Receptors**	**Distance from Source (m)**				
		<20	**<50**	**<100**	**<250**	
High	>100	High	High	Medium	Low	
	10 - 100	High	Medium	Low	Low	
	1 - 10	Medium	Low	Low	Low	
Medium	>1	Medium	Low	Low	Low	
Low	>1	Low	Low	Low	Low	
Sensitivity of the Area to Human Health Impacts						
Receptor Sensitivity	**Annual Mean PM_{10} Concentration**	**Number of Receptors**	**Distance from Source (m)**			
			<20	**<50**	**<100**	**<250**
High	< 24 µg/m^3	>100	Medium	Low	Low	Low

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		10 - 100	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Medium	< 24 µg/m^3	>10	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Low	< 24 µg/m^3	>1	Low	Low	Low	Low

Sensitivity of the Area to Dust Related Ecology Impacts		
Receptor Sensitivity	**Distance from Source (m)**	
	<20	**<50**
High	High	Medium
Medium	Medium	Low
Low	Low	Low

Once the dust emission magnitude and sensitivity of the area have been determined the next step, according to the IAQM guidance (IAQM, 2024), is to establish the level of risk by combining the magnitude with the overall sensitivity of the area to dust soiling, human health and ecological effects. The level of risk associated with each activity is determined using the criteria in Table 5-6.

Table 5-6: IAQM Criteria to Determine Risk of Dust Impacts

Sensitivity of Area	**Dust Emission Magnitude**		
	Large	**Medium**	**Small**
Demolition			
High	High risk	Medium risk	Medium risk
Medium	High risk	Medium risk	Low risk
Low	Medium risk	Low risk	Negligible
Earthworks			
High	High risk	Medium risk	Low risk
Medium	Medium risk	Medium risk	Low risk
Low	Low risk	Low risk	Negligible
Construction			
High	High risk	Medium risk	Low risk
Medium	Medium risk	Medium risk	Low risk
Low	Low risk	Low risk	Negligible
Trackout			
High	High risk	Medium risk	Low risk
Medium	Medium risk	Medium risk	Low risk
Low	Low risk	Low risk	Negligible

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5.2.3.2 Construction Phase Traffic Assessment

Construction phase traffic also has the potential to impact air quality. The TII guidance *Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106* (TII, 2025), states that road links meeting one or more of the following criteria can be defined as being '*affected*' by a proposed development and should be included in the local air quality assessment. While the guidance is specific to infrastructure projects, the approach can be applied to any development that causes a change in traffic.

- Annual average daily traffic (AADT) changes by 1,000 or more;
- Heavy duty vehicle (HDV) AADT changes by 200 or more;
- Daily average speed change by 10 kph or more;
- Peak hour speed change by 20 kph or more;
- A change in road alignment by 5m or greater.

Waterman Moylan Consulting Engineers Limited (Waterman Moylan hereafter) have prepared Chapter 14 – Material Assets: Traffic and Transport of this EIAR. As per Chapter 14, it has been determined by Waterman Moylan that the construction stage traffic will not increase by 1,000 AADT, or 200 HDV AADT, or that the development will not result in speed changes or changes in road alignment. Therefore, the traffic does not meet the above scoping criteria. A detailed air quality assessment of construction stage traffic emissions has been scoped out from any further assessment as there is no potential for significant impacts to air quality with respect with human or ecological receptors.

5.2.4 Operational Phase

5.2.4.1 Operational Phase Traffic Assessment – Human Receptors

Operational phase traffic has the potential to impact local air quality as a result of increased vehicle movements associated with the proposed development. The TII scoping criteria detailed in Section 5.2.3.2 were used to determine if any road links are affected by the proposed development and require inclusion in a detailed air dispersion modelling assessment. Waterman Moylan has prepared a Traffic and Transport Impact Assessment for the proposed development enclosed separately and have prepared Chapter 14 – Material Assets: Traffic and Transport. The proposed development will result in a greater than 1000 AADT increase on 4 road links in the vicinity of the proposed development site. As a result, an assessment of traffic related emissions was conducted. Additionally, traffic associated with other cumulative developments in the vicinity of the proposed development was included in the figures supplied to ensure a full cumulative assessment was conducted. See Traffic and Transport Assessment and Chapter 14 – Material Assets: Traffic and Transport for further details.

The impact to air quality as a result of changes in traffic is assessed at sensitive human receptors in the vicinity of affected roads as per the TII PE-ENV-01106 guidance (TII, 2025). These are discussed in further detail within Section 5.5.3 and shown graphically in Figure 5-3.

5.2.4.1.1 Modelling Scenarios

The TII guidance (2025) states that modelling should be conducted for NO_2, PM_{10} and $PM_{2.5}$ for the Base, Opening and Design Years for both the Do Nothing (DN), i.e. assuming the proposed development is not in place, and Do Something (with the proposed development in place) scenarios. Modelling of operational NO_2, PM_{10} and $PM_{2.5}$ concentrations has been conducted for the Do Nothing and Do Something (DS) scenarios using the TII Road Emissions Model (REM) online calculator tool (TII, 2026).

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5.2.4.1.2 Model Inputs

The following inputs are required for the REM tool: receptor locations, light duty vehicle (LDV) AADT, heavy duty vehicles (HDV) AADT, annual average traffic speeds, road link lengths, road type, project county location and pollutant background concentrations. The Default fleet mix option was selected which includes the following assumptions for fleet composition:

- Cars - Climate Action Plan (CAP), this projection assumes that the policies set out in the CAPs up to 2024 are implemented resulting in increased adoption of electrified vehicles.
- LGV - Business as Usual (High Ambition), this is based on a review of market capacity for different technologies within each category. This is broken down further into “high ambition” in the LGV fleet, where the distinction is the rate of adoption of low emissions technologies based on available and emerging technologies, adjusted to recognise the unique conditions, constraints and opportunities in the Irish market.
- HGVs - EU target projections for HGVs, this represents interim targets for emissions from sales of new HGVs.

The Default fleet mix represents a realistic worst-case scenario according to the TII PE-ENV-01106 guidance (TII, 2025). The TII REM uses county-based Irish fleet composition for different road types, for different European emission standards from pre-Euro to Euro 6/VI with scaling factors to reflect improvements in fuel quality, retrofitting, and technology conversions. The TII REM also includes emission factors for PM_{10} emissions associated with brake and tyre wear (TII, 2026).

Using this input data the model predicts the road traffic contribution to ambient ground level concentrations at the identified sensitive receptors using generic meteorological data. The predicted road contributions are then added to the existing background concentrations to give the predicted ambient concentrations. The ambient concentrations are then compared with the relevant ambient air quality standards to assess the compliance of the proposed development with these ambient air quality standards. For the opening and design years, background projection factors are applied to these concentrations to more accurately reflect the likely background concentrations in the future, based on air quality background trends. These factors are stated in Section 5.3.2.5.

Proposed receptors, representative of worst-case sensitive receptors introduced with the development, were also included in the assessment. However, for these receptors no impacts can be described, as the receptors do not exist in a DN scenario. For the proposed receptors, only predicted concentrations for the DS scenario are reported and compared with the relevant limit values.(see Section 5.5.3.1)

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Table 5-7 Traffic Data used in Operational Phase Air Quality Assessment

Road Name	Speed (kph)	Base Year LDV AADT (HDV AADT)	Opening Year		Design Year	
			DN LDV AADT (HDV AADT)	DS LDV AADT (HDV AADT)	DN LDV AADT (HDV AADT)	DS LDV AADT (HDV AADT)
Park West Road between Junctions 1 & 2 (Link1)	50	10189 (767)	13426 (1011)	15610 (1175)	14868 (1119)	17052 (1283)
Park West Road between Junctions 2 & 3 (Link2)	50	10189 (767)	12802 (964)	15534 (1169)	14180 (1067)	16911 (1273)
Park West Road between Junctions 3 & 8 (Link3)	50	4738 (97)	1748 (132)	14009 (1054)	12237 (921)	15198 (1144)
Park West Road between Junctions 8 & 4 (Link4)	50	1282 (97)	1748 (132)	14297 (1076)	12237 (921)	15486 (1166)
Cherry Orchard Green between Junctions 4 & 5 (Link5)	50	12596 (948)	5135 (105)	7456 (152)	5694 (116)	8013 (164)
Barnville Walk between Junctions 5 & 6 (Link6)	50	1282 (97)	1442 (109)	2744 (207)	1589 (120)	2902 (218)
Park West Road between Junctions 4 & 7 (Link7)	50	12596 (948)	14450 (1088)	16993 (1279)	15922 (1198)	18464 (1390)

5.3 Baseline Environment

5.3.1 Meteorological Data

A key factor in assessing temporal and spatial variations in air quality is the prevailing meteorological conditions. Depending on wind speed and direction, individual receptors may experience very significant variations in pollutant levels under the same source strength (i.e. traffic levels) (WHO, 2006). Wind is of key importance in dispersing air pollutants and for ground level sources, such as traffic emissions, pollutant concentrations are generally inversely related to wind speed. Thus, concentrations of pollutants derived from traffic sources will generally be greatest under very calm conditions and low wind speeds when the movement of air is restricted. In relation to PM_{10}, the situation is more complex due to the range of sources of this pollutant. Smaller particles (less than $PM_{2.5}$) from traffic sources will be dispersed more rapidly at higher wind speeds. However, fugitive emissions of coarse particles ($PM_{2.5}$ - PM_{10}) will actually increase at higher wind speeds. Thus, measured levels of PM_{10} will be a non-linear function of wind speed.

The nearest representative weather station collating detailed weather records is Casement Aerodrome meteorological station, which is located approximately 5.8 km southwest of the site. Casement Aerodrome met data has been examined to identify the prevailing wind direction and average wind speeds over a five-year period (Figure 5-1). For data collated during five representative years (2021 - 2025), the predominant wind direction is south-westerly (Met Éireann, 2026).

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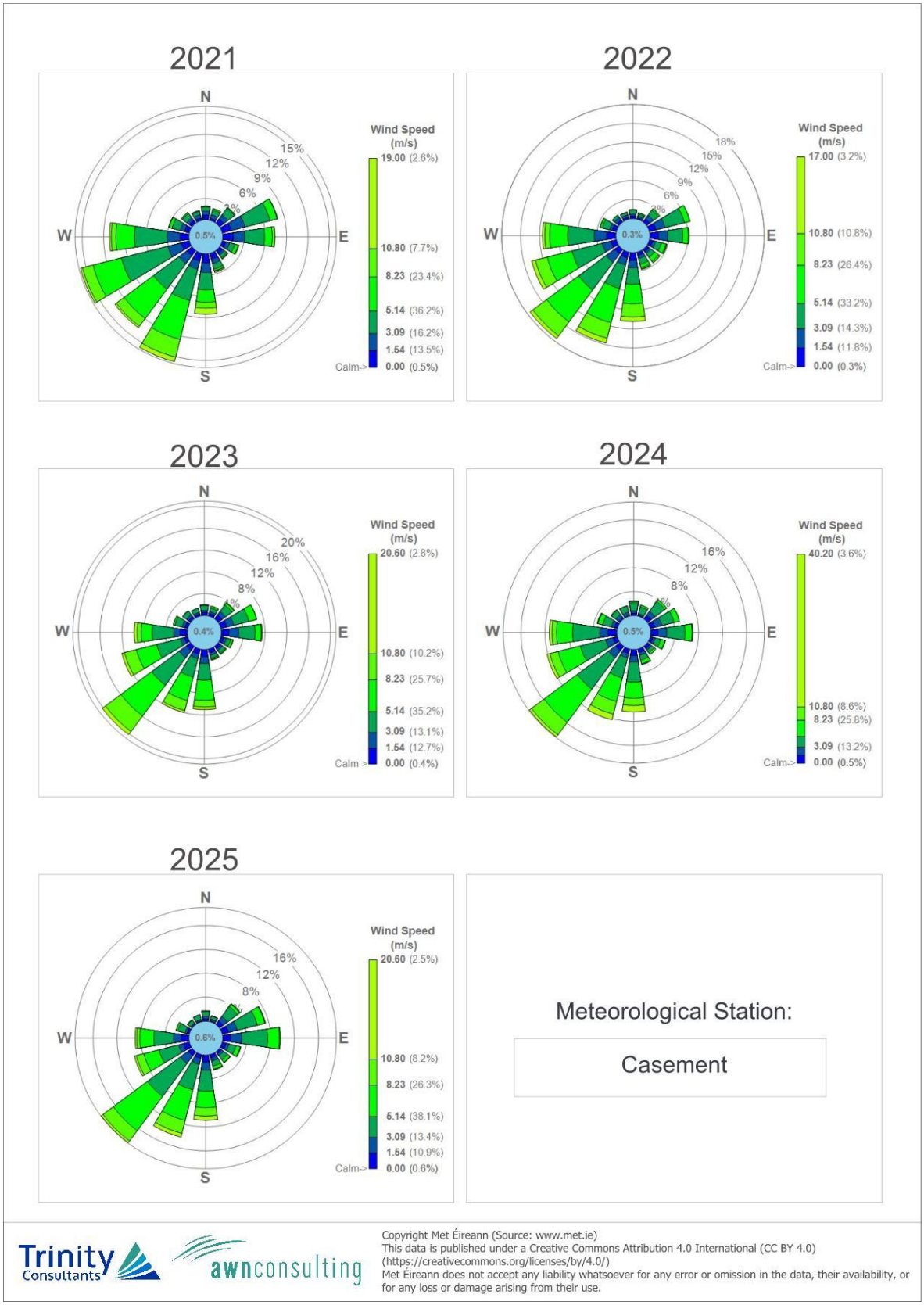


Figure 5-1 Wind Roses for Casement Aerodrome Meteorological Station

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5.3.2 Baseline Air Quality

Air quality monitoring programs have been undertaken in recent years by the EPA. The most recent annual report on air quality in Ireland is 'Air Quality In Ireland 2024' (EPA, 2025). The EPA website details the range and scope of monitoring undertaken throughout Ireland and provides both monitoring data and the results of previous air quality assessments.

As part of the implementation of the Air Quality Standards Regulations 2022 (S.I. No. 739 of 2022), as amended, four air quality zones have been defined in Ireland for air quality management and assessment purposes (EPA, 2025). Dublin is defined as Zone A and Cork as Zone B. Zone C is composed of 23 towns with a population of greater than 15,000. The remainder of the country, which represents rural Ireland and all towns with a population of less than 15,000, is defined as Zone D.

In terms of air monitoring and assessment, the proposed development site is within Zone A (EPA, 2025). The long-term monitoring data has been used to determine background concentrations for the key pollutants in the region of the proposed development. The background concentration accounts for all non-traffic derived emissions (e.g. natural sources, industry, home heating etc.). The use of publicly available long-term datasets is recommended by TII in their PE-ENV-0016 guidance (2025). This use of long-term data sets is preferred over on-site baseline air monitoring surveys as it gives a better indication of long-term trends in air quality.

Continuous monitoring by the EPA is carried out at a number of monitoring stations within Zone A; these include urban background sites, roadside (traffic) sites and suburban background sites. It is necessary to select monitoring stations that are representative of the site location. Not all monitoring stations are considered suitable for determining background pollutant concentrations and must be reviewed on a case-by-case basis to determine the most appropriate EPA monitoring sites for the current assessment. The selected representative Zone A monitoring locations are also not influenced by site specific NO_2 emissions such as those from Dublin Airport. While the monitoring station at Dublin Airport is categorised as a suburban background station, it is not considered representative of the site location as it is heavily impacted by emissions from aircraft.

The EPA, on their website (EPA, 2025), state that background sites generally represent overall area-wide exposure more closely than roadside sites. Roadside monitoring sites are heavily influenced by traffic emissions and are not considered representative of area-wide pollutant levels.

The full suite of EPA Zone A monitoring locations was reviewed. Suburban background was determined to be the most representative background for the area of the proposed development. Influences from traffic emissions will be captured within the traffic modelling assessment and therefore, suburban background concentrations give the best indication of other, non-traffic derived sources of pollutants.

5.3.2.1 NO_2

Long-term NO_2 monitoring was carried out at representative Zone A suburban background locations over the period 2020 – 2024, see Table 5-8 (EPA, 2025).

Long term average NO_2 concentrations are significantly below the current annual average limit of 40 µg/m^3 and the post-2030 limit value of 20 µg/m^3 (see Table 5-8). Average results range from 10 – 16 µg/m^3 over the period 2020 – 2024. There were no exceedances of the hourly limit in recent years, however, 18 exceedances are allowable per year. The 5-year average NO_2 concentration suggests a background concentration of 13 µg/m^3. Based on this, a conservative estimate of the current background NO_2 concentration for the region of the proposed development is 13 µg/m^3.

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Table 5-8: Air Quality - Nitrogen Dioxide (NO_2)

Station	Averaging Period	Year				
		2020	2021	2022	2023	2024
Ballyfermot (Suburban Background)	Annual Mean NO_2 (µg/m^3)	12	13	13	13	12
	1-hr Mean > 200 µg/m^3 (days)	0	0	0	0	0
Dun Laoghaire (Suburban Background)	Annual Mean NO_2 (µg/m^3)	13	16	16	13	11
	1-hr Mean > 200 µg/m^3 (days)	0	0	0	0	0
Swords (Suburban Background)	Annual Mean NO_2 (µg/m^3)	11	11	12	10	10
	1-hr Mean > 200 µg/m^3 (days)	0	0	0	0	0
Tallaght (Suburban Background)	Annual Mean NO_2 (µg/m^3)	14	13	14	14	12
	1-hr Mean > 200 µg/m^3 (days)	0	0	0	0	0

5.3.2.2 PM_{10}

Continuous PM_{10} monitoring was carried out at representative Zone A suburban background locations over the period 2020 – 2024, see Table 5-9 (EPA, 2025).

Long-term PM_{10} concentrations are well below the annual average limit value of 40 µg/m^3. Levels range from 9 - 14 µg/m^3 over the five-year period at the Zone A sites, with at most 3 exceedances (Marino in 2022) of the 24-hour limit value of 50 µg/m^3 (35 exceedances are permitted per year) (EPA, 2025). The 5-year average PM_{10} concentration at the sites suggests an average concentration of no more than 12 µg/m^3 (Table 5-9). Based on the EPA data, a conservative estimate of the current background PM_{10} concentration in the region of the proposed development is 12 µg/m^3.

Table 5-9: Air Quality - PM_{10}

Station	Averaging Period	Year				
		2020	2021	2022	2023	2024
Ballyfermot (Suburban Background)	Annual Mean PM_{10} (µg/m^3)	12	12	13	11	11
	24-hr Mean > 50 µg/m^3 (days)	2	0	1	0	0
Dun Laoghaire (Suburban Background)	Annual Mean PM_{10} (µg/m^3)	12	11	12	12	12
	24-hr Mean > 50 µg/m^3 (days)	0	0	1	0	1
Finglas (Suburban Background)	Annual Mean PM_{10} (µg/m^3)	12	12	12	12	12
	24-hr Mean > 50 µg/m^3 (days)	0	0	1	0	0
Marino (Suburban Background)	Annual Mean PM_{10} (µg/m^3)	13	12	14	12	12
	24-hr Mean > 50 µg/m^3 (days)	0	0	3	0	0
Phoenix Park (Suburban Background)	Annual Mean PM_{10} (µg/m^3)	10	10	11	9	10
	24-hr Mean > 50 µg/m^3 (days)	0	0	0	0	0
St. Anne's Park (Suburban Background)	Annual Mean PM_{10} (µg/m^3)	11	11	13	11	11
	24-hr Mean > 50 µg/m^3 (days)	0	0	1	0	0
Tallaght (Suburban Background)	Annual Mean PM_{10} (µg/m^3)	10	10	11	11	10
	24-hr Mean > 50 µg/m^3 (days)	1	0	1	1	0

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5.3.2.3 $PM_{2.5}$

Continuous $PM_{2.5}$ monitoring was carried out at representative Zone A suburban background locations over the period 2020 – 2024 (EPA, 2025). The results are shown in Table 5-10. $PM_{2.5}$ concentrations range from 6 - 9 µg/m^3 over the five-year period at the Zone A sites (EPA, 2025). The 5-year average $PM_{2.5}$ concentration at the sites suggests an average concentration of no more than 7 µg/m^3. Based on the EPA data, a conservative estimate of the current background $PM_{2.5}$ concentration in the region of the proposed development is 7 µg/m^3.

Table 5-10: Air Quality - $PM_{2.5}$

Station	Averaging Period	Year				
		2020	2021	2022	2023	2024
Ballyfermot (Suburban Background)	Annual Mean $PM_{2.5}$ (µg/m^3)	8	8	8	7	7
Dun Laoghaire (Suburban Background)	Annual Mean $PM_{2.5}$ (µg/m^3)	8	8	8	7	7
Finglas (Suburban Background)	Annual Mean $PM_{2.5}$ (µg/m^3)	7	8	7	7	7
Marino (Suburban Background)	Annual Mean $PM_{2.5}$ (µg/m^3)	8	8	9	7	8
Phoenix Park (Suburban Background)	Annual Mean $PM_{2.5}$ (µg/m^3)	7	6	6	6	7
St. Anne's Park (Suburban Background)	Annual Mean $PM_{2.5}$ (µg/m^3)	7	7	8	7	6

5.3.2.4 Summary

Based on the above information the air quality at suburban background sites in the Zone C area is generally good, with concentrations of the key pollutants generally well below the relevant limit values set out in Table 2 of Annex I of Directive (EU) 2024/2881. The current annual mean pollutant concentrations at all of the monitoring sites are also in compliance with the 2030 limit values set out in Table 1 of Annex I in Directive (EU) 2024/2881 and the clean air strategy.

5.3.2.5 Background Concentration Projections for Future Years

The TII PE-ENV-01106 (TII, 2025) guidance provides a methodology for predicting future year background NO_2, PM_{10} and $PM_{2.5}$ concentrations. This is necessary to allow for changes in background air quality in future years. For the purposes of the air quality assessment of traffic emissions, impacts are predicted for the future opening and design years for the proposed development, and it is overly pessimistic to assume that the current background pollutant concentrations will remain the same in these future years.

Future year projection factors are provided in Appendix C of the PE-ENV-01106 guidance (TII, 2025). Projection factors have been provided to allow for calculation of background pollutant concentrations

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up to 2040. Where background concentrations beyond 2040 are required TII state that the background concentrations for 2040 can be used as representative concentrations the future year (TII, 2025). The realistic worst-case scenario has been applied in relation to future year background projections.

The EPA baseline concentrations have been used in combination with the future year projection factors to produce background concentrations for the Opening Year of 2027 and the Design Year of 2042 for the proposed development. The background concentrations used in this assessment are shown in Table 5-11.

Table 5-11 Background Pollutant Concentration Projections

Pollutant	Base Year 2026 Background (µg/m^3)	Opening Year 2027		Design Year 2042	
		Adjustment Factor	Adjusted Background (µg/m^3)	Adjustment Factor	Adjusted Background (µg/m^3)
NO_2	13.0	0.97	12.6	0.77	10.0
PM_{10}	12.0	0.99	11.9	0.90	10.8
$PM_{2.5}$	7.0	0.99	6.9	0.84	5.9

5.3.3 Sensitivity of Receiving Environment

5.3.3.1 Construction Phase

The impact to air quality due from construction phase activities is assessed at sensitive receptors within 250 m of the development boundary. In terms of receptor sensitivity to dust soiling, there are a number of highly sensitive residential properties within 100 m of the proposed development boundary (see Figure 5-2). There are 1-10 high sensitivity residential properties within 20 m of the site boundary, and there are a further 10-100 within 50 m and 10-100 properties within 100 m of the site boundary.

The IAQM guidelines also outline the assessment criteria for determining the sensitivity of the area to dust-related ecological impacts. Dust emissions can coat vegetation leading to a reduction in the photosynthesising ability of the plant in addition to the potential chemical effects from the constituents of the particulates. The guidance states that dust impacts to vegetation can occur up to 50 m from the site, and 50 m from the public roads used by construction traffic up to 250 m from the site entrance. The sensitivity of the area is determined based on the distance to the source, the designation of the site, (European, National or local designation) and the potential dust sensitivity of the ecologically important species present. There are no sensitive ecological receptors that meet these criteria within the study area, therefore no further assessment is required.

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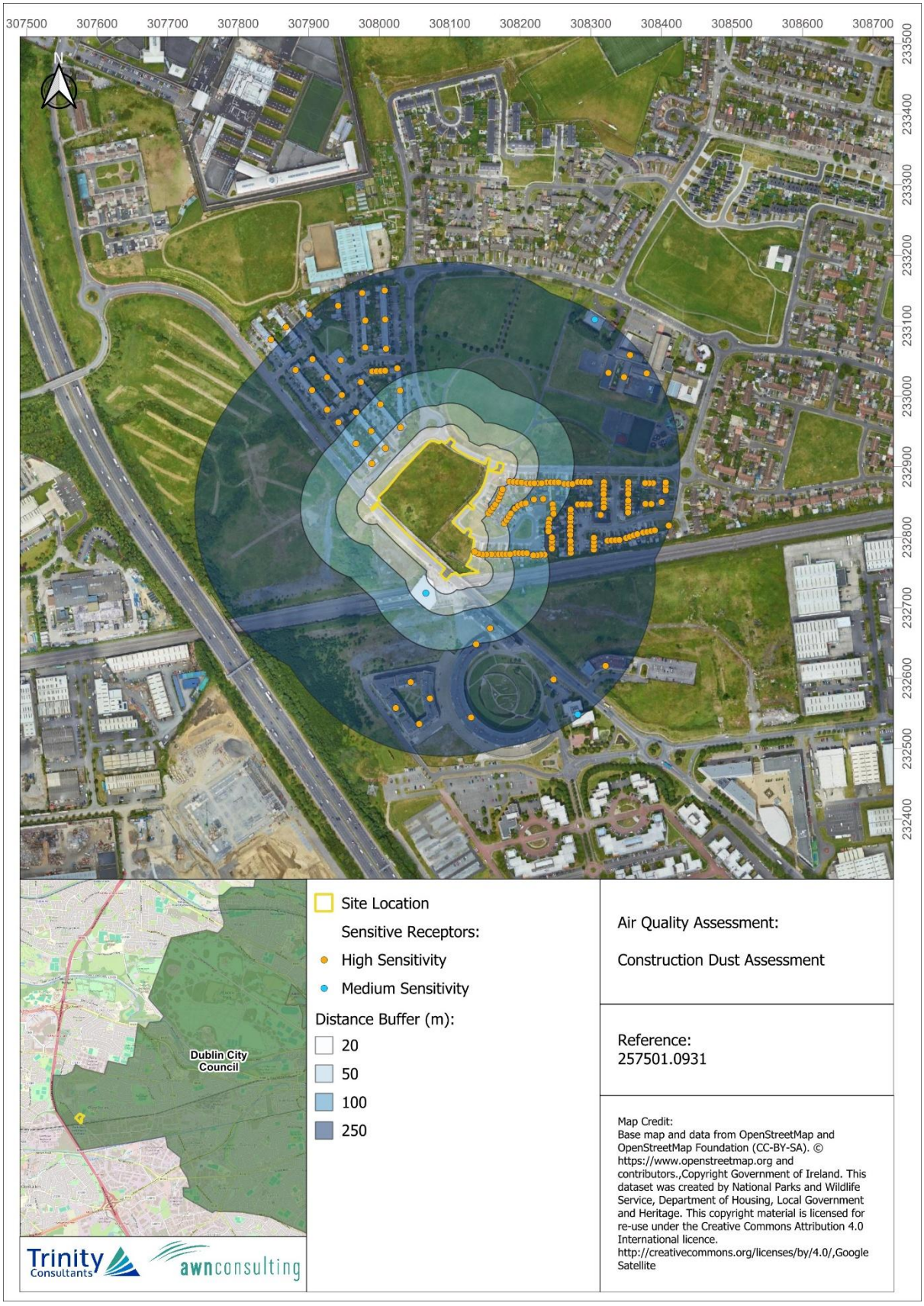


Figure 5-2: Construction Dust Sensitive Receptors within 250 m of Site

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5.3.3.2 Operational Phase

The impact to air quality due to changes in traffic is assessed at sensitive receptors in the vicinity of affected roads. The TII guidance (TII, 2025) states that a proportionate number of representative receptors, which are located in areas which will experience the highest concentrations or largest impacts from the proposed development traffic, are to be included in the modelling. The TII criteria state that receptors within 200 m of impacted road links should be assessed; roads which are greater than 200 m from receptors will not impact pollutant concentrations at that receptor (TII, 2025). The TII guidance (TII, 2025) defines sensitive receptor locations for the purposes of modelling annual mean pollutant concentrations as: residential housing, schools, hospitals, care homes and short term-accommodation such as hotels, i.e. locations where members of the public are likely to be regularly present for 24 hours. A total of 10 no. receptors were included in the assessment to determine concentration levels at the development in the opening and design years: R1- R7 (high sensitivity residential receptors) and 3 no. potential development receptors (P1- P3) (see Figure 5-3).

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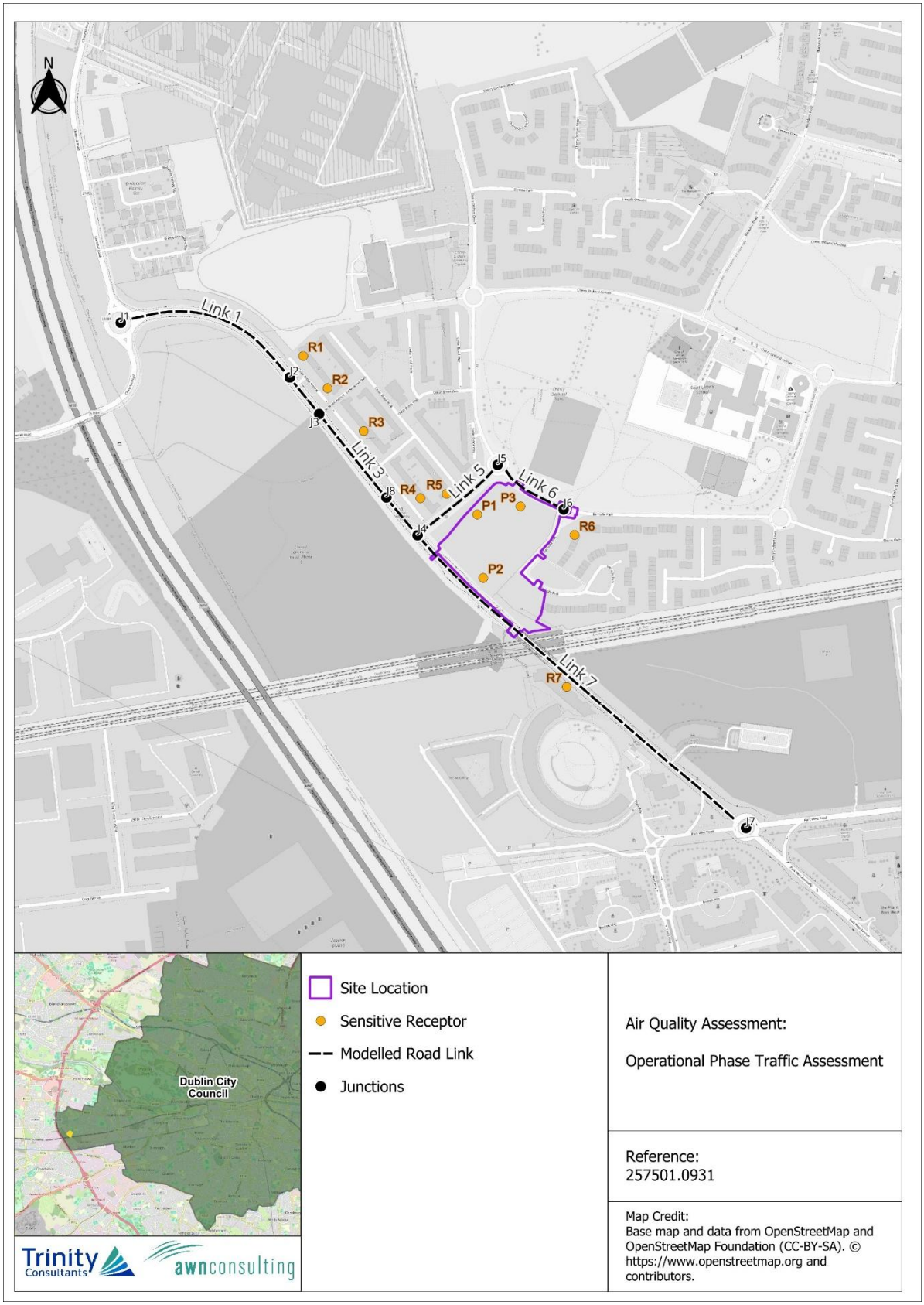


Figure 5-3 Location of Sensitive Receptors used in Operational Phase Air Quality Assessment

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5.4 Characteristics Of the Proposed Development

The proposed development is a mixed-use development comprising residential housing, commercial units and communal spaces. For a more comprehensive understanding of the proposed development, please refer to Chapter 1 and 2. This section provides a detailed overview of the project, including reference to the architectural and civil engineering, drawings, plans, reports, and other relevant document in order to define the proposed development.

During the construction phase construction dust emissions have the potential to impact air quality. Dust emissions will primarily occur as a result of site preparation works, earthworks and the movement of trucks on site and exiting the site. There is also the potential for engine emissions from site vehicles and machinery to impact air quality. Construction phase impacts will be short-term in duration. When the proposed development is operational, emissions from vehicles accessing the site can potentially cause increases in pollutants at sensitive receptors around the local road network.

5.5 Predicted Impacts

5.5.1 The 'Do Nothing' Scenario

In the Do Nothing scenario, ambient air quality at the site will remain as per the baseline and will change in accordance with trends within the wider area (including influences from potential new developments in the surrounding area, changes in road traffic, etc).

The Do Nothing scenario associated with the operational phase of the development is assessed within Section 5.5.3 pollutant concentrations are in compliance with the relevant limit values for all pollutants

5.5.2 Construction Phase

5.5.2.1 Construction Dust Assessment

The greatest potential impact on air quality during the construction phase of the proposed development is from construction dust emissions and the potential for nuisance dust. While construction dust tends to be deposited within 250 m of a construction site, the majority of the deposition occurs within the first 50 m (IAQM, 2024). The extent of any dust generation depends on the nature of the dust (soils, peat, sands, gravels, silts etc.) and the nature of the construction activity. In addition, the potential for dust dispersion and deposition depends on local meteorological factors such as rainfall, wind speed and wind direction. A review of Casement Aerodrome meteorological data indicates that the prevailing wind direction is south-westerly, and wind speeds are generally moderate in nature (Section 5.3.1). Dust impacts are likely to occur during drier periods, as rainfall acts as a natural dust suppressant (IAQM, 2024). Days with less than 0.2mm of rainfall can be classified as days with little or no rainfall. A review of historical 30-year average data for Casement Aerodrome indicates that on average 194 days per year have rainfall over 0.2 mm (Met Éireann, 2025). Therefore, it can be determined that over 53% of the time dust generation will be reduced due to natural meteorological conditions.

To determine the level of dust mitigation required during the proposed works, the potential dust emission magnitude for each dust generating activity needs to be taken into account, in conjunction with the previously established sensitivity of the area (Section 5.3.3). The major dust generating activities are divided into four types within the IAQM guidance (IAQM, 2024) to reflect their different potential impacts. These are: demolition, earthworks, construction and trackout (movement of heavy vehicles).

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5.5.2.1.1 Determining the Potential Dust Emission Magnitude

The magnitude of the works under each category can be classified as either small, medium or large depending on the scale of the works involved. The magnitude of each activity (Table 5-12) has been determined below for the proposed development using the criteria in Table 5-4.

Table 5-12: Potential Dust Emission Magnitude

Activity	Dust Emission Magnitude	Justification
Demolition	n/a	No buildings to be demolished
Earthworks	Large	Total site area is greater than 110,000 m^2
Construction	Large	Greater than 75,000 m^3 of volume of building to be constructed
Trackout	Medium	20- 50 outward vehicles (HGV) movements per day from construction site activities

5.5.2.1.2 Determining the Sensitivity of the Area

In terms of receptor sensitivity to dust soiling, there are a number of highly sensitive residential properties within 100 m of the proposed development boundary (Figure 5-2). There are 1-10 high sensitivity residential properties within 20 m of the site boundary. Based on these receptor numbers and using the IAQM criteria in Table 5-5, the sensitivity of the area to dust soiling impacts from the proposed development is medium.

In addition to sensitivity to dust soiling, the IAQM guidelines also outline the assessment criteria for determining the sensitivity of the area to human health impacts. The criteria take into consideration the current annual mean PM_{10} concentration, receptor sensitivity based on type (residential receptors are classified as high sensitivity) and the number of receptors affected within various distance bands from the construction works. A conservative estimate of the current annual mean PM_{10} concentration in the vicinity of the proposed development is 12 µg/m^3. There are 1-10 high sensitivity receptors within 20 m of the proposed development boundary. Based on the IAQM criteria outlined in Table 5-5 the worst-case sensitivity of the area to dust-related human health effects is low.

The IAQM guidelines also outline the assessment criteria for determining the sensitivity of the area to dust-related ecological impacts. Dust emissions can coat vegetation leading to a reduction in the photosynthesising ability of the plant, as well as other effects. The guidance states that dust impacts to vegetation can occur up to 50 m from the site, and 50 m from site access roads, up to 250 m for the site entrance. The sensitivity of the area is determined based on the distance to the source, the designation of the site, (European, National or local designation) and the potential dust sensitivity of the ecologically important species present. There are no sensitive ecological receptors that meet these criteria within the study area therefore no further assessment is required.

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Table 5-13: Sensitivity of the Area

Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	**Earthworks**	**Construction**	**Trackout**
Dust Soiling	n/a	Medium	Medium	Medium
Human Health	n/a	Low	Low	Low
Ecology	n/a	n/a	n/a	n/a

5.5.2.1.3 Determining the Risk of Dust Impacts

As detailed in Table 5-6, The predicted dust emission magnitude has been combined with the sensitivity of the area to determine the risk of impacts during the construction phase, prior to mitigation.

Table 5-14 below provides a summary of the risk of dust impacts for the proposed development.

There is at most a medium risk of dust soiling impacts and low risk of dust-related human health impacts associated with the proposed works. Without mitigation in place, construction dust will have a short-term, direct, localised, negative, and moderate effect on air quality, which is potentially significant. Best practice dust mitigation measures associated with medium-risk works will be implemented to ensure there are no significant impacts at nearby sensitive receptors (see Section 5.7.1).

Table 5-14: Risk of Dust Impacts Used to Define Site-Specific Mitigation

Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	**Earthworks**	**Construction**	**Trackout**
Dust Soiling	n/a	Medium Risk	Medium Risk	Medium Risk
Human Health	n/a	Low Risk	Low Risk	Low Risk
Ecology	n/a	n/a	n/a	n/a

5.5.2.1.4 Construction Phase Traffic Assessment

There is also the potential for traffic emissions to impact air quality with respect to human health in the short-term over the construction phase, particularly, due to the increase in HGVs accessing the site. The construction stage traffic has been reviewed, and a detailed air quality assessment has been scoped out as none of the road links impacted by the proposed development exceed the TII assessment criteria in Section 5.2.3.2.

Therefore, it can be determined that the construction stage traffic will have a short-term, direct, localised, negative and not significant effect on air quality.

5.5.3 Operational Phase

5.5.3.1 Operational Phase Traffic Assessment

The potential impact of the proposed development has been assessed by modelling emissions from the traffic generated due to the development. The traffic data has included specific cumulative developments within the area to provide for a worst-case assessment and to assess potential

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cumulative impacts (see Chapter 14 – Material Assets: Traffic and Transport, prepared by Waterman Moylan, for further details).

The traffic data includes the Do Nothing (DN) scenario and Do Something (DS) scenario. The impact of NO_2, PM_{10} and $PM_{2.5}$ emissions for the Opening and Design Years was predicted at the nearest sensitive receptors to the impacted road links. This assessment allows the significance of the development, with respect to both relative and absolute impacts, to be determined. Proposed receptors, representative of worst-case sensitive receptors introduced with the development, were also included in the assessment. However, for these receptors no impacts can be described, as the receptors do not exist in a DN scenario. For the proposed receptors, only predicted concentrations for the DS scenario are reported and compared with the relevant limit values.

The TII guidance PE-ENV-01106 (TII, 2025) details a methodology for determining air quality impact significance criteria for TII road schemes and infrastructure projects. However, this significance criteria can be applied to any development that causes a change in traffic. The degree of impact is determined based on both the absolute and relative impact of the proposed development. Results are compared against the 'Do Nothing' scenario, which assumes that the proposed development is not in place in future years, to determine the degree of impact.

Traffic related air emissions have the potential to impact air quality which can affect human health. The following details the results of the air dispersion modelling assessment of traffic emissions to determine the impact to human health. The predicted pollutant concentrations have been compared against the ambient air quality limit values set out in Table 5-1. The post-2030 limit values set out in Table 1 of Annex I in Directive (EU) 2024/2881 are applicable to the Opening Year 2027 and Design Year 2042, as per TII guidance (TII, 2025).

5.5.3.1.1 NO_2

The results of the NO_2 modelling are shown in Table 5-15. In the Opening Year 2027, predicted annual mean NO_2 concentrations at both the existing and proposed modelled receptors are in compliance with the annual mean limit value of 20 µg/m^3, reaching at most 75% of the limit. In addition, the TII guidance (2025) states that the hourly limit value for NO_2 of 200 µg/m^3 is unlikely to be exceeded at roadside locations unless the annual mean is above 30 µg/m^3, and the daily limit value is unlikely to be exceeded if it is below 25 µg/m^3. As predicted NO_2 concentrations are significantly below 25 µg/m^3, it can be concluded that the short-term NO_2 limit value will be complied with at all receptor locations. An increase in NO_2 concentrations is predicted at the worst-case receptor assessed in the Opening Year when compared with the Do Nothing scenario. Concentrations are predicted to increase by at most 1.21 µg/m^3 at receptor R3. When comparing the change in concentration with the air quality limit value, it results in a maximum change of 6.05% at receptor R3. This increase is considered 'slight adverse' as per the TII criteria in Table 5-3.

In the Design Year 2042, predicted annual mean NO_2 concentrations are in compliance of the limit value of 20 µg/m^3 at all modelled receptors, reaching at most 51% of the limit. The proposed development will result in a 'neutral' increase in NO_2 concentrations according to the TII significance criteria in Table 5-3, with concentrations increasing by 0.02 µg/m^3 at receptor R3 and R7 as a result of the proposed development, which is an increase of 0.1% when compared with the applicable annual mean limit value for NO_2. Therefore, the impact of the proposed development on NO_2 concentrations is neutral.

Table 5-15: Predicted Annual Mean NO_2 Concentrations (µg/m^3)

Receptor	Impact Opening Year						
	DN	% of AQLV	DS	% of AQLV	DS-DN	% Change of AQLV	Description
R1	13.9	70%	14.0	70%	0.11	0.55%	Neutral

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Receptor	Impact Opening Year						
	DN	% of AQLV	DS	% of AQLV	DS-DN	% Change of AQLV	Description
R2	13.9	70%	14.1	70%	0.18	0.90%	Neutral
R3	12.8	64%	14.0	70%	1.21	6.05%	Slight Adverse
R4	12.8	64%	13.9	70%	1.13	5.65%	Slight Adverse
R5	13.3	66%	13.6	68%	0.29	1.45%	Neutral
R6	12.8	64%	12.9	64%	0.11	0.55%	Neutral
R7	14.8	74%	14.9	75%	0.15	0.75%	Neutral
P1	N/A	N/A	13.4	67%	N/A	N/A	N/A
P2	N/A	N/A	14.5	73%	N/A	N/A	N/A
P3	N/A	N/A	13.0	65%	N/A	N/A	N/A
Receptor	**Impact Design Year**						
	DN	**% of AQLV**	**DS**	**% of AQLV**	**DS-DN**	**% Change of AQLV**	**Description**
R1	10.1	51%	10.1	51%	0.01	0.05%	Neutral
R2	10.1	51%	10.1	51%	0.00	0.00%	Neutral
R3	10.1	51%	10.1	51%	0.02	0.10%	Neutral
R4	10.1	51%	10.1	51%	0.02	0.10%	Neutral
R5	10.1	50%	10.1	50%	0.02	0.10%	Neutral
R6	10.0	50%	10.0	50%	0.01	0.05%	Neutral
R7	10.2	51%	10.2	51%	0.02	0.10%	Neutral
P1	N/A	N/A	10.1	50%	N/A	N/A	N/A
P2	N/A	N/A	10.2	51%	N/A	N/A	N/A
P3	N/A	N/A	10.0	50%	N/A	N/A	N/A
Note: As P1 - P3 is a potential development receptor, no associated DN concentrations or impacts have been predicted as they will not exist without the development in place.							

5.5.3.1.2 PM_{10}

The results of the PM_{10} modelling can be seen in Table 5-16 for the Opening Year 2027 and Design Year 2042.

In the Opening Year 2027, annual mean PM_{10} concentrations at both the existing and proposed modelled receptors are in compliance with the annual mean limit value of 20 µg/m^3 reaching at most 77% of the limit. In the Design Year 2042 annual mean PM_{10} concentrations are also in compliance with the annual mean limit value of 20 µg/m^3 reaching at most 78% of the limit. In addition, the proposed development will not result in any additional days of exceedance of the daily PM_{10} limit value (Table 5-1) in both the opening and design years.

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The changes in PM_{10} concentrations as a result of the proposed development can be assessed relative to the DN levels. In the Opening Year 2027 annual PM_{10} concentrations will increase by at most 1.95 µg/m^3 at receptor R3, this is a 4.88% increase when compared with the annual mean limit value of 20 µg/m^3. This increase is considered 'slight adverse' as per the TII criteria in Table 5-3.

In the Design Year 2042 the proposed development will result in a maximum increase of 0.37 µg/m^3 at receptor R5, which is a 1.85% increase when compared with the annual mean limit of 20 µg/m^3. The changes in concentrations in the Design Year are considered 'neutral' based on the TII criteria in Table 5-3.

Table 5-16: Predicted Annual Mean PM_{10} Concentrations (µg/m^3)

Receptor	Impact Opening Year						
	DN	% of AQLV	DS	% of AQLV	DS-DN	% Change of AQLV	Description
R1	14.0	70%	14.2	71%	0.18	0.45%	Neutral
R2	14.0	70%	14.3	71%	0.29	0.73%	Neutral
R3	12.2	61%	14.1	71%	1.95	4.88%	Slight Adverse
R4	12.2	61%	14.0	70%	1.82	4.55%	Slight Adverse
R5	12.8	64%	13.3	66%	0.43	1.08%	Neutral
R6	12.1	60%	12.3	61%	0.19	0.47%	Neutral
R7	15.4	77%	15.7	78%	0.24	0.60%	Neutral
P1	N/A	N/A	13.0	65%	N/A	N/A	N/A
P2	N/A	N/A	14.9	75%	N/A	N/A	N/A
P3	N/A	N/A	12.5	62%	N/A	N/A	N/A
Receptor	**Impact Design Year**						
	DN	**% of AQLV**	**DS**	**% of AQLV**	**DS-DN**	**% Change of AQLV**	**Description**
R1	12.8	64%	12.9	64%	0.11	0.55%	Neutral
R2	12.8	64%	13.0	65%	0.14	0.70%	Neutral
R3	12.5	63%	12.8	64%	0.31	1.55%	Neutral
R4	12.4	62%	12.7	63%	0.30	1.50%	Neutral
R5	11.7	59%	12.1	60%	0.37	1.85%	Neutral
R6	11.0	55%	11.2	56%	0.17	0.85%	Neutral
R7	14.0	70%	14.2	71%	0.19	0.95%	Neutral
P1	N/A	N/A	11.9	59%	N/A	N/A	N/A
P2	N/A	N/A	13.6	68%	N/A	N/A	N/A
P3	N/A	N/A	11.3	57%	N/A	N/A	N/A
Note: As P1 - P3 is a potential development receptor, no associated DN concentrations or impacts have been predicted as they will not exist without the development in place.							

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5.5.3.1.3 $PM_{2.5}$

In relation to changes in $PM_{2.5}$ concentrations as a result of the proposed development, the results of the assessment can be seen Table 5.17, for the modelled Opening Year 2027 and Design Year 2042.

In the Opening Year 2027, predicted annual mean concentrations of $PM_{2.5}$ at both the existing and proposed modelled receptors are in compliance with the annual mean limit value of 10 µg/m^3 reaching at most 88% of the limit. There is predicted to be an increase in $PM_{2.5}$ concentrations at the worst-case receptor assessed in the Opening Year when compared with the Do Nothing scenario. Concentrations are predicted to increase by 1.03 µg/m^3 at receptor R3. When comparing the change in concentration with the air quality limit value, it results in a maximum change of 10.30% at receptor R3. This increase is considered 'slight adverse' as per the TII criteria in Table 5-3. In addition, the proposed development will not result in any additional days of exceedance of the daily $PM_{2.5}$ limit value (Table 5-1) in both the opening and design years.

In the Design Year 2042, predicted annual mean $PM_{2.5}$ concentrations at both the existing and potential development modelled receptors are in compliance with the limit value of 10 µg/m^3 at all receptors assessed. Concentrations reach at most 89% of the annual mean limit value. The proposed development will result in a 'neutral' increase in $PM_{2.5}$ concentrations according to the TII significance criteria in Table 5-3, with concentrations increasing by 0.20 µg/m^3 at receptor R5 as a result of the proposed development, which is an increase of 2.0% when compared with the annual mean limit value of 10 µg/m^3 for $PM_{2.5}$.

Table 5-17 Predicted Annual Mean PM2.5 Concentrations (µg/m3)

Receptor	Impact Opening Year						
	DN	% of AQLV	DS	% of AQLV	DS-DN	% Change of AQLV	Description
R1	8.0	80%	8.1	81%	0.10	1.00%	Neutral
R2	8.0	80%	8.2	82%	0.15	1.50%	Slight Adverse
R3	7.1	71%	8.1	81%	1.03	10.30%	Slight Adverse
R4	7.0	70%	8.0	80%	0.96	9.60%	Slight Adverse
R5	7.4	74%	7.6	76%	0.23	2.30%	Neutral
R6	7.0	70%	7.1	71%	0.10	1.00%	Neutral
R7	8.8	88%	8.9	89%	0.12	1.20%	Neutral
P1	N/A	N/A	7.5	75%	N/A	N/A	N/A
P2	N/A	N/A	8.5	85%	N/A	N/A	N/A
P3	N/A	N/A	7.2	72%	N/A	N/A	N/A
Receptor	**Impact Design Year**						
	DN	**% of AQLV**	**DS**	**% of AQLV**	**DS-DN**	**% Change of AQLV**	**Description**
R1	7.0	70%	7.0	70%	0.06	0.60%	Neutral
R2	7.0	70%	7.1	71%	0.08	0.80%	Neutral
R3	6.8	68%	7.0	70%	0.17	1.70%	Neutral
R4	6.8	68%	6.9	69%	0.16	1.60%	Neutral
R5	6.4	64%	6.6	66%	0.20	2.00%	Neutral

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Receptor	Impact Opening Year						
	DN	% of AQLV	DS	% of AQLV	DS-DN	% Change of AQLV	Description
R6	6.0	60%	6.1	61%	0.09	0.90%	Neutral
R7	7.7	77%	7.8	78%	0.11	1.10%	Neutral
P1	N/A	N/A	6.5	65%	N/A	N/A	N/A
P2	N/A	N/A	7.4	74%	N/A	N/A	N/A
P3	N/A	N/A	6.2	62%	N/A	N/A	N/A
Note: As P1 - P3 is a potential development receptor, no associated DN concentrations or impacts have been predicted as they will not exist without the development in place.							

5.5.3.1.4 Significance of Predicted Changes in NO_2, PM_{10} and $PM_{2.5}$ Concentrations

As outlined in Section 5.2.2.4, the TII guidance (2022) states that the significance of effects should be assessed based on the opening year only. Non-significant effects are 'neutral' or 'slight' changes in concentrations while significant effects can be changes in pollutant concentrations that are either 'moderate' or 'substantial'. However, the TII guidance (2025) states that these must be considered in the context of the project and 'moderate' or 'substantial' increases are not necessarily always significant effects.

In relation to NO_2, PM_{10} and $PM_{2.5}$ the predicted changes in concentrations are 'slight adverse' at the worst-case receptor assessed. However, the predicted changes in concentrations are 'slight adverse' at the worst-case receptor assessed, due to the NO_2, PM_{10} and $PM_{2.5}$ background concentrations, contributing to between 74% of the limit value of 20 µg/m^3 for NO_2 , 77% of the limit value of 20 µg/m^3 for PM_{10} and 88% of the limit value of 10 µg/m^3 for PM_{10} in the opening year.

All effects are either 'neutral' or 'slight adverse' for NO_2, PM_{10} and $PM_{2.5}$. Therefore, it can be concluded that the air quality effect of traffic emissions on air quality and human health during the operational phase is long-term, direct, localised, negative and not significant in EIA terms.

The measures set out in the Clean Air Strategy for Ireland (Government of Ireland 2023) aim to work towards solutions to ensure that air pollution concentrations are reduced in order to comply with the future changes in limit values. Ireland will need to continue to implement and develop measures to ensure continuing improvements in air quality in future years in order to meet the objectives of the Clean Air Strategy for Ireland (Government of Ireland, 2023) and to ensure the ambient air quality limit values set out in Directive (EU) 2024/2881 are achieved. The estimated background concentrations used in the assessment are the largest contribution to predicted pollutant concentrations, rather than pollutant contributions associated with the proposed development. Strategies to improve air quality at a national level in future years will contribute to reducing background concentrations and therefore it is envisioned that air quality will improve in the future.

5.6 Cumulative Impacts

5.6.1 Construction Phase

There is the potential for cumulative construction dust impacts to nearby sensitive receptors if the construction phase of the proposed development coincides with that of other large-scale developments within 500 m of the site.

A review of the planned and permitted projects within the vicinity of the site was undertaken in order to identify developments with the potential for cumulative construction phase impacts. There are several

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sites identified which may have coinciding construction phases with that of the proposed development.

These include:

- SD19A/0185 (Planning App. Ref.): Alterations to approved plans (Grant of Permission ref PL06S.243151 and PA Reg Ref SD13A/0271 and SD18A/0068) to the previously granted planning permission for the construction of an ESB 110kV Gas Insulated Substation for the use by Crag Digital Limited.
- SD20A/0034 KN Group HQ, Cloverhill Industrial EstateOffice accommodation extension to the rear of the existing office building.
- 3403/21: Planning permission for the proposed development will consist of modifications to the permitted residential development of 86 no. residential units over retail/restaurant uses (reg. ref. 3798/18, 3941/20, 2517/21).
- 321931 (Part 10)- LDA on behalf of DCC :Cherry Orchard Phase, the proposed development on a site of c. 3.185 hectares, located on lands at Cherry Orchard, Dublin 10 (known as Development Site 4 in the Park West Cherry Orchard Local Area Plan 2019). The development will consist of the construction of a residential scheme containing 137no. residential dwellings (comprising 31no. 2 bedroom units, and 106no. 3-bedroom units) through a mixture of houses, duplex units and own-door apartments.
- 316119: DART+ Southwest electrified heavy railway order. The 20 km of electrification and re-signalling of the Hazelhatch and Celbridge Line to Heuston and the south city via Phoenix Park Tunnel. Construction of a new station at Heuston West to serve the community of Clancy Quay and Island Bridge. Four-tracking of the rail line from Park West and Cherry Orchard Station to Heuston to enhance capacity. Civil, bridge and ancillary works as necessary to accommodate the project. Upgrading of the Phoenix Park Tunnel. New electric DART carriages for the DART+ Programme will be deployed on Hazelhatch and Celbridge services

There is a medium risk of dust impacts associated with the proposed development (see Table 5-14). The dust mitigation measures outlined in Section 5.7 applied during the construction phase will avoid significant cumulative impacts on air quality. With appropriate mitigation measures in place, the predicted cumulative air quality effects associated with the construction phase of the proposed development and the aforementioned developments are deemed ***short-term, direct, localised, negative*** and ***not significant***.

5.6.2 Operational Phase

There is the potential for cumulative impacts to air quality during the operational phase as a result of traffic associated with other existing and permitted developments within the area. The traffic data provided for the operational stage air quality assessment included specific cumulative developments within the area (see Traffic and Transport Assessment and Chapter 14 – Material Assets: Traffic and Transport for further details).

The cumulative operational phase effect is assessed within Section 5.5.3 and was found to be ***long-term, direct, localised, negative*** and ***not significant***.

5.7 Mitigation Measures

5.7.1 Construction Phase

Based on the assessment results in 5.5.2, mitigation associated with a medium risk of construction dust impacts is required. The relevant mitigation measures for medium-risk sites as recommended by IAQM

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construction dust guidance (2024) are outlined below. These measures shall be incorporated into the Construction Environmental Management Plan (CEMP) prepared for the site.

5.7.1.1 Communications

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.
- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
- Display the head or regional office contact information.

5.7.1.2 Site Management

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- Make the complaints log available to the local authority when asked.
- Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the logbook.

5.7.1.3 Preparing and Maintaining the Site

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
- Fully enclose site or specific operations where there is a high potential for dust production and the site is actives for an extensive period.
- Avoid site runoff of water or mud.
- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.
- Cover, seed or fence stockpiles to prevent wind whipping.

5.7.1.4 Operating vehicle/machinery and sustainable travel

- Ensure all vehicles switch off engines when stationary – no idling vehicles.
- Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable.
- Impose and signpost a maximum-speed-limit of 25 kph on surfaced and 15 kph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).

5.7.1.5 Operations

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate
- Use enclosed chutes and conveyors and covered skips.

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- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

5.7.1.6 Waste management

- Bonfires and burning of waste materials are legally prohibited.

5.7.1.7 Measures Specific to Earthworks

- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable
- Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as is practicable.
- Only remove the cover in small areas during work and not all at once.

5.7.1.8 Measures Specific to Construction

- Avoid scabbling (roughening of concrete surfaces) if possible.
- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.
- For smaller supplies of fine powder materials, ensure bags are sealed after use and stored appropriately to prevent dust.

5.7.1.9 Measures Specific to Trackout

- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.
- Avoid dry sweeping of large areas.
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
- Record all inspections of haul routes and any subsequent action in a site logbook.
- Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).
- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.
- Access gates to be located at least 10 m from receptors where possible.

5.7.2 Operational Phase

The effect of the operational traffic associated with proposed development on air quality is predicted to be not significant with respect to the operational phase in the long term. Therefore, no site-specific mitigation measures are required.

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5.8 Residual Impacts

5.8.1 Construction Phase

Once the dust mitigation measures outlined in Section 5.7.1 are implemented, the air quality effect of the proposed development in terms of dust soiling will be ***short-term, direct, localised, negative*** and ***not significant*** at nearby receptors.

Best practice mitigation measures associated with medium-risk are proposed for the construction phase of the proposed development which will focus on the pro-active control of dust and other air pollutants to minimise generation of emissions at source. The mitigation measures that will be put in place during construction of the proposed development will ensure that the impact of the development complies with all EU ambient air quality legislative limit values which are based on the protection of human health. Therefore, the air quality effect of construction of the proposed development will be ***short-term, direct, localised, negative*** and ***not significant*** with respect to human health.

5.8.2 Operational Phase

Air dispersion modelling of operational traffic emissions associated with the proposed development was carried out using the TII REM tool. The modelling assessment determined that the change in emissions of NO_2, PM_{10} and $PM_{2.5}$ at nearby sensitive receptors as a result of the proposed development will be 'neutral' or 'slight adverse' in line with the TII assessment criteria (Table 5-3). Therefore, the operational phase air quality effect is ***long-term, direct, localised, negative,*** and ***not significant***.

Dispersion modelling of traffic emissions at sensitive receptors in proximity to impacted road links during the operational phase indicate pollutant emissions will be in compliance with the ambient air quality standards set out in Table 5-1 which are set for the protection of human health and the environment. Section 5.5.3.1 determined that the air quality effect as a result of increased traffic volumes during the operational phase of the proposed development will be ***long-term, direct, localised, negative*** and ***not significant*** for the opening year. However, Ireland will need to develop measures to ensure continuing improvements in air quality in future years in order to meet the objectives of the Clean Air Strategy for Ireland (Government of Ireland, 2023) and to ensure the ambient air quality limit values set out in Directive (EU) 2024/2881 are achieved.

5.9 Difficulties Encountered

No difficulties were encountered in compiling this chapter.

5.10 Interactions

5.10.1 Air Quality and Population & Human Health

5.10.1.1 Construction Phase

An adverse air quality impact during the construction phase can cause health and dust nuisance issues. There is a low risk of dust-related human health impacts during the construction phase of the proposed development. Best practice mitigation measures will be implemented during the construction phase to ensure that the impact of the proposed development complies with all ambient air quality legislative limits. Therefore, the predicted impact is ***direct***, ***short-term***, ***negative***, ***localised*** and ***not significant*** with respect to Population and Human Health during the construction phase.

5.10.1.2 Operational Phase

Vehicles accessing the site will emit pollutants which may impact Air Quality and Human Health. However, the increased number of vehicles associated with the proposed development will not cause

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a significant change in air pollutant emissions in the locality. It has been assessed that emissions will be in compliance with the ambient air quality standards which are set for the protection of human health. Impacts will be ***long-term, direct, localised, negative***, and ***not significant***.

5.10.2 Air Quality and Climate

Air Quality and Climate have interactions as the emissions from the burning of fossil fuels during the construction and operational phases generate both air quality and climate impacts. There is no impact on climate due to air quality. However, the sources of impacts on air quality and climate are strongly linked.

5.10.3 Air Quality and Land & Soils

5.10.3.1 Construction Phase

Construction phase activities such as land clearing, excavations, stockpiling of materials etc. have the potential for interactions between Air Quality and Land & Soils in the form of dust emissions. With the appropriate mitigation measures to prevent fugitive dust emissions, it is predicted that there will be no significant interactions between air quality and land and soils during the construction phase.

5.10.3.2 Operational Phase

There are no potentially significant interactions identified between Air Quality, and Land & Soils during the operational phase.

5.10.4 Air Quality and Biodiversity

5.10.4.1 Construction Phase

Dust generation can occur during extended dry weather periods due to construction traffic along haul routes and construction activities such as excavations and infilling works. Dust emissions can coat vegetation leading to a reduction in the photosynthesising ability as well as other effects. There are designated ecological sites within 250 m of the proposed development site area. Dust mitigation measures will be implemented on site as set out in Section 5.7.1. With the implementation of these mitigation measures dust emissions will be minimised and impacts will be ***direct, short-term, negative, localised*** and ***not significant*** with respect to biodiversity.

5.10.4.2 Operational Phase

There are no potentially significant interactions identified between Air Quality, and Biodiversity during the operational phase.

5.10.5 Air Quality and Material Assets – Traffic & Transport

5.10.5.1 Construction Phase

Interactions between Air Quality and Traffic can be significant. With increased traffic movements and reduced engine efficiency, i.e. due to congestion, the emissions of vehicles increase. The impacts of the proposed development on air quality are assessed by reviewing the change in annual average daily traffic on roads close to the site. In this assessment, the impact of the interactions between Traffic and Air Quality are linked but there is no potential for significant impacts from traffic on air quality. The effects are considered to be ***direct, short-term, neutral, localised*** and ***not significant*** during the construction phase.

5.10.5.2 Operational Phase

The impact of the interactions between Traffic and Air Quality are considered to be ***long-term, direct, negative*** and ***not significant*** during the operational phase.

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5.11 Monitoring

5.11.1 Construction Phase

The following monitoring measures are proposed to ensure the dust mitigation measures are working satisfactorily:

- Undertake daily on-site and off-site inspections, where receptors (including roads) are nearby, to monitor dust, record inspection results in the site inspection log. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100 m of site boundary, with cleaning to be provided if necessary.
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.

5.11.2 Operational Phase

There is no monitoring recommended for the operational phase of the proposed development as impacts to air quality are predicted to be not significant.

5.12 References

Environmental Protection Agency (2006) Environmental Management Guidelines - Environmental Management in the Extractive Industry (Non-Scheduled Minerals)

Environmental Protection Agency (2022) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports

Environmental Protection Agency (2025) Air Quality in Ireland 2024 (& previous annual reports 2020-2023)

German VDI (2002) Technical Guidelines on Air Quality Control – TA Luft

Government of Ireland (2023) Clean Air Strategy for Ireland

Institute of Air Quality Management (IAQM) (2020) A Guide To The Assessment Of Air Quality Impacts On Designated Nature Conservation Sites (Version 1.1)

Institute of Air Quality Management (IAQM) (2024) Guidance on the Assessment of Dust from Demolition and Construction (Version 2.2)

Met Éireann (2026) Met Éireann website: https://www.met.ie/

Transport Infrastructure Ireland (2025) Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106

Transport Infrastructure Ireland (2026) TII Road Emissions Model (REM): Model Development Report – GE-ENV-01107

UK Department for Environment, Food and Rural Affairs (Defra) (2022) Part IV of the Environment Act 1995: Local Air Quality Management, LAQM. TG(22)

World Health Organisation (2021) Air Quality Guidelines (and previous Air Quality Guideline Reports 1999 & 2000 & 2006)

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6 Climatic Factors

6.1 Introduction

This chapter assesses the likely climate impacts associated with the proposed development of the lands at Cherry Orchard Point. The proposed development is Phase 3 of a plan for the area, with Phase 1 and 2 already classified as Permitted Developments. A full description of the development is available in Chapter 2.

The climate assessment is divided into two distinct sections:

- The Greenhouse Gas Emissions Assessment (GHGA) – Quantifies the greenhouse gas (GHG) emissions from a project over its lifetime. The assessment compares these emissions to relevant carbon budgets, targets and policy to contextualise magnitude.
- The Climate Change Risk Assessment (CCRA) – Identifies the impact of a changing climate on a project and receiving environment. The assessment considers a project's vulnerability to climate change and identifies adaptation measures to increase project resilience.

6.2 Expertise and Qualifications

This report was written by Mobin Ud Din who is a Senior Climate Consultant in the Climate and Air Quality team at AWN Consulting, a Trinity Consultants Company. He holds a BE in Environmental Engineering from the National University of Sciences and Technology, Pakistan, and an MSc in Transition, Innovation and Sustainability Environments from University College Dublin. He has over five years of experience in climate change, sustainability and environmental management. Mobin specialises in climate and carbon assessment, including greenhouse gas and lifecycle assessment, climate change risk assessment and coordination of climate inputs to Environmental Impact Assessment Reports. He has experience delivering climate assessments for large scale infrastructure, transport and built environment projects, with detailed knowledge of Irish climate policy and guidance, including TII climate standards and the Climate Action and Low Carbon Development Acts.

This report was reviewed by Sarah Berry is a Principal Climate Consultant in the Air Quality and Climate section of AWN Consulting, a Trinity Consultants Company. She holds a BSc in Physical Geography from the University of Leeds. She has 9 years' experience in climate change and sustainability, with expertise in greenhouse gas permitting, accounting and verification. Her experience includes conducting strategic sector-specific GHG audits across a range of industries (data centres, industrial facilities, hospitals, manufacturing, power stations and airports). She has prepared climate chapters for EIARs for proposed developments across Ireland including large residential developments, windfarms, industrial developments and wastewater treatment works.

6.3 Methodology

6.3.1 Legislation, Policy and Guidance

In common with all environmental legislation, in Ireland climate legislation is driven primarily by international agreements or European Directives that are then transcribed into domestic law by the Government of Ireland. This is then interpreted through European and domestic policy instruments that clarify aspects, objectives, targets and requirements described in the legislation.

6.3.1.1 Legislation

The **United Nations Paris Agreement** (United Nations, 2015) treaty binds signatory nations to a commitment to hold global average temperature increase well below 2°C above pre-industrial levels with efforts to limit the increase to 1.5°C below pre-industrial levels. Signatories commit to Nationally Determined Contributions (NDCS) which are self- defined climate pledges made by countries in response to climate change, which also includes the direction of finance. Adaptation to the adverse impacts of climate change and lowering greenhouse gas emissions should be undertaken in an

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equitable manner so as not to disadvantage populations on lower incomes or those most at risk from climate change.

Regulation (EU) 2026/667 of the European Parliament and of the Council of 11 March 2026 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 2021/1119, 401/2009 and (EU) 2018/1999 (European Parliament and Council, 2021) follows from the Paris Agreement and writes into EU law the goal set out in the European Green Deal for Europe's economy and society to become climate-neutral by 2050. The law also sets the intermediate target of reducing net greenhouse gas (GHG) emissions by at least 90% by 2040, compared to 1990 levels. These targets are also applied to member states.

Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (European Parliament and Council, 2014) acknowledges that climate change will play a crucial role in the sustainable development of society. Directive 2014/52/EU requires assessment of the impact of specific types of new development on the climate. There is a requirement for the quantification of greenhouse gases from a development, and an assessment of the risk posed to specific types of new development by the adverse effects of climate change.

The **Climate Action and Low Carbon Development Act 2015** (Government of Ireland, 2015) enables Ireland 'to pursue, and achieve, the transition to a low carbon, climate resilient and environmentally sustainable economy by the end of the year 2050'. This is referred to in the 2015 Act (as amended) as the 'national transition objective'. The 2015 Act (as amended) made provision for a national mitigation plan, and a national adaptation framework. In addition, the Act provided for the establishment of the Climate Change Advisory Council with the function to advise and make recommendations on the preparation of the national mitigation and adaptation plans and compliance with existing climate obligations.

Section 15 of the 2015 Act, sets out the duties imposed by certain bodies, including local authorities and An Coimisiún Pleanála. This section was amended by the 2021 Act and states:

> *"(1) A relevant body shall, in so far as practicable, perform its functions in a manner consistent with—*
>
> *(a) the most recent approved climate action plan,*
>
> *(b) the most recent approved national long term climate action strategy,*
>
> *(c) the most recent approved national adaptation framework and approved sectoral adaptation plans,*
>
> *(d) the furtherance of the national climate objective, and*
>
> *(e) the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.".*

The **Climate Action and Low Carbon Development (Amendment) Act 2021** (Government of Ireland, 2021) provides the framework for Ireland to achieve a climate resilient and climate neutral economy by the end of the year 2050. The Act allows for the setting of carbon budgets and sectoral emissions ceilings to apply to sectors of the economy whilst promoting climate justice and just transition to the climate resilient and climate neutral economy. Carbon budgets are determined based on the requirements for reductions in GHG described in EU Regulation 2018/842. The Climate Action and Low Carbon Development (Amendment) Act 2021 should be read together with the Climate Action and Low Carbon Development Act 2015, and together are referred to in this report as the "Climate Act".

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6.3.1.2 Policy

The **European Green Deal** published by the European Commission in December 2019, provides an action plan which aims for the EU to achieve climate neutrality by 2050. The EU Green Deal highlights a reduction in emissions of 55% in comparison to 1990 levels by 2030 and 90% by 2040. The deal outlines plans for a just and fair transition to a climate neutral society through funding and social investment, carbon pricing, the Emissions Trading Scheme, green industry, the circular economy and stakeholder engagement in the processes at every level.

The **2021 EU Strategy on Adaptation to Climate Change** (European Commission, 2021a) sets out the pathway to prepare for the unavoidable impacts of climate change. The aim is that "by 2050, when we aim to have reached climate neutrality, we will have reinforced adaptive capacity and minimised vulnerability to climate impacts…"

The latest iteration of the Government of Ireland's ***Climate Action Plan*** (CAP25) (Government of Ireland, 2025a) was published in 2025 updating many of the suggested measures and actions required to achieve carbon budgets and sectoral emissions ceilings from CAP24, (Government of Ireland, 2024a). Both CAP24 and CAP25 should be read together. The plans taken together provide the roadmap for halving Ireland's emissions by 2030 and achieving carbon neutrality by 2050. The CAP25 advances sector-specific measures including decarbonising the residential building sector. This includes the complete phase-out of fossil fuel heating for both new builds and retrofits. CAP25 details the 5-year carbon budget periods, shown in Table 6-1, and the Sectoral Emissions Ceilings, shown in Table 6-2, as required by the Climate Act.

Table 6-1: Carbon Budgets for the CAP25 5-Year Periods

Budget Period	Carbon Budget	Reduction Required
2021-2025	295 Mt CO2e	Reduction in emissions of 4.8% per annum for the first budget period.
2026-2030	200 Mt CO2e	Reduction in emissions of 8.3% per annum for the second budget period.
2031-2035	151 Mt CO2e	Reduction in emissions of 3.5% per annum for the third provisional budget.

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Table 6-2: CAP25 Sectoral Emission Ceilings for 2030

Sector	Baseline (Mt CO2e)	Carbon Budgets (Mt CO2e)		2030 Emissions (Mt CO2e)	Indicative Emissions % Reduction in Final Year of 2025- 2030 Period (Compared to 2018)
	2018	2021-2025	2026-2030		
Electricity	10	40	20	3	75
Transport	12	54	37	6	50
Built Environment - Residential	7	29	23	4	40
Built Environment - Commercial	2	7	5	1	45
Industry	7	30	24	4	35
Agriculture	23	106	96	17.25	25
Other (F-gases, waste, petroleum refining)	2	9	8	1	50
Land Use, Land-use Change and Forestry (LULUCF)	5	Reflecting the continued volatility for LULUCF baseline emissions to 2030 and beyond, a new approach aligned with the EU LULUCF Regulation has been adopted.			
Total	68				
Unallocated Savings	-	-	26	-5.25	-
Legally Binding Carbon Budgets and 2030 Emission Reduction Targets	-	295	200	-	51

The **Long-Term Strategy on Greenhouse Gas Emissions Reductions 2024** (Government of Ireland, 2023) provides the indicative pathways beyond 2030 on how Ireland will transition towards carbon neutrality by 2050. The strategy is intended to bridge the gap between the short-term objectives of the Climate Action Plans and the longer-term objectives of EU Climate Law and Ireland's National Climate Objective.

The **National Planning Framework (First Revision)** (Government of Ireland, 2025b) specifies policies relevant for the proposed development:

- National Policy Objective 1: Ensure that all plans, projects and activities requiring consent arising from the National Planning Framework are subject to the relevant environmental assessment requirements including SEA, EIA, SFRA and AA as appropriate.
- National Policy Objective 66: The planning system will be responsive to our national environmental challenges and ensure that development occurs within environmental limits, having regard to the medium and longer-term requirements of all relevant environmental and climate legislation and the sustainable management of our natural capital.

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- National Policy Objective 69: Reduce our carbon footprint by integrating climate action into the planning system in support of national targets for climate policy mitigation and adaptation objectives, as well as targets for greenhouse gas emissions reductions as expressed in the most recently adopted carbon budgets.
- National Policy Objective 79: Support the management of stormwater, rainwater and surface water flood and pollution risk through the use of nature-based solutions and sustainable drainage systems, including the retrofitting of existing environments to support nature-based solutions.
- National Policy Objective 82: Integrated planning for Green and Blue Infrastructure will be incorporated into the preparation of statutory land use plans while maintaining ecosystem services and ecosystem functions and conserving and/or restoring biodiversity.
- National Policy Objective 93: Improve air quality and help prevent people being exposed to unacceptable levels of pollution in our urban and rural areas through integrated land use and spatial planning that supports public transport, walking and cycling as more favourable modes of transport to the private car, the promotion of energy efficient buildings and homes, heating systems with zero local emissions, green and blue infrastructure planning and innovative design solutions.

6.3.1.3 Climate Change Vulnerability Policy

The **Second National Adaptation Framework** (NAF) (Government of Ireland, 2024b) outlines a comprehensive, whole-of-government and whole-of-society approach to climate adaptation. Its core objective is to enhance Ireland's resilience to a wide range of climate risks, including extreme weather events, flooding, drought, biodiversity loss, sea level rise, and rising temperatures. The NAF sets out the roles of the Taoiseach, Government and non-governmental organisations, incorporates an evidence base for climate change and incorporates sectoral and local requirements and indicators for adaptation planning.

In relation to the built environment, the NAF states in Chapter 3, that the deepening of adaptation considerations in the planning and building standards processes is considered the most appropriate way of increasing the resilience of the built environment. Within the NAF it mentions that there is a risk of damage to buildings and structures from severe weather events such as high winds and intense rainfall. New development should accommodate predicted future climate change impacts without requiring major redesign or redevelopment in the future, which may be costly and inefficient. This will require facilitating innovative building design, new materials and standards (to accommodate hotter summers while withstanding changes in precipitation patterns and more intense storms for example) according to the NAF (DECC, 2024).

The **National Climate Change Risk Assessment** (NCCRA) (Environmental Protection Agency, 2025) was required as part of the 2021 CAP. The NCCRA approached the risk assessment though:

- **Hazard** - the potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems, and environmental resources
- **Exposure** - the presence of people, livelihoods, species or ecosystems, environmental functions, services, and resources, infrastructure, or economic, social, or cultural assets in places and settings that could be adversely affected
- **Sensitivity** - refers to the degree to which a system or asset is affected by climate hazards. It reflects how vulnerable something is to changes such as temperature extremes, flooding, or drought, based on its physical, functional, or ecological characteristics
- **Vulnerability** - the propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts including sensitivity
- **Risk** - the potential for adverse consequences for human or ecological systems

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Compilation of the NCCRA was undertaken using scenarios from the fifth Intergovernmental Panel on Climate Change Assessment Report (AR5). The NCCRA used a high concentration scenario resulting a predicted average global temperature increase of 4.3°C by 2100 (RCP8.5) generally accepted as an extreme worst-case scenario, and a moderate scenario (RCP4.5) where emissions are predicted to peak by 2040 and then decline resulting in an average global temperature increase of between 2.5°C and 3°C. Both scenarios are considered conservative for Ireland as they assume that emissions targets are not met.

6.3.2 Local policy

The Dublin City Council Climate Neutral Dublin 2030 (Local Authority Climate Action Plan 2024-2029) report is based on four foundations and sets out the 2030 vision that Dublin City Council have for the city. The four foundations can be described as: a Creative City, a Resource-Full City, a Resilient City and a Social City. These foundations aim to deliver the overall targets of a 51% reduction in greenhouse gas emissions in line with our National Climate Objective by 2030 (2018 baseline), while striving for neutrality before 2050 as per Dublin City's participation in the EU Mission for 100 Climate Neutral and Smart Cities (Net Zero Cities). While achieving this, DCC want the city to also ensure it remains climate resilient and that the transition to carbon neutrality 2030 is just.

As a part of Foundation 1: A Resilient City, the aforementioned report highlights "Dublin will be here for another millennium and longer if we build our resilience and adapt to a changing climate. To do this we will take actions to ensure that our housing, our buildings, our food system, our roads, our energy supply and our communication networks, are future proofed for the known flooding, sea level rise, coastal erosion, heat waves, drought, cold spells, and extreme events - and unknown impacts of climate change." Therefore, listing the following actions (most relevant to proposed development):

- R1 | Social Housing Regeneration: *Implement a flagship climate-resilient retrofit programme for social housing (starting with Dominick Street Lower) to set the standard for sustainable, low-carbon living with integrated energy, mobility, waste, and community features.*
- R2 | Public Buildings Regeneration: *Retrofit and adapt public and heritage buildings to demonstrate climate-resilient, sustainable operation across the city's civic estate.*
- R3 | Climate Resilient Critical Infrastructure: *Maintain and upgrade critical infrastructure systems through multi-agency partnership to ensure long-term climate resilience and energy security.*

6.3.3 Guidance

The following guidance is considered relevant to this assessment:

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (hereafter referred to as the EPA Guidelines) (Environmental Protection Agency, 2022)
- Environmental Impact Assessment of Projects – Guidance on the Preparation of the Environmental Impact Assessment Report (hereafter referred to as the EU Guidance) (European Commission, 2017)
- Transport Infrastructure Ireland (TII) PE-ENV-01104: Climate Guidance for National Roads, Light Rail and Rural Cycleways (Offline & Greenways) – Overarching Technical Document (Transport Infrastructure Ireland, 2022);
- Transport Infrastructure Ireland (TII) GE-ENV-01106: TII Carbon Assessment Tool for Road and Light Rail Projects and User Guidance Document (Transport Infrastructure Ireland, 2025
- Institute of Sustainability and Environmental Professionals (ISEP) (formerly known as Institute of Environmental Management & Assessment (IEMA)) Environmental Impact Assessment Guide to: Assessing GHG Emissions and Evaluating their Significance (hereafter referred to as the ISEP Supplementary Guidance 2026) (Institute of Sustainability & Environmental Professionals, 2026);

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- ISEP Environmental Impact Assessment Guide to: Climate Change Resilience and Adaptation (hereafter referred to as the ISEP 2020 EIA Guide) (Institute of Sustainability & Environmental Practitioners, 2020a)
- ISEP GHG Management Hierarchy (hereafter referred to as the ISEP 2026 GHG Management Hierarchy) (Institute of Sustainability & Environmental Practitioners, 2026)
- Carbon Management in Infrastructure and Built Environment - PAS 2080 (The British Standards Institution, 2023)
- Technical Guidance on the Climate Proofing of Infrastructure in the Period 2021-2027 (European Commission, 2021b)

6.3.4 Greenhouse Gas Assessment

6.3.4.1 Construction Phase

The assessment of GHG emissions resulting from the construction phase is quantified using the categories described in BS EN 15978. These are:

- **Product Stages (Category A1 to A3)**
  The carbon emissions generated at this stage arise from extracting the raw materials from the ground, their transport to a point of manufacture and then the primary energy used (and associated carbon impacts that arise) from transforming the raw materials into construction products.
- **Construction (Category A4 to A5)**
  These carbon impacts arise from transforming the construction products to site, and their subsequent processing and assembly into the building.
- **Use Stage (Category B1 to B7)**
  This covers a wide range of sources from the GHG emissions associated with the operation of the building (B1), maintenance (B2), repair (B3), refurbishment (B4) and replacement (B5) of materials, and operational energy use (B6), and water use (B7).
- **End of Life Stages (Category C1 to C4)**
  The eventual deconstruction and disposal of the existing building at the end of its life takes account of the on-site activities of the demolition contractors. No “credit” is taken for any future carbon benefit associated with the reuse or recycling of a material into new products.

PE-ENV-01104 (Transport Infrastructure Ireland, 2022) recommends the calculation of the construction stage embodied carbon using the TII Online Carbon Tool or an appropriate alternative tool. Embodied carbon refers to the sum of the carbon needed to produce a good or service. It incorporates the energy needed in the mining or processing of raw materials, the manufacturing of products and the delivery of these products to site. The purpose of the embodied carbon assessment is to engage the design team in the consideration of embodied carbon at an early stage in the development and mitigate embodied carbon. This engagement aims to ensure carbon savings are made and to assist in aligning the project to Ireland’s CAP25 goal of achieving carbon neutrality by 2050.

The TII Online Carbon Tool has been commissioned by TII to assess GHG emissions associated with road or rail projects in Ireland. The TII Carbon Tool uses emission factors from recognised sources including, but not limited to:

- Civil Engineering Standard Method of Measurement (CESSM) Carbon and Price Book database
- Circular Ecology ICE v4.0 ICE DB Advanced V4.0

The tool can be applied to a variety of developments, not just road or rail and aligns with PAS 2080.

The TII Carbon Tool was utilised to estimate the GHG emissions associated with the non-building elements of the proposed development including construction activities, land clearance activities and construction wastes.

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For the building elements of the proposed development, the OneClick LCA 3D Designer tool was utilised. OneClick LCA is certified to EN 15978, and data requirements of ISO 14040 & EN 15804, and is LEED, BREEAM and PAS 2080 aligned. It allows users to assess the carbon impact of buildings at various stages of design. The tool includes a detailed product and material list based on Irish materials as well as materials from the UK and Europe. The OneClick LCA 3D Designer option allows for a high-level assessment of the embodied carbon impact of a development at early design stages when specific detailed design information is not known and is suitable for EIAR stage assessments.

Inputs into the tool include gross floor areas for the building types (houses/duplexes/apartments), building frame type, number of above ground floors and building size and shape. The tool then makes necessary default assumptions based on these parameters and a typical build-up with the option to refine the default assumptions where project specific information is available. The tool allows for optioneering and optimization of the carbon impact, it highlights the key areas within the building with the highest carbon impact and provides options for lower carbon intensive materials.

Reasonable conservative estimates have been used in this assessment where necessary to provide an estimate of the GHGs associated with the proposed development.

The GHG emissions from the development as a total cannot be compared against one specific sector 2030 carbon budget. The emissions are broken down into different assessment categories, and these must be compared separately to the relevant sectoral emissions budgets, which are detailed in Table 6-2. The relevant sectoral emissions for the proposed development comparison include the Industry sector, Transport sector, Electricity and Waste sector. The predicted emissions for the proposed development are annualised over the assumed 60-year lifespan and then compared to the relevant sector 2030 carbon budgets. Annualising the full carbon emissions over the lifetime of the development allows for appropriate comparison with annual GHG targets.

6.3.4.2 Operational Phase

6.3.4.2.1 Traffic Emissions

Operational phase traffic also has the potential to impact climate. The TII guidance Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106 (TII, 2025a), states that road links meeting one or more of the following criteria can be defined as being ‘affected’ by a proposed development and should be included in the local air quality assessment. The same criteria is applied for climate assessments in lieu of alternative guidance. While the guidance is specific to infrastructure projects, the approach can be applied to any development that causes a change in traffic.

- Annual average daily traffic (AADT) changes by 1,000 or more;
- Heavy duty vehicle (HDV) AADT changes by 200 or more;
- Daily average speed change by 10 kph or more;
- Peak hour speed change by 20 kph or more;
- A change in road alignment by 5m or greater.

The carbon emission outputs from the REM tool are provided by Air Quality specialists as part of the Air Quality monitoring process. The methodology can be found in the Air Quality Chapter 5 of the EIAR. As set out in the Air Quality Chapter, in accordance with PE-ENV-01104, GHG emissions from traffic are scoped into this assessment.

6.3.4.2.2 Operational Phase Energy Use

The EU *Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment* (European Commission, 2013) also states that indirect GHG emissions as a result of a development must be considered, which include emissions associated with energy usage. The assessment of operational phase electricity-related emissions for the proposed development has therefore been undertaken using a bottom-up approach, based on the projected residential unit mix and representative energy performance characteristics. Annual electricity consumption has been derived using mean Irish residential electricity consumption data by dwelling type and Building Energy Rating

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(BER), based on the latest 2023 Central Statistics Office data (CSO, 2023), and combined with National Grid emission factors published by the Sustainable Energy Authority of Ireland (SEAI) (SEAI, 2025) in their SEAI Life-Cycle Global Warming Potential Calculation Workbook for Buildings. Total electricity consumption has been calculated across the development and converted to greenhouse gas emissions (tCO_2e) using these factors, with emissions projected over the operational lifetime and, where relevant, annualised.

This approach reflects present-day grid carbon intensity and does not incorporate the projected decarbonisation of the electricity network over the operational lifetime of the proposed development.

Under a decarbonised pathway, aligned with the Climate Action Plan, the carbon intensity of electricity is expected to decrease significantly over time due to the increasing penetration of renewable energy and the displacement of fossil fuel-based generation. The Climate Action Plan identifies significant reductions in electricity sector emissions driven by renewable energy deployment and grid transformation.

In contrast, the use of non-decarbonised SEAI emission factors assumes a trend in carbon intensity across the assessment period that reduces but not at the pace expected by national policy. This therefore represents a precautionary approach consistent with EIAR practice, ensuring that operational emissions are not underestimated in the absence of certainty regarding the delivery and timing of future grid decarbonisation.

It is also important to note that in instances where electric vehicle (EV) charging infrastructure is provided, the associated electricity consumption has been excluded from the scope of operational energy use (Module B6) and the life-cycle Global Warming Potential (GWP) calculation, and is assumed to be separately metered and accounted for outside of this assessment, in accordance with SEAI Life-Cycle GWP Calculation Methodology guidance.

6.3.4.3 Significance Criteria

The significance of the impacts of GHG emissions on the climate is an area of scientific consensus that is described clearly in the IPCC AR6 reports, and as such all GHG emissions are considered to contribute adversely towards climate change.

In accordance with ISEP and TII guidance, the significance of effect of GHG emission resulting from a given project is based on its contribution to sectoral and national carbon budgets and whether it supports Ireland's CAP25 objective of achieving carbon neutrality by 2050, by reducing GHG emissions. This process requires an assessment of the quantified GHG emissions against the sensitivity of receptors (Ireland's national GHG targets or National Climate Objective), qualification of the potential measures that will mitigate against GHG emissions, and a degree of professional judgement that takes account of the balance of all of these factors. Both the ISEP and TII guidance documents are explicit in this concept.

ISEP Supplementary Guidance (2026) (Assessing Greenhouse Gas Emissions and Evaluating their Significance) highlights the importance of mitigation in determination of significance, committing the project to go further than minimum regulatory compliance. This is particularly relevant in the context of the severity of the climate situation and potential exceedance of the 1.5°C Paris Agreement target as described in Section 6.3.1.1. It explains it is no longer sufficient for developments to comply with national policies or regulatory standards as mitigation and achieve non-significant effects. It determines embodied carbon must be addressed and generalised measures found in a CEMP cannot be relied upon to materially reduce significance. Where no sufficient and meaningful mitigation is proposed which supports an applicable 1.5°C or net zero compatible trajectory, beyond minimum compliance with current regulations (such as Department of Housing, Local Government and Heritage Technical Guidance Document L), this would typically indicate a major or moderate, significant adverse effect.

The ISEP points set out above and the TII definitions set out in Table 6-3 below are well aligned but the ISEP goes a step further in requiring mitigation beyond 'good practice'.

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Acknowledging the ISEP 2026 guidance, the primary criteria used in determining the significance of effects on climate are those set out in the TII guidance and the 2022 ISEP guidance. Where possible, additional mitigation beyond current regulatory requirements have also been included to further reduce the impact to climate. In order to streamline the process and provide accountability, the criteria outlined in PE-ENV-01104 (Transport Infrastructure Ireland, 2022) (which are based on the 2026 ISEP guidance and are consistent with the terminology contained within Figure 3.4 of the EPA's (2022) '*Guidelines on the Information to be Contained in Environmental Impact Assessment Reports'*), are used together with the following two factors:

- The extent to which the trajectory of GHG emissions from the project aligns with Ireland's GHG trajectory to net zero by 2050
- The level of mitigation taking place.

Table 6-3: TII Significance Criteria for Greenhouse Gas Assessment

Effects	Significance Level	Description
Significant adverse	**Major adverse**	The project's GHG impacts are not mitigated; The project has not complied with do-minimum standards set through regulation, nor provided reductions required by local or national policies; and No meaningful absolute contribution to Ireland's trajectory towards net zero.
	Moderate adverse	The project's GHG impacts are partially mitigated; The project has partially complied with do-minimum standards set through regulation, and has not fully complied with local or national policies; and Falls short of full contribution to Ireland's trajectory towards net zero.
Not significant	**Minor adverse**	The project's GHG impacts are mitigated through "good practice" measures. The project has complied with existing and emerging policy requirements; and Fully in line to achieve Ireland's trajectory towards net zero.
	Negligible	The project's GHG impacts are mitigated beyond design standards. The project has gone well beyond existing and emerging policy requirements; and Well "ahead of the curve" for Ireland's trajectory towards net zero.
Beneficial	**Beneficial**	The project's net GHG impacts are below zero and it causes a reduction in atmosphere GHG concentration. The project has gone well beyond existing and emerging policy requirements; and Well "ahead of the curve" for Ireland's trajectory towards net zero, provides a positive climate impact.

6.3.5 Climate Change Risk Assessment

The Climate Change Risk Assessment (CCRA) involves determining the vulnerability of the proposed development to climate change. This requires an analysis of the sensitivity and exposure of the development to climate hazards which together provide a measure of vulnerability.

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- **Step 1**: First an initial, high level climate screening of physical hazards is carried out based on location and type of development. This is a qualitative screening intending to only proceed with relevant hazards.
- **Step 2:** The proposed development asset categories must be assigned a level of sensitivity to climate hazards. PE-ENV-01104 (TII, 2022) provides the list of asset categories and climate hazards to be considered, as per the below. The asset categories will vary for development type and need to be determined on a development-by-development basis.
    - Asset Categories Pavements; drainage; structures; utilities; landscaping; signs; light posts; buildings; and fences.
    - Climate Hazards Flooding (coastal, pluvial, fluvial); extreme heat; extreme cold; wildfire; drought; extreme wind; lightning and hail; landslides; fog.

  Following this, all asset categories are assessed on their sensitivity to climate change. The sensitivity is based on a High, Medium or Low rating with a score of 1 to 3 assigned as per the criteria below.

    - **High Sensitivity:** The climate hazard will or is likely to have a major impact on the asset category. This is a sensitivity score of 3.
    - **Medium Sensitivity:** It is possible or likely the climate hazard will have a moderate impact on the asset category. This is a sensitivity score of 2.
    - **Low Sensitivity:** It is possible the climate hazard will have a low or negligible impact on the asset category. This is a sensitivity score of 1.
- **Step 3:** Once the sensitivities have been identified the exposure analysis is undertaken. The exposure analysis involves determining the level of exposure of each climate hazard at the project location irrespective of the project type. For example, flooding could be a risk if the project location is next to a river in a floodplain. Exposure is assigned a level of High, Medium or Low as per the below criteria.
    - **High Exposure** It is almost certain or likely this climate hazard will occur at the project location, i.e. might arise once to several times per year. This is an exposure score of 3.
    - **Medium Exposure** It is possible this climate hazard will occur at the project location, i.e. might arise a number of times in a decade. This is an exposure score of 2.
    - **Low Exposure** It is unlikely or rare this climate hazard will occur at the project location, i.e. might arise a number of times in a generation or in a lifetime. This is an exposure score of 1.
- **Step 4:** Once the sensitivity and exposure are categorised, a vulnerability analysis is conducted by multiplying the sensitivity and exposure to calculate the vulnerability:

$$Vulnerability = Sensitivity \times Exposure$$

6.3.5.1 Significance Criteria for CCRA

The CCRA involves an initial screening assessment to determine the vulnerability of the proposed development to various climate hazards. The vulnerability is determined by multiplying the sensitivity and the exposure of the proposed development to various climate hazards.

The vulnerability assessment at this stage excludes mitigation. Table 6-4 details the vulnerability matrix; vulnerabilities are scored on a high, medium and low scale.

The PE-ENV-01104 guidance note that if all vulnerabilities are ranked as low in a justified manner, no detailed climate risk assessment may be needed. Therefore, the impact from climate change on the proposed development can be considered to be not significant.

However, following the embedding of mitigation measures, where residual medium or high vulnerabilities exist the assessment may need to be progressed to a detailed climate change risk assessment and further mitigation implemented to reduce risks. According to PE-ENV-01104, an assessment of construction phase CCRA impacts is only required if a detailed CCRA is required. Where

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a CCRA for the construction phase is not required, best practice mitigation against climate hazards should still be recommended.

Table 6-4: Vulnerability Matrix

		Exposure		
		High (3)	**Medium (2)**	**Low (1)**
Sensitivity	**High (3)**	9 - High	6 - High	3 - Medium
	Medium (2)	6 - High	4 - Medium	2 - Low
	Low (1)	3 - Medium	2 - Low	1 - Low

6.4 Receiving Environment

6.4.1 Current GHG Baseline

Data published in July 2026 (Environmental Protection Agency, 2026a), indicates that Ireland exceeded, without the use of flexibilities, its 2025 annual limit set under EU's Effort Sharing Regulation (ESR) (EU 2018/842) by 5.01 $MtCO_2e$. However, the reported emissions for 2025 represent the third consecutive year in which Ireland's emission were below 1990 levels by 5.5%. Emissions Trading Scheme emissions have decreased by 52.4% or 11.8 $MtCO_2e$ compared to 2005 and Effort Sharing Regulation emissions decreased by 11.8% or 5.6 $MtCO_2e$. Ireland is now a net 3,198 $ktCO_2e$ distant from its target under the Effort Sharing Regulation.

The EPA estimate that 2025 total national GHG emissions, excluding LULUCF, have decreased by 2.3% on 2024 levels to 52.65 $MtCO_2e$. The sector with the highest emissions in 2025 was agriculture at 38.7% of the total, followed by transport at 22.0%. For 2025, total national emissions (including LULUCF) were 55.16 $MtCO_2e$ (Table 6-5). Agriculture emissions decreased by 0.2% in 2025, primarily due to a 3.3% reduction in cattle herd numbers. However, a 12.7% increase in fertilizer nitrogen lessened the impact of the herd reduction on emissions. Greenhouse gas emissions from the transport sector decreased by 1.5% in 2025, the increase in the use of biofuels contributed to the majority of this emission reduction in addition to the increasing number of electric vehicles on Irish roads. Emissions from the energy industries sector decreased for the fourth consecutive year by 7.1% in 2025. This reduction can be attributed to an increase in imported electricity as well as increased renewable generation. Renewables accounted for 40.6% of electricity generation in 2025.

The current estimates of National greenhouse gas emissions (including LULUCF) in 2025 are 14.5% below 2018 levels, at considerable variance from the National Climate ambition of a 51% reduction by 2030. The data indicate that from 2021 to 2025 Ireland has used 99.6% or 293.9 $MtCO_2e$ of the 295 $MtCO_2e$ Carbon Budget for the five-year period 2021-2025. This leaves 1.1 $MtCO_2e$ of the budget available to be carried over into budget 2 for 2026-2030. In order to achieve Ireland's climate ambition of a 51% reduction by 2030, annual emission reductions of over 10% are required for the next 5 years.

In relation to compliance with the sectoral emissions ceilings (SECs), the provisional GHG emissions estimates (see Table 6-5) indicate that four sectors, Buildings (Residential), Buildings (Commercial and Public), Agriculture and Other, have stayed within their sectoral emissions ceilings. The other three sectors, Electricity, Transport and Industry have exceeded their sectoral emissions ceilings. The EPA state that the National Climate objective of a 51% reduction by 2030 will be unattainable unless every sector meets its indicative percentage reduction target.

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Table 6-5: Trends in Total National GHG Emissions 2021 – 2025

Sector *Note 1*	2021	2022	2023	2024	2025	Total	Sectoral Emissions Ceiling 2021-2025	% SEC 2021-2025 Used
MtCO2e								
Electricity	9.82	9.62	7.50	6.89	6.30	40.12	40	100.3%
Transport	11.19	11.88	11.93	11.78	11.61	58.40	54	108.1%
Buildings (Residential)	6.71	5.62	5.23	5.49	5.21	28.26	29	97.4%
Buildings (Commercial and Public)	1.42	1.38	1.34	1.44	1.39	6.97	7	99.6%
Industry	7.25	6.82	6.47	6.20	6.00	32.74	30	109.1%
Agriculture	21.97	21.78	20.72	20.44	20.40	105.30	106	99.3%
Other *Note 2*	1.82	1.85	1.73	1.64	1.75	8.79	9	97.6%
LULUCF	2.87	2.47	2.97	2.51	2.51	13.33	-	N/A
National Total (incl. LULUCF)	**63.05**	**61.42**	**57.89**	**56.38**	**55.16**	**293.90**	**295**	**99.6%**

Note 1 Reproduced from latest emissions data from the EPA (EPA, 2026).

Note 2 Other includes Petroleum refining, F-Gases and Waste (emissions from solid waste disposal on land, solid waste treatment (composting and anaerobic digestion), wastewater treatment, waste incineration and open burning of waste).

6.4.2 Future GHG Baseline

The future baseline with respect to the GHGA can be considered in relation to the future climate targets which the assessment results will be compared against. In line with TII (TII, 2022) and ISEP guidance (ISEP, 2022) the future baseline is a trajectory towards net zero by 2050, "*whether it* [the project] *contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050*".

The future baseline will be determined by Ireland meeting its targets set out in the CAP25, and future CAPs, alongside binding 2030 EU targets. The European Union (EU) enacted 'Regulation (EU) 2018/842 on binding annual GHG emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No. 525/2013' (hereafter referred to as the Regulation) (European Union, 2018) to meet the commitments under the Paris Agreement. The Regulation aims to deliver, collectively by the EU in the most cost-effective manner possible, reductions in GHG emissions from the Emission Trading

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Scheme (ETS) and non-ETS sectors amounting to 43% and 30%, respectively, by 2030 compared to 2005. The Regulation was amended in April 2023 by Regulation (EU) 2023/857 and Ireland must now limit its ETS and non-ETS greenhouse gas emissions by at least 42% by 2030. The ETS is an EU-wide scheme which regulates the GHG emissions of larger industrial emitters including electricity generation, cement manufacturing and heavy industry. The non-ETS sector includes all domestic GHG emitters which do not fall under the ETS scheme and includes GHG emissions from transport, residential and commercial buildings and agriculture.

In May 2026, the EPA released the report Ireland's Greenhouse Gas Emissions Projections 2025-2030 (EPA, 2026b), which includes total projected emissions and a breakdown of projected emissions per sector under the 'With Existing Measures' and 'With Additional Measures' scenarios. The EPA projections indicate that currently implemented measures (With Existing Measures) will achieve a reduction of 12.7% on 2005 levels by 2030, significantly short of the 42% reduction target. If measures in the higher ambition (With Additional Measures) scenario are implemented, EPA projections show that Ireland can achieve a reduction of 23.4% by 2030, still short of the 42% reduction target.

The EPA GHG emissions projections report for 2025 - 2030 (EPA, 2026b) states that Ireland is not on track to meet the 51% emissions reduction target by 2030 (compared to 2018). Full implementation of a wide range of policies and plans across all sectors that deliver carbon savings is required to achieve a projected reduction of 25%.

The estimates of GHG emissions from the EPA for the 2021 – 2025 period indicate that the first carbon budget for 2021 – 2025 will be met but that Budget period 2 (2026-2030) of 200 $MtCO_2e$ is expected to be exceeded by 53 to 81 $MtCO_2e$.

6.4.3 Current CCRA Baseline

6.4.3.1 Climate Hazard Screening

Table 6-6 sets out a qualitative assessment of climate hazards relevant to the proposed development. This high-level screening ensures focus is given to relevant climate hazards throughout the remainder of the assessment. The initial climate hazard list is taken from TII PE-ENV-01104.

Table 6-6: Physical Climate Hazard Screening

Climate-related Hazard	Hazard Screening Rationale	Screening
Extreme heat (including extreme heat events and increasing temperatures overtime)	Screen in	High temperatures are a key consideration for both construction and long-term operation of the proposed development. Heat can affect the performance of materials, roofing, road surfaces, electrical systems while also affecting the lifecycle of assets. Extreme heat should therefore be further considered and screened in.
Extreme cold (including frost and snow)	Screen in	Snow and ice events pose significant risks to health, safety, and site operations. Road access may be disrupted, and low temperatures can affect water mains. Freeze-thaw cycles may cause cracking in concrete and road surfaces, with snow clearance and requiring management. Cold temperatures are therefore screened in.
Flooding (pluvial)	Screen in	Surface water is a key vulnerability for any proposed development during both construction, operational and decommissioning phases due to the sensitivity of construction materials, site access, and site assets to water exposure therefore it is screened in.
Flooding (fluvial)	Screen out	The FRA by Ground Investigation Ireland states the proposed development is entirely in Flood Zone C therefore fluvial flooding is screened out.

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Climate-related Hazard	Hazard Screening Rationale	Screening
Flooding (coastal)	Screen out	Proposed development approximately 13.1km from the coast.
Drought	Screen out	Drought is more likely to occur in the future but it is not considered a fundamental issue for the operation of a residential development.
Wildfire	Screen out	The area surrounding the proposed development is largely developed and in close proximity to urban centres.
Extreme wind	Screen in	High winds and storms may cause localised disturbances such as road blockages and flying small debris. Damage would be expected to be minor and easily repairable but should be further assessed so is screened in.
Fog	Screen out	Fog is not considered a significant hazard for the proposed development, as it does not involve transport, aviation, or activities requiring high visibility.
Lightning and hail	Screen out	Proposed development is not at an elevated location and is surrounded by other tall buildings. Nonetheless, lightening protection to IS EN 62305 will be specified.
Landslides	Screen out	Geological Society of Ireland (GSI) landslide susceptibility mapping database categorised location as low for landslide susceptibility.

6.4.3.2 Extreme temperatures and precipitation

Ireland has a temperate, oceanic climate, resulting in mild winters and cool summers. This baseline data is derived from the European Centre for Medium-Range Weather Forecasts (ECMWF) ERA5 data reanalysis and presented on the World Bank Group Climate Change Knowledge Portal (World Bank Group, 2026b) which includes observed data from local meteorological weather stations across Ireland from 1950-2023. This data is reanalysed to model a complete picture of Irelands historical climate. This method has been chosen to ensure data can be analysed at the daily level and harmoniously compared with future scenarios. The baseline time-period referred to in this assessment was from 1991-2020 and is specific to the county of Dublin.

Climate averages for the 30-year period from 1991-2020 are shown in Figure 6-1. The data show that there are two distinct peaks for precipitation on wettest days, one occurring in June and one in September. On average, the precipitation peaks in August at 81.8 mm, and another wetter period from October to January with November being the wettest month on average with rainfall of 87.6 mm. The period from January to May experiences rainfall below the average (74.2 mm) for the year. September also experiences rainfall below the annual average however this is when the wettest days occur with daily average maximum rainfall of 28.2 mm. The driest month is February with 60.7 mm of rainfall.

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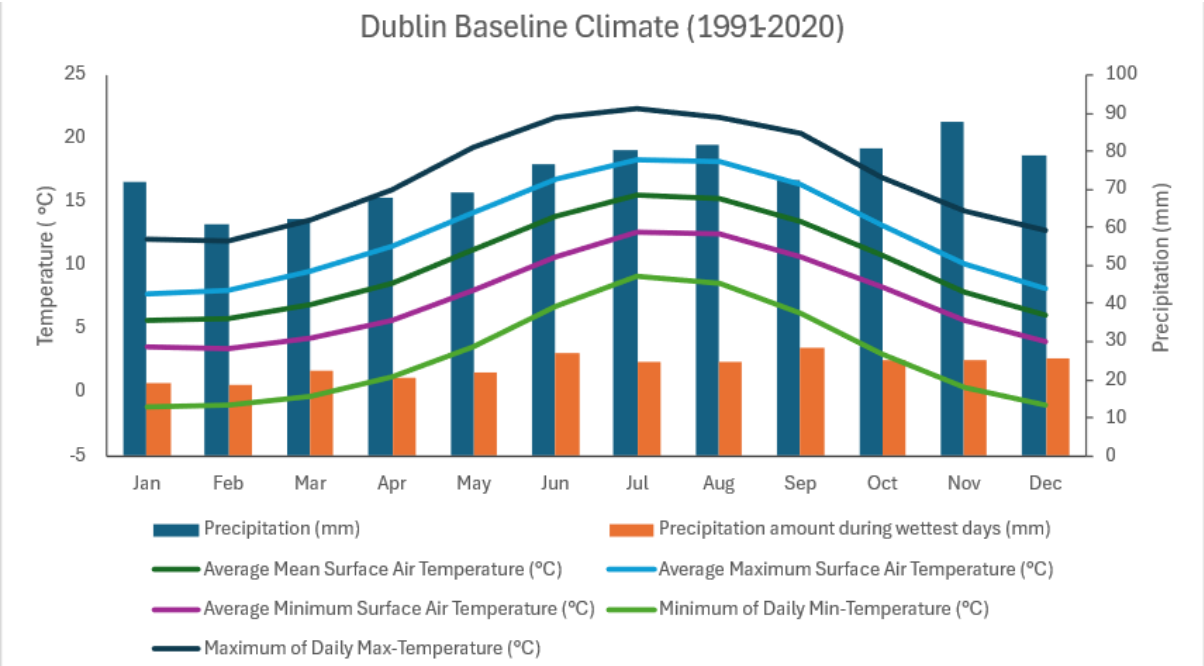


Figure 6-1: Climate Averages for Dublin, Ireland, for the period 1991-2020

July and August are the warmest month on average with a mean surface air temperature of 15.5°C and 15.3°C respectively. Both months also experience the average maximum surface air temperature (18.4°C and 18.2°C). It should be noted that the max temperature of 33.0°C was recorded for Dublin on 18th July, 2022 (MET Éireann, 2022). January is the coldest month on average with a mean average surface temperature of 5.7°C and recording the daily minimum temperature (-1.2°C), however the average minimum surface air temperature of 3.5°C occurs in February.

6.4.3.3 Wind and storms

At Dublin Airport, shown in Figure 6-2 during the period 1991-2020, the average wind speed was 10.5 knots (19.5km/h) annually, the average windiest month being January at 12.3 knots (22.6 km/h). Historically, the highest absolute gust of 80.0 knots (147.3 km/h) was recorded in January 2007 during Cyclone Kyrill. With reference to recent extreme weather events in Ireland, storm Éowyn hit the island in January 2025 and recorded a 10-minute mean wind speed of 142 km/h in Galway, with the highest gust being 184 kmh. Four weather stations broke their highest gust records during this storm and two stations reached hurricane force 12 on the Beaufort scale.

Later in the year storm Amy also resulted in strong winds such that five recording stations broke their records for 10-minute mean wind speeds. Overall, there were five named storms to hit Ireland in 2025.

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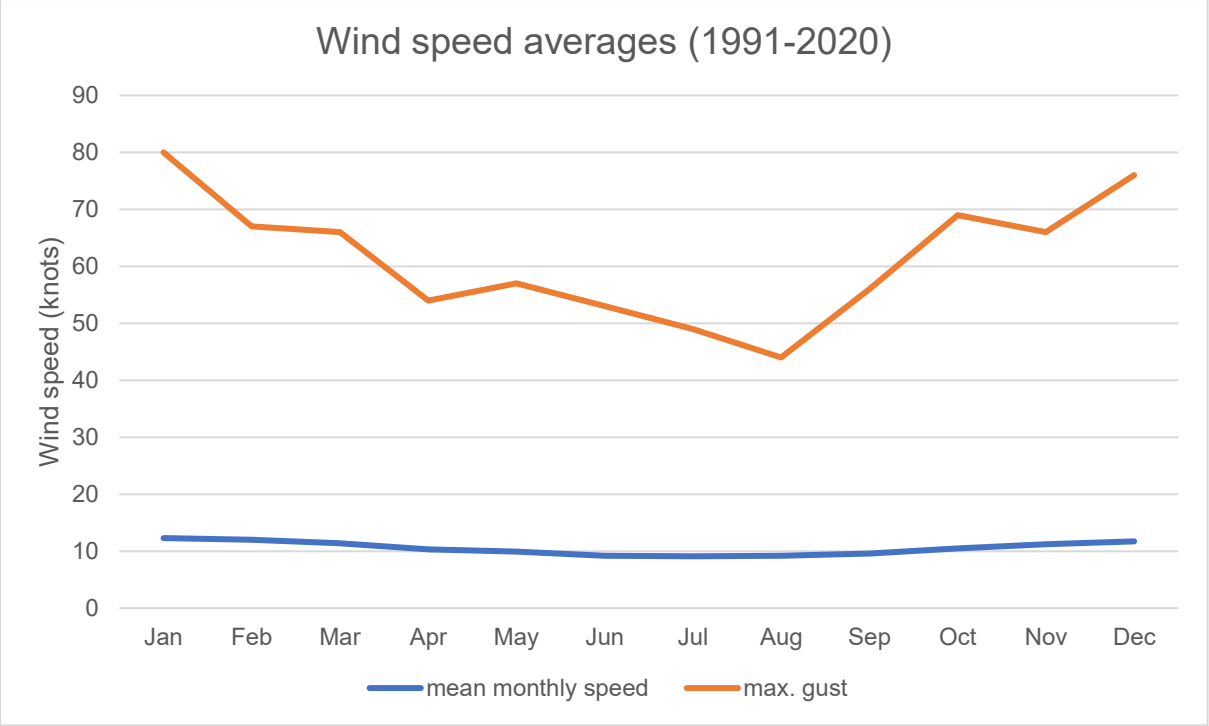


Figure 6-2: Wind speed averages

6.4.3.4 Flood

A Flood Risk Assessment (FRA), undertaken by Waterman Moylan, concludes that surcharging of proposed on-site drainage systems is a low likelihood. The report also mentions that historical flood areas in the vicinity are not considered a pluvial flooding risk to the subject site or proposed development. The FRA findings are based on current baseline events. Climate projections for the site of proposed development (Table 6-7) indicate an increase in the intensity of short-duration rainfall events, including increases in maximum 1-day rainfall. This may result in higher peak runoff rates and increased pressure on surface water drainage systems.

In contrast to fluvial flooding, which can be spatially correlated with defined watercourses and mapped flood zones, pluvial flooding is more dependent on local topography, drainage capacity and the performance of on-site infrastructure, and is therefore subject to a greater degree of uncertainty, especially under future climate conditions.

On this basis and having regard to the potential for increased rainfall intensity and the associated uncertainty in forecasting localised surface water flooding, pluvial flooding is considered a relevant climate hazard and is therefore screened in for further assessment.

6.4.4 Future CCRA Baseline

The current global climate is in a state of extreme flux. This is illustrated in the latest IPCC AR6 Synthesis Report Summary for Policymakers (IPCC, 2023) using the climate stripes representation pioneered by Professor Ed Hawkins of the University of Reading, reproduced in Figure 6-3.

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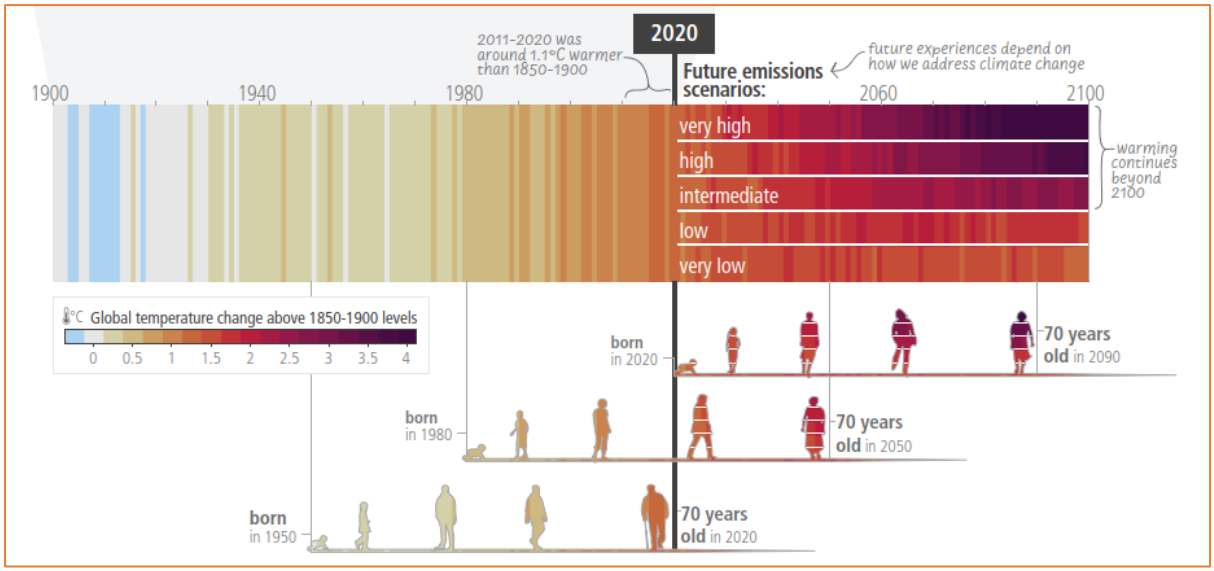


Figure 6-3: Global Climate Change Representation (IPCC, 2023)

Figure 6-3 shows that global average temperatures are already substantially above the 1850-1900 baseline level, and potential increases under future emissions scenarios are also presented.

The United Nations reported that 2024 was the first calendar year to exceed the 1.5°C average increase (United Nations, 2026) with an average temperature 1.55°C above the 1850-1900 average. Whilst this is not an indication of a definite exceedance of the 1.5°C Paris Agreement commitment, as there will be some natural variation in the coming years, it is a clear indication that the climate is continuing to significantly warm.

In addition, the CMIP6 climate model predicts a severe weakening of the Atlantic Meridional Overturning Current (AMOC) due to ocean surface warming and glacial meltwater entering the system from the Greenland ice sheets that is known to be highly influenced by anthropogenic emissions. Normally this current has a stabilising effect on the climate in Ireland, however a weakening or cessation of the ocean current would have profound consequences for Ireland in terms of overall climate stability and the magnitude of temperature extremes. Recent observations have been coupled with prediction models (Observational constraints project a ~50% AMOC weakening by the end of this century, 2026) that show AMOC weakening that is far greater than predicted in CMIP6. The implications of such a weakening or cessation of flow within AMOC for the climate in Ireland are predicted to be severely negative resulting in continental style hot summers and extreme cold in winter commensurate with the latitude of Ireland on the globe in a way not previously experienced due to the flow of warmer waters from the Atlantic.

The CMIP7 model is now available and is based on a new set of global emissions scenarios that differ from CMIP6. The highest emission scenario is now lower than in CMIP6 whilst the lowest emission scenario now results in temperature changes that exceed the 1.5°C change that was part of the Paris Agreement. The highest emission scenario still results in substantial climate change above 4°C by 2100. CMIP7 results are expected to be published for public use later in 2026.

6.4.4.1 Climate Change Impacts and Projections for Ireland

Ireland is already experiencing increased annual rainfall in the north and west, with more variable patterns in the south and east (EPA, 2021b). Key risks identified by the EPA relevant to Ireland:

- Increased likelihood of more frequent and intense North Atlantic low-pressure systems bringing high rainfall and high winds.
- More intense rainfall periods which may lead to pluvial flooding and elevated fluvial levels.
- Longer dry spells and increased temperatures will elevate the risk of wildfire.

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6.4.4.2 Climate Modelling and Planning

International best practice and national policy such as the NCCRA (2025), IPCC (2023), and Transport Infrastructure Ireland (TII, 2022) recommends using two emission scenarios to project future climate change. This includes a moderate and high emission scenarios (RCP4.5 and RCP8.5) for future planning. These Representative Concentration Pathways (RCPs) reflect varying levels of global climate mitigation explained below.

- RCP 4.5 (a 'moderate' scenario) represents an approximate 2.4°C increase in global average temperatures (1.7-3.2°C). It assumes moderate mitigation efforts leading to stabilisation of emissions by mid-century and is generally aligned with current policies for emission reduction.
- RCP 8.5 (a 'worst case' / high emissions scenario) represents an approximate 4.3°C increase in global average temperatures (3.2-5.4°C) and assumes continued high emissions with minimal mitigation. This high-end scenario is useful for understanding potential impacts of current emission trends continue. Consequently, this scenario will result in the highest level of physical risk for Ireland, and therefore the greatest requirement for adaptation.

This climate change assessment uses the latest climate change projections standardised and bias corrected for Ireland available through the EPA and the TRANSLATE project (EPA, 2025e).

6.4.4.3 Key Findings from Climate Projections

Table 6-7 provides a detailed comparison of baseline and future climatology across a medium (RCP4.5) and high emissions scenario (RCP8.5) up to 2070 whilst Figure 6-3 shows the changes graphically in a national context. Key Projected changes include:

- Average maximum temperatures rising by over 1.5°C and overall mean temperatures increasing 1.1°C and 1.6°C by mid-century under RCP4.5 and RCP8.5 respectively.
- Annual precipitation rising by 56mm, in medium RCP 8.5 scenario (2041-2070), with maximum 1-day rainfall increasing by 29% across the same time frame.
- Frost days reducing by 81% in long term RCP 8.5 scenario (6.1 days <0°C).
- Increased number of heatwaves in medium RCP 8.5 scenario (9 consecutive days >25°C).

This will result in longer dry periods and heavy rainfall events. Met Éireann has high confidence in maximum rainfall rates increasing but not in how the frequency or intensity of storms will change with climate change.

Impacts resulting from climate change hazards will evolve and have the potential to include increases in global temperatures and increases in the intensity and frequency of rainfall days per year combined with increases in the intensity and frequency of low-pressure systems in the north Atlantic during the winter storm period. Therefore, it is expected that the climate over the proposed site in will evolve over time and consideration is needed with respect to this within the design of the proposed development.

Table 6-7: Predicted future climate hazards across RCP4.5 and RCP8.5 up to 2100

Climate Hazard	Indicator	Baseline	RCP4.5		RCP8.5	
		(1976-2005)	(2041-2070)	(2071-2100)	(2041-2070)	(2071-2100)
Temperature	Mean temp (°C)	9.9	11.0 (+1.1°C)	11.4 (+1.5)	11.5 (+1.6°C)	12.7 (+2.8)
	Mean Max temp (°C)	13.6	14.6 (+1.1°C)	15.0 (+1.5)	15.1 (+1.5°C)	16.3 (+2.7)

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Climate Hazard	Indicator	Baseline	RCP4.5		RCP8.5	
		(1976-2005)	(2041-2070)	(2071-2100)	(2041-2070)	(2071-2100)
	Mean Min temp (°C)	6.2	7.4 (+1.1°C)	7.8 (+1.6)	7.8 (+1.6°C)	9.1 (+2.9)
	Average of Daily Max temp (°C)	25.5	27.5 (+2°C)	28.3 (+2.8)	28.1 (+2.6°C)	28.9 (+3.3)
	Frost Days (Nr.)	32.7	18.4 (-44%)	14.0 (-57%)	13.8 (-58%)	6.1 (-81%)
Precipitation and Flooding	Annual precipitation (mm)	740	778 (+39)	794 (+54)	796 (+56)	826 (+86)
	Max 1-day (mm)	35	44 (+26%)	43 (+26%)	45 (+29%)	48 (+40%)
Storms and high winds	Storm Frequency and Average speed	On Average 8 named storms annually with speeds exceeding 100 kmp/h Note 1	Winter storm frequency is projected to increase, with a possible extension of the storm season. While the intensity of individual storms cannot be accurately projected, storm wind speeds are likely to remain above 100 km/hr.			
	Max gust Speed Note 2	80 knots (147 kph)				
Note-1: Data from combined Met Éireann						
Note-2: Data from Dublin Airport (~13.7km from site), 1991-2020						

6.5 Characteristics of the proposed development

The proposed development will consist of the construction of a residential led mixed use scheme containing 312no. residential apartments comprising 244no. cost rental and 68 no. social units, 8 no. local retail and commercial units, landscaped public and communal open space. The proposed development includes a new principal access via Barnville Park to the south, providing entry to an internal under croft parking court, upgraded pedestrian and cycle footpaths, Barnville pedestrian link connecting the Park West and Cherry Orchard railway station and all associated site and development works. The proposed development represents Phase 3 of the overall planned development for Development Sites 4 and 5 of the LAP lands.

6.5.1 Construction Stage

During the construction phase embodied carbon of materials used in the construction of the development along with site activities will impact climate. Engine emissions from site vehicles and machinery have the potential to impact climate through the release of CO_2 and to a lesser extent, other

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greenhouse gases. Impacts to climate are assessed against Ireland's obligations under the EU 2030 GHG targets and sectoral emissions ceilings.

6.5.2 Operational Stage

Engine emissions from vehicles accessing the site have the potential to impact climate during the operational phase of the development through the release of CO_2. These can be from the residents of the apartments or users of other facilities. Emissions from the energy use of the operation of the proposed development will also have an impact on the climate. This includes indirect greenhouse gas emissions arising from the generation of electricity consumed within the development. In addition, the vulnerability of the proposed development in relation to future climate change must be considered during the operational phase.

6.6 Potential Impact of the proposed development

6.6.1 Greenhouse Gas Assessment

6.6.1.1 Construction Stage

The results of the GHGA are shown in Table 6-8. This includes both the outputs from the OneClick LCA tool and the TII Carbon Tool. Construction materials make up the majority of GHG emissions for the proposed development, accounting for approximately 97% of the total construction phase GHG emissions. It was specified by the proposed development that soil stabilisation will be required therefore the GHG impact of this has also been incorporated within the material GHG emissions category.

It has been calculated that the total construction phase embodied carbon for the proposed development will be 46,672 tonnes CO_2e as shown in Table 6-8.

Table 6-8: Construction Phase GHG Assessment Results

Stage	GHG Assessment Category	Predicted GHG Emissions (tCO2e)	Predicted GHG Emissions as % of Construction phase	Relevant Sector for Carbon Budget Comparison
A1-A3	**Materials**	45,447	97	Industry
A4	**Material Transport**	338	1	Transport
	Construction worker travel to site	647	1	Transport
A5	**Excavations**	12.24	0.03	Industry
	Construction site waste	220	0.46	Waste
	Construction site material waste transport	8	0.02	Transport
	Total	**46,672**		

6.6.1.2 Operational Stage

The results of the GHGA for the operational stage are shown in Table 6-9. This includes both the outputs from the OneClick LCA tool and the TII Carbon Tool. GHG Emissions from maintenance includes embodied carbon of new materials required to repair or replace building elements through the lifetime of the proposed development. It is quantified using default product specifications in OneClick. Operational waste disposal data has been taken from the Material Assets – Waste Management

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Chapter (Chapter 15) and the transport of the waste is calculated using default in the TII tool, both values have been multiplied by the lifespan of the building.

Operational energy use associated with electricity (B6) has been quantified in line with the methodology mentioned in Section 6.3.4.2.2.To reiterate, the Irish Grid Electricity non-decarbonisation factors have been used which are taken from SEAI.

No fossil fuels are used within the proposed development. Therefore, operational energy demand is assumed to be fully electrified, and associated GHG emissions are calculated solely based on electricity consumption using SEAI grid emission factors.

It has been calculated that the total operational phase GHG emissions over the 60 years lifespan of the proposed development will be 29,971 tCO_2e with electricity usage dominating the share by 65%.

Table 6-9: Operational Phase GHG Assessment Results across the lifespan of the proposed development

PAS2080 LC Stage	TII Category	tCO2e	Predicted GHG Emissions as % of Operational Phase	Relevant Sector for Carbon Budget Comparison
B1-B5	**Operational Waste Disposal**	3805	12.7%	Waste
B1-B5	**Operational Waste Transport**	252	0.84%	Transport
B4-B5	**Replacement**	6,415	21%	Industry
B6	**Electricity use**	19,499	65%	Electricity
Total		**29,971 tCO2e**		

A number of measures have been incorporated into the design to ensure the operational phase emissions are minimised. The primary elements with respect to reducing climate impacts and optimising energy usage are summarised in Section 6.7.2 and are based on information provided within the development description.

6.6.1.2.1 Operational Traffic Emissions

This assessment falls under the B8 of PAS2080 LC stages. According to EN 15978 standard, B8 is the building related user's activity which is optional to report. If reported, it should be kept separate in the assessment, hence it is reported here.

The use of fossil fuel powered vehicles by new occupants of the proposed development will result in GHG emissions. Traffic data was provided by Waterman Moylan and is included in Chapter 14 Material Assets – Traffic and Transport. The data include the cumulative flows of the proposed development, committed developments from the surrounding area and background, existing traffic flows. The predicted transport GHG emissions for 2027 and 2042 shown in Table 6-10 demonstrate that the operational emissions from transport are a small fraction of the transport sector emission ceiling, and a smaller fraction of the national emission ceiling. The values for the Do Nothing and Do Something scenarios are presented for the opening year and design year along with the difference between the Do Nothing and Do Something scenarios.

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Table 6-10: Summary of Transport related GHG Emissions

Year	Scenario	tCO2e (tonnes/annum)
2027	**Do Nothing**	1,305
	Do Something	2,165
2042	**Do Nothing**	986
	Do Something	1,214
Increment Change in 2027		35
National Emission Ceiling 2027 (Tonnes) Note 1		37,869,352
Impact in 2027 (as % of national emissions ceiling)		0.0001%
Transport Sector 2030 Emission Ceiling		6,000,000
Impact in 2027 (as % of transport sector emissions ceiling)		0.001%
Increment Change in 2042		22
National Emission Ceiling 2030 (Tonnes) Note 1		33,381,312
Impact in 2042 (as % of national emissions ceiling)		0.001%
Impact in 2042 (as % of transport sector emissions ceiling)		0.004%
Note 1 Target under Commission Implementing Decision (EU) 2020/2126 of 16 December 2020 (amendments 2023/1319, 2024/1884, 2025/1405, 2026/895) on setting out the annual emission allocations of the Member States for the period from 2021 to 2030 pursuant to Regulation (EU) 2018/842 of the European Parliament and of the Council.		

6.6.1.3 Contextualisation of GHG emissions

In Table 6-11, GHG emissions have been compared against the carbon budget for the industry, transport, electricity, and waste sectors in 2030 (DECC, 2024), against Ireland's total GHG emissions in 2025, and against Ireland's EU 2030 target of a 42% reduction in non-ETS sector emissions based on 2005 levels (27.7 Mt CO_2e) (set out in Regulation EU 2018/842).

The estimated total GHG emissions annualised over the 60-year proposed development lifespan are shown in Table 6-11 and are a small fraction of the sectoral budgets.

Table 6-11: Estimated GHG Emissions Relative to Sectoral Budgets and GHG Baseline

Target/Sectoral Budget (tCO2e)		Annualised Development GHG Emissions (tCO2e)		% of Relevant Target/Budget
Ireland's 2025 Total GHG Emissions (existing baseline)	**55,160,000**	1277	Total GHG Emissions	0.002%
Non-ETS 2030 Target	**27,722,000**			0.005%
2030 Sectoral Budget (Industry Sector)	**4,000,000**	865	Total Industry Emissions	0.02%
2030 Sectoral Budget (Transport Sector)	**6,000,000**	21	Total Transport Emissions	<0.001%

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Target/Sectoral Budget (tCO2e)		Annualised Development GHG Emissions (tCO2e)		% of Relevant Target/Budget
2030 Sectoral Budget (Electricity Sector)	**3,000,000**	325	Total Electricity Emissions	0.01%
2030 Sectoral Budget (Waste Sector)	**1,000,000**	67.1	Total Waste Emissions	0.007%

6.6.1.3.1 GHGA Significance of Effects

The TII and ISEP guidance states that the following two factors should be considered when determining significance:

- The extent to which the trajectory of GHG emissions from the project aligns with Ireland's GHG trajectory to net zero by 2050; and
- The level of mitigation taking place.

Therefore, prior to mitigation, any impact to climate as a result of GHG emissions arising from the construction and operation of the proposed development is considered significant.

6.6.2 Climate Change Risk Assessment

6.6.2.1 Construction Stage

Whilst the development is likely to be exposed to potential weather extremes due to climate change during the construction phase, the potential length of the construction phase and its transient nature means that a detailed CCRA of this phase is scoped out.

However, the following non-exhaustive list of risks has been identified:

- Flood Risk due to increased precipitation, and intense periods of rainfall. This includes pluvial flooding affecting unfinished structures or access roads/pavement.
- Increased temperatures potentially causing drought, wildfires and prolonged periods of hot weather potentially affecting setting concrete or cement, dust suppression and construction worker health and safety.
- Reduced temperatures resulting in ice or snow potentially affecting setting concrete or cement, landscaping and construction worker health and safety.
- Major storm damage including wind damage potentially affecting landscaping, stored materials, vertical infrastructure and construction worker health and safety.

6.6.2.2 Operational Stage

6.6.2.2.1 Sensitivity Analysis

The aim of the sensitivity analysis is to identify which climate hazards are relevant to the specific type of project, irrespective of its location. Individual components within the type of proposed development i.e. a large residential development, are assessed against each climate hazard. Sensitivities are based on the experience and professional judgement of the Climate Practitioner in consultation with the Design Team.

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Table 6-12: Receptors and their sensitivity to climate hazards

Receptors	Sensitivity to Climate Hazards (No consideration of site location)			
	Extreme Heat	Extreme Cold	Flood (Pluvial)	Extreme Wind
Buildings and Structures	1	1	2	1
Drainage	1	1	2	1
Health, safety and wellbeing	2	1	2	2
Roads	2	1	2	1
Public and communal open spaces	2	2	2	1
Critical systems	2	1	2	2
1 = Low; 2 = Medium; 3 = High				

Table 6-12 shows low sensitivity and medium sensitivity for relevant climate hazards when assessed against sensitivity receptors. High sensitivity was not proposed for any of the sensitivity receptors. The majority of the medium risks are to the health and wellbeing of the residents, communal open spaces, and to critical systems. High heat events can cause heat stress especially for the vulnerable residents – for example, the young and the elderly. This might also result in hospitalisation of the affected. Sustained high temperatures may also result in softening and deformation of road surfaces, including rutting or cracking, particularly during peak summer periods, potentially affecting road condition, safety and maintenance frequency.

With flooding, the critical systems are also at risk since pluvial flooding can damage the grid lines or the energy systems of the proposed development. It can then lead to power outages or even destruction of these critical systems. Moreover, if the proposed undercroft parking is flooded, the residents may not be able to access their apartments and their health and safety may be at risk too. Therefore, this also has a cascading negative effect on the users of the proposed development. The public and communal open spaces are also prone to flooding if the drainage overflows during an extreme rainfall event. It can cause damage to the flora and the amenities.

By the EU Technical guidance definition, a medium risk is “possibility or likelihood that the climate hazard will have a moderate impact on the asset category”. Due to the nature of the proposed development and strict building regulations ensuring buildings in Ireland are constructed to a high quality and with some resilience to climate hazards, the risks to the receptors are not considered high.

6.6.2.3 Exposure Analysis

The exposure of the proposed development to climate risks is highly dependent on the project location. The aim of the exposure analysis is to identify which climate hazards are relevant to the planned project location. This assessment is based on future climate described in Table 6-7.

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Table 6-13: Exposure of proposed development to the climate hazards

Climate Exposure	Exposure Risk to Climate Hazards (Consider the site location)			
	Extreme Heat	Extreme Cold	Flood (Pluvial)	Extreme Wind
Exposure at project location	2	1	1	2
1= Low, 2= Medium, 3= High				

Table 6-13 shows the locality of the proposed development is at low or medium exposure to the climate hazards. Medium exposure is defined as “this climate hazard occurs at the project location a number of times in a decade”. The assessment has been based on information in Section 6.3.5. Occurrences of extreme heat also sit within the medium exposure category based on the current climate. Exposure of the proposed development to pluvial flooding was determined by the Flood Risk Assessment (FRA) prepared by Waterman Moylan and the future climate predictions in Table 6-7. The FRA determines that the pluvial flooding risk to the proposed development is low keeping in mind accommodating the 1-in-100-year rainfall events.

Extreme winds, as a result of storms, are getting more frequent in Ireland with events like storm Éowyn. Dublin city has been increasingly exposed to such storm events therefore; the proposed development is expected to have medium exposure as well.

6.6.2.3.1 Vulnerability Analysis

This assessment combines the outcomes of the sensitivity and exposure analysis to determine which climate hazards pose a risk to the proposed development. The vulnerability of the proposed development to climate risks is determined based on the sensitivity and the exposure as follows:

$$Vulnerability = Sensitivity \times Exposure$$

The vulnerability of the proposed development to the risks of Climate Change impacts is shown in Table 6-14 below:

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Table 6-14: Vulnerability of the proposed development to the risks of climate change impacts

Receptors	Vulnerability Analysis			
	Extreme Heat	Extreme Cold	Flood (Pluvial)	Extreme Wind
Buildings and Structures	2	1	2	2
Drainage	2	1	2	2
Health, safety & wellbeing	4	1	2	4
Roads	4	1	2	2
Public and communal open spaces	4	2	2	2
Critical systems	4	1	2	4
1, 2 = Low; 3, 4 = Medium; 6,9 = High				

Table 6-14 shows a collective rating of each receptor's vulnerability to the hazards that were screened in. Health and wellbeing of the users of the proposed development and critical systems are the most vulnerable to the physical hazards. Extreme heat poses a threat to the receptors as it can cause overheating of critical systems, heat stress on residents, damage plants and landscaping and cause road surfaces to buckle.

Pluvial flooding, as a result of increased rainfall in a short span of time, impacts the whole proposed development as it can not only hinder physical functionalities but also damage the structures. Nonetheless, the FRA concluded that that the pluvial flooding likelihood is low at the site therefore, this assessment concludes that pluvial flooding risk is low for the receptors of the proposed development.

Extreme winds have the potential to cause damage to the receptors through flying debris, uprooting of trees and plants and damage exposed electrical systems, which can in turn have a cascading effect on the health and wellbeing of the users of the proposed development e.g. if the power supply is damaged, residents may experience power outages.

6.6.2.4 CCRA Significance of Effects

In the absence of design mitigation, there is a medium risk to the proposed development as a result of climate change. In accordance with the EPA Guidelines (EPA, 2022), the significance of effect of the impacts to the proposed development as a result of climate change are ***direct*** as climate extremes have a direct physical effect on buildings and infrastructure, ***long-term*** due to the response times of the climate in relation to changes in anthropogenic emissions, ***negative*** as climate extremes have been shown to damage or adversely affect infrastructure, and ***moderate*** due to the medium vulnerability of the proposed development to the effects of climate change, which is overall ***not significant*** in EIA terms.

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6.6.3 Do-Nothing Impact

In the Do-Nothing scenario, the site will remain as per the baseline and will change in accordance with trends within the wider area (including influences from potential new developments in the surrounding area, changes in road traffic, etc).

As the site is zoned for development, in the absence of the proposed development it is likely that a development of a similar nature would be constructed in the future in line with national policy and the development plan objectives. Therefore, the construction and operational phase impacts outlined in this assessment are likely to occur in the future even in the absence of the implementation of the proposed development.

6.7 GHG Mitigation Measures (Ameliorative, Remedial or Reductive Measures)

6.7.1 Construction Stage

Embodied carbon of materials and construction activities will be the primary source of climate impacts during the construction phase. As mentioned in the Preliminary Construction Environmental Management Plan (CEMP) prepared by Waterman Moylan, the following measures have been taken to reduce the impact:

- All plant powered by mains electricity where possible rather than generators.
- Surplus subsoil excavated from the site will be reviewed for possible reuse as engineering fill.
- Surplus unsuitable sub-soils generated by excavations on site will be reviewed for reuse as landscaping or non-engineering fills on site.
- Careful separation of builder's rubble packaging and contaminated waste from re-usable material will result in the minimisation of the disposal of material to landfill.
- Cutting on site will be avoided where possible by using pre-fabrication methods.
- Design optimisation incorporated by reducing the requirement for fill material during the course of construction of the development.

In addition to the above, during the construction phase the following best practice measures shall be implemented on site to prevent significant GHG emissions and reduce impacts to climate:

- Construction staff will be encouraged to reduce car use by car sharing and / or travelling by public transport.
- Workers will be encouraged by their employer to keep themselves informed about the public transport options and active mode facilities provided in the surrounding area.
- Shut down all plant and equipment in intermittent use in the intervening periods between work or throttle down to a minimum.
- Plan deliveries and vehicle movements so that vehicles are not waiting or queuing. If unavoidable, engines to be turned off.
- Prohibition of on-site burning of materials.
- Prevention of on-site or delivery vehicles from leaving engines idling, even over short periods.
- Engines and exhaust systems will be maintained so that exhaust emissions do not breach stationary emission limits set for the vehicle / equipment type and mode of operation.

6.7.2 Operational Stage

A number of mitigation measures have been incorporated into the design of the development to reduce the impact on climate wherever possible. These are taken from in the Climate Action Energy Statement written by Waterman Moylan in July 2026.

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The development shall include several energy conservation measures to achieve a high energy rating:

- Space heating to be undertaken using air source heat pumps (ASHP). Total heat output roughly three to four times greater than the electrical input, (i.e. a coefficient of performance of 3 to 4 or efficiency of 300% to 400%) making the system highly energy-efficient.
- Achieve a BER Rating in line with the *Part L 2022 Dwellings* requirements. This requires reduction of 70% in energy consumption and 65% in carbon emissions.
- Strict on-site control of building techniques to significantly reduce infiltration losses, resulting in equivalent savings in energy consumption, emissions and running costs.
- 20% of the total energy consumed within the dwelling must be provided from renewable thermal sources (solar thermal, biomass, heat pumps) or renewable electrical sources (Photovoltaic, Micro-wind).

A number of sustainable design features have been considered within the design to achieve the sustainability targets of the proposed development. These include:

- The proximity of the development to public transportation networks.
- The proximity of the proposed development to active travel networks.
- Installation of infrastructure for electric vehicle (EV) charging for representing 50% of the total parking spaces.

The proposed development also follows the Land Development Agency's (LDA) sustainable design philosophy that is as follows:

- **Be Lean**: Use less energy and manage demand during operation through building design efficiency, fabric and servicing improvements and the incorporation of flexibility measures
- **Be Clean:** Exploit local energy resources (such as secondary heat) and supply energy efficiently and cleanly by connecting to district heating networks
- **Be Green:** Maximise opportunities for renewable energy by producing, storing and using renewable energy on site
- **Be Seen:** Monitor, verify and report on energy performance

The above measures will assist in reducing emissions associated with additional transport as a result of the Proposed Development.

6.8 CCRA Adaptation Measures

6.8.1 Construction Stage

In terms of impact on the proposed development due to climate change, during construction the contractor will be required to update the CEMP and plan to adapt against the effects of extreme rainfall/flooding, extreme temperatures and wind and storms through site risk assessments, method statements and good site management practice. Measure such as storing pollutants in bunded areas, will be taken to reduce vulnerability to pollution incidents exacerbated by heavy rainfall, which is a key climate risk during construction. All materials used during construction will be accompanied by certified datasheets which will set out the limiting operating temperatures. Temperatures can affect the performance of some materials, and this will require consideration during construction.

6.8.2 Operational Stage

6.8.2.1 Extreme heat and cold

Extreme temperatures, both hot and cold, can affect building materials and infrastructure; however, the project will use materials that comply with current standards and are designed to withstand projected climate extremes. Cold events are expected to decline, reducing the risk of cracking from freeze thawing

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of road surfaces and deterioration of auxiliary systems and infrastructure. However, cold events are still anticipated, and systems have been designed with this in mind, for example, the surface water pipes constructed in accordance with the GDSDS & DCC guidelines. The buried nature of the infrastructure limits the effects of freezing temperatures or extreme heat on network performance. While potential heat-related impacts such as road surface softening are possible during heatwaves, projected extremes are not expected to reach critical thresholds for infrastructure failures seen in other European countries. Nonetheless, the infrastructure's summer peak internal temperatures will be aligned with Part L / TM59.

Further, tree planting and green infrastructure will provide shading and sequester carbon dioxide, reducing global warming. With expected climate change scenarios, the planting strategy focuses on creating biodiverse planted areas mimicking nature, to create resilient ecosystems. In general, the landscape planting strategy focuses on enhancing biodiversity and native species which require less watering and general maintenance. Specifically, drought tolerant species are proposed to the podium level courtyards in order to minimise the need for irrigation.

As a result of the above adaptation measures, the proposed development is at low risk from extreme temperatures.

6.8.2.2 Pluvial Flooding

Pluvial flooding is the result of rainfall-generated overland flows which arise before run-off can enter any watercourse or sewer. It is usually associated with high-intensity rainfall. The provision of a suitable surface water drainage system for any proposed development on the site will mitigate against this risk. The flood risk assessment was carried out by Waterman Moylan in accordance with the Planning System and Flood Risk Management Guidelines for Planning Authorities (2009), published by the Department of Environment, Heritage and Local Government in conjunction with the Office of Public Works (EHLG/OPW). The report mentions that the proposed development does not contain soils that provide adequate infiltration rates for surface water management features relying solely on infiltration. However, localised infiltration within Sustainable Urban Drainage Systems (SuDS) may be feasible where features such as engineered rain gardens, swales, or bioretention tree pits are designed with appropriate overflow mechanisms and positive drainage connections to the main surface water network.

The FRA determines that the pluvial flooding risk to the proposed development is low keeping in mind accommodating the 1-in-100-year rainfall events, including a 30% allowance for climate change. This aligns with predicted max 1-day rainfall (Table 6-7) which is to increase up to 26% in RCP 4.5 scenario and 29% in medium term RCP 8.5 scenario. With the appropriate SuDS and other measures in place, the risk of pluvial flooding in the long term RCP 8.5 scenario is also low. Provided the drainage network is adequately maintained, surcharging of the proposed on-site system is considered unlikely.

The following Sustainable Urban Drainage System (SuDS) features have been incorporated into the proposed development design:

- Green and Blue Roofs;
- Raingardens;
- Swales;
- Bioretention tree pits;
- Soft landscaping;
- Permeable surfaces;
- Tree Root Systems; and
- Attenuation Areas.

Provided that the above adaptation measures are in place and ensured, the proposed development is at low risk from pluvial flooding.

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6.8.2.3 Extreme Wind

To mitigate against the effects of extreme winds, suppliers are expected to ensure brackets and fixings are fit for purpose. In terms of the buildings and structures, foundations are designed to transfer load from high winds experienced by buildings directly to ground in accordance with the relevant Eurocodes. The landscaped areas pose a risk from flying debris. To reduce this risk, the Landscape Architect has confirmed maintenance, and management plans will include:

- **Woodland windbreak planting:** Wind-tolerant native species are proposed along the site boundary, including a woodland belt to the M50 that functions as a windbreak while also filtering noise and air pollution.
- **Sheltered fruit tree planting:** Fruit trees are located within the more sheltered main park and communal courtyard areas to reduce exposure to prevailing winds.
- **Street tree mix:** A combination of wind-tolerant species and fruit trees are proposed along streets to balance resilience and amenity value.
- **Woonerf wind attenuation design:** Tree planting within east-west oriented woonerf streets (i.e. shared surface residential streets where pedestrians, cyclists and vehicles coexist at low speeds) is arranged across the street profile to reduce wind speeds, avoid wind tunnel effects, and introduce a chicane effect (i.e. a deliberately staggered and non-linear vehicle route created through planting and layout to slow traffic and discourage straight-line driving) to calm vehicular movement.
- **Low-level willow planting:** Willow is incorporated within Phase 3 shrub planting for biodiversity and replacement of existing scrub, limited to low-growing and understorey species to minimise wind exposure.
- **Tree stability design:** Adequate soil depth and volume are provided to support root development and ensure trees can withstand wind loading and storm events, consistent with good practice in EIAR landscape design.

In light of the above adaptation measures, the proposed development is at low risk from extreme wind events.

6.9 Residual Impact of the proposed development

6.9.1 GHGA Residual Effects

The TII guidance states that the following two factors should be considered when determining significance:

- The extent to which the trajectory of GHG emissions from the project aligns with Ireland's GHG trajectory to net zero by 2050; and
- The level of mitigation taking place.

TII reference the ISEP guidance (2022) which states that the crux of assessing significance is:

> *"not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050".*

As set out in Section 6.3.4, the proposed development will negatively impede Ireland's trajectory to achieving net zero by 2050 as GHG emissions produced during the construction and operational phases will contribute a small fraction towards the national and sectoral budgets. However, the proposed development will minimise its impacts through design and management measures (see Section 6.7.1). The level of mitigation described in Section 6.7 has therefore been taken into account when determining the residual significance of the proposed project's GHG emissions.

Based on the above reasoning, according to the TII significance criteria, the residual significance of the GHG emissions during the construction and operational phase is **minor adverse**. The ISEP GHG

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guidance (ISEP, 2022) (which has been embraced by the updated TII Guidance (TII, 2022) in Section 6.7.2) describes minor adverse as follows:

"A minor adverse not significant impact is described with: A project that is compatible with the budgeted, science based 1.5°C trajectory (in terms of rate of emissions reduction) and which complies with up-to-date policy and 'good practice' reduction measures to achieve that has a minor adverse effect that is not significant. The project may have residual impacts but is doing enough to align with and contribute to the relevant transition scenario. A 'minor adverse' or 'negligible' non-significant effect conclusion does not necessarily refer to the magnitude of GHG emissions being carbon neutral (i.e. zero on balance) but refers to the likelihood of avoiding severe climate change and achieving net zero by 2050. A 'minor adverse' effect or better is a high bar and indicates exemplary performance where a project meets or exceeds measures to achieve net zero earlier than 2050."

In addition, the TII guidance (2022) describes minor adverse as:

- The project's GHG impacts are mitigated through 'good practice' measures.
- The project has complied with existing and emerging policy requirements; and
- Fully in line to achieve Ireland's trajectory towards net zero.

In accordance with the EPA Guidelines (EPA, 2022), the above criteria equates to an impact of GHG emissions during the construction phase of a ***direct*** impact due to its presence, that is ***long-term*** as a result of the atmospheric lifetime of GHG emissions, ***negative*** due to the emission of GHGs and ***slight*** based on the reduced contribution of GHG emissions to Ireland's national trajectory to net zero, due to the outlined mitigation measures. Overall, the impact on the climate is considered to be ***not significant*** in EIA terms.

In accordance with the EPA Guidelines (EPA, 2022), the above criteria equates to an impact of GHG emissions during the operational phase of a ***direct*** impact due to its presence, that is ***long-term*** as a result of the estimated lifetime of the buildings and atmospheric lifetime of GHG emissions, ***negative*** due to the emission of GHGs and ***slight*** based on the reduced contribution of GHG emissions to Irelands national trajectory to net zero, due to the outlined mitigation measures. Overall, the impact on the climate is considered to be ***not significant*** in EIA terms.

6.9.2 CCRA Residual Effects

With design mitigation in place, no residual risk to the proposed development as a result of climate change is identified. Keeping the adaptation measures in view and in accordance with the EPA Guidelines (EPA, 2022), the significance of effect of the impacts to the proposed development as a result of climate change are ***direct*** as climate extremes have a direct physical effect on buildings and infrastructure, ***long-term*** due to the response times of the climate in relation to changes in anthropogenic emissions, ***negative*** as climate extremes have been shown to damage or adversely affect infrastructure, and ***not significant*** due to the low vulnerability of the proposed development to the effects of climate change once mitigation measures have been embedded, which is overall ***not significant*** in EIA terms.

6.9.3 Cumulative

In accordance with guidance from the ISEP (Institute of Sustainability & Environmental Professionals, 2022) and TII (Transport Infrastructure Ireland, 2022) the climate is not constrained by project, regional or national boundaries and therefore the GHG assessment has been presented in the context of the national and sectoral carbon budgets for the whole of Ireland and the ability of the proposed development to assist or impede the national relevant targets. Given the contribution of such targets to the global efforts to reduce the impact of society upon the climate the assessment is considered to be inherently cumulative.

In addition, the traffic data provided for the quantification of operational GHG emissions includes committed developments as far as they can be advised, and as such is considered to be cumulative.

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In light of these statements, the residual cumulative impact of the proposed development in relation to GHG emissions is considered ***direct***, ***long-term***, ***negative*** and ***slight***, which is overall ***not significant*** in EIA terms.

6.10 Monitoring

Monitoring and reporting of the embodied carbon in the construction phase will be conducted. The aim of monitoring will be to seek further ways to minimise climate impacts. Monitoring will include contractual obligations, in line with the most recent Climate Action Plan and sectoral targets, for the successful tenderer to ensure that the proposed development stays in line with updated aims. Commitments to monitor GHG emissions during the construction phase will also be secured through the final Construction Environmental Management Plan (CEMP). Monitoring will include embodied carbon of construction materials, water usage, power and fuel usage, and waste generation (including reuse and recycling rates). Where monitoring shows that the proposed development is not meeting its targets, further mitigation will be put in place.

Monitoring should also include reviewing potential for extreme weather events which may cause damage during construction. Contractors' Environmental Management System (EMS) will include measures to address risks during such events i.e. flooding.

6.11 Difficulties Encountered

The proposed development is still in the design stage and therefore materials used, construction and operational activities are subject to change. Despite these uncertainties, there is sufficient information for this Chapter to provide an accurate assessment. Any deviation from the assumptions set out below, will not result in a significant change to the assessment set out in this chapter. Data assumptions for the GHG assessment are set out in the Table 6-15 below:

Table 6-15: GHG Calculation Assumptions

Factor	Assumption
Materials	Data provided in units different to those in the TII Tool. Areas of materials were converted to volumes for conversion into tonnes through the use of density factors.
Waste transport	An assumption for a vehicle capacity of 20 tonnes and a distance travelled of 50km to account for a variety of local waste disposal sites.
A4- Construction Worker Travel to site	Estimated travel of 35km each day assumed per vehicle throughout 730 days (24 months) of construction.
A5- Construction water	Scoped out in line with the ISEP guidance as GHG emissions are predicted to be <1% of total GHG emissions.
A5 – Construction Energy	Construction energy data was unavailable for this assessment.
B1-B5 Landscaping and Vegetation	Scoped out as the development land consists of grass with minimal GHG impact if removed during operation. The landscaping plan rather proposes to plant new vegetation for public and communal open spaces. Given the time required for plants and trees to reach maturity, the positive impact is minimal and hence scoped out.

6.12 Interactions

Climate has the potential to interact with a number of other environmental attributes. Interactions with other environmental chapters are described below.

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6.12.1 Land, Soils, Geology and Hydrology

The impact of flood risk has been assessed, and the surface water drainage network will be designed and upgraded to cater for increased rainfall in future years as a result of climate change in accordance with the Greater Dublin Drainage Study requirements to cater for a 1-in-100 year storm event with 30% climate change allowance. The effect of the interactions between climate and land, soils, geology are ***direct, short-term, negative and imperceptible*** during the construction phase and direct, ***long-term, negative and imperceptible*** during the operational phase, which is overall ***not significant*** in EIA terms.

6.12.2 Air Quality

Air quality and climate have interactions due to the emissions from the burning of fossil fuels, traffic and transport during the construction and operational phases generating both air quality and climate impacts. Air quality modelling outputs for traffic and transport are utilised within the Climate Chapter. There is no impact on climate due to air quality. However, the impacts on air quality and climate are strongly linked as they often come from the same sources and actions to reduce the impact of one often benefit the actions to reduce the impact of the other. Problems associated with climate change, such as hotter, drier summers, can often exasperate the problems associated with poor air quality. The effect of the interactions between climate and air quality are ***direct, long-term, neutral and imperceptible*** during the construction phase and direct, ***long-term, neutral and imperceptible*** during the operational phase, which is overall ***not significant*** in EIA terms.

6.12.3 Traffic and Transportation

During the construction and operational phase, there is the potential for interactions between climate and traffic. Vehicles accessing the site will result in emissions of CO_2, a greenhouse gas. The effects of the proposed development on climate have been assessed and the effects of the interactions between traffic and climate are considered to be ***direct, short-term, negative*** and ***not significant*** during the construction phase and ***direct, long-term, negative*** and ***not significant*** during the operational phase, which is overall ***not significant*** in EIA terms.

6.12.4 Waste

Waste management measures will be put in place to minimise the amount of waste entering landfill, which has higher associated embodied carbon emissions than other waste management such as recycling. The effect of the interactions between waste and climate are considered to be ***direct, short-term, negative and not significant*** during the construction and operational phase which is overall ***not significant*** in EIA terms.

6.12.5 Section 15 Compliance

Section 15 of the 2015 Act, sets out the duties imposed by certain bodies, including local authorities and An Coimisiún Pleanála. This section was amended by the 2021 Act and states:

> *"(1) A relevant body shall, in so far as practicable, perform its functions in a manner consistent with—*
>
> *(a) the most recent approved climate action plan,*
>
> *(b) the most recent approved national long term climate action strategy,*

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(c) the most recent approved national adaptation framework and approved sectoral adaptation plans,

(d) the furtherance of the national climate objective, and

(e) the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.".

This chapter demonstrates how the Proposed Scheme is consistent with the objectives of Section 15 of the 2015 Act (as amended). The EIAR has carried out a greenhouse gas emissions assessment and assessed the Proposed Scheme's resilience/adaptation to climate change.

- Greenhouse Gas Emissions Assessment – This assessment considers the Proposed Scheme's GHG emissions over its lifetime. The assessment analyses these emissions in the context of the relevant carbon budgets, targets and policies to ensure consistency with the most recent approved climate action plan and the most recent approved national long term climate action strategy, and with measures in furtherance of the national climate objective. This complies with subsections 15 (1) (a), (b), and (d) of the Act.
- Climate Change Vulnerability Assessment – This assessment identifies the impact of a changing climate on the Proposed Scheme and receiving environment in the context of the most recent approved national adaptation framework and approved sectoral adaptation plans. The assessment considers the Proposed Scheme's vulnerability and adaption to climate change and identifies adaptation measures to increase resilience, as discussed in Section 6.6.2.3.1. This covers sections 15(1)(c) and (e) of the Act.

The above measures pursue the furtherance of the national climate objective and the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State as far as practicable as required by section 15(1)(d) and(e) of the Acts.

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7 Noise and Vibration

7.1 Introduction

AWN Consulting Ltd has been commissioned to carry out a noise and vibration impact assessment of the proposed Phase 3 development on lands at Cherry Orchard, Dublin 10, Ireland.

This Chapter has been prepared by Dan Boote, Principal Acoustic Consultant within the Noise and Vibration team at AWN Consulting Ltd. Dan has over 14 years of experience in environmental noise and vibration assessment and holds a BSc in Music Systems Engineering from the University of the West of England. He is a Member of the Institute of Acoustics (MIOA) and specialises in environmental noise and vibration assessment, Environmental Impact Assessment (EIA), and environmental noise modelling and monitoring.

Dan has prepared noise and vibration assessments for Environmental Impact Assessment Reports (EIARs), planning applications and environmental permitting and licensing projects. His experience spans a wide range of developments, including major road and rail infrastructure schemes, residential developments, commercial developments and data centres throughout Ireland and the United Kingdom.

In terms of the site, noise and vibration will be considered in terms of two aspects. The first is the outward impact of the development (i.e. the potential impact of the Proposed Development on existing sensitive receptors in the study area) and the inward impact of existing noise and vibration sources on the development itself (with a particular focus on road traffic and rail noise).

A full description of the development is provided in Chapter 1 and 2. This chapter should be read in conjunction with Chapter 14 – Material Assets (Traffic and Transport).

7.2 Methodology

The study has been undertaken using the following methodology:

- Baseline noise monitoring has been undertaken across the development site to determine the range of noise levels at varying locations across the site;
- A review of the relevant standards and guidelines has been conducted in order to set a range of acceptable noise and vibration criteria for the construction and operational phases of the proposed development;
- Predictive calculations have been performed to estimate the likely noise emissions during the construction phase of the project at the nearest sensitive locations (NSL's) to the site;
- Predictive calculations have been performed to assess the potential impacts associated with the operation of the development at the most sensitive locations surrounding the development site;
- A schedule of mitigation measures has been proposed, where relevant, to control the noise and vibration emissions associated with both the construction and operational phases of the proposed development, and;
- The inward impact of noise of the surrounding environment into the proposed buildings has also been assessed to determine the requirements, for additional noise mitigation to provide suitable residential amenities.

7.2.1 Construction Phase Noise Criteria

There is no published statutory Irish guidance relating to the maximum permissible noise and vibration levels that may be generated during the construction phase of a project. It is common practice to use *BS 5228:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites* with respect to the controlling noise and vibration impacts. For this development, appropriate criteria relating to permissible construction noise levels are taken from Part One of the standard Noise.

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7.2.1.1 Residential Receptors

The approach adopted here calls for the designation of a noise sensitive location into a specific category (A, B or C) based on exiting ambient noise levels in the absence of construction noise. This then sets a threshold noise value that, if exceeded at this location, indicates a significant noise impact is associated with the construction activities. Note that, in accordance with the BS 5228 guidance, this assessment criteria are only applicable to residential receptors.

The closest neighbouring noise sensitive properties to the proposed development are the residential dwellings on Barnville Park that bound the east of the site, these are located adjacent to the development site at their closest point.

BS 5228-1:2009+A1:2014 sets out guidance on permissible noise levels relative to the existing noise environment. Table 7-1 sets out the values which, when exceeded, indicate a significant effect at the facades of residential receptors.

Table 7-1 BS5228 ABC Methodology

Assessment category and threshold value period (LAeq)	Threshold value, in decibels (dB)		
	Category A	Category B	Category C
Daytime (07:00 – 19:00) and Saturdays (07:00 – 13:00)	65	70	75
Evenings and weekends	55	60	65
Night Time	45	50	55

Category A: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are less than these values.

Category B: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are the same as category A values.

Category C: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are higher than category A values.

For the appropriate assessment period (i.e., daytime in this instance) the ambient noise level is determined and rounded to the nearest 5 dB. Baseline monitoring carried out as part of this assessment indicate that noise sensitive receptors at this location can be considered Category A and a 65 dB $L_{Aeq,12hr}$ threshold should be applied. Figure 7-1 presents a map indicating properties that are identified as Category A. If the construction noise exceeds the appropriate category value, then a significant effect is deemed to occur, depending on context. A description of each receptor is provided below:

R1 – Residential estate on Cedar Brooke Avenue located approximately 10m to the north-west of the proposed masterplan site. A 65 dB $L_{Aeq,12hr}$ threshold is proposed at this location.

R2 – Residential estate on Barnville Park located approximately 10m to the east of the proposed masterplan site. A 65 dB $L_{Aeq,12hr}$ threshold is proposed at this location.

R3 – Residential estate off Park West Avenue located approximately 55m to the south of the proposed masterplan site. A 65 dB $L_{Aeq,12hr}$ threshold is proposed at this location.

R4 – Phase 1 of the Cherry Orchard masterplan, approximately 20m to the south-west of the proposed masterplan site. A 65 dB $L_{Aeq,12hr}$ threshold is proposed at this location

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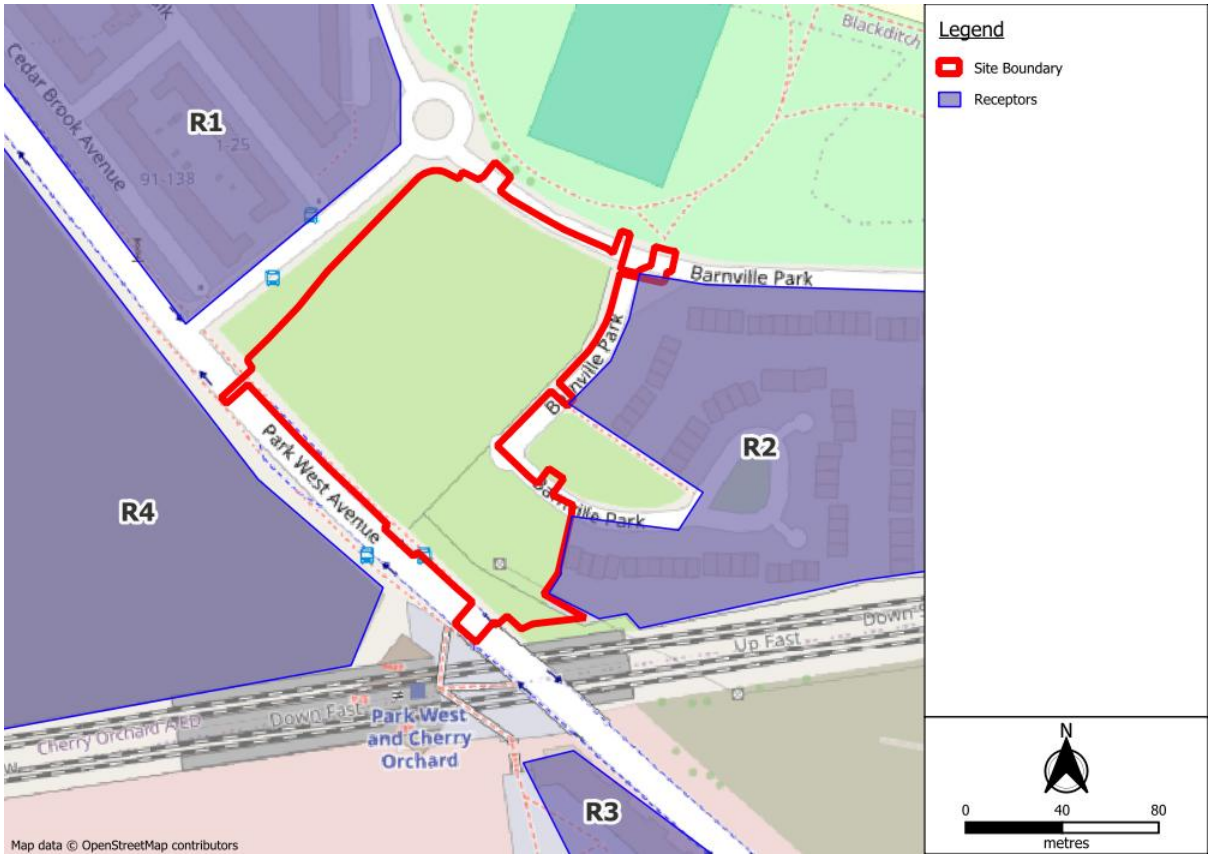


Figure 7-1 Construction Receptors

7.2.1.2 Commercial Receptors

The BS 5228-1:2009+A1 guidance gives several examples of acceptable limits for construction or demolition noise, the most simplistic being based upon the exceedance of fixed noise limits. For example, paragraph E.2 states:

> *"Noise from construction and demolition sites should not exceed the level at which conversation in the nearest building would be difficult with the windows shut."*
>
> *Paragraph E.2 goes on to state:*
>
> *"Noise levels, between say 07.00 and 19.00 hours, outside the nearest window of the occupied room closest to the site boundary should not exceed:*
>
> *70 decibels (dBA) in rural, suburban areas away from main road traffic and industrial noise.*
>
> *75 decibels (dBA) in urban areas near main roads in heavy industrial areas".*

For non-residential locations it is considered appropriate to adopt the 75dB(A) criterion during the day. The non-residential properties are only considered to be noise sensitive during office hours.

7.2.1.3 Proposed Threshold Noise Levels

Considering the proposed documents outlined above and referring to the baseline noise environment monitored around the development site (see Section 7.3), BS 5228-1:2009+A1:2014 has been used to inform the assessment approach for construction noise.

The following Construction Noise Threshold (CNT) levels are proposed for the construction stage of this development: -

- For residential NSLs it is considered appropriate to adopt 65 dB(A) CNT based on existing noise level. The receptor areas are defined in Figure 7-1.

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- For non-residential NSLs it is considered appropriate to adopt the 75 dB(A) CNT, given the urban environment, in line with BS 5228-1:2009+A1:2014 Annex E2.

7.2.1.4 Interpretation of CNT

In order to assist with interpretation of CNTs, Table 7-2 includes guidance as to the likely magnitude of impact associated with construction activities, relative to the CNT. This guidance is derived from Table 3.16 of DMRB: Noise and Vibration and adapted to include the relevant significance effects from the EPA Guidelines (EPA 2022).

Table 7-2 Construction Noise Significance

Guidelines for Noise Impact Assessment Significance (DMRB)	CNT per Period	EPA EIAR Significance Effects	Determination
Negligible	Below or equal to baseline noise level	Not Significant	Depending on CNT, duration & baseline noise level
Minor	Above baseline noise level and below or equal to CNT	Slight to Moderate	
Moderate	Above CNT and below or equal to CNT +5 dB	Moderate to Significant	
Major	Above CNT +5 to +15 dB	Significant, to Very Significant	
Significant	Above CNT +15 dB	Very Significant to Profound	

The adapted DMRB guidance outlined will be used to assess the predicted construction noise levels at NSLs and comment on the likely impacts during the construction stages.

7.2.2 Construction Phase Vibration Criteria

There are two aspects to the issue of vibration that are addressed in the standards and guidelines: the risk of cosmetic or structural damage to buildings and human perception of vibration. In the case of this development, vibration levels used for the purposes of evaluating building protection and human comfort are expressed in terms of Peak Particle Velocity (PPV) in mm/s. There is no published statutory Irish guidance relating to the maximum permissible vibration level. The following standards are the most widely accepted in this context and are referenced here in relation to cosmetic or structural damage to buildings:

- BS 7385: Evaluation and measurement for vibration in buildings – Part 2: Guide to damage levels from groundborne vibration (1993); and
- BS 5228: 2009 +A1 2014: Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration.

Building Damage

BS 7385-2 and BS 5228-2 advise that, for soundly constructed residential properties and similar light-framed structures that are generally in good repair, a threshold for minor or cosmetic (i.e. non-structural) damage should be taken as a peak component particle velocity (in frequency range of predominant pulse) of 15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz and 50 mm/s at 40 Hz and above for transient vibration. Where the dynamic loading caused by continuous vibration is such as to give rise to dynamic magnification due to resonance, especially at the lower frequencies where lower guide values apply, then the guide values in Table B.2 of BS 5228-2 may need to be reduced by up to 50%. On a cautious basis, therefore, continuous vibration limits are set as 50% of those for transient vibration across all frequency ranges. For buildings or structures that are structurally unsound, lower vibration magnitudes will apply, typically 50% of those for structurally sound buildings. Protected or historic buildings are not

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automatically assumed to be more vulnerable to vibration unless they have existing structural defects. The values are summarised in Table 7-3 relating to transient vibration.

Table 7-3 Transient Vibration Guide Values for Cosmetic Building Damage

Type of Building	Peak component particle velocity in frequency range of predominant pulse	
	4Hz to 15Hz	15Hz and above
Reinforced or framed structures Industrial and heavy commercial buildings.	50 mm/s at 4 Hz and above	
Unreinforced or light framed structures. Residential or light commercial building types.	15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above.

Note 1 Values referred to are at the base of the building.*

Note 2 At frequencies below 4Hz, a maximum displacement of 0.6 mm (zero to peak) is not to be exceeded.*

BS 5228-2 and BS 7485-2 state that minor structural damage can occur at vibration magnitudes greater than twice those in Table 7-3 and major structural damage can occur at vibration magnitudes greater than four times those in Table 7-3.

The guide values contained in Table 7-3 relate to transient vibration which does not give rise to resonant responses in structures, and to low rise buildings.

Human Perception

It is acknowledged that humans are particularly sensitive to vibration stimuli and that any perception of vibration may lead to concern. In the case of traffic, vibration is perceptible at around 0.5 mm/s and may become disturbing or annoying at higher magnitudes. Higher levels of vibration, however, are typically tolerated for single events or events of short duration. For example, during piling, one of the primary sources of vibration during construction, vibration levels may typically be tolerated at up to 2.5mm/s. This guidance is applicable to the daytime only; it is unreasonable to expect people to be tolerant to such activities during the night-time (or if they are trying to sleep during the daytime).

BS 5228-2 and DMRB Noise and vibration (UKHE 2020) provides guidance relating to the assessment of human response to vibration in terms of the peak particle velocity (PPV). Table 7-4 summarises the range of vibration values and the associated potential effects on humans.

Table 7-4 Guidance on effects of human response to PPV magnitudes

Vibration Level, PPV	Likely Effect (DMRB)	Significance Ratings (EPA)
≥10 mm/s PPV	Major	Significant to Very Significant
≥1 to <10 mm/s PPV	Moderate	Moderate to Significant
≥0.3 to <1 mm/s PPV	Minor	Not Significant to Slight
≥0.14 to 0.3mm/s PPV	Negligible	Imperceptible to Not significant
Less than 0.14 mm/s PPV		Imperceptible

7.2.3 Operational Noise Criteria

7.2.3.1 Additional Traffic on Public Roads

In order to consider the potential noise impact associated with the proposed development introducing additional traffic onto the existing road networks and given that vehicle movements on public roads are assessed using a different parameter (the ten-percentile noise level; L_{A10}), it is appropriate to consider the increase in traffic noise level that arises as a result of vehicular movements associated with the development in terms of the L_{A10} parameter.

In order to assist with the interpretation of the noise associated with vehicular traffic on public roads, Table 7-5 offers guidance as to the likely impact associated with any change in traffic noise level.

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Table 7-5 Likely Impact Associated with Change in Traffic Noise Level

Change in Sound Level (dB LA10)	Subjective Reaction	DMRB Magnitude of Impact	EPA Classification Magnitude of Impact
0	Inaudible	No Change	Neutral
0.1 – 2.9	Barely Perceptible	Negligible	Imperceptible
3 – 4.9	Perceptible	Minor	Slight
5 – 9.9	Up to a doubling of loudness	Moderate	Moderate
10+	Doubling of loudness and above	Major	Significant

7.2.3.2 Inward Noise Impact

The Dublin Agglomeration Noise Action Plan 2024 – 2028, addresses the requirements of the European Noise Directive 2002/49/EC for local authorities for managing environmental noise. The Noise Action Plan (NAP) states the following in regard to planning guidance:

> *"The appropriate use of the planning system can be used to help avoid, or minimise, the adverse impacts of noise without placing unreasonable restrictions on development"*

The action plan outlines various guidance to minimise the impact in relation to noise on new developments. Both Professional Practice Guidance: Planning and Noise: Professional Practice Guidance on Planning and Noise (ProPG) and BS 8233: Guidance on Sound Insulation and Noise Reduction for Buildings are recommended as guidance to be employed in areas where people are being brought to noise in the form of existing transport noise or industrial noise sources such as ports.

The ProPG document was published in May 2017. The document was prepared by a working group comprising members of the Association of Noise Consultants (ANC), the Institute of Acoustics (IOA) and the Chartered Institute of Environmental Health (CIEH). Although not a government document, since it's adoption it has been generally considered as a best practice guidance and has been widely adopted in the absence of equivalent Irish guidance.

The ProPG outlines a systematic risk based 2-stage approach for evaluating noise exposure on prospective sites for residential development. The two primary stages of the approach can be summarised as follows:

- Stage 1 - Comprises a high-level initial noise risk assessment of the proposed site considering either measured and or predicted noise levels; and,
- Stage 2 – Involves a full detailed appraisal of the proposed development covering four "key elements" that include:
  - Element 1 - Good Acoustic Design Process.
  - Element 2 - Noise Level Guidelines.
  - Element 3 - External Amenity Area Noise Assessment; and,
  - Element 4 - Other Relevant Issues.

The initial noise risk assessment is intended to provide an early indication of any acoustic issues that may be encountered. It calls for the categorisation of the site as a negligible, low, medium or high risk based on the pre-existing noise environment. Figure 7-2 presents the basis of the initial noise risk assessment; it provides appropriate risk categories for a range of continuous noise levels either measured and/or predicted on site.

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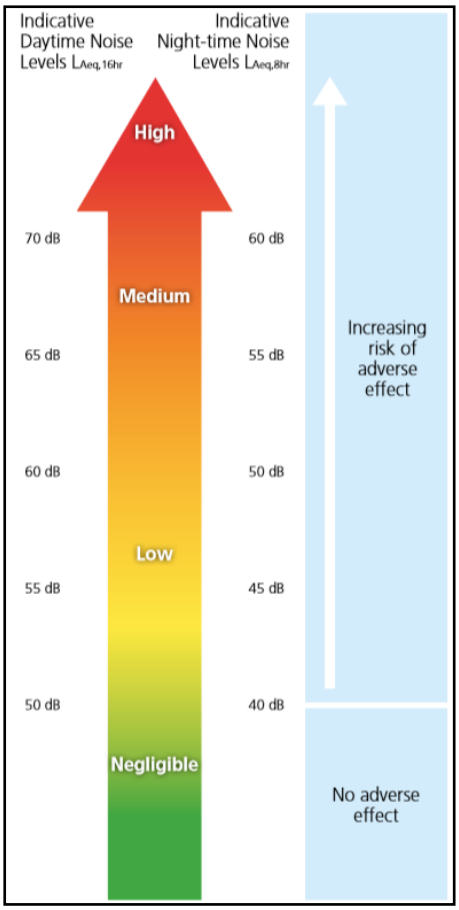


Figure 7-2 ProPG Stage 1 - Initial Noise Risk Assessment

It is noted that a site should not be considered a negligible risk if more than 10 L_{AFmax} events exceed 60 dB during the night period and the site should be considered a high risk if the L_{AFmax} events exceed 80 dB more than 20 times a night.

Element 2 of the ProPG document sets out recommended internal noise targets derived from BS 8233 (2014). The recommended indoor ambient noise levels are set out in Table 7-6 and are based on annual average data, they omit occasional events where higher intermittent noisy events may occur.

Table 7-6 ProPG Internal Noise Levels

Activity	Location	(07:00 to 23:00hrs)	(23:00 to 07:00hrs)
Resting	Living Room	35 dB LAeq, 16hr	-
Dining	Dining Room/Area	40 dB LAeq, 16hr	-
Sleeping	Bedroom	35 dB LAeq, 16hr	30 dB LAeq, 8hr 45 dB LAFmax

*Note - The document comments that the internal $L_{AFmax,\,T}$ noise level may be exceeded no more than 10 times per night without a significant impact occurring.

In addition to these absolute internal noise levels ProPG provides guidance on flexibility of these internal noise level targets. For instance, in cases where the development is considered necessary or desirable, and noise levels exceed the external noise guidelines, then a relaxation of the internal L_{Aeq} values by up to 5 dB can still provide reasonable internal conditions.

ProPG provides the following advice with regards to external noise levels for amenity areas in the development:

> *"The acoustic environment of external amenity areas that are an intrinsic part of the overall design should always be assessed and noise levels should ideally not be above the range*

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50 – 55 dB $L_{Aeq,16hr}$."

7.2.3.3 Outward Noise Impact

Once a development of this nature becomes fully operational, a variety of electrical and mechanical plant will be required to service the development. Most of this plant will be capable of generating noise to some degree. Some of this plant may operate 24 hours a day, and hence would be most noticeable during quiet periods (i.e., overnight). Noisy plant with a direct line-of-sight to noise sensitive properties would potentially have the greatest impact. Plant contained within plantrooms has the least potential for impact once consideration is given to appropriate design of the space.

BS 4142 describes methods for rating and assessing sound of an industrial and/or commercial nature. The methods described in this British Standard use outdoor sound levels to assess the likely effects of sound on people who might be inside or outside a dwelling or premises used for residential purposes upon which sound is incident.

For an appropriate BS 4142 assessment it is necessary to compare the measured external background noise level (i.e. the $L_{A90,T}$ level measured in the absence of plant items) to the rating level ($L_{Ar,T}$) of the various plant items, when operational. Where noise emissions are found to be tonal, impulsive in nature or irregular enough to attract attention, BS 4142 also advises that a penalty be applied to the specific level to arrive at the rating level.

The subjective method for applying a penalty for tonal noise characteristics outlined in BS 4142 recommends the application of a 2 dB penalty for a tone which is just perceptible at the noise receptor, 4dB where it is clearly perceptible, and 6 dB where it is highly perceptible.

The following definitions as discussed in BS 4142 as summarised below:

"Ambient noise level, $L_{Aeq,T}$"	is the noise level produced by all sources including the sources of concern, i.e., the residual noise level plus the specific noise of mechanical plant, in terms of the equivalent continuous A-weighted sound pressure level over the reference time interval [T].
"Residual noise level, $L_{Aeq,T}$"	is the noise level produced by all sources excluding the sources of concern, in terms of the equivalent continuous A-weighted sound pressure level over the reference time interval [T].
"Specific noise level, $L_{Aeq,T}$"	is the sound level associated with the sources of concern, i.e., noise emissions solely from the mechanical plant, in terms of the equivalent continuous A-weighted sound pressure level over the reference time interval [T].
"Rating level, $L_{Ar,T}$"	is the specific sound level plus any adjustments for the characteristic features of the sound (e.g. tonal, impulsive or irregular components);
"Background noise level, $L_{A90,T}$"	is the sound pressure level of the residual noise that is exceeded for 90% of the time period T.

If the rated plant noise level is +10 dB or more above the pre-existing background noise level, then this indicates that complaints are likely to occur and that there will be a significant adverse impact. A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context.

The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact.

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7.2.4 Operational Vibration Criteria

There are no expected sources of vibration associated with the operational phase; therefore vibration criteria have not been specified for this phase.

7.3 Baseline Environment

7.3.1 Description

The site is in Cherry Orchard, Dublin10, Ireland. The site is bound by Park West Ave to the South-West and Barnville Park to the North-East. The M50 is located further to the West.

7.3.2 Environmental Noise Survey

An environmental noise survey has been conducted at the site in order to quantify the existing noise environment. The survey was conducted in general accordance with ISO 1996: 2017: Acoustics – Description, measurement and assessment of environmental noise. Specific details are set out below.

7.3.3 Choice of Measurement Positions and Survey Times

The attended noise survey was conducted between the following periods:

- 17:00 on 25th of February 2026 to 00:50 on 26th of February 2026.

The measurements cover a period that was selected in order to provide a typical snapshot of the existing noise climate, with the primary purpose being to ensure that the proposed noise criteria associated with the development are commensurate with the prevailing environment. The weather during the survey periods was dry and overcast, with wind speeds less than 5 m/s; these conditions are considered suitable for obtaining representative baseline noise measurements

Measurement locations were selected as shown in Figure 7-3 below.

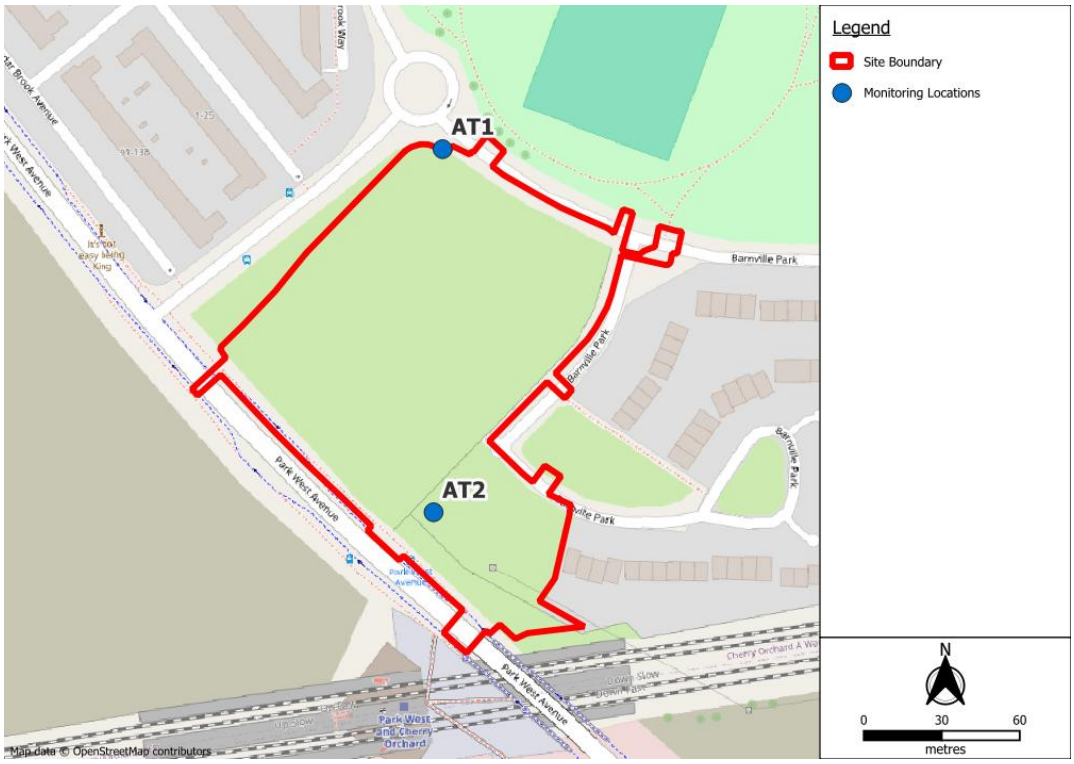


Figure 7-3 Noise level measurement locations

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7.3.4 Personnel and Instrumentation

All measurements were performed by AWN Consulting. Attended measurements were made using a Rion NL-52 Sound Level Meter. Sample periods were 15 minutes for attended noise measurements.

Before and after the survey the measurement instruments were check calibrated using a Brüel & Kjær Type 4231 Sound Level Calibrator.

7.3.5 Measurement Parameters

The noise survey results are presented in terms of the following parameters.

L_{Aeq} is the equivalent continuous sound level. It is a type of average and is used to describe a fluctuating noise in terms of a single noise level over the sample period.

L_{A90} is the sound level that is exceeded for 90% of the sample period. It is typically used as a descriptor for background noise.

L_{AFmax} is the instantaneous maximum sound level measured during the sample period using the 'F' time weighting.

L_{AFmin} is the instantaneous minimum sound level measured during the sample period using the 'F' time weighting.

The "A" suffix denotes the fact that the sound levels have been "A-weighted" in order to account for the non-linear nature of human hearing. All sound levels in this report are expressed in terms of decibels (dB) relative to 2x10-5 Pa.

7.3.6 Survey Results and Discussion

The results of the surveys at the attended monitoring locations are summarised in Table 7-7 and Table 7-8 below. Note that L_{Aeq} values are logarithmic averages over the stated period, whereas L_{A90} values are arithmetic averages.

Table 7-7 Attended Noise Measurements at Location AT1

Date/Time	Measured Noise levels			
	L_{Aeq}	L_{AFmax}	L_{Amin}	L_{A90}
25/02/2026 17:05	69	84	53	57
25/02/2026 17:45	69	86	52	54
25/02/2026 18:24	67	78	49	52
25/02/2026 23:35	61	70	47	51
26/02/2026 00:15	58	76	46	49

Table 7-8 Attended Noise Measurements at Location AT2

Date/Time	Measured Noise levels			
	L_{Aeq}	L_{AFmax}	L_{Amin}	L_{A90}
25/02/2026 17:25	64	79	51	54
25/02/2026 18:05	59	72	49	52
25/02/2026 18:42	59	68	50	53
25/02/2026 23:55	57	64	48	51
26/02/2026 00:35	53	61	45	48

Road traffic noise was identified as the dominant source of noise at all measurement locations. Other

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noise sources noted include aircraft, pedestrian conversations and birdsong. The audible sources during the survey are considered to be typical of the local area.

7.4 Predicted Impacts

7.4.1 Construction Phase – Noise Impact

The largest noise and vibration impact of the proposed development will occur during the construction phase due to the operation of various plant machinery and HGV movement to, from and around the site. However, the construction phase can be classed as a short-term phase.

BS 5228-1 contains noise level data for various construction machinery. The noise levels relating to site clearance, ground excavation and loading lorries (dozers, tracked excavators and wheeled loaders) reach a maximum of 81 dB $L_{Aeq,T}$ at a distance of 10 m. For this assessment, a worst-case scenario is assumed of 3 no. such items with a sound pressure level (SPL) of 81 dB at 10 m operating simultaneously along the closest works boundary. This would result in a total noise level of 86 dB at 10 m and an equivalent combined sound power level of 114 dB L_{WA}. This conservative scenario is the typical assumption made for developments of this size, on the basis that it is unlikely that more than 3 no. items of such plant/equipment would be operating simultaneously in such close proximity to each other. This represents a conservative worst-case scenario, assuming simultaneous operation of multiple plant items at the closest feasible working distance, which would not occur continuously in practice.

Guidance on the approximate attenuation achieved by barriers surrounding the site is also provided in BS 5228-1. It states that when the top of the plant is just visible to the receiver over the noise barrier, an approximate attenuation of 5 dB can be assumed, while a 10 dB attenuation can be assumed when the noise screen completely hides the sources from the receiver.

For this scenario it is assumed that construction will be partially screened from the local receptors by way of typical 2.4m site hoarding. Table 7-9 shows the potential noise levels calculated at various distances based on the assumed sound power level, a percentage on time of 66% and attenuation provided by the barrier of 5 dB.

Table 7-9 Predicted construction noise levels at varying distances

Description of Noise Source	Sound Power Level (dB Lw(A))	Calculated noise levels at varying distances (dB LAeq,T)				
		10m	20m	40m	60m	80m
3 no. items each with SPL of 81 dB at 10 m operating simultaneously.	114	80	74	65	61	59

The closest receptors from the area of construction works are residential properties at R1 – Ceder Brooke Avenue and R2 - Barnville Park at distances of approximately 10m. There is the potential for noise levels to reach 80 dB during the worst periods of construction works. This would occur when works are at the closest boundaries to the phase 1 buildings, however, it is noted that for the vast majority of the construction works will be further from the boundary and associated noise levels will be much lower. At distances greater than approximately 40m from construction works, impacts would be not significant.

On this basis, a negative, moderate to significant and short-term construction noise impact is concluded.

Construction Traffic

In terms of the additional construction traffic on local roads that will be generated as a result of this development the following comment is presented. In order to increase traffic noise levels by 1 dB traffic volumes would need to increase by the order of 25% along the local road network. Additional traffic introduced onto the local road network due to the construction phase of the proposed development will

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result in a negative, not significant and short-term noise impact.

7.4.2 Construction Phase – Vibration Impact

During rock breaking, there is potential for vibration to be generated through the ground. Empirical data for this activity is not provided in the BS 5228-2:2009+A1:2014 (BSI 2014b) standard, however the likely level of vibration from this activity is expected to be significantly below the vibration criteria for building damage on experience from other sites. AWN Consulting Ltd (the Author of the Noise and Vibration chapter) have previously conducted vibration measurements under controlled conditions, during trial construction works, on a sample site where breaking was carried out. The trial construction works consisted of the use of the following plant and equipment when measured at various distances:

- 3 tonne hydraulic breaker on small CAT tracked excavator; and
- 6 tonne hydraulic breaker on large Liebherr tracked excavator.

Vibration measurements were conducted during various staged activities and at various distances. Peak vibration levels during staged activities using the 3 Tonne Breaker ranged from 0.48 to 0.25 PPV (mm/s) at distances of 10m to 50m respectively from the breaking activities. Using a 6 Tonne Breaker, measured vibration levels ranged between 1.4 to 0.24 PPV (mm/s) at distances of 10m to 50m respectively.

Whilst these measurements relate to a breaking of concrete, the range of values recorded provides some context in relation typical ranges of vibration generated by construction breaking activity. Notwithstanding the above, any construction activities undertaken on the site will be required to operate below the recommended vibration criteria set out in Section 7.2.2.

The predicted vibration impacts are not significant, and the worst-case effects can be described as short-term, negative, and imperceptible to not significant.

Potential for vibration impacts during the construction phase programme are likely to be limited given that rock breaking is not expected. In terms of piling, this activity is not expected to occur within 35m distance to the nearest noise sensitive property. Expected vibration levels during piling assuming augured or bored piles have been determined through reference to published empirical data. The British Standard BS 5228 – Part 2: Vibration, publishes the measured magnitude of vibration of rotary bored piling using a 600mm pile diameter for bored piling into soft ground over rock, (Table D.6, Ref. No. 106):

- 0.54mm/s at a distance of 5m, for auguring.
- 0.22mm/s at a distance of 5m, for twisting in casing.
- 0.42mm/s at a distance of 5m, for spinning off, and.
- 0.43mm/s at a distance of 5m, for boring with rock auger.

Considering the distance to the receptors vibration emissions from this activity will be significantly reduced. Vibration levels at the closest neighbouring buildings are expected to be orders of magnitude below the limits set out in Table 7-3 to avoid any cosmetic damage to buildings. Vibration levels are also expected to be below a level that would cause disturbance to building occupants. The impacts are predicted to be negative, not significant, and short-term.

7.4.3 Operational Phase – Additional Traffic on Existing Public Roads

The Traffic Impact Assessment predicts the following changes to Annual Average Daily Traffic (AADT) in the design year 2042. This is shown in Table 7-10 along with approximate corresponding changes to noise level. Note that all figures take account of committed developments in the area and the overall masterplan lands. Figure 7-4 presents the location of each assessed junction.

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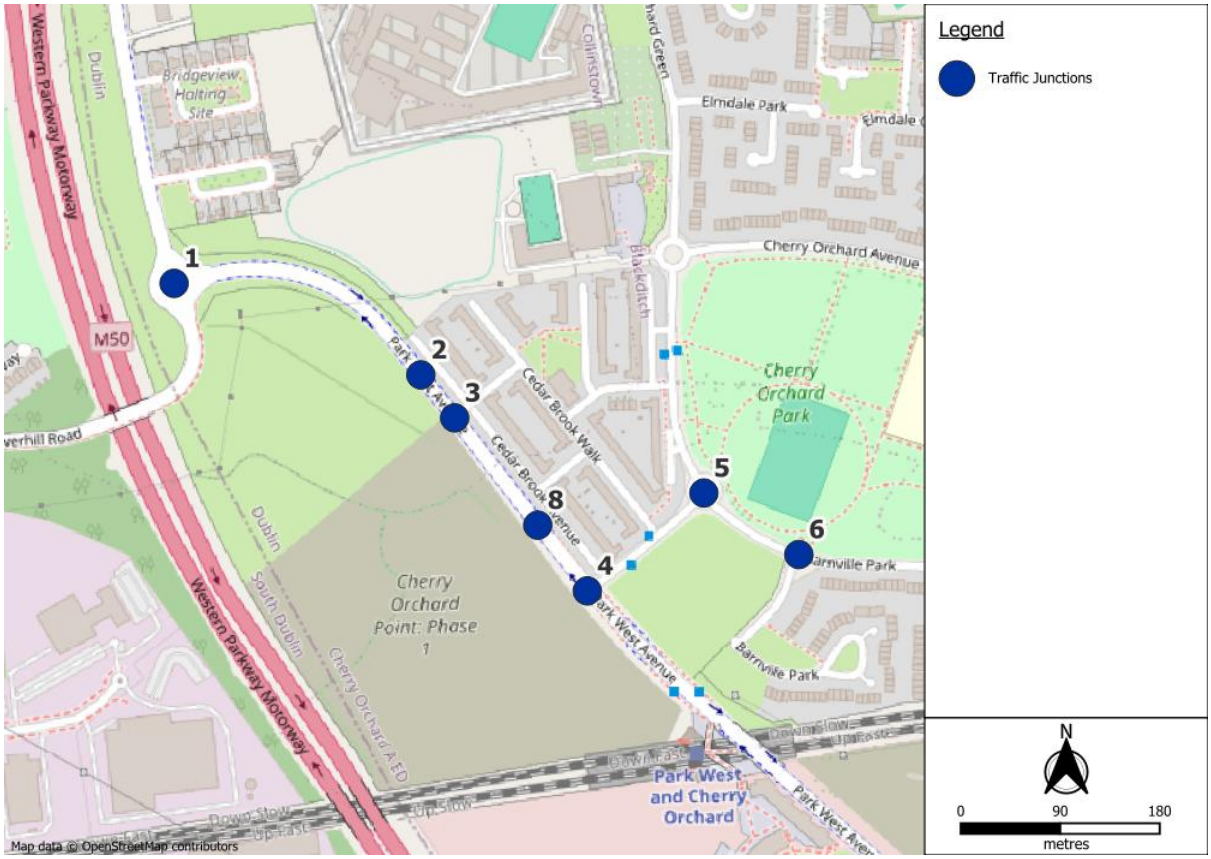


Figure 7-4 Location of assessed junctions

Table 7-10 Predicted changes in noise level with and without the development in place

Junction Arm	24 Hour AADT for Opening Year (2027)		24 Hour AADT for Design Year (2042)	Increase (dB) (DMRB Impact Magnitude)	
	Without Development	With Development	With Development	Short Term	Long Term
Junction 1&2	14,437	16,785	18,335	+0.7 (Negligible)	+1.0 (Negligible)
Junction 2&3	13,766	16,703	18,184	+0.8 (Negligible)	+1.2 (Negligible)
Junction 3&8	1,880	15,063	16,342	+9.0 (Major)	+9.4 (Moderate)
Junction 8&4	1,880	15,373	16,652	+9.1 (Major)	+9.5 (Moderate)
Junction 4&5	5,240	7,608	8,177	+1.6 (Minor)	+1.9 (Negligible)
Junction 5&6	1,551	2,950	3,120	+2.8 (Minor)	+3.0 (Minor)
Junction 4&7	15,538	18,272	19,854	+0.7 (Negligible)	+1.1 (Negligible)

The assessment indicates that a major short term and moderate long term noise impact may occur between Junction 3 and 8, and between Junction 8 and 4, due to change in traffic volumes. All other assessed junctions indicate that noise impacts will be imperceptible to slight and not significant with reference to Table 7-5.

Given that between Junction 3 and 8, and between Junction 8 and 4 is indicating a major short term and moderate long term noise impact, it is appropriate to undertake a more detailed calculation to predict the noise level from road traffic at the receptor locations near to these junctions.

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The noise level associated with an event of short duration, such as a passing vehicle movement, may be expressed in terms of its Sound Exposure Level (L_{AX}). The Sound Exposure Level can be used to calculate the contribution of an event or series of events to the overall noise level in a given period.

The appropriate formula is given below:

$L_{Aeq,T}$ = L_{AX} + 10log10(N) – 10log10(T) + 10log10(r1/r2) dB

where:

$L_{Aeq,T}$ is the equivalent continuous sound level over the time period T (in seconds);

L_{AX} is the "A-weighted" Sound Exposure Level of the event considered(dB);

N is the number of events over the course of time period T;

r1 is the distance at which LAX is expressed;

r2 is the distance to the assessment location.

The assumed mean value of Sound Exposure Level for cars and HGV's is in the order of 73 dB L_{AX} and 88 dB L_{AX} respectively at a distance of 5 metres. These values have been used to calculate the noise levels as a result of cumulative road traffic with the proposed development place and the full development of the masterplan lands.

The resultant noise level for receptors close to Junctions 3, 8, and 4 is 68 dB which is in line with baseline noise levels recorded as part of the baseline noise survey. Consequently, although the relative change in noise level is classified as 'major' in accordance with Table 7-5, the overall noise level from the junctions remain consistent with the existing urban area and the local noise environment; therefore a negative, imperceptible to slight, and long-term impact is concluded.

7.4.4 Inward Noise Impact

The development lands in question are in proximity to transportation infrastructure. Noise from these sources has the potential to impact the residential development proposed for the site itself.

7.4.4.1 Existing Noise Climate

The existing noise climate within the development lands was surveyed and the results summarised in Section 7.3 of this chapter. The results of the survey have indicated that road noise contributes significant noise levels at the measurement locations on the site.

In order to determine the inward noise impact for noise sensitive properties proposed as part of the development, it is necessary to calculate the internal noise levels within the proposed buildings. These calculated levels can then be compared against appropriate internal noise criteria from BS 8233, as summarised in Table 7-6.

It is possible to calculate internal noise levels within the residential properties proposed within the site, taking account of the existing and future potential noise environment, proposed constructions and the relevant sound insulation provided by the building elements (i.e., walls, roof, glazing etc.).

7.4.4.2 Noise Model of Site

In order to calculate noise levels across the site, an acoustic model was. Proprietary noise calculation software was used for the purposes of establishing the prevailing noise levels on the proposed site. The selected software, Brüel & Kjær Type 7810 Predictor, calculates noise levels in accordance with the selected source.

The following information was included in the model:

- Site layout drawings of proposed development.

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- Topographical survey of the development site, and;
- OS mapping of surrounding environment.

7.4.4.3 Noise Modelling

Following the methodology outlined in ProPG, as discussed in Section 7.2.3.2, the noise model has been used to predict noise levels across the site. The results of this exercise are presented in Figure 7-5 to Figure 7-8 for day and night periods.

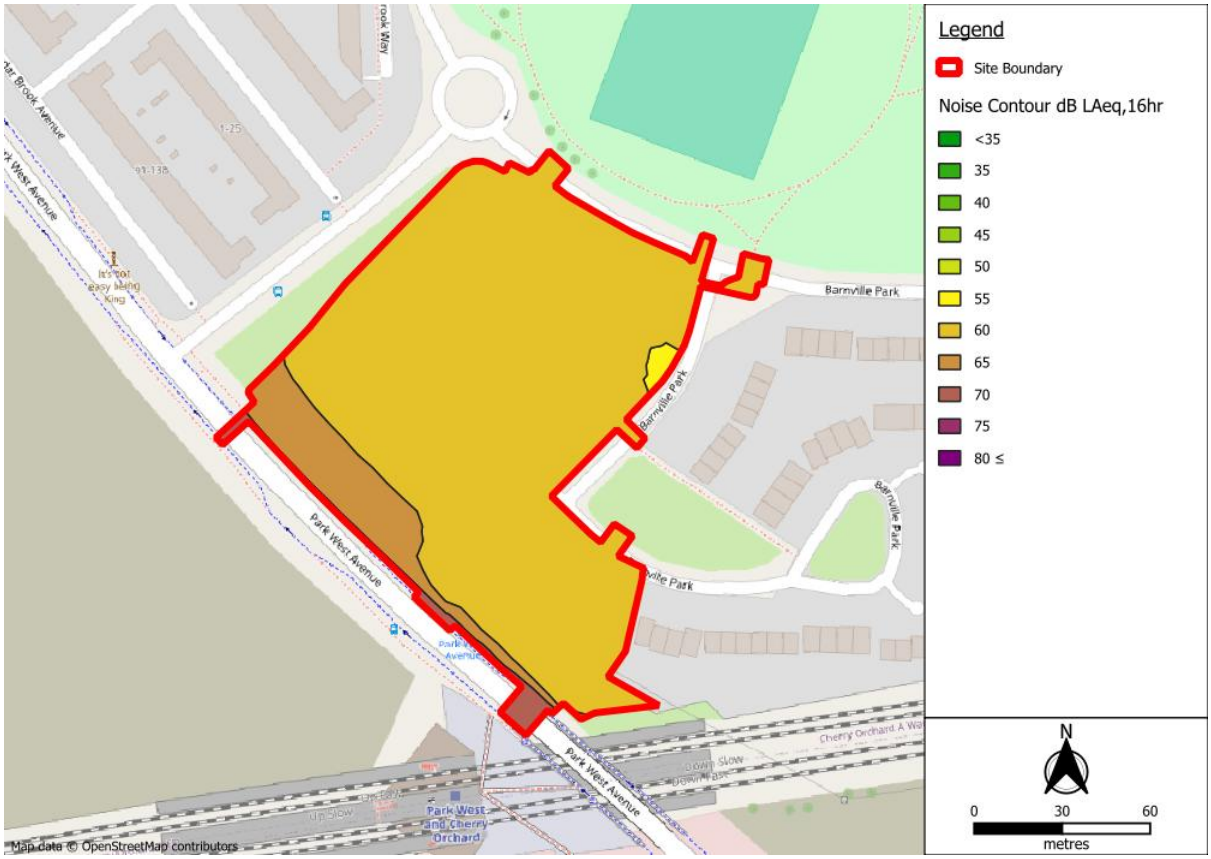


Figure 7-5 Predicted Day Time Noise Contours (1.5m height)

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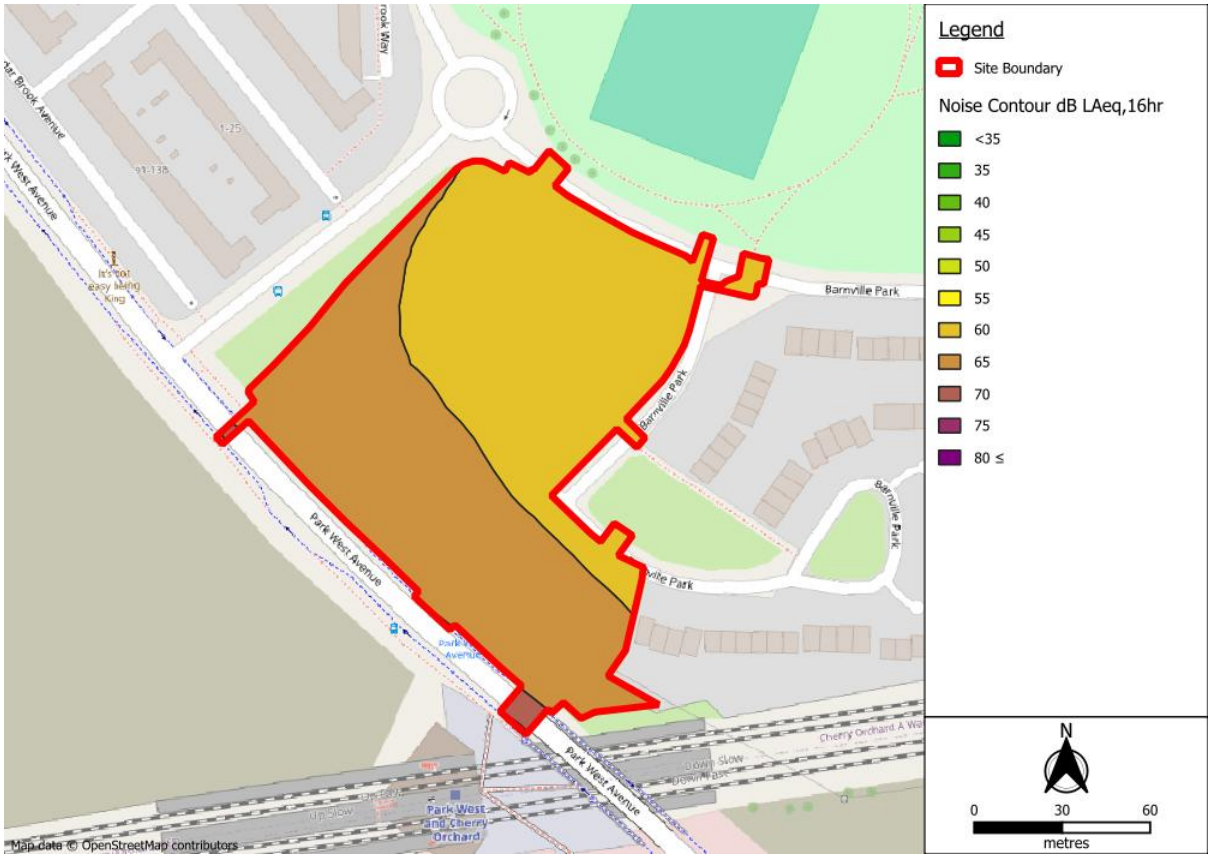


Figure 7-6 Predicted Day Time Noise Contours (10m height)

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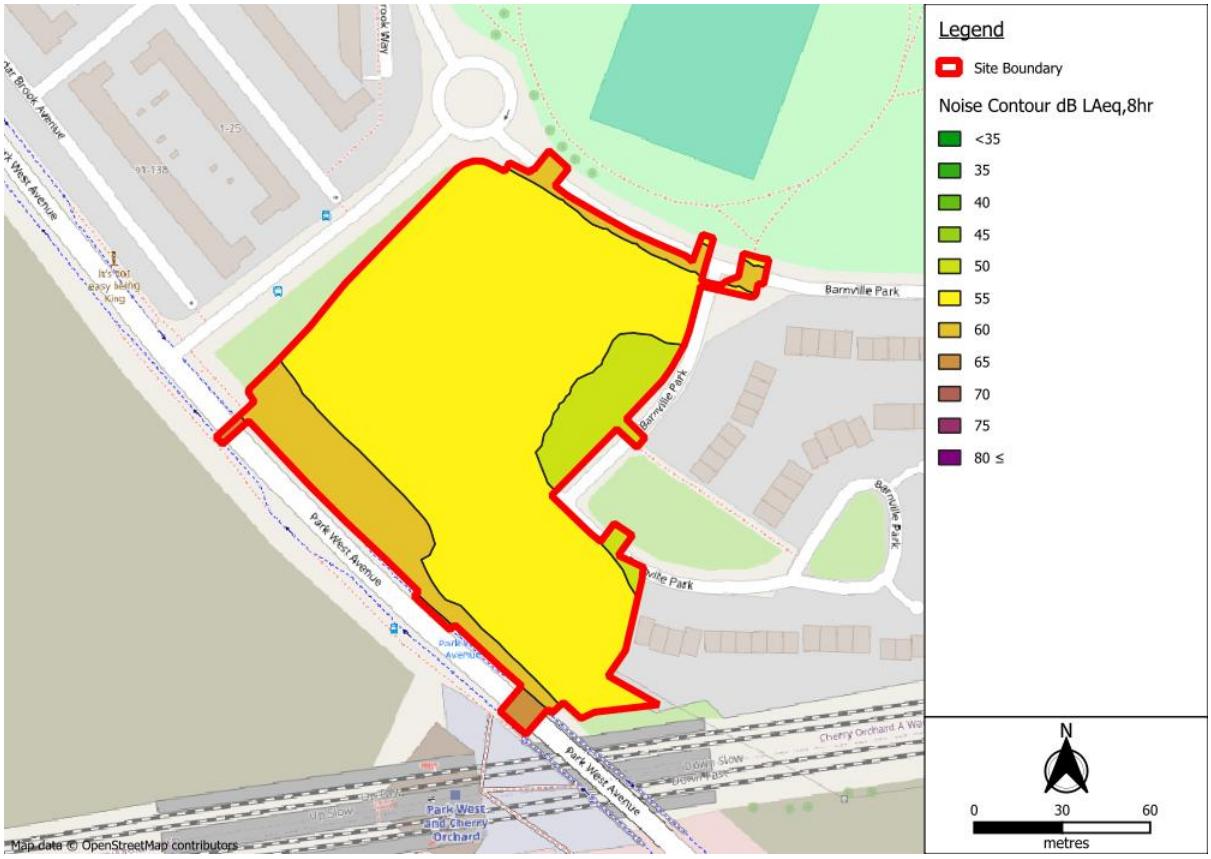


Figure 7-7 Predicted Night Time Noise Contours (1.5m height)

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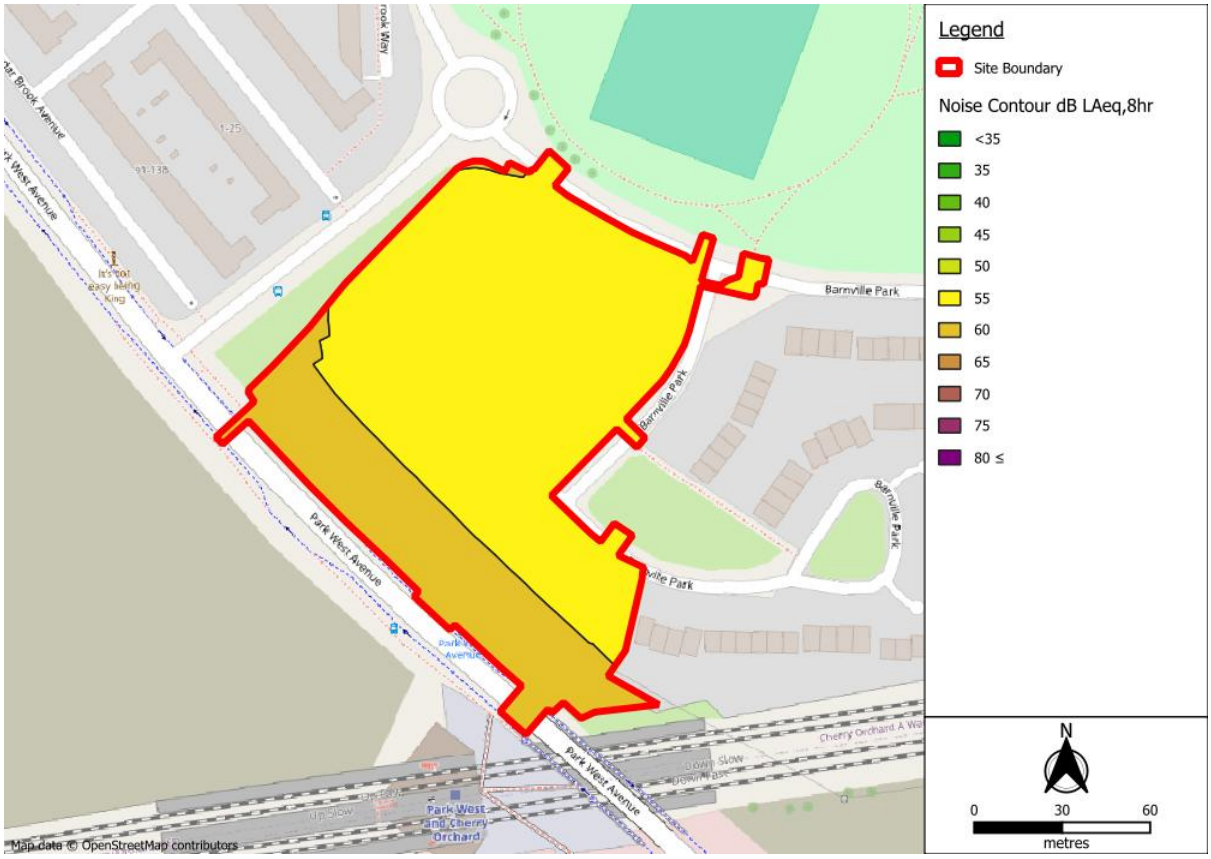


Figure 7-8 Predicted Night Time Noise Contours (10m height)

Road traffic noise levels calculated across the majority of the site during daytime periods are between 60 and 70 dB $L_{Aeq,16hr}$. Night time noise levels are the order of 55 to 65 dB $L_{Aeq,8hr}$ across the site in this situation.

Giving consideration to the measured and predicted noise levels presented in the previous sections the initial site noise risk assessment has concluded that the level of risk across the site varies from medium to high noise risk.

Additionally, the Stage 1 Noise Risk Assessment requires analyses of the L_{AFmax} noise levels. In assessments for previous phases of the development undertaken by AWN, the L_{AFmax} noise levels typically measured less than 80 dB during the night with sporadic events also recorded above this level. ProPG guidance considers 20 night events over 80 dB to be a high risk, therefore this site would be considered a low to medium risk in terms of maxima events.

ProPG states the following with respect to medium and high risks:

Medium Risk As noise levels increase, the site is likely to be less suitable from a noise perspective and any subsequent application may be refused unless a good acoustic design process is followed and is demonstrated in an ADS which confirms how the adverse impacts of noise will be mitigated and minimised, and which clearly demonstrate that a significant adverse noise impact will be avoided in the finished development.

High Risk High noise levels indicate that there is an increased risk that development may be refused on noise grounds. This risk may be reduced by following a good acoustic design process that is demonstrated in a detailed ADS. Applicants are strongly advised to seek expert advice.

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Given the above it can be concluded that the development site may be categorised as Medium to High Risk and as such an Acoustic Design Strategy is required to demonstrate that suitable care and attention has been applied in mitigating and minimising noise impact to such an extent that an adverse noise impact will be avoided in the final development.

It is noted that ProPG states the following with regard to how the initial site noise risk is to be used,

> *"2.12 It is important that the assessment of noise risk at a proposed residential development site is not the basis for the eventual recommendation to the decision maker. The recommended approach is intended to give the developer, the noise practitioner, and the decision maker an early indication of the likely initial suitability of the site for new residential development from a noise perspective and the extent of the acoustic issues that would be faced. Thus, a site considered to be high risk will be recognised as presenting more acoustic challenges than a site considered as low risk. A site considered as negligible risk is likely to be acceptable from a noise perspective and need not normally be delayed on noise grounds. A potentially problematical site will be flagged at the earliest possible stage, with an increasing risk indicating the increasing importance of good acoustic design."*

Therefore, following the guidance contained in ProPG does not preclude residential development on sites that are identified as having medium or high-risk noise levels. It merely identifies the fact that a more considered approach is required to ensure the developments on the higher risk sites are suitable designed to mitigate the noise levels. The primary goal of the approach outlined in ProPG is to ensure that the best possible acoustic outcome is achieved for a particular site.

Façade Noise Levels

Noise levels have been predicted across the development site during day and night-time periods using the noise model developed to include the development buildings. Where façade noise levels are less than 55 dB $L_{Aeq,16hr}$ during the day and 50 dB $L_{Aeq,8hr}$ at night, it is possible to achieve reasonable internal noise levels while also ventilating the dwellings with open windows. Therefore, for those properties where the façade noise levels are less than 55 dB $L_{Aeq,16hr}$ during the day and 50 dB $L_{Aeq,8hr}$ at night no further mitigation is required.

Where façade levels are above these levels the sound insulation performance of the building façade becomes important and a minimum sound insulation performance specification is required for windows and vents to ensure the internal noise criteria are achieved.

Figure 7-9 identifies those façades where the noise levels are higher and where mitigation in the form of enhanced glazing and ventilation is required. The specification of this enhanced façade is discussed in Section 7.5. Once these mitigation measures are applied the inward impact is neutral, not significant and long-term.

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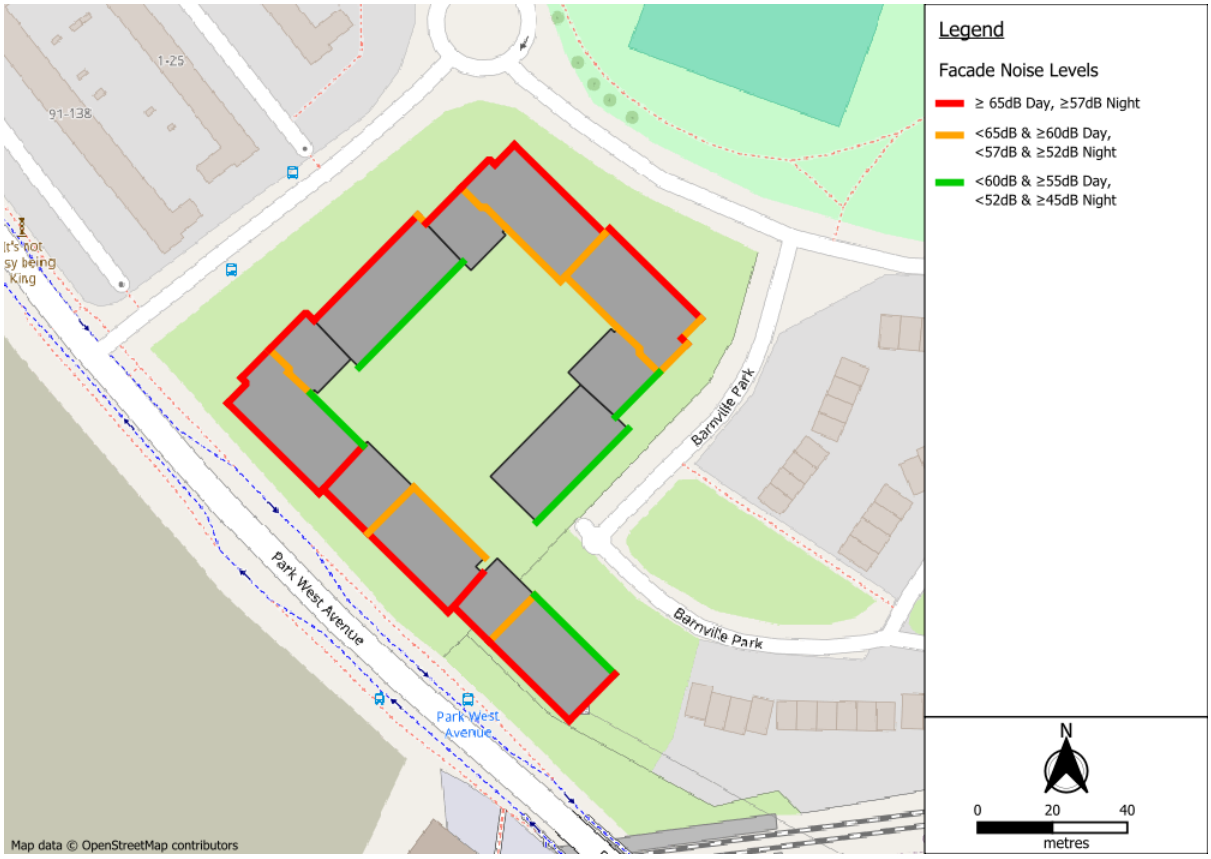


Figure 7-9 Façade Noise Levels

External Noise Levels

Where external amenity areas are protected from traffic noise sources due to the layout of the proposed buildings, Figure 7-10 indicates that there will be areas within the recommended range of noise levels from ProPG of between 50 – 55 dB $L_{Aeq,16hr}$, or lower. Typically, at areas around the outside of the development, noise levels will be higher than the recommended noise levels, however, future residents will have access to the central area of the development which is predicted to have suitable noise levels.

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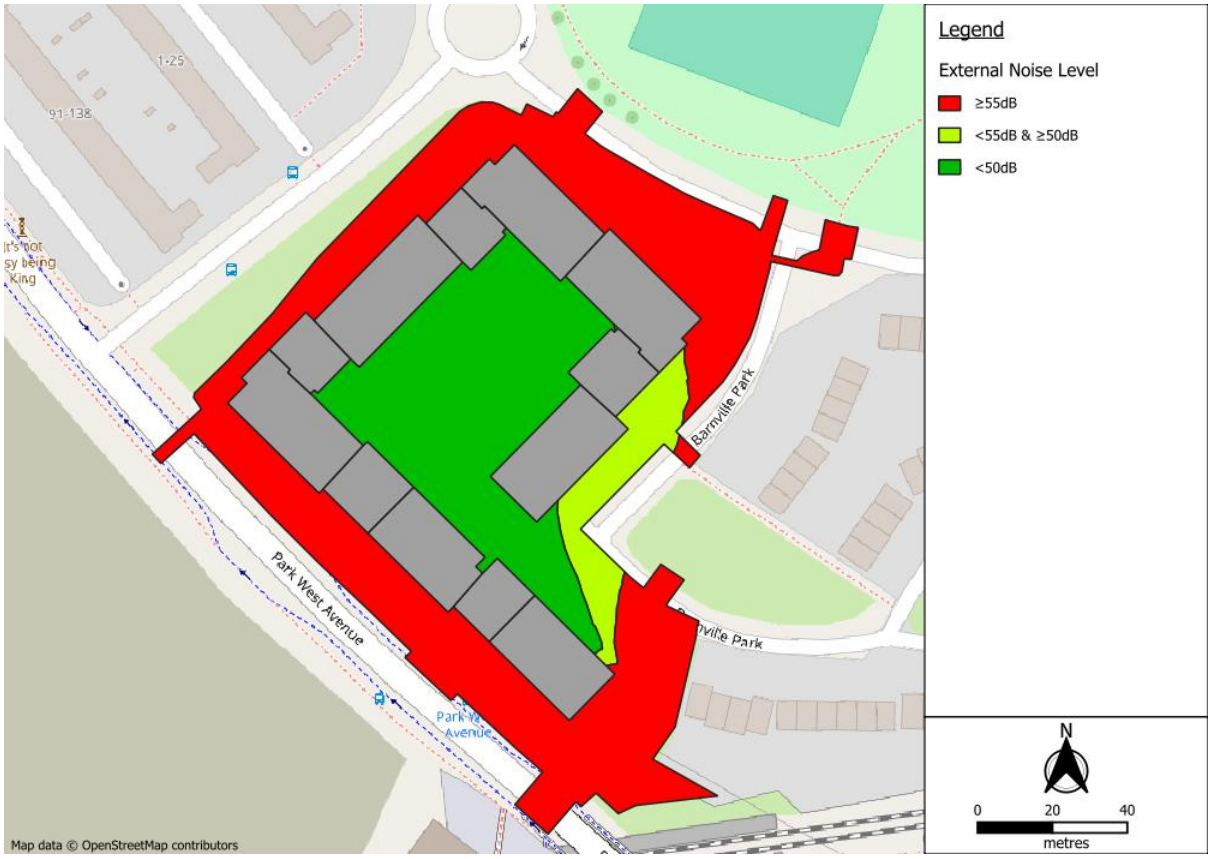


Figure 7-10 External Amenity Noise Levels

7.4.5 Operational Noise – Mechanical Plant and Services

BS 4142: 2014 +A1 2019: Methods for Rating and Assessing Industrial and Commercial Sound sets out a method for assessing the impact of a new continuous noise source to a residential environment such as plant items used to service the apartments and amenity areas. Residential units are the most sensitive to this source, therefore, control of impacts at these units ensures control elsewhere. It states that if the rating level of the item exceeds the background noise level by 5 dB, an adverse impact is likely to occur, while an exceedance of 10 dB is likely to cause a significant adverse impact, depending on the context.

The location or type of building services plant has not yet been established, therefore it is not possible to calculate the potential noise levels. For this development, it is best practice to use the above guidance (BS 4142) to inform the detailed design during the selection and layout of building services for the development.

The background noise level at the boundaries of the site were determined through baseline noise surveys. The lowest background noise levels were 52 dB L_{A90} during daytime periods and 48 dB L_{A90} during night-time periods.

All plant associated with the development will be designed such that the rating level does not exceed background noise levels at noise sensitive locations, in accordance with BS 4142:2014+A1:2019, and will not contain audible tones at any noise sensitive locations.

Plant items will be selected, designed and located so that there is no negative impact on sensitive receivers within the development itself. Taking into account that sensitive receivers within the development are much closer than off-site sensitive receivers, then once the relevant noise criteria is

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achieved within the development it is expected that there will be no negative impact at sensitive receivers off site.

7.5 Mitigation Measures

7.5.1 Construction Noise

With regard to construction activities, best practice control measures for noise and vibration from construction sites are found within BS 5228 (2009 +A1 2014) Code of Practice for Noise and Vibration Control on Construction and Open Sites Parts 1 and 2. Predictions indicate that moderate construction noise impacts are expected to occur when work is ongoing at boundary locations adjacent to noise sensitive locations; such impacts would occur intermittently and for limited durations as construction progresses across the site. Hence, the contractor will ensure that all best practice noise and vibration control methods will be used. In this regard, various mitigation measures will be applied during the construction of the proposed development, such as:

- limiting the hours during which site activities likely to create high levels of noise or vibration are permitted;
- establishing channels of communication between the contractor/developer, Local Authority and residents;
- appointing a site representative responsible for matters relating to noise and vibration;
- monitoring typical levels of noise and vibration during critical periods and at sensitive locations;
- all site access roads will be kept even so as to mitigate the potential for vibration from lorries.

Furthermore, a variety of practicable noise and vibration control measures will be employed. These will include as standard:

- selection of plant with low inherent potential for generation of noise and/ or vibration;
- erection of barriers as necessary around noisy processes and items such as generators heavy mechanical plant or high duty compressors;
- placing of noisy / vibratory plant as far away from sensitive properties as permitted by site constraints and the use of vibration isolated support structures where necessary.

7.5.2 Mechanical Plant and Services

At the detailed design stage, best practice measures relating to building services plant will be taken to ensure there is no significant noise impact on noise-sensitive locations within the development. Due to the relative proximity of the NSLs within the development, this will also prevent a negative impact on NSLs in the surrounding area. The over-riding requirement is that the criteria in Section 7.4.5 is adhered to through implementation of best practice measures at the design stage including the following:

- Where ventilation is required for plant rooms, consideration will be given to acoustic louvers or attenuated acoustic vents, where required, to reduce noise breakout;
- Ventilation plant serving plant rooms and car parks will be fitted with effective acoustic attenuators to reduce noise emissions to the external environment;
- The use of perimeter plant screens will be used, where required, for roof-top plant areas to screen noise sources;
- The use of attenuators or silencers will be installed on external air-handling plant;

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- All mechanical plant items, e.g. fans, pumps etc., shall be regularly maintained to ensure that excessive noise generated by worn or rattling components is minimised;
- Any new or replacement mechanical plant items, including plant located inside new or existing buildings, shall be designed so that all noise emissions from site do not exceed the noise limits outlined in this document;
- Installed plant will have no tonal or impulsive characteristics when in operation.

7.5.3 Inward Noise Impact

As is the case in most buildings, the glazed elements and ventilation paths of the building envelope are typically the weakest element from a sound insulation perspective. In general, all wall constructions (i.e. block work or concrete and spandrel elements) offer a high degree of sound insulation, much greater than that offered by the glazing systems. Therefore, noise intrusion via the wall construction will be minimal.

For this development, the façades highlighted in Figure 7-9 will be provided with glazing that achieves the minimum sound insulation performance as set out in Table 7-11. Any passive ventilation units will have to be carefully selected at the design stage to ensure that the composite sound reduction index of the façade is not compromised.

Table 7-11 Sound Insulation Performance Requirements for Glazing, SRI (dB)

Façade Ref	Octave Band Centre Frequency (Hz)						Rw
	125	250	500	1k	2k	4k	
Red	28	23	32	38	42	44	35
Orange	22	20	26	36	39	31	31
Green							

The overall R_w outlined above is provided for information purposes only. The over-riding requirement is the Octave Band sound insulation performance values which may also be achieved using alternative glazing and ventilation configurations. Any selected system will be required to provide the same level of sound insulation performance set out in Table 7-11 or greater.

It is important to note that the acoustic performance specifications detailed herein are minimum requirements which apply to the overall glazing and ventilation systems. In the context of the acoustic performance specification the ‘glazing system’ is understood to include any and all of the component parts that form part of the glazing element of the façade, i.e. glass, frames, seals, openable elements etc.

The assessment has demonstrated that the recommended internal noise criteria can be achieved through consideration of the proposed façade elements at the design stage. The calculated glazing and specifications are preliminary and are intended to form the basis for noise mitigation at the detailed design stage. Consequently, these may be subject to change as the project progresses.

7.6 Residual Impact

7.6.1 Construction Noise

Mitigation defined in Section 7.5.1 will provide a further reduction of approximately 5 dB to construction noise levels. Given the distance to local receptors and the mitigation applied the residual construction noise impacts are predicted to be negative, short-term and slight to moderate at receptors within

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approximately 40m of construction works. Overall, the impact is predicted to be negative, not significant, and short term.

7.6.2 Construction Vibration

Given the distance to local receptors the residual vibration impacts are predicted to be negative, not significant, and short-term.

7.6.3 Operational Stage – Additional Traffic on Public Roads

All assessed junctions indicate that impacts will be neutral to negative, imperceptible to slight and long term.

7.6.4 Operational Stage – Inward Noise Impact

Following implementation of the sound insulation mitigation the residual impacts are predicted to be neutral, not significant, and long-term.

7.6.5 Operational Stage – Mechanical Plant

Once noise emissions from operational plant and activities are designed in accordance with BS 4142 Methods for Rating and Assessing Industrial and Commercial Sound the residual impacts are predicted to be negative, not significant, and long-term.

7.7 Cumulative Effects

7.7.1 Construction Stage

There are existing residential and commercial developments close by, along with the multiple permissions remaining in place in the area. In a worst-case scenario, multiple developments in the area could be developed concurrently or overlap in the construction phase, including the following:

Table 7.15 Development Planning permissions that can potentially overlap with the development

Reference	Location	Development Description	Status	Decision Date
4313/22 (Part 8 Application)	Cherry Orchard Green, Dublin 10	Proposed construction of a residential development comprising 172 no. dwellings (141 no. 3-bedroom two-storey terraced houses and 31 no. 2-bedroom two-storey terraced houses), 2 public open spaces approx. 0.83 ha /14% of site area, associated site infrastructure works/ supporting infrastructure, landscaping, public lighting, access roads/pavements, boundary treatments and provision for a link road/ pavements and cycleways to Ballyfermot	Granted	03.10.2022
3490/25 (Part 8 Application)	Cherry Orchard, Dublin 10	Construction of a mixed-use development of 171 residential units and neighbourhood centre on a site of c.3.64 ha bound by Cherry Orchard Meadow, Blackditch Road, Croftwood Crescent and Cherry Orchard Avenue, Cherry Orchard, Dublin 10. Includes a new 4 to 5 storey neighbourhood centre block with 4 retail units (599 sqm), 3 community, arts and cultural space units (615 sqm), and 107 older persons' apartments; 64 two-storey	Approved by City Council	13.04.2026

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Reference	Location	Development Description	Status	Decision Date
		houses; a 0.76 ha central park with daylighted Blackditch Stream, play area, civic plaza, pedestrian bridge and walkways; 638 sqm communal open space; 91 car spaces, 4 motorcycle spaces, 1 loading bay and 228 bicycle spaces; three vehicular accesses; road and public realm improvements; site clearance, boundary treatments, public lighting, drainage, traffic calming, crossings, internal roads, landscaping, ESB substation and ancillary works.		
318607 (Part 10 Application)	Cherry Orchard Green, Dublin 10	The proposed development (GFA of c. 66,399sqm) involves the construction of a residential led mixed use scheme across 16 blocks contained within 9 buildings ranging in height from 4 to 15 storeys. The development includes the provision of 708no. residential apartments, 7no. retail / commercial units, community, arts and cultural spaces and associated external events space and community gardens (1,157sq.m) and a childcare facility (672sq.m GFA) with associated external playing space.	Granted	01.07.2024
321068 (Part 10 Application)	Cherry Orchard Green, Dublin 10	Proposed alterations to the previously granted ABP-318607-23, construction of a residential led mixed use scheme across 16 blocks within 9 buildings ranging in height from 4 to 15 storeys	Granted	11.03.2025
321931 (Part 10 Application)	Cherry Orchard Green, Dublin 10	The development will consist of the construction of a residential scheme containing 137no. residential dwellings (comprising 31no. 2-bedroom units, and 106no. 3-bedroom units) through a mixture of houses, duplex units and own-door apartments. The proposed development also includes the provision of 2,133sqm landscaped public open space, in addition to 2,050sq.m of public open space as approved under the Phase 1 permission	Granted	22.09.2025
312290	Park West Avenue and Park West Road, Park West, Dublin 12	750 no. apartments, creche and associated site works.	Granted	16.06.2022
3403/21	Site (1.26 ha) at Blocks 70 and 72 Park West Avenue and Park West Road, Park West, Dublin 12	Planning permission for the proposed development will consist of modifications to the permitted residential development of 86 no. residential units over retail/restaurant uses (reg. ref. 3798/18, 3941/20, 2517/21) within blocks 70 and 72.	Granted	06.12.2021
SD188/0006 (Part 8 Application)	New Nangor Road, Clondalkin, Dublin 22.	Social Housing Development comprising of two and three storey housing and apartment units (44 units in total) on a site located at New Nangor Road, bounded by Riversdale Estate & Mayfield Park, Clondalkin, Dublin 22. The proposed development shall consist of: 19no. 3-bed, two	Part 8 Approved by Council	08.10.2018

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Reference	Location	Development Description	Status	Decision Date
		storey houses, 1no. two storey specially adapted unit and 24no. 2-bed apartments in 3 storey building.		
5311/22	Block 7, Parkwest Business Campus, Parkwest, Dublin 12	The development will consist of the change of use of the ground, first and second floors from class 3 office use to class 8 for use as a health centre / clinic along with all associated works.	Granted	05.04.2023
3999/21	Unit 55, Park West Road, Park West Industrial Park, Dublin 12, D12 X9F9	The development will consist of extension of the existing office space at second floor level resulting in an overall office floorspace increase of 125 sqm approximately, construction of a new mezzanine level in the warehouse area (circa 257 sqm) and a new stairwell. Creation of 2no. openings to the south elevation and 1no. opening to the west elevation and associated site development works. The development will also include the retention of the existing office space at ground and first floor level of 250 sqm approximately.	Granted Permission and Retention Permission	04.02.2022
SD21A/0100	Unit 15, Cherry Orchard Industrial Estate, Ballyfermot Road, Dublin 10	Construction of a revised two storey mono-pitched Discount Foodstore (with ancillary off-licence use), with an increased total gross floor space of 2,415sq.m and an increased net retail sales area of 1,650sq.m (2,144sq.m and 1,400sq.m respectively permitted under SD19A/0286); Associated reconfiguration of site layout and all other associated and ancillary modifications to SD19A/0286 above and below ground level, including modifications to pedestrian access and a new electricity substation and switch room building.	Granted	07.06.2021
SD20A/0309 SD22A0093	3-4, Crag Avenue, Clondalkin Industrial Estate, Clondalkin, Dublin 22	Provision of 4 new information and communications technology (ICT) Facility buildings and associated development at the subject site, superseding elements of the extant planning permissions on site (Reg. Ref.: SD18A/0068 and Reg, Ref.: SD19A/0185). The proposed development will comprise the following: The construction of 4 ICT Facility buildings (ICT Facilities 1, 2, 3, and 4) with a combined total gross floor area {GFA) of c. 47,564.5 sq. m.	Granted	23.03.2021
SD19A/0185	3-4, Crag Avenue, Clondalkin Industrial Estate, Clondalkin, Dublin 22.	Alterations to approved plans (Grant of Permission ref PL06S.243151 and PA Reg Ref SD13A/0271 and SD18A/0068) to the previously granted planning permission for the construction of an ESB 110kV Gas Insulated Substation for the use by Crag Digital Limited in support of the development and to incorporate an ESB Network Substation to improve and upgrade power supply to Clondalkin and adjoining areas; the proposed ESB 110kV Gas Insulated Substation is a two storey building of	Granted	31.07.2019

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Reference	Location	Development Description	Status	Decision Date
		gross floor area of 1,586sq.m and Client Control Room building of an area of 116sq.m		
SD20A/0034	KN Group HQ, Cloverhill Industrial Estate, Cloverhill Road, Raheen, Dublin 22	Office accommodation extension to the rear of the existing office building (455sq,m at ground floor, 33.2sq.m at first floor); covered bicycle parking area to the front of the existing building 25.2sq.m; all necessary associated ancillary ground and drainage works.	Granted	30.06.2020
SD22A0060	Cloverhill Industrial Estate, Cloverhill Road, Dublin 22	Change of use of 464sq.m of warehouse mezzanine storage, approved under planning reference SD18A/0031, to office use, as well as associated and ancillary internal works, elevational changes and external ground works to facilitate this new use.	Granted	19.07.2022
SD19A/0100	Unit 1, Elmfield Court, Ninth Lock Road, Clondalkin, Dublin 22	Change of use for part of existing retail unit to Off-Licence sales area (Site area 0.025 ha)	Granted	01.07.2019
SD24A/0125W	Unit 10, Clondalkin Business Centre, Crag Cres, Clondalkin Industrial Estate, Dublin 22, Co. Dublin	Partial change of use as constructed under Reg. Ref. S99A/0146, from Warehouse to Office use (29sqm) to include for internal alterations and extension of current office floor areas on ground and first floor level.	Granted	04.07.2024
SD24A/0106*	Block 1, Units 10-13 Weatherwell Industrial Estate, Neilstown, Clondalkin Industrial estate, Dublin 22, Co.Dublin	The construction of new office space at first floor level including enclosing the existing access stairs (total area @ 87.915 sq./mts), all works proposed are ancillary to the use of the existing building and business.	Granted	12.09.2024
SD19A/0286	Unit 15, Cherry Orchard Industrial Estate, Ballyfermot Road, Dublin 10	Demolition of existing single storey discount food store (with ancillary off-licence use) measuring 1758sq.m gross floor space with a net retail sales area of 1286sq.m; two storey mono-pitch discount food store (with ancillary off-licence use) measuring 2144sq.m gross floor space with a net retail sales area of 1400sq.m	Granted	16.12.2019
316119	DART+ South West Electrified Heavy Railway Order - Hazelhatch & Celbridge Station to Heuston Station, and Hesuton Station to Glasnevin		Granted	13.11.2024

The majority of the sites are located at distances greater than 200m from the proposed development and consequently there is likely to be no significant cumulative impacts associated with these developments.

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If phases of the overall masterplan for the proposed development proceed simultaneously then elevated construction noise emissions due to cumulative noise are likely to occur at receptor locations proximate to two or more construction sites as well as a potential increase in the length of time that the receptor will be exposed to construction noise. Hence, cumulative construction impacts will need to be considered and managed during the construction phase. It is recommended that liaison between construction sites is on-going throughout the duration of the construction phase. Contractors should schedule work in a co-operative effort to limit the duration and magnitude of potential cumulative impacts on nearby sensitive receptors. With mitigation in place the impact of phases being constructed simultaneously will be negative, slight to moderate and brief to short-term.

7.7.2 Operational Stage

Traffic data already accounts for other projects within the area and also for the latter stages of the overall Cherry Orchard masterplan, hence, the cumulative assessment has already been accounted for.

7.7.3 Do Nothing Impact

Under the Do Nothing Scenario no construction works will take place and the previously identified impacts will not occur. Impacts from increased traffic volumes also not occur. The local noise and vibration levels at the site will remain as per the baseline and will change in accordance with trends within the wider area (including influences from new developments in the surrounding area, changes in road traffic, etc.). Therefore, this scenario can be considered neutral in terms of noise and vibration.

7.8 Difficulties Encountered

No difficulties were encountered during this assessment.

7.9 Interactions

This chapter has used information from the Traffic chapter and the architectural drawings to inform the assessment of noise and vibration impacts. With increased traffic movements, the noise levels in the surrounding area have the potential to increase. The impacts of the proposed development on the noise environment are assessed by reviewing the change in traffic flows on roads close to the site. In this assessment, the impact of the interactions between traffic and noise are considered to be imperceptible to not significant on all junctions.

7.10 References

- BS 8233: 2014: Guidance on sound insulation and noise reduction for buildings.
- British Standard BS 4142: 2014+A1:2019: Methods for Rating and Assessing Industrial and Commercial Sound
- Design Manual for Roads & Bridges – LA111 Revision 2, 2020.
- British Standard BS 5228 (2009 +A1 2014): Code of Practice for Control of Noise and Vibration on Construction and Open Sites Part 1: Noise & Part 2: Vibration.
- British Standard BS 7385 (1993): Evaluation and measurement for vibration in buildings Part 2: Guide to damage levels from ground borne vibration.
- Calculation of Road Traffic Noise, Department of Transport Welsh Office, HMSO, 1988.
- ISO 1996-1:2016: Acoustics – Description, measurement and assessment of environmental noise – Part 1: Basic quantities and assessment procedures.

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- ISO 1996-2:2017: Acoustics – Description, measurement and assessment of environmental noise – Part 2: Determination of sound pressure levels.
- ISO 9613-2:2024: Acoustics – Attenuation of sound during propagation outdoors – Part 2: Engineering method for the prediction of sound pressure levels outdoors.
- EPA Guidelines on the information to be contained in Environmental Impact Assessment Reports, (May 2022).
- Professional Guidance on Planning & Noise (ProPG), (IoA, 2017).
- Dublin Agglomeration Noise Action Plan 2024-2028, Dublin City Council, 2025

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8 Biodiversity

8.1 Introduction

This chapter of the EIAR was prepared by Altemar Limited to assess the potential for significant effects of the proposed development on the ecology/biodiversity of the surrounding area and within the potential zone of influence (ZOI).

This Chapter should be read in conjunction with:

- Chapter 2 (Project Description)
- Chapter 5 (Air Quality)
- Chapter 7 (Noise & Vibration)
- Chapter 10 (Landscape)
- Chapter 11 (Land & Soils)
- Chapter 12 (Water)
- Chapter 14 (Traffic & Transport)

The programme of work in relation to biodiversity aspects of the EIAR has been designed to identify and describe the existing ecology of the proposed development site and outline habitats and species of conservation interest that may be present within the zone of influence (ZoI). It also assesses the significance of the likely impacts of the scheme on the biodiversity elements including designated conservation sites and designs mitigation measures to alleviate identified impacts. Mitigation measures and the phasing of the project are contained in the accompanying Outline Construction Environmental Management Plan (CEMP), which has been prepared by Waterman Moylan Consulting Engineers Limited. Additionally, the Flood Risk Assessment was prepared by Waterman Moylan Consulting Engineers Limited to accompany the planning application.

Standard construction and operational phase control measures, in addition to monitoring measures will be carried out to minimise potential impacts. Additionally, an Appropriate Assessment Screening has been prepared by Altemar Ltd. to accompany this planning application.

8.1.1 Statement of Authority

Altemar Ltd.

Since its inception in 2001, Altemar has been delivering ecological and environmental services to a broad range of clients. Operational areas include residential, infrastructural, renewable, marine, private industry, local authorities, EC projects and State/semi-State Departments. Bryan Deegan is the managing director of Altemar Limited. Bryan is an environmental scientist and marine biologist with 30 years' experience working in Irish terrestrial and aquatic environments, providing services to the State, Semi-State and industry. Bryan Deegan (MCIEEM) holds a MSc in Environmental Science, BSc (Hons.) in Applied Marine Biology, NCEA National Diploma in Applied Aquatic Science and a NCEA National Certificate in Science (Aquaculture). Bryan Deegan carried out all elements of this Appropriate Assessment Screening.

The 2025 & 2026 surveys for this site were undertaken by Emma Peters and David Culleton of Altemar Ltd.

This chapter has been prepared and surveys carried out by **Emma Peters (BSc) of Altemar Ltd.** Emma has carried out a range of wintering and breeding ornithological surveys in Ireland. Emma has experience in bat detection through static detector surveys, dusk emergence, and down re-entry surveys and is a member of Bat Conservation Ireland. She is also skilled in habitat identification, native and non-native species identification and terrestrial mammal surveys.

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Surveys were **also** carried out by **David Culleton (B.Sc., M.Sc.)** is a skilled ecologist with over 3 years' experience and has been involved in the production of Appropriate Assessment Screening reports for a wide range of small- to large scale residential and commercial developments.

8.2 Study methodology

8.2.1 Relevant legislation

EIA DIRECTIVE

The Environmental Impact Assessment (EIA) Directive[1] relates to the assessment of the effects of certain public and private projects on the environment. It aims to ensure a high level of environmental protection and that environmental considerations are integrated into the preparation and authorisation of projects.

This objective is achieved by ensuring that environmental assessment of certain public and private projects listed in Annex I and II to the Directive (airports, nuclear installations, railways, roads, waste disposal installations, wastewater treatment plants, etc.) is carried out prior to their authorisation.

The EIA Directive applies to a wide range of public and private projects.

Amending legislation (Directive 2014/52/EU) was adopted in 2014. In line with the drive for smarter regulation, it:

- helps reduce administrative burden
- improves the level of environmental protection to permit sounder, more predictable and sustainable business decisions on public and private investments

  The amendment takes into account threats and challenges that have emerged since the original rules came into force 30 years ago. This means paying more attention to aspects like resource efficiency, climate change and disaster prevention, which are now better reflected in the assessment process.

This chapter relates to the biodiversity element of the EIAR.

EU Habitats Directive

The "Habitats Directive" (Council Directive 92/43/EEC) on the Conservation of Natural Habitats and of Wild Flora and Fauna) is the main legislative instrument for the protection and conservation of biodiversity within the European Union. The Habitats Directive provides for the designation, conservation and protection of sites comprising Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), collectively forming the Natura 2000 network of 'European sites'. Article 3 of the Habitats Directive obliges Member States to designate as SACs sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II of the Habitats Directive. Article 10 of the Habitats Directive requires that Member States endeavour to improve the ecological coherence of the Natura 2000 network to manage and conserve features of the landscape which are of major importance for wild fauna and flora, for example ecological corridors or stepping-stones which are important for the migration, dispersal and genetic exchange of species.

Article 6(2) obliges Member States to take the necessary measures to avoid the deterioration of an SAC, or disturbance of a species for which the site is designated. Article 6(3) sets out the requirement for an "Appropriate Assessment", to ensure that a proposed plan or project will not have an adverse

[1] Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU

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effect on the integrity of a SAC. Article 7 applies the requirements of Article 6(2) and 6(3) of the Habitats Directive to SPAs designated under the Birds Directive.

In addition, and separate to the Appropriate Assessment requirements, Article 12 of the Habitats Directive obliges Member States to establish a regime of strict protection for certain species listed in Annex IV of the Directive, wherever they occur within their natural range. The protection for species under Article 12 of the Habitats Directive is not confined to the boundary of SACs. Species listed in Annex IV include the otter and certain species of bat.

EU Birds Directive

The "Birds Directive" (European Council (2009) Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds) confers legal protection to all naturally occurring wild birds within the EU territory. Member States are obliged to adopt the necessary measures to maintain the population of bird species, and that includes, in accordance with Article 3, an obligation to create, maintain and manage habitats for birds, and specifically for the species of Bird listed in Annex I of the Directive, Article 4 requires Member States to create SPAs which, by virtue of Article 7 of the Habitats Directive, form part of the Natura 2000 network of European sites and are subject to the Appropriate Assessment requirements under Article 6(3) of the Habitats Directive.

Additionally, Article 5 of the Birds Directive requires that Member States establish a general system of protection for all naturally occurring wild birds within the EU territory, similar to the system of strict protection required for Annex IV species under the Habitats Directive.

Wildlife Acts 1976 – 2024[2]

The primary domestic legislation providing for the protection of wildlife in general, and wild birds in particular, and the control of some activities adversely impacting upon wildlife is the Wildlife Act of 1976, as amended. The aims of the Wildlife Act, according to the National Parks and Wildlife Service (NPWS) are "... to provide for the protection and conservation of wild fauna and flora, to conserve a representative sample of important ecosystems, to provide for the development and protection of game resources and to regulate their exploitation, and to provide the services necessary to accomplish such aims." All wild bird species are protected under the Act. The European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) made significant amendments to the Wildlife Acts to ensure consistency with the Habitats and Birds Directives.

Birds and Natural Habitats Regulations

The European Communities (Birds and Natural Habitats) Regulations 2011 are also a key piece of legislation (S.I. No. 477/2011) containing legal direction on the protection of flora and fauna pursuant to European Law. The Planning and Development Acts also incorporates the AA requirements into the planning regime.

The Habitats Directive and the Birds Directive have been transposed into Irish law by Part XAB of the Planning and Development Acts and the above-mentioned European Communities (Birds and Natural Habitats) Regulations 2011, as amended.

This Chapter has also been prepared with reference to the following guidelines and publications:

- Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC (EC, 2007);
- Guidance document on the strict protection of animal species of Community interest under the Habitats Directive (EC, 2021);

[2] Wildlife Act 1976, as amended. Administrative consolidation of the Wildlife Act 1976, Law Reform Commission (2024)

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- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DEHLG, December 2009, Rev 2010);
- EPA Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022);
- Best Practice Guidance for Habitat Survey and Mapping (Heritage Council, 2011);
- Ecological Surveying Techniques for Protected Flora & Fauna (NRA, 2008);
- Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009);
- Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2019);
- Birds of Conservation Concern in Ireland 2020 –2026 (Gilbert, Stanbury & Lewis 2021);
- The IUCN Red List of Threatened Species (2025);
- The Status of EU Protected Habitats and Species in Ireland (NPWS, 2025).
- Chapter 12 of Dublin City Development Plan 2022-2028
- Section 11 of the Park West Cherry Orchard LAP 2019

The methodology and terminology for rating effects are derived from the EPA *Guidelines on the information to be contained in Environmental Impact Assessment Reports* (2022) and are included in Chapter 1 of this EIAR.

8.2.2 Desk Study

A pre-survey biodiversity data search was carried out multiple times between November 2025 and July 2026 depending on the survey completed. This included examining records and data from the National Parks and Wildlife Service (NPWS), National Biological Data Centre (NBDC) and the Environmental Protection Agency (EPA), in addition to aerial, 6-inch maps and satellite imagery.

Desk studies were carried out to obtain relevant existing biodiversity information within the Zone of Influence (ZOI).

8.2.2.1 Designated Conservation Sites

The European Commission's *"Assessment of plans and projects in relation to Natura 2000* sites guidance on Article 6(3) and (4) of the Methodological Habitats Directive 92/43/EEC" published 28th September 2021 states at section 3.1.3, that:

"*Identifying the Natura 2000 sites that may be affected should be done by taking into consideration all aspects of the plan or project that could have potential effects on any Natura 2000 sites located within the zone of influence of the plan or project. This should take into account all of the designating features (species, habitat types) that are significantly present on the sites and their conservation objectives. In particular, it should identify:*

- *any Natura 2000 sites geographically overlapping with any of the actions or aspects of the plan or project in any of its phases, or adjacent to them;*
- *any Natura 2000 sites within the likely zone of influence of the plan or project Natura 2000 sites located in the surroundings of the plan or project (or at some distance) that could still be indirectly affected by aspects of the project, including as regards the use of natural resources (e.g. water) and various types of waste, discharge or emissions of substances or energy;*
- *Natura 2000 sites in the surroundings of the plan or project (or at some distance) which host fauna that can move to the project area and then suffer mortality or other impacts (e.g. loss of feeding areas, reduction of home range);*
- *Natura 2000 sites whose connectivity or ecological continuity can be affected by the plan or project*".

The range of Natura 2000 sites to be assessed, i.e. the zone in which impacts from the plan or project may arise, will depend on the nature of the plan or project and the distance at which effects may occur.

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For Natura 2000 sites located downstream along rivers or wetlands fed by aquifers, it may be that a plan or project can affect water flows, fish migration and so forth, even at a great distance. Emissions of pollutants may also have effects over a long distance. Some projects or plans that do not directly affect Natura 2000 sites may still have a significant impact on them if they cause a barrier effect or prevent ecological linkages. This may happen, for example, when plans affect features of the landscape that connect Natura 2000 sites or that may obstruct the movements of species or disrupt the continuity of a fluvial or woodland ecosystem. To determine the possible effects of the plan or project on Natura 2000 sites, it is necessary to identify not only the relevant sites but also the habitats and species that are significantly present within them, as well as the site objectives.

The Zone of Influence may be determined by considering the Proposed Development's potential impact on biodiversity, in terms of:

- Nature, scale, timing and duration of all aspects of the proposed works and possible impacts, including the nature and size of excavations, storage of materials, flat/sloping sites;
- Distance and nature of potential pathways (dilution and dispersion; intervening 'buffer' lands, roads etc.); and
- Location of ecological features and their sensitivity to the possible impacts.

In relation to designated sites the potential for source, pathway, receptor connectivity is firstly identified through GIS interrogation, and detailed information is then provided on sites with connectivity. The main potential source of potential pollution/impacts associated with the Proposed Development are silt, petrochemical, dust and/or other pollutants associated with the proposed works. For wintering birds, Qualifying Interests of adjacent Special Protection Areas (SPAs), potential pathways include both hydrological and aerial pathways, including waterborne contaminant transport via the existing drainage outfall to Dublin Bay, as well as disturbance pathways such as noise, visual disturbance, and indirect displacement effects across intertidal feeding areas and flight lines within the wider coastal environment.

European sites and their Qualifying Interests/Conservation Objectives considered as potential receptors due to their presence within/adjacent to the potential Zone of Influence of the Proposed Development are presented Table 8-2 & 8-3 and demonstrated in Figures 8.1 & 8.2. Sites of National importance (e.g. Natural Heritage Areas (NHA) & proposed Natural Heritage Areas (pNHA) and Ramsar sites are considered as potential receptors due to their presence within/adjacent to the potential Zone of Influence of the Proposed Development are presented Table 8-3 and demonstrated in Figures 8.3 to 8.5. In particular, sites supporting wintering bird Special Conservation Interests, including the South Dublin Bay and River Tolka Estuary SPA, are considered due to their proximity and functional connectivity to the study area.

The proposed development site is located within a densely populated urban environment. The nearest European site is Rye Water Valley/Carton SAC (7.9 km) (Figure 8.1). The nearest waterbody to the subject site is the Grand Canal Main Line (Liffey and Dublin Bay), located 635m to the south of the site boundary (Figure 8.6).

After consultation with Waterman Moylan, foul water discharge from the site will ultimately connect at the intersection of Cedar Brook Way and Cherry Orchard Green (previously named Barnville Park). The foul water will then be treated at Ringsend WwTP, prior to being discharged to Dublin Bay. The surface water will outfall into two different surface water networks which both outfall into the Blackditch Stream which leads to the Camac River. The Camac River connects to the River Liffey which outfalls into Dublin Bay. Therefore, there is an indirect hydrological pathway from the proposed development site to the European sites located within and around Dublin Bay and nationally protect sites proximate to the site.

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Between the foul and surface water there is, therefore, an indirect hydrological pathway from the proposed development site to the European sites located within and around Dublin Bay include: South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, and North Bull Island SPA. There is no hydrological pathways to pNHA's, NHA's or RAMSAR sites proximate to the subject site.

Site clearance will remove biodiversity elements on site. Additionally, given the excavation works and the scale of the development there is the potential for dust and contaminated surface water to enter the watercourse and impact on biodiversity. In this case, the potential ZOI extends beyond the site, with the potential for impacts to extend beyond the proposed development area via the proposed construction works and the surface water network. Details of the proposed development are seen in Chapter 2 of this EIAR. The proposed project construction methodology, layout, drainage strategy, Construction Management Plan, Site Investigations, design and landscape design were reviewed to inform this assessment. Further, the other chapters within the EIAR were assessed.

8.2.3 Site Surveys

Mammal, wintering bird, bat, habitat, flora, and invasive species surveys were undertaken within the appropriate seasonal timeframes and in compliance with relevant guidelines (See Appendices 8.2.3.1 - 8.2.3.3 for relevant mammal, wintering bird, and bat reports). Field surveys were carried out as outlined in Table 8.1. All appropriate surveys were carried out in the appropriate seasons (Smith et al., 2011).

Table 8-1 Detail of Field surveys

Survey	Surveyor	Dates
Flora and Habitat	Emma Peters	9th April 2026
Bat	Emma Peters	13th of May 2026 and 20th July 2026
Mammal	David Culleton	20th January 2026
Wintering Birds 2025/2026	David Culleton and Emma Peters	20th November 2025, 27th November 2025, 4th December 2025, 16th December 2025, 7th January 2026, 20th January 2026, 28th January 2026, 4th February 2026, 12th February 2026, 25th February 2026, 10th March 2026, 18th March 2026.
Invasive species	Emma Peters	9th April 2026

8.3 The existing receiving environment (baseline situation)

8.3.1 Designated sites

The nearest European site is Rye Water Valley/Carton SAC (7.9 km). The nearest waterbody to the subject site is the Grand Canal Main Line (Liffey and Dublin Bay), located 635m to the south of the site boundary. There are no NHAs within 15 km of the proposed development and no potential hydrological pathways from the proposed development site to any NHAs located further than 15 km (Figure 8.3). Watercourses surrounding the site and potential pathways to proximate designated conservation sites are seen in Figures 8.7 and 8.8. An AA Screening accompanies this EIAR.

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Table 8-2 Proximity to designated sites of conservation importance

European Site	Distance	Direct pathway
Special Areas of Conservation		
Rye Water Valley/Carton SAC	7.9km	No
Glenasmole Valley SAC	8.4km	No
Wicklow Mountains SAC	10.7km	No
South Dublin Bay SAC	10.9km	No
North Dublin Bay SAC	13.3km	No
Special Protection Areas		
South Dublin Bay and River Tolka Estuary SPA	10.9km	No
Wicklow Mountains SPA	11.9km	No
North Bull Island SPA	13.3km	No

Table 8-3 Proximity to pNHAs and Ramsar sites within 15km of the subject site

pNHA	
Grand Canal	623 m
Liffey Valley	2.2 km
Royal Canal	4.7 km
Dodder Valley	5.9 km
Lugmore Glen	7.3 km
Glenasmole Valley	8.4 km
Slade of Saggart and Crooksling Glen	9.0 km
Rye Water Valley/Carton	9.3 km
North Dublin Bay	9.9 km
South Dublin Bay	10.9 km
Santry Demense	10.9 km
Fitzsimon's Wood	11.9 km
Booterstown Marsh	12.1 km
Dolphins, Dublin Docks	12.5 km
Ramsar	
Sandymount Strand/Tolka Estuary	10.9 km
North Bull Island	13.5 km

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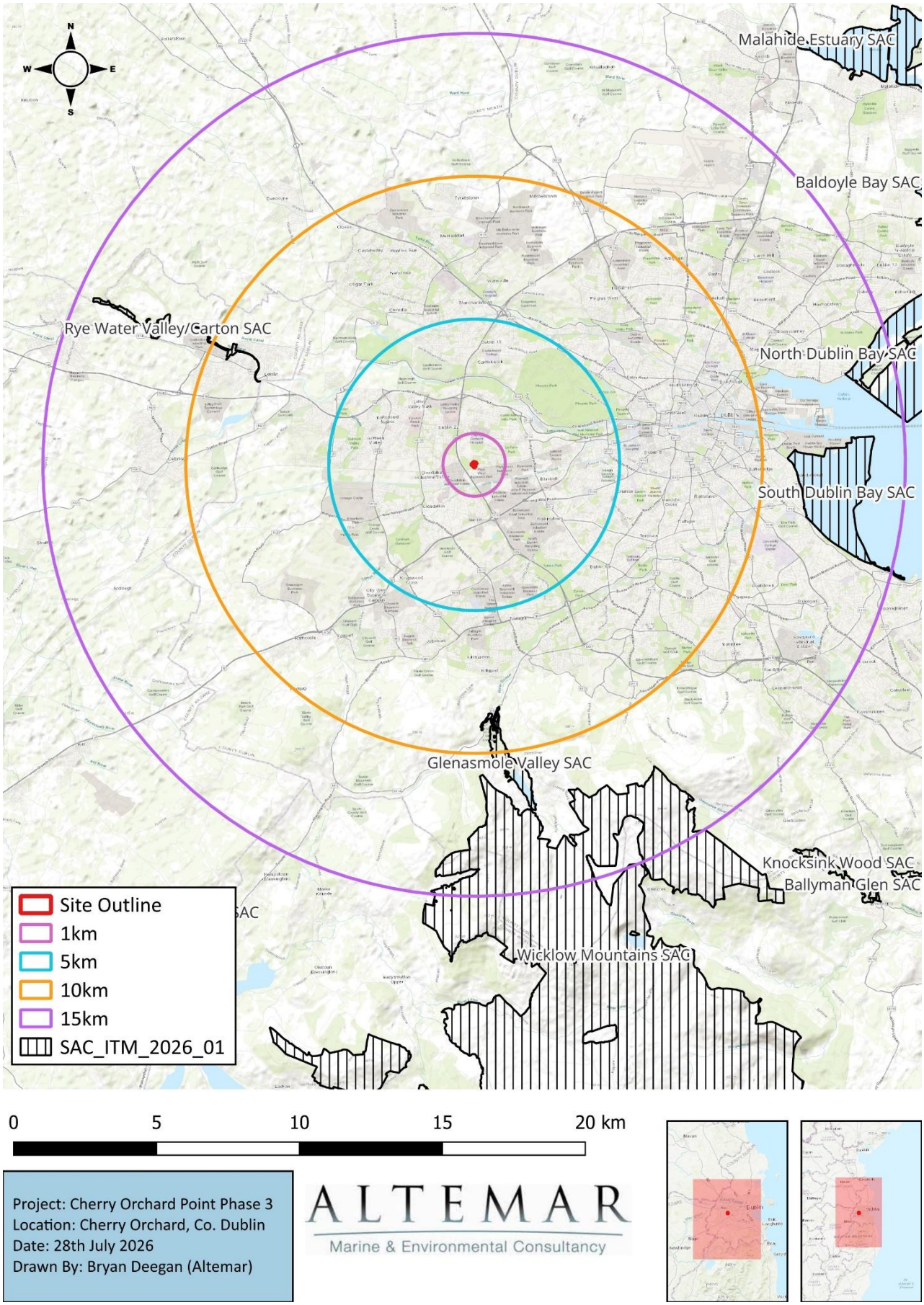


Figure 8-1 SACs located within 15km of the proposed development.

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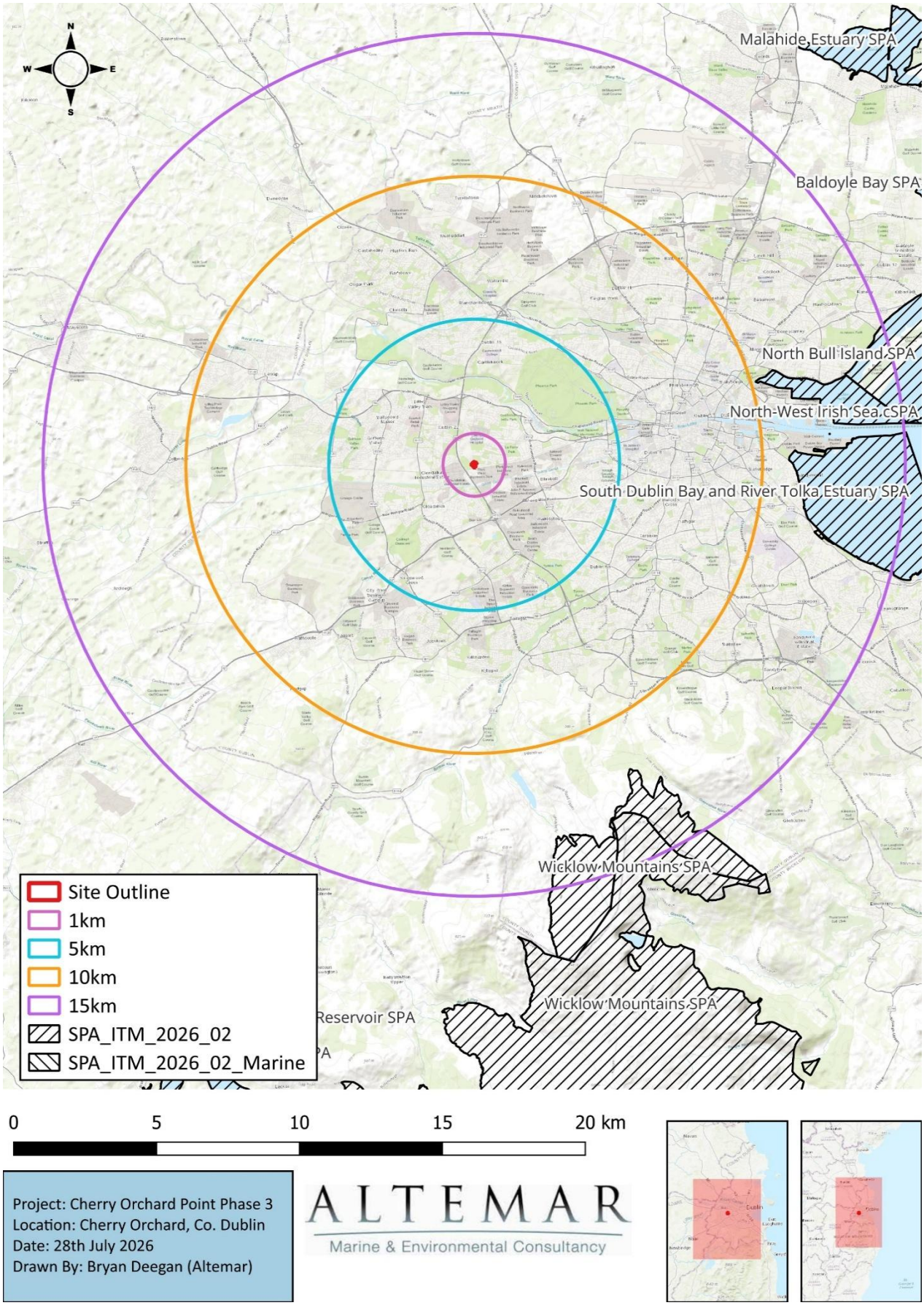


Figure 8-2 SPAs located within 15km of the proposed development.

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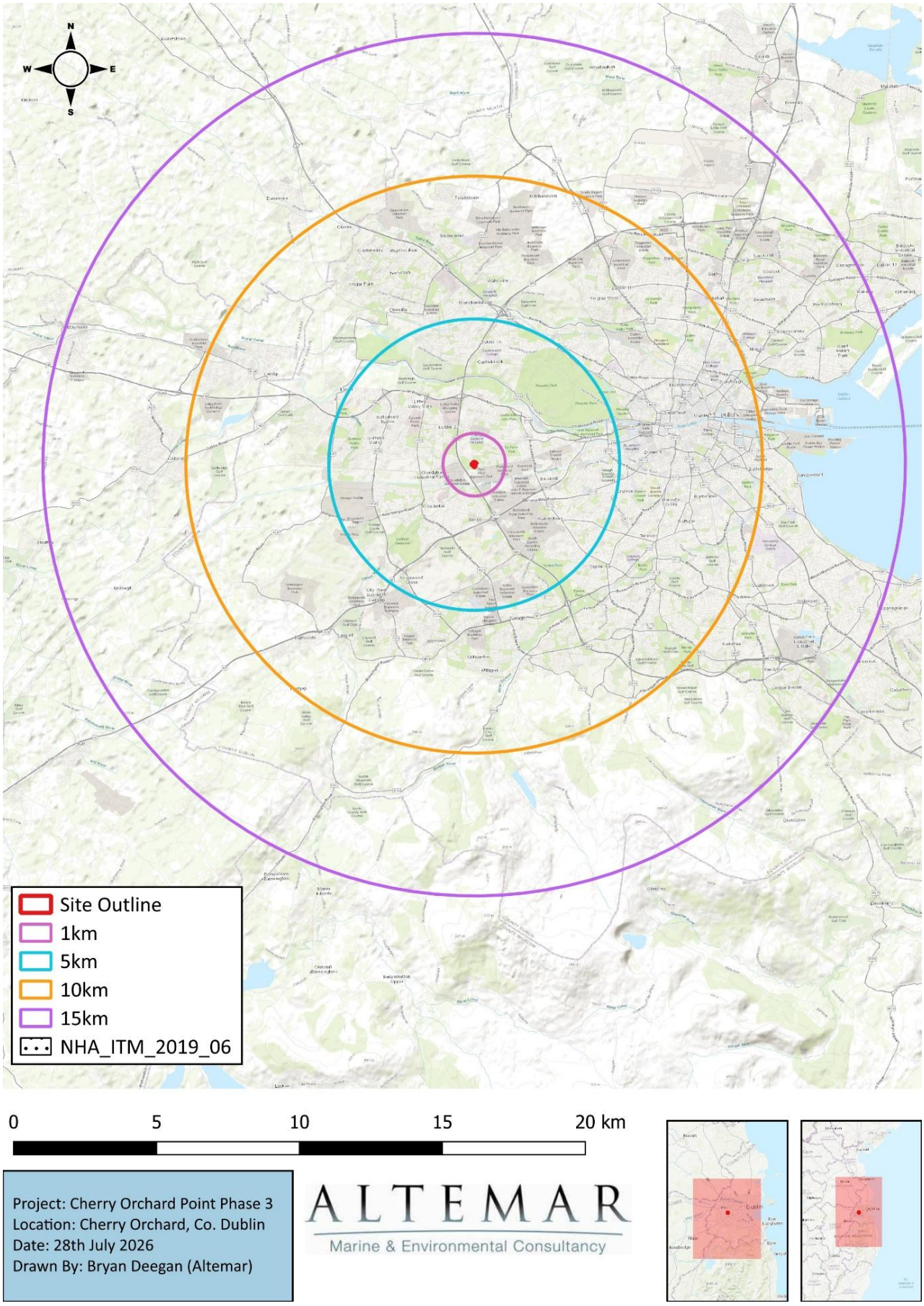


Figure 8-3 NHAs located within 15km of the proposed development.

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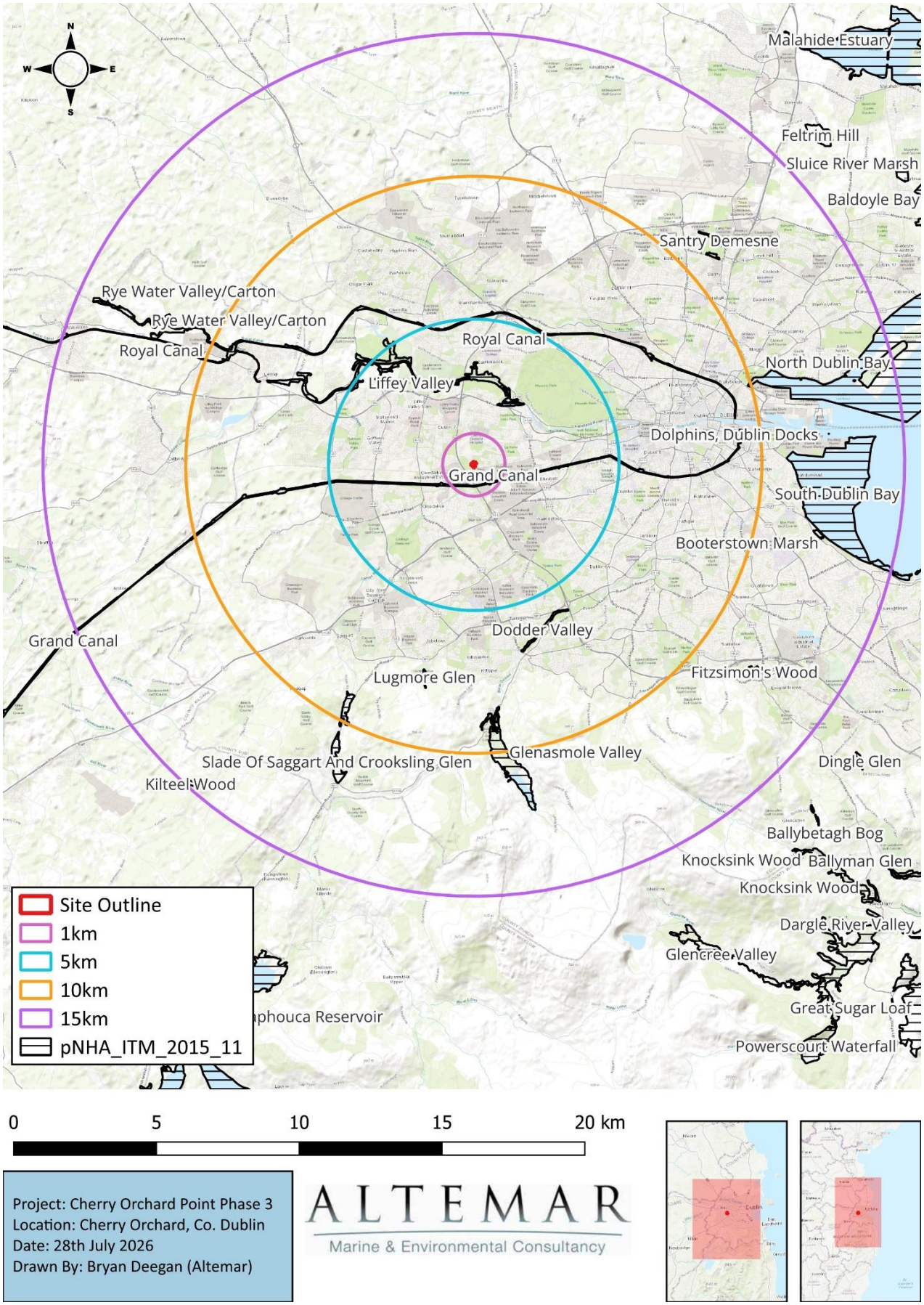


Figure 8-4 pNHAs located within 15km of the proposed development.

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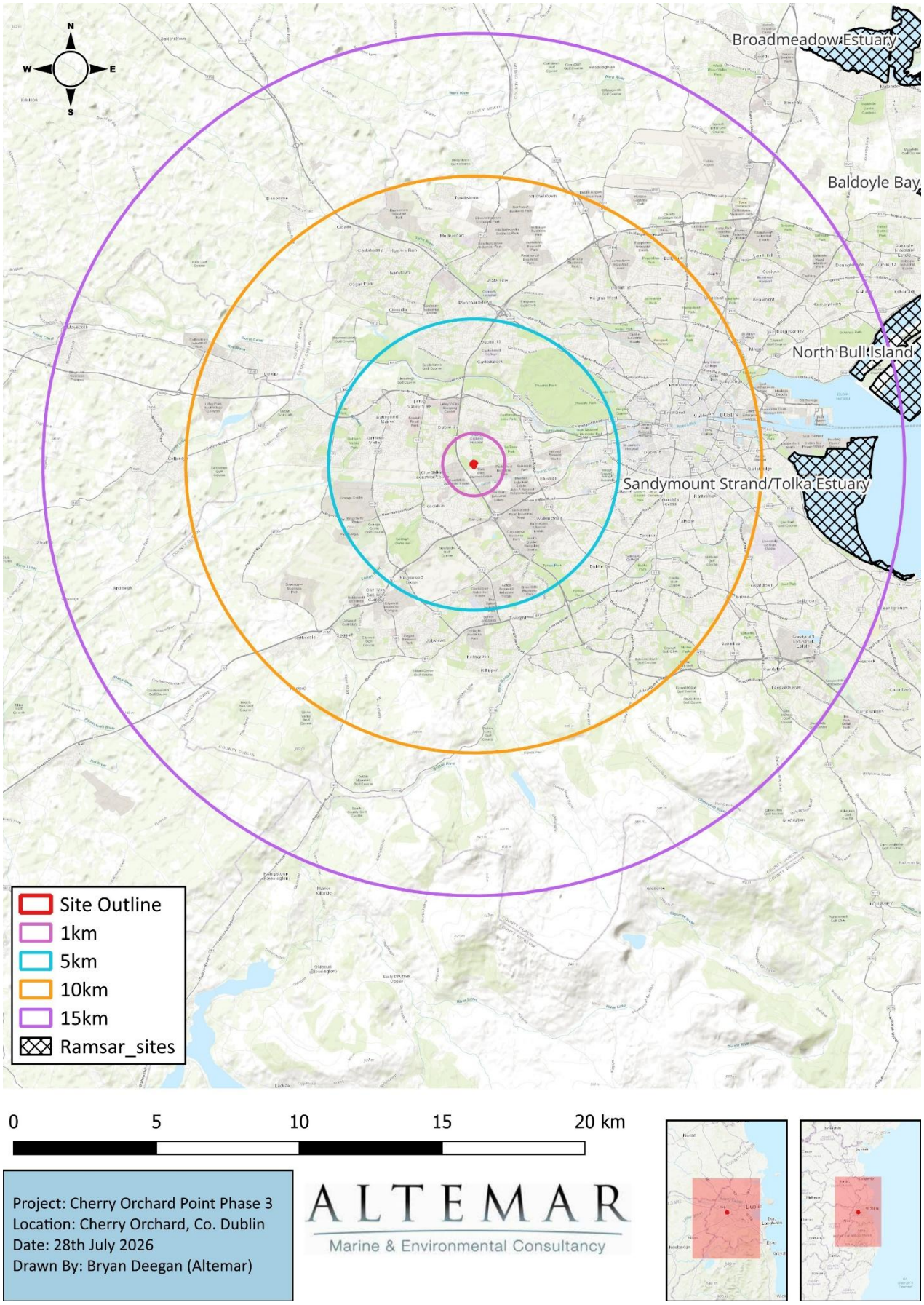


Figure 8-5 RAMSAR sites located within 15km of the proposed development.

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Figure 8-6 Watercourses within 1km of the proposed development site.

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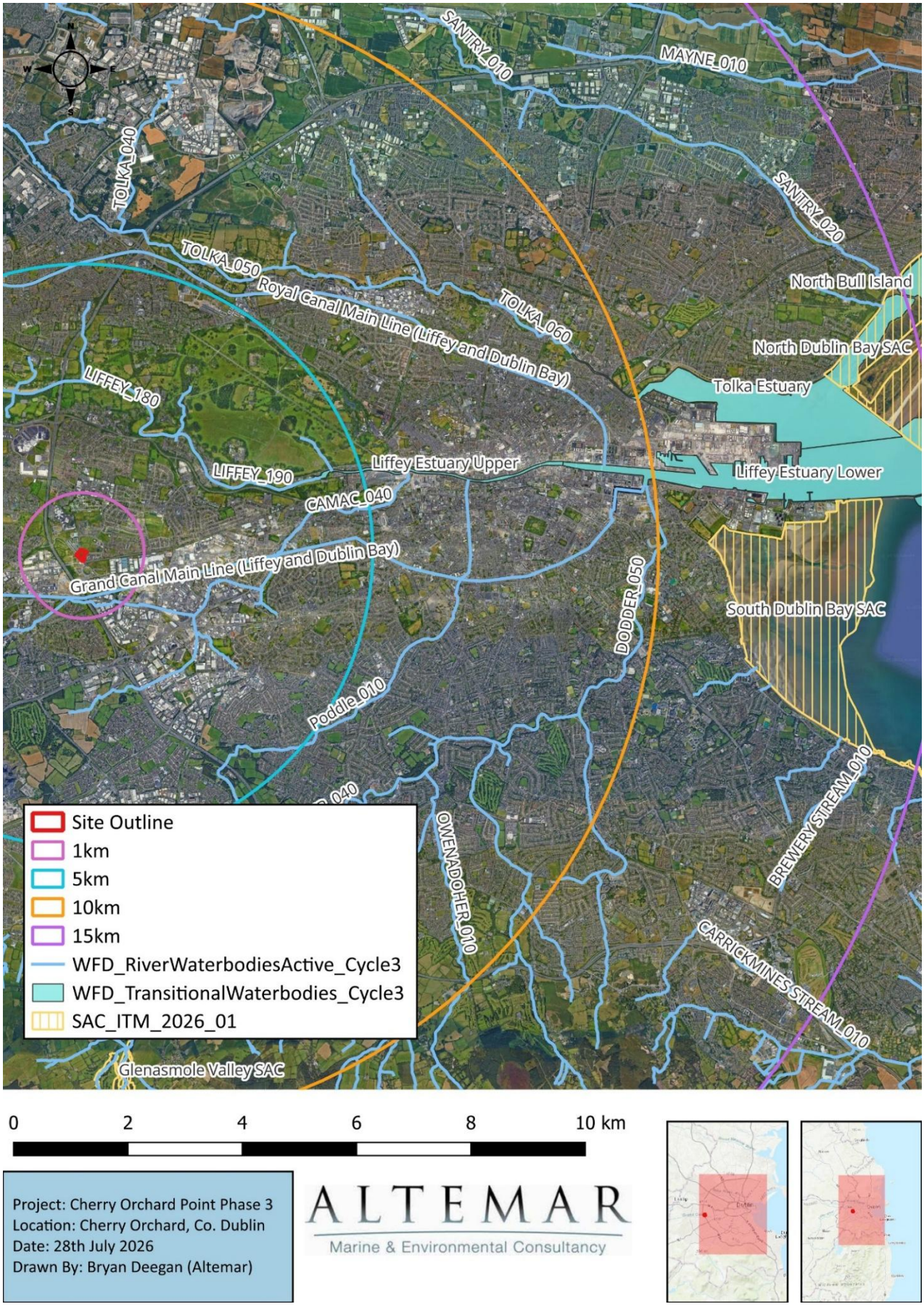


Figure 8-7 Watercourses and SACs of the proposed development site

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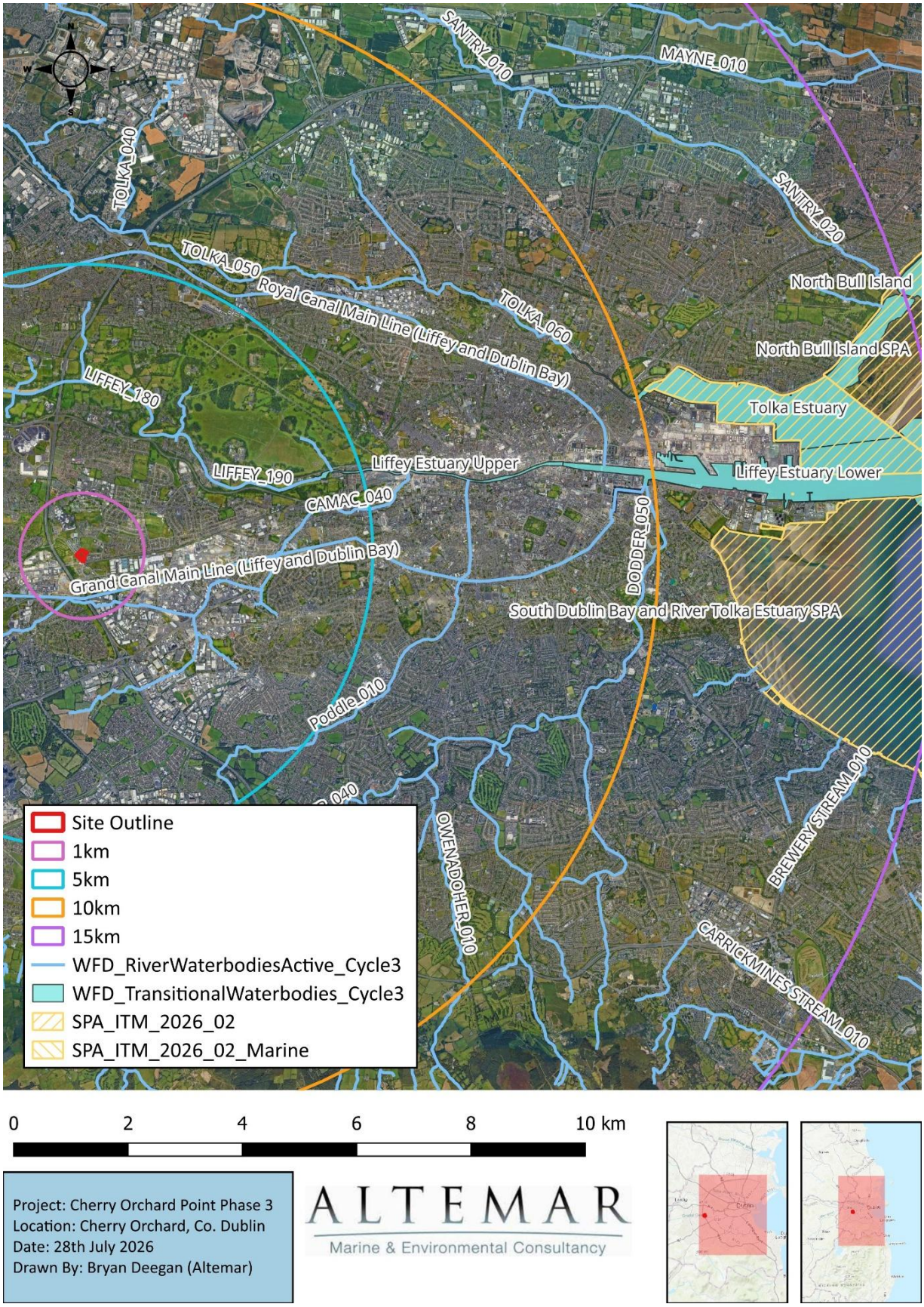


Figure 8-8 Waterbodies and SPAs proximate to the subject site.

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8.3.2 Species Data

The National Biodiversity Data Centre's online viewer was consulted to determine the extent of biodiversity and / or species of interest in the area. A desk-based assessment was carried out and it recorded no species of interest within the site area. Following this, a 2km^2 grid was assessed (O03W) Table 8.4 provides a list of all species of interest recorded in the 2km^2 grid area.

Table 8-4 Species of interest recorded within 2km2 of the site (O03W)

Species name	Record count	Date of last record	Title of dataset	Designation
Black-headed Gull (*Chroicocephalus ridibundus*)	9	17/02/2023	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Gull (*Larus canus)*	2	16/12/2022	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Coot (*Fulica atra)*	7	17/02/2023	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section II Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Cormorant (*Phalacrocorax carbo*)	6	14/12/2024	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Goldcrest (*Regulus regulus)*	3	09/06/2022	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Greenfinch *(Chloris chloris)*	2	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Herring Gull *(Larus argentatus)*	8	17/02/2023	eBIRD Bird Records for Ireland	Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
House Martin *(Delichon urbicum)*	2	13/04/2011	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
House Sparrow *(Passer domesticus)*	4	17/04/2023	Birds of Ireland	Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Kestrel *(Falco tinnunculus)*	3	27/11/2014	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Kingfisher *(Alcedo atthis)*	2	30/11/2014	Birds of Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Lesser Black-backed Gull *(Larus fuscus)*	2	15/05/2013	eBIRD Bird Records for Ireland	Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of

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Species name	Record count	Date of last record	Title of dataset	Designation
				Conservation Concern >> Birds of Conservation Concern - Amber List
Linnet *(Linaria cannabina)*	7	25/04/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Little Egret *(Egretta garzetta)*	1	20/12/2009	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species
Little Grebe (*Tachybaptus ruficollis)*	3	08/11/2022	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts
Mallard *(Anas platyrhynchos)*	10	14/12/2024	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Meadow Pipit *(Anthus pratensis)*	5	25/04/2023	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Mute Swan *(Cygnus olor)*	7	14/12/2024	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Red Kite *(Milvus milvus)*	1	13/12/2014	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Redwing *(Turdus iliacus)*	1	20/12/2009	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Robin *(Erithacus rubecula)*	6	08/11/2022	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts
Rock Dove *(Columba livia)*	2	03/02/2023	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species
Sand Martin *(Riparia riparia)*	1	13/04/2011	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Skylark *(Alauda arvensis)*	1	24/06/2021	Birds of Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Snipe *(Gallinago gallinago)*	2	18/02/2020	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section III Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List

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Species name	Record count	Date of last record	Title of dataset	Designation
Sparrowhawk *(Accipiter nisus)*	4	05/12/2018	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts
Spotted Flycatcher *(Muscicapa striata)*	1	08/09/2009	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Starling *(Sturnus vulgaris)*	12	24/05/2023	Birds of Ireland	Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Stonechat *(Saxicola rubicola)*	1	31/03/2023	Birds of Ireland	Protected Species: Wildlife Acts
Swallow *(Hirundo rustica)*	3	02/05/2011	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Tufted Duck *(Aythya fuligula)*	4	17/02/2023	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section II Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Willow Warbler *(Phylloscopus trochilus)*	2	13/04/2011	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Yellowhammer *(Emberiza citrinella)*	1	13/04/2011	eBIRD Bird Records for Ireland	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Butterfly-bush *(Buddleja davidii)*	1	29/03/2019	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Invasive Species: Medium Risk Invasive Species (2013 Report)
Canadian Waterweed *(Elodea canadensis)*	5	31/07/2009	National Invasive Species Database	Invasive Species: Regulation S.I. 477/2011 (Ireland) || Invasive Species: High Risk Invasive Species (2013 Report) || Invasive Species: The Wildlife (Northern Ireland) Order 1985
Japanese Knotweed *(Fallopia japonica)*	7	02/04/2019	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Invasive Species: EU Invasive Alien Species Regulation No. 1143/2014 || Invasive Species: Regulation S.I. 477/2011 (Ireland) || Invasive Species: High Risk Invasive Species (2013 Report) || Invasive Species: Regulation S.I. 374/2024 (Ireland) || Invasive Species: The Wildlife (Northern Ireland) Order 1985
Japanese Rose *(Rosa rugosa)*	1	26/05/2019	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Invasive Species: Medium Risk Invasive Species (2013 Report)
Nuttall's Waterweed *(Elodea nuttallii)*	2	31/07/2009	National Invasive Species Database	Invasive Species: EU Invasive Alien Species Regulation No. 1143/2014 || Invasive Species: Regulation S.I. 477/2011 (Ireland) || Invasive Species: High Risk Invasive Species (2013 Report) || Invasive Species: Regulation S.I. 374/2024 (Ireland)
Harlequin Ladybird *(Harmonia axyridis)*	12	29/10/2025	Ladybirds of Ireland	Invasive Species: Regulation S.I. 477/2011 (Ireland) || Invasive Species: High Risk Invasive Species (2013 Report) || Invasive Species: Regulation S.I. 374/2024 (Ireland)
Patchwork Leafcutter Bee *(Megachile centuncularis)*	1	22/06/2021	Bees of Ireland	Threatened Species: Near threatened

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Species name	Record count	Date of last record	Title of dataset	Designation
Red-tailed Bumblebee *(Bombus lapidarius)*	4	29/03/2022	Bees of Ireland	Threatened Species: Near threatened
Willughby's Leafcutter Bee *(Megachile willughbiella)*	1	17/07/2021	Bees of Ireland	Threatened Species: Near threatened
Pond Terrapin *(Trachemys scripta)*	1	11/07/2019	Amphibians and reptiles of Ireland	Invasive Species: EU Invasive Alien Species Regulation No. 1143/2014 || Invasive Species: Medium Risk Invasive Species (2013 Report)
Common Pipistrelle (*Pipistrellus pipistrellus sensu stricto)*	5	27/05/2011	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Daubenton's Bat *(Myotis daubentonii)*	3	08/07/2007	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Grey Squirrel *(Sciurus carolinensis)*	1	31/12/2007	The Irish Squirrel Survey 2007	Invasive Species: EU Invasive Alien Species Regulation No. 1143/2014 || Invasive Species: Regulation S.I. 477/2011 (Ireland) || Invasive Species: High Risk Invasive Species (2013 Report) || Invasive Species: Regulation S.I. 374/2024 (Ireland)
Leisler's Bat *(Nyctalus leisleri)*	4	27/05/2011	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Otter *(Lutra lutra)*	1	04/05/1980	Otter Survey of Ireland 1982	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex II || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Pine Marten *(Martes martes)*	1	14/10/2020	Mammals of Ireland 2016-2025	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex V || Protected Species: Wildlife Acts
Pipistrelle *(Pipistrellus pipistrellus sensu lato)*	1	13/10/2021	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Rabbit *(Oryctolagus cuniculus)*	3	31/03/2023	Mammals of Ireland 2016-2025	Invasive Species: Medium Risk Invasive Species (2013 Report)
Soprano Pipistrelle (*Pipistrellus pygmaeus)*	3	08/07/2007	National Bat Database of Ireland	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts

8.3.3 Habitats and species

A field survey was carried out by Emma Peters on the 9th of April 2026 in relation to flora and fauna. The surveys were carried out in warm and dry conditions and covered all land within the site outline and the land immediately outside the site. The purpose of the field surveys was to identify habitat types according to the Fossitt (2000) habitat classification and map their extent. Additionally, more detailed information on the species composition and structure of habitats, conservation value and other data were gathered. Notes were also taken on any incidental sightings of fauna or signs of fauna that were made during the field surveys. It should be noted that the following habitats & species section is based on the most recent flora field survey undertaken on the 9th of April 2026.

In addition to this, two bat surveys were undertaken on the 13th of May and 20th of July 2026. Further details and the results of these surveys can be found in the bat assessment report in Appendix 8.2.3.3. A wintering bird survey was carried out from November to March of 2026 by David Culleton and Emma Peters. Further details and the results of these surveys can be found in the bird assessment report in Appendix 8.2.3.2.

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8.3.3.1 Survey Limitations

The field surveys were carried out in the optimum survey period for full species assessments of floral cover, bats, mammals and wintering birds. It should be noted that good coverage of the site was possible and there was full and clear access to all areas. There is no limitation in relation to the survey timings.



Figure 8-9 Fossitt map of lands of the proposed development.

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8.3.3.2 Fossitt Codes and Corresponding Species Lists

Below is a list of habitats noted onsite and corresponding species. Habitats are identified using codes as prescribed by Fossitt (2000).

The Fossitt (2000) codes are listed below with the habitat title.

Habitats

ED2 - Spoil/bare ground

The ground was mostly bare soil with cleavers (*Galium aparine*), thistles (*Cirsium* spp.), coltsfoot (*Tussilago farfara*), cowslips (*Primula veris*), scutch grass (*Elymus repens*), nettles (*Urtica dioica*), common ragwort (*Jacobaea vulgaris*), and a self-seeded cherry tree sapling (*Prunus* spp.).

WS1-Scrub

A small area of scrub was located in towards the southwest of the site and comprised of brambles (*Rubus fruticosus* agg.), buddleja (*Buddleja davidii*), gorse (*Ulex europaeus*) and willow (*Salix* spp.).

GS2 – Dry meadow and grassy verges

The dry meadow habitat comprised wild carrot (*Daucus carota*), white clover (*Trifolium repens*), thistle (*Cirsium* spp.), creeping cinquefoil (*Potentilla reptans*), germander speedwell (*Veronica chamaedrys*), nettle (*Urtica dioica*), a sallow willow sapling (*Salix cinerea*), common vetch (*Vicia sativa*), ribwort plantain (*Plantago lanceolata*), dandelion (*Taraxacum officinale* agg.), red clover (*Trifolium pratense*), coltsfoot (*Tussilago farfara*), bird's-foot trefoil (*Lotus corniculatus*), meadow buttercup (*Ranunculus acris*), daisy (*Bellis perennis*), black medick (*Medicago lupulina*), cowslip (*Primula veris*), broad-leaved dock (*Rumex obtusifolius*), cleavers (*Galium aparine*), herb-Robert (*Geranium robertianum*), yarrow (*Achillea millefolium*), dove's-foot cranesbill (*Geranium molle*),nipplewort (*Lapsana communis*), a self-seeded hawthorn sapling approximately 1 m in height (*Crataegus monogyna*) and winter heliotrope (*Petasites fragrans*).

GA2 – Amenity grassland

This managed habitat was species poor and boarded the existing footpaths and an area and the south of the adjacent property.

BL3- Built land

No plants or habitats of conservation concern were noted in this habitat. The built land consisted of roadways, footpaths and boundary walls.

Evaluation of Habitats

The majority of habitats on site are of low ecological value. However, the scrub and dry meadow habitats are the habitats of most ecological value.

Plant Species

The plant species encountered within the various habitats on site are detailed above. No plant species protected or restricted under Irish or international legislation were noted on site. Records of rare and threatened species from NBDC and NPWS were examined. No rare or threatened plant species were recorded within the proposed development site.

Invasive Plant Species

No invasives of high-risk status were observed onsite. It should be of note, Buddleja (*Buddleja davidii*), a medium-risk invasive, was observed in multiple locations onsite.

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Terrestrial Mammals

All areas of the site were accessible. No evidence of mammals of conservation importance was noted on site. Records of rare and threatened species from NBDC and NPWS were examined. No rare or threatened faunal species were recorded within the proposed site.

Emergent / Detector Surveys

Dusk bat detector surveys were carried out on the 13th May 2026 & 20th July 2026. During all surveys, the weather was dry, with little to no wind and temperatures were warm (>13 °C). Bats were identified by their ultrasonic calls, coupled with behavioral and flight observations. No roosts were noted foraging onsite. No bats were noted foraging onsite. Common bat species were only noted to be traversing over the site.

Wintering Bird Surveys

A total of twelve wintering bird surveys was carried out from November 2025 to March 2026. A total of 15 species were recorded within, above and adjacent to the survey area across 12 surveys (see Appendix 8.2.3.2 for individual observations). 9 green, 5 amber, and 1 red of conservation concern were recorded either within, over and adjacent to the overall survey area.

Table 8-5 Bird Species Recorded During the site visit on 9th of April 2026.

Common Name	Scientific Name	BoCCI Ireland Conservation Status
Blackbird	*Turdus merula*	Green
Black-headed Gull	*Chroicocephalus ridibundus*	Amber
Herring Gull	*Larus argentatus*	Amber
Linnet	*Linaria cannabina*	Amber
Magpie	*Pica pica*	Green
Meadow Pipit	*Anthus pratensis*	Red
Pied Wagtail	*Motacilla alba yarrellii*	Green
Robin	*Erithacus rubecula*	Green
Wren	*Troglodytes troglodytes*	Green

8.4 Characteristics of Proposed Development

The description of the proposed development is as follows:

“ The proposed development will consist of the construction of a residential led mixed-use scheme containing 312no. residential apartments comprising 244no. cost rental and 68no. social units, 8no. local retail and commercial units, landscaped public and communal open space. The proposed development includes a new principal access via Barnville Park to the south, providing entry to an internal undercroft parking court, upgraded pedestrian and cycle footpaths, Barnville link connecting the Park West Avenue and Cherry Orchard railway station and all associated site and development works.’

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8.5 Potential Impact of the Proposed Development

This section of the EIAR examines the potential causes of impact that could result in positive or negative effects arising on the species and habitats that occur within the ZOI of the proposed development. The following assessment of potential impacts is based on the EPA EIAR Guidelines 2022 (the EIAR Guidelines). These impacts could arise during either the construction or operational phases of the project. The following terms are derived from the EPA EIAR Guidelines and are used to describe the likely significant effects on the ecological receptors arising from the construction and operation of the proposed development.

Table 8-6 Terms as per EPA EIAR Guidelines

Table 8.6 a Magnitude of effect and typical description

Magnitude of effect (change)		Typical description
High	Adverse	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements.
	Beneficial	Large scale or major improvement of resource quality; extensive restoration; major improvement of attribute quality.
Medium	Adverse	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements
	Beneficial	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Low	Adverse	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
	Beneficial	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial effect on attribute or a reduced risk of negative effect occurring
Negligible	Adverse	Very minor loss or alteration to one or more characteristics, features or elements.
	Beneficial	Very minor benefit to or positive addition of one or more characteristics, features or elements.

Table 8.6 b Criteria for Establishing Receptor Sensitivity/Importance

Importance	Ecological Valuation
International	Sites, habitats or species protected under international legislation e.g. Habitats and Species Directive. These include, amongst others: SACs, SPAs, Ramsar sites, Biosphere Reserves, including sites proposed for designation, plus undesignated sites that support populations of internationally important species.
National	Sites, habitats or species protected under national legislation e.g. Wildlife Act 1976 and amendments. Sites include designated and proposed NHAs, Statutory Nature Reserves, National Parks, plus areas supporting resident or regularly occurring populations of species of national importance (e.g. 1% national population) protected under the Wildlife Acts, and rare (Red Data List) species.
Regional	Sites, habitats or species which may have regional importance, but which are not protected under legislation (although Local Plans may specifically identify them) e.g. viable areas or populations of Regional Biodiversity Action Plan habitats or species.
Local/County	Areas supporting resident or regularly occurring populations of protected and red data listed-species of county importance (e.g. 1% of county population), Areas containing Annex I habitats not of international/national importance, County important populations of species or habitats identified in county plans, Areas of special amenity or subject to tree protection constraints.
Local	Areas supporting resident or regularly occurring populations of protected and red data listed-species of local importance (e.g. 1% of local population), Undesignated sites or features which enhance or enrich the local area, sites containing viable

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	area or populations of local Biodiversity Plan habitats or species, local Red Data List species etc.
Site	Very low importance and rarity. Ecological feature of no significant value beyond the site boundary

Table 8.6 c Quality of Effects

Quality of Effects	Effect Description
Negative /Adverse Effect	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance).
Neutral Effect	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
Positive Effect	A change which improves the quality of the environment (for example, by increasing species diversity, or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).

Table 8.6 d Quality of Effects

Significance of Effect	Description of Potential Effect
Imperceptible	An effect capable of measurement but without significant consequences.
Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Significant Effects	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
Profound	An effect which obliterates sensitive characteristics.

Table 8.6 e Duration and Frequency of Effects

Duration and Frequency of Effect	Description
Momentary	**Effects lasting from seconds to minutes**
Brief	**Effects lasting less than a day**
Temporary	**Effects lasting less than a year**
Short-term	**Effects lasting one to seven years.**
Medium-term	**Effects lasting seven to fifteen years.**
Long-term	**Effects lasting fifteen to sixty years.**
Permanent	**Effects lasting over sixty years**
Reversible	**Effects that can be undone, for example through remediation or restoration**

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Table 8.6 f Describing the Probability of Effects

Describing the Probability of Effects	Description
Likely Effects	**The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.**
Unlikely Effects	**The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.**

8.5.1 Construction Phase

In the absence of mitigation, the overall development of the site is foreseen to have direct negative impacts upon the existing habitats, fauna and flora within the site outline. These construction effects would include effects that may arise during the site clearance, re-profiling of the site and the building phases of the Proposed Development. The principal construction activities with potential to interact with biodiversity receptors include:

- Site clearance and vegetation removal;
- Earthworks, excavations and installation of foundations and underground services;
- Construction of residential units, mixed-use buildings and associated infrastructure;
- Construction of roads, access points, pedestrian and cycle infrastructure;
- Installation of foul, surface water and water supply infrastructure;
- Landscaping works and establishment of public open space and the strategic linear park adjacent to the Royal Canal;
- Construction traffic, plant operation and the temporary storage of fuels, oils and construction materials.

Direct negative effects will be manifested in terms of the removal of the site's internal habitats. The removal of these habitats will result in a loss of species of low biodiversity importance. However, the scrub does provide a l nesting foraging resource for birds. Potential pathways for impacts on biodiversity beyond the site outline during construction include disturbance, dust, noise and vibration, sediment mobilisation and accidental spillages.

Potential impacts are assessed below for each of the ecological components:

8.5.1.1 Designated sites

The proposed development is not within a designated conservation site. The nearest designated conservation site the pNHA Grand Canal (623m). The nearest Natura 2000 site is Rye Water Valley/Carton SAC (7.9km) from the proposed development site. The nearest official EPA Water Framework Directive watercourse to the subject site is the Grand Canal located 623m south of the proposed development site. There are no National Heritage Areas (NHAs) within 15 km of the proposed development and no potential hydrological pathways from the proposed development site to any pNHA's or NHAs.

Given the nature of the works, the distance from the Rye Water Valley/Carton SAC and the lack of any watercourses onsite, it is considered there is no direct or indirect hydrological link to this designated site. There is an indirect link during construction vis surface water drainage to European sites in Dublin Bay.

Despite the weak indirect hydrological pathway to five Natura 2000 sites at Dublin Bay (South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, North Bull Island

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SPA and North-west Irish Sea SPA), it is still considered an indirect connection. The surface water will outfall into two different surface water networks which both outfall into the Blackditch Stream which leads to the Camac River. The Camac River connects to the River Liffey which outfalls into Dublin Bay. Therefore, there is an indirect hydrological pathway from the proposed development site to the European sites located within and around Dublin Bay. However, given the distance from the proposed development site to these Natura 2000 sites (10.9 - 13.3km) and the fact that foul water drainage will be treated prior to being discharged into Dublin Bay, no significant effects on Natura 2000 , pNHAs,' NHA'S or ramsar sites due to foul water drainage are foreseen. In relation to surface water drainage, the distance, dilution, flocculation within the waterbody will ensure any pollutants, dust or silt laden run off will be dispersed anddiluted, prior to reaching the marine environment. In the absence of mitigation, no significant effects on the qualifying interests of these Natura 2000 pNHAs' NHA'S or ramsar sites are foreseen.

Potential Impacts in the absence of mitigation: Low Adverse / Local / Negative Impact / Not significant / short-term.

8.5.1.2 Habitats, Botany and Avian Ecology

No flora or habitats of conservation importance were noted during the surveys. During the site visits no bird species of conservation importance as listed on Annex I of the EU Birds Directive were recorded. Meadow Pipit (*Anthus pratensis*) is a red listed species and was noted on site. Localised disturbance due to noise on site is foreseen.

Site clearance will result in a reduction in the vegetation cover including scrub and grassland. This would result in a nesting and foraging resource loss for the bird species (including red and amber listed species) noted on site. Clearance works on site during bird nesting season will impact on bird population within the proposed development site by way of removal of suitable nesting habitat identified onsite. Mitigation will be required to protect nesting birds onsite during bird nesting season in line with Irish Wildlife Acts.

Impacts in the absence of mitigation: negative; moderate adverse, site, short term, not significant. Mitigation is required to ensure no nests are disturbed during nesting season. All clearance of nesting habitat such as scrub, should be carried out outside of bird nesting season. Further, the reduction in foraging and potential roosting areas are not significant in the context of the wider area available to species of relevance due to the widespread and abundant habitats of comparable suitability.

Given the minimal bird activity recorded within and proximate to the subject site, no significant impacts on bird species foraging and moving between foraging/roosting sites are likely in the absence of mitigation measures. No significant impact on bird species of conservation interest is predicted.

8.5.1.3 Terrestrial Mammals

No signs of badgers (*Meles meles*) or other non-volant mammal species of conservation importance were noted onsite. As there is potential for badgers to move onto the site before construction commences, mitigation in the form of a a pre-construction mammal survey is required in order to avoid negative impacts on mammals.

Potential Impacts in the absence of mitigation: Low Adverse /International / negative Impact / Not significant / short-term. Mitigation measures are required in the form of pre-construction mammal surveys.

8.5.1.4 Bat Fauna

No bat roosts or potential roosts were noted onsite. No bats were noted foraging onsite.

Potential Impacts in the absence of mitigation: Low adverse / site / Negative Impact / Not significant / short term.

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8.5.2 Operational Phase

Once developed, the site would be seen as a stable ecological environment. Planting of native species, implementing a wildflower meadow, native rain garden, native shrub planting to barnville link, and courtyard, will be important to re-establish nesting and foraging habitats lost.. These landscaping measures will be important for supporting insect species and creating nesting/ foraging habitat for birds/bats. The landscaping strategy for this project prioritises the use of Irish pollinator friendly, food baring plants and minimising the use of pesticides/herbicides.

The lighting fixtures will be facing down to avoid excessive light spill. This would not deter bats from foraging in the future.

8.5.2.1 Designated Conservation sites within 15km

There is an indirect pathway from the proposed development to Dublin Bay (South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, and North Bull Island SPA). via the foul and surface water drainage networks. The foul water from the site will be discharged to Ringsend WwTP via the existing sewer networks. The foul water will be treated under licence prior to being discharged to Dublin Bay. The surface water will outfall into two different surface water networks which both outfall into the Blackditch Stream which leads to the Camac River. The Camac River connects to the River Liffey which outfalls into Dublin Bay. Therefore, there is an indirect hydrological pathway from the proposed development site to the European sites located within and around Dublin Bay.

However, given the distance from the proposed development site to these designated sites (10.9 - 13.3km) and that foul water drainage will be treated prior to being discharged into Dublin Bay, no significant effects on designated sites due to foul water drainage are likely. In relation to surface water drainage, the distance, dilution and flocculation within the waterbody will ensure any pollutants, dust or silt laden run off will be dispersed and, diluted, and ultimately treated within the public network prior to reaching the marine environment. In relatio to surface water drainage, the distance will ensure any pollutants, dust or silt laden run off will be dispersed, diluted, and ultimately treated within the public network prior to reaching the marine environment. In the absence of mitigation, no significant effects on the qualifying interests of these Natura 2000 sites are likely. There is no direct source pathway receptor link to protected sites.

Potential Impacts in the absence of mitigation: Minor Adverse / Local / Negative Impact / Not significant / Long-term. In the absence of mitigation, no significant impacts are likely.

8.5.2.2 Biodiversity

Biodiversity value of the site will improve as landscaping matures. The landscaping features that are proposed include native trees including alder, birch, pin oak, hawthorn and apple trees, Rain gardens, native wildflower meadows and native shrub planting. As these native plant species mature, they will increase in yield in food sources and habitat for native insect and animal species. The native tree and shrub species will also provide habitat for wildlife as they mature.

8.5.2.3 Terrestrial mammalian species

No badger setts were noted on or proximate to the proposed development site.

Potential Impacts in the absence of mitigation: minor adverse / local/ Negative Impact / Not significant / long term.

8.5.2.4 Flora

No protected or invasive flora species were noted on site.

Potential Impacts in the absence of mitigation: Neutral / site / Not significant / long-term.

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8.5.2.5 Bat Fauna

No bat roosts or potential roosts were noted onsite. No bats were noted foraging onsite. The proposed lighting strategy may slightly impact bats transiting across the site. Due to the site's lack of bat roosts and foraging areas, there is no potential forno adverse impacts for bat roosts and foraging areas.

Impacts in the absence of mitigation: negative, low adverse, international, permanent, not significant.

8.5.2.6 Bird Fauna

The proposed development will change the local environment as new structures are to be erected. The buildings are comprised of solid materials consisting of a solid material on the exterior which includes sections of concrete and glass. These buildings would be clearly visible to bird species and would not pose a significant collision risk. However, the presence of buildings on site and increased human activity may reduce the potential for breeding birds to forage.

Potential Impacts in the absence of mitigation: Minor adverse / site / Negative Impact / Not significant / short term

8.6 Potential Cumulative Impacts

There are several proposed developments located in the area immediately surrounding the subject site. The following is a list of planning applications in close proximity to the subject site as identified on the Department of Housing, Local Government and Heritage's 'National Planning Application Database' portal[3],:

Table 8-7 Cumulative Impacts assessed

Ref. No.	Distance from Site	Address	Proposal
4886/23	0.15km	St. Ultan's Primary School, St. Ultan's Campus, Cherry Orchard Ave, Dublin 10	Permission for the construction of a two- storey classroom building for additional crèche facilities and all associated site development works to the east elevation at the south corner of St. Ultan's Campus.
SD25A/0257W	0.33km	3-4, Crag Avenue, Clondalkin Industrial Estate, Clondalkin, Dublin 22	Permission and retention permission is sought for the following development: Permission for an ancillary generator structure with a total height of c. 22m located between ICT Facility 2 and ICT Facility 3 including 13 no. double-stacked back-up generators with flues of c. 25m, fuel storage, transformers, and associated electrical equipment and plant. Permission for 13 no. ancillary generators within a fenced compound, with a total height of c. 8.1m located to the north of ICT Facility 3, including 13 no. back-up generators with flues of c. 25m, fuel storage tanks and fuel pump room building, transformers, and associated electrical equipment and plant. The primary fuel for the proposed back-up generators will be Hydrogenated Vegetable Oil (HVO). Permission for associated works including services connections, boundary treatments, lighting, and all ancillary works. Permission for reconfiguration of car parking spaces and the

3 https://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=9cf2a09799d74d8e9316a3d3a4d3a8de

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Ref. No.	Distance from Site	Address	Proposal
			retention of 10 no. car parking spaces to the west of ICT Facility 3, resulting in an overall reduction of 8 no. car parking spaces. Retention permission for 4 no. existing water tanks with a total height of c.9.2m and an existing water processing building with a total height of c. 5.1m, located between ICT Facility 2 and ICT Facility 3. Retention permission for 1 no. sprinkler tank with an overall height of c. 8.1m and a single storey pump room with a total height of c. 3.2m to the north of ICT Facility 3. An EPA-Industrial Emissions Directive (IE) license is required to facilitate the operation of the proposed development.
SD22A/0060	0.37km	Cloverhill Industrial Estate, Cloverhill Road, Dublin 22	Change of use of 464sq.m of warehouse mezzanine storage, approved under planning reference SD18A/0031, to office use, as well as associated and ancillary internal works, elevational changes and external ground works to facilitate this new use.
SD24A/0015	0.67km	Units 1, 2 & 3, Cloverhill Industrial Estate, Clondalkin, Dublin 22	Extension, refurbishment, and alterations to adjoined warehousing Units 1, 2 & 3 Cloverhill Industrial Estate, Clondalkin, Dublin 22 as follows: 1. The existing warehousing Unit 1 (existing total area 11,725m2, comprised of 8,526m2 warehouse area and 3,199m2 of two storey ancillary offices) is proposed to be subdivided into two units as follows: A. Unit 1A, 2,582m2 in total including redesigned ancillary offices on 2 floors with an overall area of 522m2 (note: existing two storey office will be reduced by the demolition of 259m2 first floor offices and change of use of part of ground floor office, 281m2, to warehousing space), with a resulting warehouse area of 2,060m2. B. Unit 1B, 8,116m2 in total including redesigned ancillary offices on 2 floors with an overall area of 568m2 (note: existing two storey office will be reduced by demolition of 768m2 first floor offices and change of use of part of ground floor office, 801m2, to warehousing space) with a resulting warehouse area of 7,548m2. Both of the above units to receive front/southern elevation upgrades and access improvements of HGV's entering the site through two improved existing entrance/exit locations, addition of 1 no. goods door to Unit 1A, addition of 4 no. dock leveller doors & 1 no. goods door to Unit 1B, removal of a disused sprinkler pumphouse/plant room & (167m2) and sprinkler tank (24m2, 7m high) to the rear of Unit 1B, associated elevational changes, drainage works including surface water swales, landscaping, rearranged car parking, provision of cycle parking and associated site development works. 2. Existing Unit 2 building area remains unaltered. 3. Existing Unit 3 with a total area of 4,995m2, proposed alterations will include existing warehouse office area (90sqm total over 3 locations) to be reduced to 42sqm by the demolition of 24m2 of first floor office and the change of use of 24sqm of part of ground floor office area to the warehousing area, and

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Ref. No.	Distance from Site	Address	Proposal
			separately demolition of 147sqm of adjoined warehouse corridor resulting in 4,782m2 of warehouse area with the addition of a proposed new two storey adjoined ancillary office area extension of 358m2, with associated elevation works, ancillary cycle parking and adjusted car parking, addition of 2no. dock leveller doors & 1 no. goods door to the side/eastern elevation plus associated drainage works including surface water swales, landscaping and associated site development works.
3867/24	0.65km	19, Beckett Way, Park West Business Park, Dublin 12, D12 H993	This development will consist of the following works to the existing generator compound located at the north of the site : (1) the change of use from a generator compound to an enclosed bicycle store, (2) replacing the existing metal grate roof with a new single skin non-drip flat roof; to cover 24 secure bicycle store spaces and 3 electric scooter spaces.
SD22A/0093	0.36km	3-4, Crag Avenue, Clondalkin Industrial Estate, Clondalkin, Dublin 22	Amendments to the development permitted under Reg. Ref. SD20A/0309 comprising: alterations to permitted ICT Facility buildings 2 and 3, to include internal reconfiguration of the ICT equipment halls, associated electrical and mechanical plant rooms, loading bays, maintenance and storage space, office administration areas, and reconfiguration of screened plant; alterations to the external facades of permitted ICT Facility buildings 2 and 3 to include modification and reconfiguration of fenestration, louvers, loading bays, and access doors, along with an increase in height of 1.2 metres to main parapet level and reduction in the height of rooftop plant to not exceed the parapet height of the buildings, along with the omission of previously permitted flues and exhaust ducts at roof level; omission of emergency generators and associated flues from permitted ICT Facility buildings 2 and 3; The proposed amendments to ICT Facility buildings 2 and 3 result in an increase in their gross floor area (GFA) of 2,511sq.m for each building, resulting in an overall increase in the GFA of the two buildings of 5,022sq.m; Alterations to the water storage tanks serving the permitted ICT Facility buildings, including total increase of 268 sq.m GFA to the permitted pumprooms and a reduction in the scale of the associated water storage tanks. All associated and ancillary works; The application site is subject to an EPA Industrial Emissions Licence relating to the Energy Centre permitted on site (under Reg. Ref.: SD18A/0068 as amended by Reg. Ref.: SD19A/0185).

During construction and operation, it is proposed to discharge to foul water to the existing foul sewer network which discharges to Ringsend WwTP. Ringsend WWTP is required to operate under an EPA licence (D0034-01) and meet environmental legislative requirements as set out in such licence. It is noted that the capacity will be exceeded in the next three years per the 2023 Annual Environmental Report. However, Ringsend Wastewater Treatment Plant upgrade woks were completed at the end of 2025 that allows the plant to be able to treat wastewater for up to 2.4 million population equivalents

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while meeting the required standards. (See Appendix II for the EPA's Treatment Capacity Report Summary)[14] .

The proposed project is within a greenfield site, zoned for new residential and mixed-use development. Most of the applications outlined above relate to commercial projects with temporary/short term construction phases, and also relate to the alterations of existing structures, or minor public infrastructural improvements. The proposed development site is of low biodiversity importance and is within a built-up urban area, with no direct pathway to designated sites. It is considered that in combination effects with other existing and proposed developments in proximity to the application area would be unlikely, neutral, not significant and localised. It is concluded that no significant effects on Natura 2000 sites will be seen as a result of the proposed development alone or combination with other projects. No in combination effects are foreseen.

No projects in the vicinity of the proposed development would be seen to have a significant in combination effect on biodiversity in the zone of influence of the project.

8.7 'Do Nothing' Impact

Due to the zoning of the subject site, it would be expected that in the absence of this subject proposal a development of similar scale and nature would be progressed. Under this scenario, in the absence of specific development details, it is likely that the effect would be similar to this proposal as outlined below. However, in the absence of any development on the site it would be expected that the grassland, scrub and treeline habitats would continue to be utilised by local bird, mammal and bat populations.

Potential Impacts of 'Do Nothing' Impact in the absence of mitigation: Minor Beneficial / Local / Positive Impact / Not significant / Long-term.

8.8 Avoidance, Remedial & Mitigation Measures

In addition to the mitigation measures outlined in Chapter 8 (Hydrogeology), Chapter 7 (Land and Soils), CEMP and Chapter 5 (Air Quality)submitted as part of this application, the following mitigation measures will be implemented for the protection of biodiversity on and adjacent to the site:

8.8.1 Construction Phase

The following mitigation measures will be implemented:

Bats

- Lighting during construction will be managed sensitively with no direct lighting into adjacent habitats. Lighting will be directed downwards and contained to the site. Lighting during construction is intended to illuminate the focused area of work and only turned on during hours of work.
- All construction-phase lighting will be implemented to the satisfaction of the project ecologist.

Birds

- Vegetation clearance will be undertaken in accordance with relevant guidelines and legislation (Section 40 of the Wildlife Acts 1976–2024). Where clearance during the bird nesting season cannot be avoided, a pre-works inspection will be undertaken by a suitably qualified ecologist to confirm the absence of active nests. If nests are found, NPWS will be contacted prior to clearance of the area.

[1] Annual Environmental Report 2023 - Ringsend

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- During construction, light spill onto habitats used by breeding birds will not exceed 3 lux to minimise disturbance. All lighting will be directed inward toward the site, be downward-facing, and be implemented to the satisfaction of the project ecologist.

Mammals

- A pre-construction inspection will be undertaken to confirm the absence of badger setts within, or in close proximity to, the proposed development site.

8.8.2 Operational Phase

The following mitigation measures will be implemented:

Bats

- Operational lighting will comply with Bat Lighting Guidance to the satisfaction of the project ecologist.
- A post-construction lighting assessment will be undertaken and reviewed by the project ecologist.
- Three bat boxes will be installed on site in locations agreed with the project ecologist.

Birds

- Five nest boxes will be installed on site to compensate for the loss of nesting resources, in consultation with the project ecologist.
- Landscape planting will be undertaken in consultation with the project ecologist to provide nesting cover and promote insect diversity that supports bird populations. Native Irish tree and shrub species have been selected to provide habitat and act as a food source for birds that will be in the vicinity of the proposed development. Species include oak, birch, alder, rowan, apple tree, cherry tree, walnut tree, mulberry tree, Hawthorn and Plum trees.
- Meadow areas within the development will include plant species that provide foraging opportunities for red- and amber-listed Birds of Conservation Concern in Ireland (BoCCI) species. Seed mixes will be reviewed by the project ecologist to ensure suitability. The wildflower areas of the site. There will be two large areas of 414 sqm and 547 sqm of wildflower meadow with smaller areas along the northwest and northwest boundaries onsite.

8.9 Residual Impact Assessment

This section assesses potential significant environmental impacts which remain after mitigation measures are implemented.

8.9.1 Construction Phase

Based on the successful implementation of the construction phase controls and the works to be carried out in accordance with this EIAR, there will be no significant ecological impact arising from construction works proposed for the proposed project. Designated conservation sites (Natura 2000 sites, pNHA's, NHA's or RAMSAR listed in Table 8.2 & 8.3) will not be impacted by the proposed development during construction.

Mitigation measures will be in place to limit the potential effects outlined above. Following the implementation of these mitigation measures the proposed project will not result in significant impacts on biodiversity.

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No significant environmental impacts are foreseen in relation to the construction of the proposed development.

Effects: Minor Adverse / local / Negative effect / Not significant /short term/unlikely.

8.9.2 Operational Phase

Based on the successful implementation of the operational phase controls and the works to be carried out in accordance with this EIAR, there will be no significant ecological impact arising from operation of the proposed project. Designated conservation sites (NHA's, pNHA's, RAMSAR and Natura 2000) will not be impacted by the proposed development.

The outlined mitigation measures are primarily to protect Camac River, Grand Canal and associated biodiversity, which are potentially the primary vector of impacts from the site. Light spill will be introduced into the area, but these have been designed to have minimal impact on biodiversity. Biodiversity enhancement measures have been included in the landscape plan. It would be expected that there would be no significant long-term impact on biodiversity with the implementation of mitigation measures in relation to this species as outlined above.

8.10 Monitoring

8.10.1 Construction Phase

A project ecologist will be appointed to oversee construction works on site. Pre-construction surveys will be carried out for terrestrial mammals.

8.10.2 Operational Phase

Monitoring will be carried out by the project ecologist.

8.11 Interactions

The biodiversity elements of this EIAR have involved consultation with a wide section of the Project Team particularly in relation to the Construction Management, design, drainage, lighting and landscape elements of the proposed Project. There are numerous inter-related environmental topics described in detail throughout this EIAR document which are of relevance to the biodiversity chapter. The biodiversity chapter of the EIAR involves interactions with the Land & Soils, Hydrogeology Water, Air Quality, Noise and Vibration, and Traffic and Transport. Following the implementation of mitigation measures outlined in the EIAR the following interactions are noted.

Visuals & Landscape

During the operational phase, the landscaping mitigation measures will improve the degraded nature of the site with green infrastructure, green roofs, nature-based drainage and additions of wildflower meadow and native trees and scrubs. The landscape plan involves detailing in the architectural and landscape design to mitigate wind and shadow effects to create good microclimates. There will be a loss of some vegetation on site, however this will improve with the landscaping measures outlines in the LVIA. Following the implementation of mitigation measures outlined in Chapter 10, the predicted effects on biodiversity are ***short to long term, imperceptible, not significant*** and ***neutral.*** The biodiversity of the subject site is likely to improve following the completion of landscaping works.

Lands & Soils

During the construction phase, excavated soil, stone, clay and made ground will be generated from the excavations required to facilitate site levelling and construction of the new foundations. Where material has to be taken off-site, it will be taken for reuse or recovery, where practical, with disposal as a last resort. As such, there is the potential for impacts on local biodiversity via the proposed excavation and

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re-profiling works. There will be a loss of some vegetation on site, but this is not expected to impact significantly on surrounding areas. Following the implementation of mitigation measures outlined in Chapter 11, the predicted effects on biodiversity are ***short to long term, imperceptible, not significant*** and ***neutral.*** The biodiversity of the subject site is likely to improve following the completion of landscaping works.

Hydrogeology and Hydrology

During the construction and operational phases of development, there is the potential for downstream impacts on the proximate watercourses, and designated conservation sites via contaminated surface water runoff. Following the implementation of mitigation measures outlined in 12, the predicted effects on biodiversity are ***short term, imperceptible, not significant*** and ***neutral.***

Air Quality

During the construction phase of development, given the nature and scale of the proposed works, there is the potential for dust and materials to enter the proximate watercourse during site clearance and re-profiling works with the potential for downstream impacts on biodiversity and designated conservation sites. Following the implementation of mitigation measures outlined in Chapter 5 the predicted effects on biodiversity are ***short term, imperceptible, not significant*** and ***neutral.***

Noise and Vibration

During the construction and operational phases of the development, there will be an increase in disturbance including noise and vibration that could potentially impact on birds on site and mammals proximate to the site. Following the implementation of mitigation measures outlined in Chapter 7, the predicted effects are ***short term, not significant and minor adverse.***

Traffic and Transport

During the construction phase of development, heightened traffic within and immediately surrounding the subject site (resulting from the transport of construction materials and the commuting of workers to the site) has the potential to impact on local biodiversity through increased disturbance. Following the implementation of mitigation measures outlined in Chapter 14, the predicted effects on biodiversity are ***short and long term, imperceptible, not significant*** and ***neutral.***

8.12 Difficulties Encountered in Compiling

No difficulties were encountered in compiling this Biodiversity Chapter of the EIAR.

8.13 References

Department of Environment Heritage and Local Government Circular NPW 1/10 and PSSP 2/10 on Appropriate Assessment under Article 6 of the Habitats Directive – Guidance for Planning Authorities March 2010.

Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities, Department of the Environment, Heritage and Local Government 2009; http://www.npws.ie/publications/archive/NPWS_2009_AA_Guidance.pdf

Managing NATURA 2000 Sites: the provisions of Article 6 of the Habitats Directive 92/43/EEC, European Commission 2000; http://ec.europa.eu/environment/nature/Natura2000/management/docs/art6/provision_of_art6_en.pdf

Assessment of Plans and Projects Significantly Affecting NATURA 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC;

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http://ec.europa.eu/environment/nature/Natura2000management/docs/art6/Natura_2000_assess_en.pdf

Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC https://ec.europa.eu/environment/nature/natura2000/management/pdf/methodological-guidance_2021-10/EN.pdf

Bats & lighting. Guidance Notes for: Planners, engineers, architects and developers. Bat Conservation Ireland,2010.https://www.batconservationireland.org/wpcontent/uploads/2013/09/BCIrelandGuidelines_Lighting.pdf

Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission; http://ec.europa.eu/environment/nature/Natura2000/management/docs/art6/guidance_art6_4_en.pdf

Guidance document on the implementation of the birds and habitats directive in estuaries and coastal zones with particular attention to port development and dredging; http://ec.europa.eu/environment/nature/Natura2000/management/docs/guidance_doc.pdf

The Status of EU Protected Habitats and Species in Ireland. https://www.npws.ie/sites/default/files/publications/pdf/article-17-report-2025-volume-1.pdf

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9 Archaeological, Architectural and Cultural Heritage

9.1 Introduction

This archaeological impact assessment comprising a desktop study and walkover survey was carried out at Cherry Orchard Point Phase 3 Planning Application on Site 5: Barnville Site (hence referred to as Site 5) a development at Gallanstown, Cherry Orchard, Dublin (ITM 707990, 732892). The assessment was undertaken in January 2026 and aims to identify and describe known and potential archaeological and cultural heritage constraints within the site and offer recommendations for the mitigation of such impacts. The objective of the study was to identify and record the location, nature and dimensions of archaeological or cultural heritage features, fabric or artefacts that may be impacted by proposed development, gauge the level of impact and include recommendations for potential mitigations necessary. The study included an examination of existing documentary sources, which was completed in tandem with non-intrusive walkover, geophysical survey and licensed archaeological test trench assessment.

The study was undertaken by Maeve McCormick BA MSc Archaeological Director with Archer Heritage Planning Ltd who has 10 years' experience in archaeological and cultural heritage impact assessments with an additional 10 years of archaeological field experience. She has been eligible to conduct licenced archaeological excavations (under Section 26 of the National Monuments Act 1930 (as amended) since 2019.

Site 5 covers an area of c.1.72ha. It is irregular in shape and bounded by galvanised steel fencing to the NW and NE, Park West Avenue to the SW and a cinder block wall to the SE. The site appears to be covered by mounds of soil from previous construction activities in the area.

The proposed development will consist of the construction of a residential led mixed-use scheme containing 312no. residential apartments comprising 244no. cost rental and 68no. social units, 8no. local retail and commercial units, landscaped public and communal open space. The proposed development includes a new principal access via Barnville Park to the south, providing entry to an internal undercroft parking court, upgraded pedestrian and cycle footpaths, Barnville link connecting the Park West Avenue and Cherry Orchard railway station and all associated site and development works.

The proposed development represents Phase 3 of the overall planned development at Cherry Orchard Point scheme for Development Sites 4 and 5 of the LAP lands. Phase 1 of the overall planned development was granted permission in July 2024 (ACP Case Ref: 318607-23) and Phase 2 was granted in September 2025 (ACP Case Ref: 321931-25). The proposed development comprises the works to be undertaken on Site 5: Barnville, which forms the subject of this planning application.

The proposed development (Total GFA of c. 28413 sq.m) involves construction of 312no. residential apartments (c. 24556 sq.m), across 7 core blocks consisting of 4 to 10 floors, comprising 16no. studio units, 146no. one-bed units, 139no. two-bed units (15no. two-bed three-person and 124no. two-bed four person), 9 no. 3-bed units (9no. three-bed five-person) and 2no. 4-bed units (2no. four-bed seven person) together with 8no. Local Retail and Commercial units (c. 1441 sq.m GFA), and all ancillary and sundry accommodation (c. 2,416sq.m total GFA). The proposed development also includes the provision of landscaped public open spaces of c.1691 sq.m. and Communal open space of c. 2390 sq.m. The communal open space has been designed to provide a high-quality amenity area, incorporating a community garden with seating, play and fitness facilities, and associated landscaping. The scheme also provides private open space for all residential units.

The proposed development will involve the provision of car parking (including accessible and EV car

parking spaces), car sharing spaces, bicycle parking spaces, motorbike spaces and loading bays. The scheme includes a Barnville link to the south of the site connecting Barnville Park with Park West

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Avenue and providing direct pedestrian access to the railway station, along with overall 4no.pedestrian crossing points connecting Park West Avenue, Barnville Park and New Cherry Orchard Park.

The development will also provide for all associated ancillary site development infrastructure including site clearance, boundary treatment, associated public lighting, internal roads and pathways, substations, switch room, water tank rooms, storage room, meter room, sprinkler tank room, bin storage, bicycle stores, hard and soft landscaping, play equipment, boundary walls, attenuation area, green and blue roof systems, photovoltaic panels and all associated works and infrastructure to facilitate the development including connection to foul and surface water drainage and water supply.

9.1.1 Definitions

Heritage is anything of value which may inherited from previous generations and which is worthy of preservation. For the purposes of this chapter, a distinction is made between tangible and intangible heritage assets. Tangible heritage assets are taken to refer to 'man-made' things such as monuments, buildings, architecture, landscapes and objects of heritage value. These could be collectively termed as built heritage. Intangible heritage assets are taken to include language, place names, folklore, storytelling and local knowledge. These could be collectively termed as cultural heritage.

9.1.2 Consultations

Consultation with the following statutory bodies was undertaken at different stages during the archaeological assessment of the wider development (Phases 1 -2). These are set out below and refer to Phases 1 and 2.

A licence application and methodology to use a detection device for archaeological purposes was submitted to the DHLGH under Section 2 of the National Monuments Act 1987 (as amended). The application was approved by DHLGH in consultation with the NMI (licence 22R0221). A final report was submitted on 24th June 2022.

A licence application and methodology to excavate test trenches was submitted to the DCHG and NMI under Section 26 of the National Monuments Act 1930 (as amended). The application was approved by DCHG in consultation with the NMI (22E0522). A final report was submitted on 5th August 2022. Archaeological feature comprising pits and postholes representing a Fullact Fia were recorded during these works.

Full archaeological excavation of the archaeological features was undertaken between 9th and 17th of October 2025 under licence 25E0914 issued to Maeve McCormick by the Department of Housing, Local Government and Heritage (DHLGH) in consultation with the National Museum of Ireland (NMI). The site was completely resolved. Archaeological monitoring of the topsoil stripping was undertaken also under licence No 25E0914 between September 2025 and March 2026. Nothing of archaeological significance was recorded. A report detailing both the excavation and the monitoring is complete and will be submitted to the NMS in the coming weeks.

9.2 Assessment Methodology

The Cultural Heritage and Archaeology study included a desk-based study where relevant databases and sources were consulted to determine the archaeological potential of the general area. In addition to the desktop assessment and site inspection, geophysical survey and test excavation assisted in providing an understanding of the receiving archaeological and cultural heritage environment and potential.

9.2.1 Desktop Study Methodology

The desktop study collated data from the Record of Monuments and Places (RMP), the Topographical files of the National Museum of Ireland (NMI), cartographic sources, aerial photography, documentary research and relevant on-line databases.

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9.2.1.1 Record of Monuments and Places (RMP)/ Sites and Monuments Record.

The Record of Monuments and Places (RMP) is a statutory inventory of archaeological sites protected under the National Monuments Acts 1930-2004 (Section 12, 1994 Act), compiled and maintained by the Archaeological Survey of Ireland (ASI). The inventory concentrates on pre-1700 AD sites and is based on a previous inventory known as the Sites and Monuments Record (SMR) which does not have legal protection or status (see www.archaeology.ie).

9.2.1.2 Topographical Files of the National Museum of Ireland.

The National Museum of Ireland Topographical Files is the national archive of all known antiquities recorded by the National Museum listed by county and townland/ street. These files relate primarily to artefacts but also include references to monuments and contain a unique archive of records of previous archaeological excavations. The Museum files present an accurate catalogue of objects reported to that institution from 1928.

9.2.1.3 Aerial Photography

Aerial photography (and other forms of remote sensing) may reveal certain archaeological features or sites (earthworks, cropmarks, soil marks) that for many reasons may not be appreciated at ground level. There are a number of available collections including the National Monuments Section, Geological Society of Ireland (1970–73), Ordnance Survey of Ireland (1995, 2000, 2005), National Museum of Ireland (St Joseph CUCAP Collection) and Air Corps (1950s–1970s).

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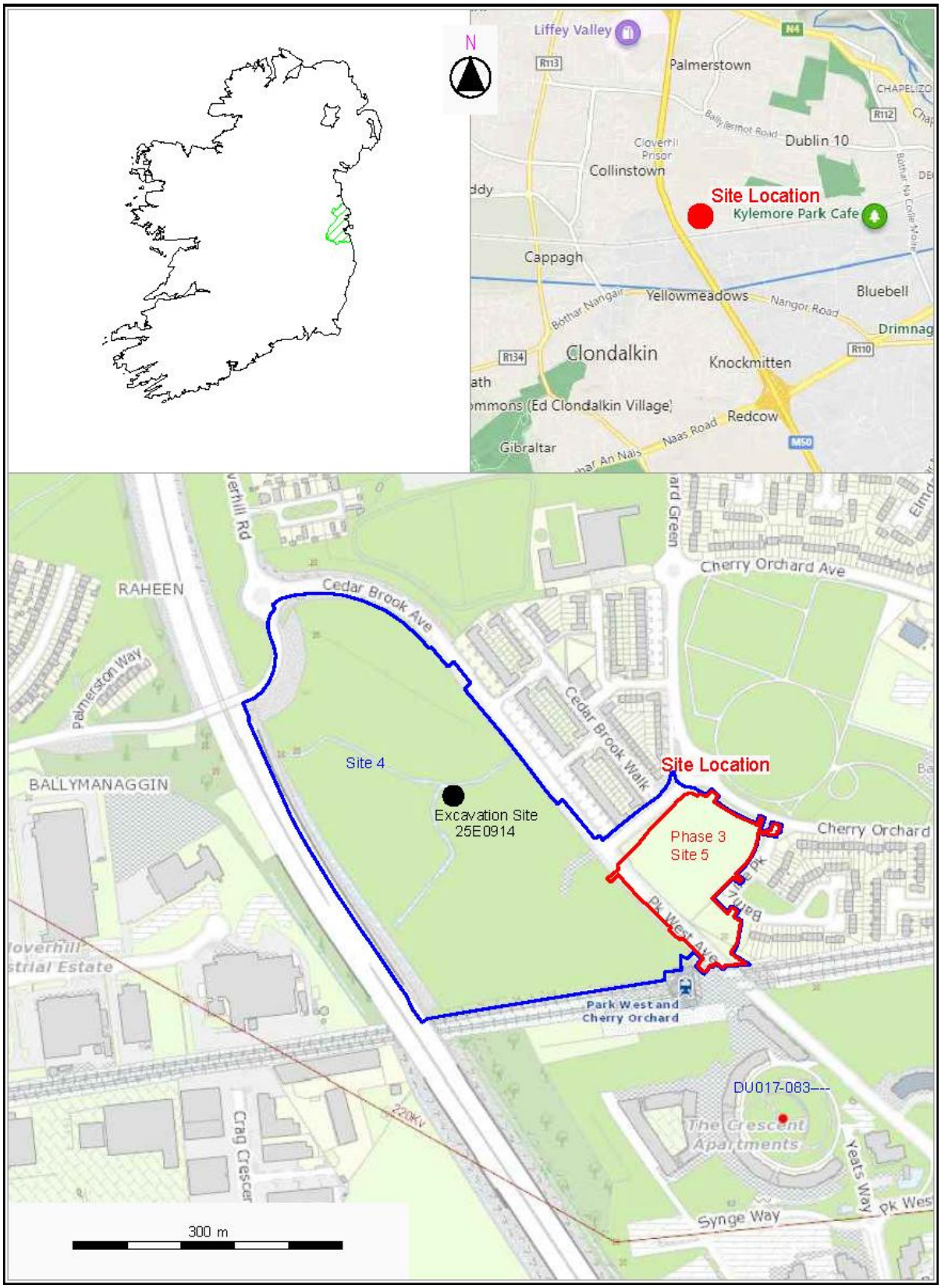


Figure 9-1 Site Location and Surrounding RMPs

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9.2.1.4 Historical Maps

Analysis of historic mapping can show human impact on landscape over a prolonged period. Large collections of historical maps (pre- and early Ordnance Survey maps as well as estate or private maps) are held at the Glucksman Map Library, Trinity College and other sources (UCD Library, Ordnance Survey Ireland, local libraries and published material).

9.2.1.5 Record of Protected Structures & National Inventory of Architectural Heritage

Local Authorities have a statutory responsibility to safeguard architectural heritage in accordance with Part IV of the Planning and Development Act 2000. Under S.51 (1), a County Council must compile a Record of Protected Structures (RPS), which lists all structures that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. The protection, unless otherwise stated, includes the exterior and interior of the structure, lands lying within its curtilage (boundary), other structures and their interiors within the curtilage, plus all fixtures and fittings that form part of the interior or exterior of any of these structures. Buildings can be added to, or deleted from the RPS at any time, though generally this occurs when the county development plan is being reviewed.

The National Inventory of Architectural Heritage (NIAH) was established on a statutory basis under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. Its purpose is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. It is intended to provide a basis for recommendations of the Minister for Culture, Heritage and the Gaeltacht to Local Authorities for the inclusion of particular structures in Records of Protected Structures (RPS).

9.2.2 Field Survey

9.2.2.1 Site Walkover Survey

Site inspection was undertaken on 31st May 2022 by Bart Korfanty MA of Archer Heritage Planning Ltd. This involved a systematic, non-intrusive walkover survey. This survey assessed current land-use patterns, site topography, site access and the presence of any previously unrecorded sites of archaeological and cultural heritage interest.

9.2.2.2 Geophysical Survey

A magnetic gradiometer survey of Site 4 (Phase 1 and 2) only was carried out by Bart Korfanty and Aidan O'Connell of Archer Heritage Planning Ltd in June 2022 under Licence No 22R0221. The objective of the survey was to identify and describe magnetic anomalies within the site that may represent unrecorded archaeological features or deposits. High resolution magnetic gradiometer survey was undertaken on c. 2.13 ha.; the portion suitable for geophysical survey within the subject site. The remainder of the area was not surveyed due to obstructive vegetation (large hedges between fields) and a southern portion of the site was heavily disturbed by previous construction works. Site 5/Phase 3 could not be geophysically surveyed due to the disturbed nature of the site,

9.2.2.3 Licensed Archaeological Test Excavation

Licensed archaeological test excavations of Site 4 (Phase 1 and 2) were undertaken in July 2022 by Maeve McCormick of Archer Heritage Planning Ltd. under licence 22E0522. The aim of the test trenching was to test geophysical anomalies and the general archaeological potential of the site. A total of 14 trenches were excavated measuring 1584 linear metres (3168 m sq). Trenches were mechanically excavated with the aid of a 16-ton tracked excavator equipped with a 1.8m grading bucket under constant archaeological supervision. The trenches were located to assess the potential of the general area. Excavation proceeded in level spits no greater than 0.2m to the top of the first archaeological horizon or the natural glacial till. Each revealed surface was inspected for archaeological

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remains and any features present recorded appropriately. Site 5/Phase 3 could not be test trenched due to the disturbed nature of the site.

9.2.2.4 Licensed Archaeological Excavation

Full archaeological excavation of the site noted during test excavation was undertaken between 9th and 17th of October 2025 under licence 25E0914 issued to Maeve McCormick of Archer Heritage. The aim of the excavation was to preserve by record the archaeological features within the site. The cutting was roughly square in shape measuring 20m x 20m, aligned N/S, centred on the archaeological features discovered during Test excavation in July 2022 (22E0522).The topsoil was removed by mechanical excavation under constant archaeological supervision. The site was then hand cleaned to clearly define the archaeological material. Archaeological features were assessed in-situ by the licensed archaeologist. A pre-excavation plan, photogrammetry and photographic record was undertaken, after which archaeological layers and deposits were subject to hand excavation and recording. Most features were half-sectioned, photographed and recorded with drawn, photogrammetry and written records retained of the cut/fills before the remaining deposits were excavated and sampled. The remaining features were fully excavated, recorded and profiled. After deposits were removed from all identified features, post-excavation photographs and photogrammetry were undertaken across the site and a post-excavation plan and photographic record were retained.

9.2.2.5 Licensed Archaeological Monitoring

Archaeological monitoring of topsoil stripping and initial groundworks across Site 4 (Phase 1 and 2) was undertaken intermittently along with the construction schedule from September 2025 through to March 2026 also under Licence No 25E0914 to Maeve McCormick. Works comprised supervision of topsoil removal and assessment of exposed surfaces by way of a walk over survey in order to record potential archaeological features which were not previously noted during geophysical survey or subsequent archaeological works.

9.2.3 Guidance and Legislation

Archaeological and cultural heritage protection in Ireland is provided by several international and national mechanisms. These include but are not limited to:

- National Monuments Acts 1930-2014;
- Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999;
- Planning & Development Act. 2000 (as amended);
- European Convention on the Protection of the Archaeological Heritage. 1992.

The Framework and Principles for the Protection of the Archaeological Heritage (1999) publication outlines the State's general principles in relation to the management and protection of archaeological heritage. It states that avoidance of developmental impacts on archaeological heritage and preservation in situ of archaeological sites and monuments are always the preferred option. When a site, or part of a site, must be removed due to development, then preservation by record must be undertaken (i.e. through licensed excavation and recording).

We note that the National Monuments Act 1930 (as amended) will be replaced by provisions contained in the Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 (the 2023 Act). The 2023 Act is not yet in force as of the date of this report, however, once the relevant provisions are commenced, the 2023 Act will replace the 1930 Act. In circumstances where the relevant provisions of the 2023 Act are commenced, I do not foresee that any of the conclusions in relation to potential impacts on receptors, mitigation, monitoring or licensing requirements contained in Chapter 9 Archaeological, Architectural and Cultural Heritage are likely to be changed as a result of the 2023 Act being commenced.

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9.2.3.1 Dublin City Development Plan 2022-2028 Chapter 11.

The Dublin City Development Plan 2022-2028 sets out general policies and standards for development within the city. The current plan contains lists of cultural heritage sites, including national monuments, recorded monuments and protected structures within the city. It is recognised that the city's heritage contributes significantly to the collective memory of its communities and to the richness and diversity of its urban fabric. It is key to the city's character, identity and authenticity and is a vital social, cultural, and economic asset for the development of the city.

The city's historic buildings, streetscapes, villages, Georgian terraces and squares, Victorian and Edwardian architecture, industrial heritage, institutional landmarks, modernist buildings of the 20th century, urban core and the Medieval City, together with its upstanding monuments and buried archaeology, contribute to its local distinctiveness and help create a strong sense of place for citizens and visitors to the city and its neighbourhoods.

The Development Plan plays a key role in valuing and safeguarding built heritage and archaeology for future generations. The plan guides decision-making through policies and objectives and the implementation of national legislation to conserve, protect and enhance our built heritage and archaeology.

Objective **BHA26** pertains to Archaeological Heritage and is outlined in the Development Plan as follows:

1. To protect and preserve Monuments and Places listed on the statutory Record of Monuments and Places (RMP) as established under Section 12 of the National Monuments (Amendment) Act 1994 which have been identified in the Record of Monuments and Places and the Historic Environment Viewer (www.archaeology.ie) and all wrecks over 100 years old including those in the Shipwreck Inventory of Ireland.

2. To protect archaeological material in situ by ensuring that only minimal impact on archaeological layers is allowed, by way of re-use of standing buildings, the construction of light buildings, low impact foundation design, or the omission of basements (except in exceptional circumstances) in the Monuments and Places listed on the statutory Record of Monuments and Places (RMP) as established under Section 12 of the National Monuments (Amendment) Act 1994.

3. To seek the preservation in situ (or where this is not possible or appropriate, as a minimum, preservation by record) of all archaeological monuments included in the Record of Monuments and Places; all wrecks and associated objects over 100 years old and of previously unknown sites, features and objects of archaeological interest that become revealed through development activity. In respect of decision making on development proposals affecting sites listed in the Record of Monuments and Places, the council will have regard to the advice and/or recommendations of the Department of Housing, Heritage and Local Government.

4. Development proposals within the Record of Monuments and Places (RMP) as established under Section 12 of the National Monuments (Amendment) Act 1994, notification of sites over 0.5 hectares size with potential underwater impacts and of sites listed in the Dublin City Industrial Heritage Record, will be subject to consultation with the City Archaeologist and archaeological assessment prior to a planning application being lodged.

5. To preserve known burial grounds and disused historic graveyards. Where disturbance of ancient or historic human remains is unavoidable, they will be excavated according to best archaeological practice and reburied or permanently curated.

6. Preserve the character, setting, and amenity of upstanding and below ground town wall defences.

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7. Development proposals in marine, lacustrine and riverine environments and areas of reclaimed land, shall have regard to the Shipwreck Inventory maintained by the Department of Housing, Local Government and Heritage and be subject to an appropriate level of archaeological assessment.

8. To have regard to national policy documents and guidelines relating to archaeology and to best practice guidance published by the Heritage Council, the Institute of Archaeologists of Ireland and Transport Infrastructure Ireland.

9.2.3.2 Park West-Cherry Orchard Local Area Plan 2019

The buildings and structures we inherit from the past often make significant contributions to an areas identity, and to the richness and diversity of the urban fabric. The Park West Cherry Orchard area contains a number of features of historic and social historical merit and it is the policy of the City Council to preserve such features where they make a positive contribution to the character, appearance and quality of the area.

It is an objective of Dublin City Council:

- **H1** To protect and conserve the special character of all built heritage features both within the plan area as well as those within the immediate surrounding areas.
- **H2** To safeguard known National Monument sites and to agree strategies for the protection of potential future sites in conjunction with the City Archaeologist,
- **H3** To protect the buildings, structures and features of industrial heritage within the Park West – Cherry Orchard LAP area along with their related artefacts and plant where appropriate.
- **H4** To undertake a feasibility appraisal for the former Gallanstown waterworks which features an underground brick arched reservoir and to explore and identify a compatible, sustainable and viable future use which will ensure the conservation of the built fabric and add to the amenity and vibrancy of the area.

9.3 Baseline Environment

9.3.1 Archaeological and Historical Background

The placename Ballyfermot is derived from the Irish '*Baile Formaid*' which is thought to owe its origin to the Irish chief *Diarmuid MacGillamocholmog*. The earliest document references to the area relate to the transfer of title from William Fitzwilliam and Avicia his wife, who before 1307 assigned a third of the manor of Ballyfermot to Thomas Cantock, Bishop of Emly and Chancellor of Ireland. After the Fitzwilliam's, Robert de Clahull appears as owner of the manor. By the 16th century, Robert Newcomen was resident in the castle at Ballyfermot (Ball 1902-20). It is likely that the castle was located on the manorial site. On his death in 1629 Sir Robert Newcomen was succeeded at Ballyfermot by his eldest son Sir Beverly Newcomen.

The parish church at Ballyfermot was founded prior to 1212 and dedicated to St. Lawrence. It formed part of the possessions of the Knights Hoispitallers of St. John of Jerusalem. In 1615, the church and chancel were described as being in ruins. There is now no surviving trace of the church, the ruins of which survived until the 1950's (Ni Mharcaigh 1997), although Wren (1982) noted a mound at the at the south-east end of Le Fanu Park covering the ruins of the 'churchyard of the rectory church of St Laurence'. Ball (1902-20) described the church as one of the larger ruined churches in the county, the measurement being some fifty-four feet by nineteen, and displaying no architectural feature of interest. This church served Ballyfermot and the surrounding townlands into the late seventeenth century (Wrenn 1982).

The parish of Clondalkin was anciently called *Cluain Dolcáin* or '*Dolcáin's* Meadow'. It was the site of an early Christian monastery from the seventh century, which occasionally features in contemporary annals (Doherty 2000). The most visible relict of this monastery is the round tower (DU017-041006,

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Located 0.9km to NW) on Tower Road. Surviving largely intact, the tower is constructed of limestone with a granite finish on the door and window jambs. The curving boundary of the former monastic enclosure, preserved in parts of Orchard Lane and Main Street (estimated diameter c. 310m), surround a number of other relicts of this period, including a wall fragment of the medieval parish church in the grounds of St. Johns Church of Ireland. Two granite cross fragments and a rectangular font are also located in the grounds of St. Johns Church. Beyond these remains and occasional annalistic entries, little is known about the foundation and early development of Clondalkin. It is known to have had a Scandinavian settlement; a fortress called *Dunawley* (Joyce 1920; Lewis 1837; Doherty 2000). In AD865, there was a massacre of one hundred Vikings and the burning of *Dunawley* by the Irish (Joyce ibid). Other references to Clondalkin before the Anglo-Norman invasion relate to subsequent attacks on the monastery in 1071 and 1076 (Ball 1899, 1902–20; Lewis 1837).

In 1171, Roderic O'Connor, King of Leinster, marched to Clondalkin to engage a force of Anglo-Normans, under the command of Richard de Clare who was laying siege to Dublin at the time (Lewis 1837). In the following period, the lands of Clondalkin monastery were given to the Archbishop of Dublin, and Clondalkin became the centre of one of the largest manors belonging to the metropolitan see. In the thirteenth century, the Archbishop of Dublin established a borough here, and an extent of 1326 states the size of the town as thirty-two burgages. By the close of the fourteenth century there were at least five streets in the borough (Mill Street, Steeple Street, Pope Lane, New Street and Mahow Street; Bradley 1998, 130-1; Thomas 1992). A small church site perhaps associated with medieval settlement was excavated in the 1960's on Watery Lane (Rynne 1967).

In January 1642 the village was burned by a troop of horse cavalry sent from Dublin and in June of that year, many of the castles in the parish were destroyed at this time to remove any potential strongholds in the vicinity of the city (Ball 1902–20). Castles such as Neilstown Castle, Ballymount Castle and Tully's Castle were likely destroyed at this time. The Down Survey (1657) recorded the ruins of a castle at Clondalkin with thatched houses and the round tower (Bradley ibid, 131).

Construction of the Grand Canal (Located c.1.5km N of the subject area) began in the mid-eighteenth century and by 1759 two sections had been completed at the Bog of Allen and near Sallins, Co. Kildare. In 1772 the Grand Canal Company was established to oversee its continued construction and the section from Dublin to Sallins was opened in 1779. It eventually reached the Shannon in 1803 (Delaney 2004). This general area of Clondalkin is referred to as the Ninth Lock and became a focus for a small hamlet of early nineteenth century cottages on Ballymanaggin Lane.

By the 1830s, this area mainly comprised fertile arable land. There were a large number of good limestone quarries in the area and brick manufacture was also carried out (Lewis 1837). A railway station was built on the Kildare line in 1846, with access from Station Road, along which a number of cottages were built. The station was closed in 1947 but reopened for a period between 1994 and 2008 when the station was moved to facilitate a line upgrade.

9.3.2 Record of Monuments and Places

There are no Recorded Monuments within either Site 4 or Site 5/Phase 3. The closest Recorded Monument to the subject site is DU017-083---- (Burial Ground), which is located c. 200m SE of the subject site (see Figure 9.1). This burial ground was identified during topsoil-stripping carried out for the development of a business park. Human remains were revealed on a very low mound towards the north-west of the development and the site was interpreted as an early medieval (AD 400-1200) cemetery. Additional monuments are recorded within 1.5 km of the subject site. These are generally of medieval and later date. Details of individual sites are outlined below in Table 9.1.

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Table 9-1 Table of RMP/SMR sites within 1.5km of the subject area

SMR No	Class	Townland	ITM	Distance to site	Description
DU017-083----	Burial ground	Gallanstown (Castleknock By.)	708085, 732612	c.0.5km SE	Pre-development testing in 1999 revealed a very low mound which covered three east-west oriented skeletons (Purcell 2000, 83). The remains were those of two adult males and one adolescent aged 12-16 years. The site is thought to be an Early Christian burial mound.
DU017-032001-	Castle – unclassified	Neillstown	706498, 732931	c.1.2km W	The castle was marked on the Down Survey (1655-6) map, approximately on the site of Neillstown House which was formerly located N of the present 9th lock on the Grand Canal. Described in the Civil survey (1654-6) as 'the ruins of an old castle', (Simington 1945, 292). The site has been built on. Not visible at ground level.
DU017-032002-	House – 16th/17th century	Neillstown	706498, 732931	c.1.2km W	L. Ball (1906,118) mentions three or four cottages associated with the castle (DU017-032001-). These may be the ' three or four cabins' which are mentioned in the Civil Survey(1654-6). The area has been built on. Not visible at ground level.
DU017-041007-	Font	Clondalkin	707201, 731535	c.1.5km SW	S of St. John's church is a rectangular granite font (dims. L 1.20m, Wth 0.95m, D 0.60m) with a dressed N face and an irregular S face with a channel inside the rim (Ball 1899, 98).
DU017-041009-	Water mill – unclassified	Clondalkin	706856, 731576	c.1.5km SW	The Mill Centre Shopping complex NW of Clondalkin Village occupies the site of a medieval mill. This mill is mentioned in Archbishop Alen's Register 1326 (McNeill 1950, 187; Ua Broin1944, 210-211) and is presumably the castellated mill described by Austin Cooper in 1780 (Price ed. 1942, 56). Not visible at ground level.
DU017-043----	Enclosure	Knockmitten	707972, 731483	c.1.5km SE	Situated on a NE facing slope close to the Camock River. An aerial photograph taken in 1971 (FSI 227/8) shows cropmark evidence for a subcircular enclosure (diam. c. 38m). Possibly a levelled ringfort. There is a housing estate on the site. Not visible at ground level.
DU017-067----	Castle – unclassified	Rowlagh	706632, 734011	c.1.5km NW	Duncan's map (1821) shows 'Rowlagh Castle, defaced'. Today there is a housing estate on the site.Not visible at ground level.

9.3.3 Summary of Previous Archaeological Fieldwork

No previous archaeological excavation works have been undertaken within the subject areas. However, three E/W oriented articulated skeletons were recorded during test excavations in 1999 (99E0108; E.

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Purcell) c. 200m SE of Site 4 (DU017-083----). This discovery is thought to be an Early Christian burial mound. For further details see Table 9.2 , below.

Table 9-2 Table of previous archaeological excavations within the surrounding landscape

Licence No.	RMP/ SMR	OS Ref	Location	Ex. Bulletin Ref.	Author	Results
07E0298	N/A	707797, 732728	Kildare Rail Route Project, Section 1, Ballyfermot to Cappagh, Dublin	2007: 428	C. Moriarty	Testing in advance of railway. No archaeology found.
02E0161	N/A	707966, 733121	Cherry Orchard Avenue, Dublin	2002: 527	N. O' Flanagan	Monitoring of groundworks. No archaeology found
-	N/A	710827, 731827	Drimnagh Castle, Ballyfermot, Dublin	1992: 038	C. Mullins	Full excavation. Modern finds.
06E0927	N/A	710438, 733176	Ballyfermot Lower	2006: 661	M. Saunderson	Testing in advance of development. No archaeology found.
98E0367	18:31	709586, 733218	Ballyfermot Upper, Dublin	1998: 120	E. O' Donovan	Testing in advance of development. Graveyard wall and undated human remains recorded.
01E1015	N/A	707797, 733018	Parkwest Distributor Road,	2001: 327	G. Scally	Testing in advance of road development. No archaeology found.
03E1393	N/A	708449, 732120	Parkwest, Gallanstown	2005: 488	T. Bolger	Monitoring in advance of commercial development. No archaeology found
19E0022	N/A	707760, 732450	Ballymanaggin, Gallanstown & Yellowmeadows	2019: 457	R. Ó Maoldúin	Monitoring and excavation in advance of development. Seven areas of archaeological significance, largely prehistoric.
-	N/A	708228, 732927	Parkwest, Gallanstown	1997: 178	D. Murphy	Monitoring of development works. No archaeology found.
01E1015 ext.	N/A	707797, 733018	Parkwest Distributor Road,	2002: 642	R. Tobin	Monitoring of road construction. No archaeology found.
03E1393	N/A	707908, 732594	Parkwest, Gallanstown	2003: 603	C. Baker	Monitoring of development works. No archaeology found.
00E0267	17:83	708194, 732447	Parkwest, Gallanstown	2000: 299	A. Purcell	Further assessment surrounding RMP DU017-018. Additional human remains recorded.

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9.3.4 Cartographic Analysis

The development of the site and its vicinity was recorded through the eighteenth to twentieth century cartography are described in Table 9.3 below (Figure 9.2-9.3). No potential archaeological features were recorded within the subject site during analysis of Historical Mapping. The parish boundary between Clondalkin and Ballyfermot bisects Site 4. In addition, the townland boundary between Raheen and Ballymanaggin townlands is present on the same site.

Table 9-3 Cartographic Sources relating to the site

Map	Date	Description
1st Edition OS	1844	Site 4 encloses fragments of 6 fields across 2 parishes and 3 townlands. All the fields appear to be agricultural land on this map.
2nd Edition OS	1871 5	The only change is appearance of railway along the southern edges of Site 4
Cassini	1906-9	No change from previous
Map	Date	Description

9.3.5 Aerial Photography

Site 4 is depicted on the Aerial photograph sources between 2000 and 2008 as partially disturbed by construction activity, mainly at the southern end. From 2009 onwards, the area is observed as fallow Greenfield. No potential archaeological features were recorded during analysis of Aerial Photography (Figure 9.4 & 9.5).

9.3.6 Topographical Files of the National Museum of Ireland

There are no artefacts listed in the Topographical Files as found within the surrounding townlands of; Gallanstown, Blackditch, Ballyfermot Upper, Fox and Geese, Fox and Geese Common, Knockmitten, Yellowmeadows, Ballymanaggin, Neillstown, Collinstown and Bluebell.

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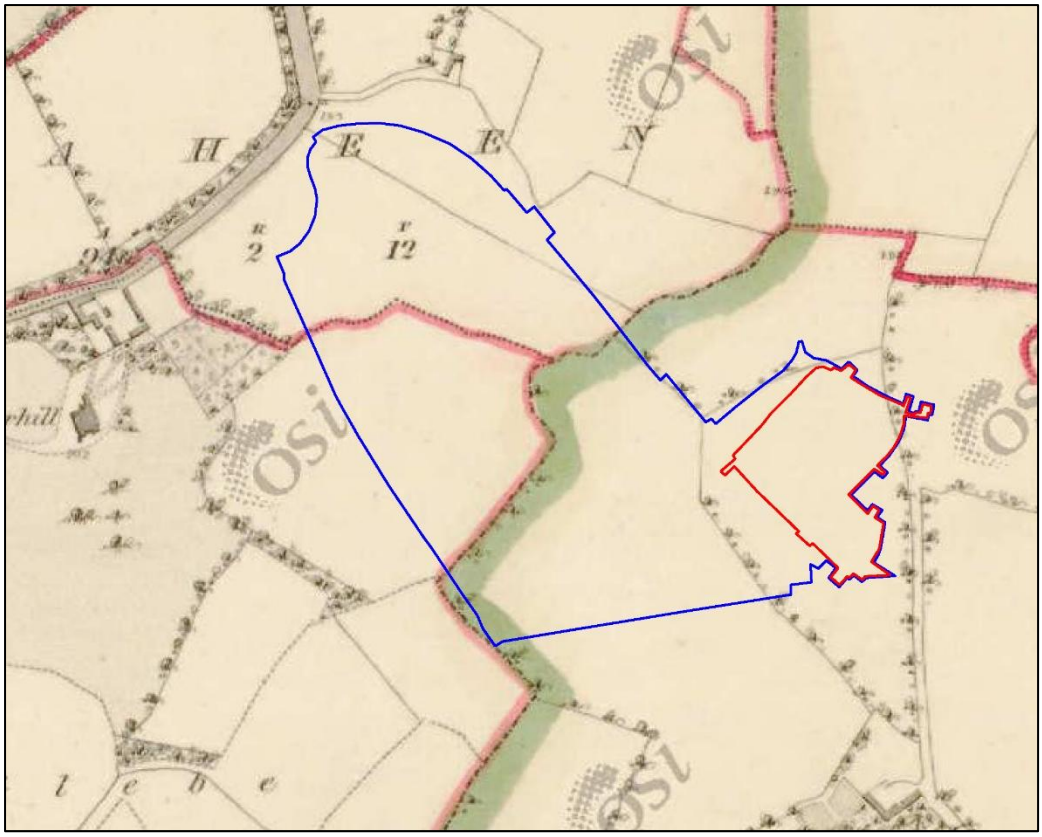


Figure 9-2 1st edition OS – 1844

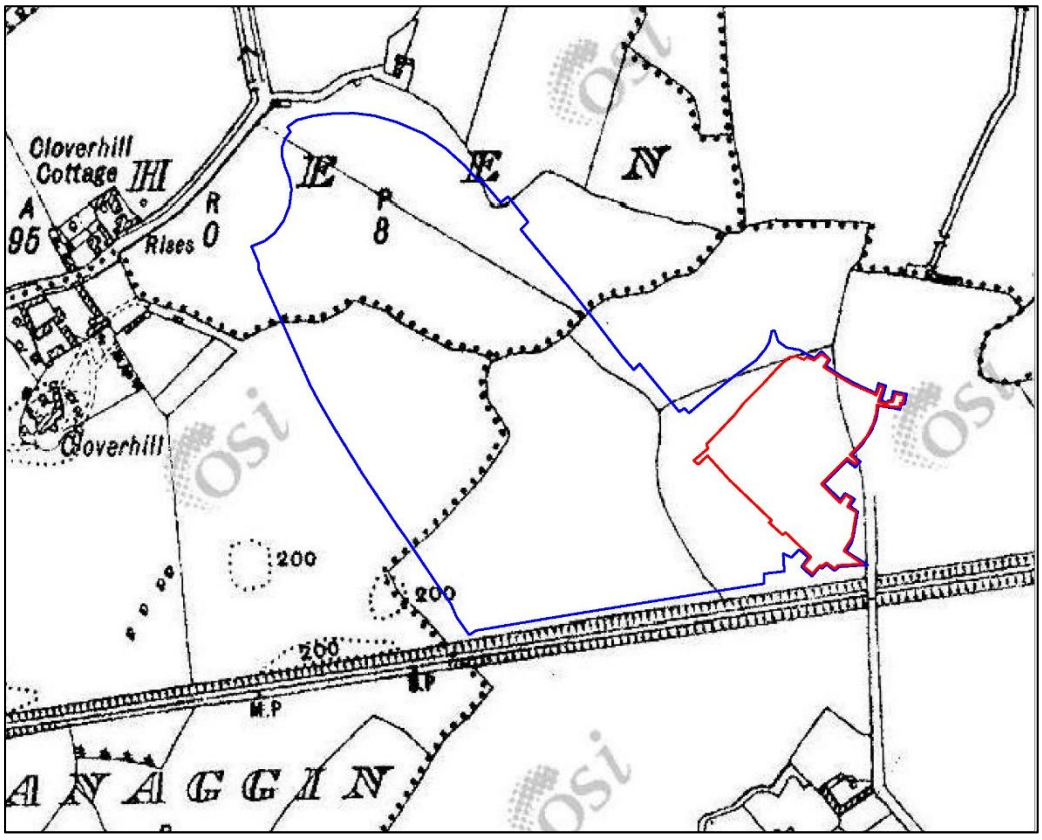


Figure 9-3 Cassini 1906-9

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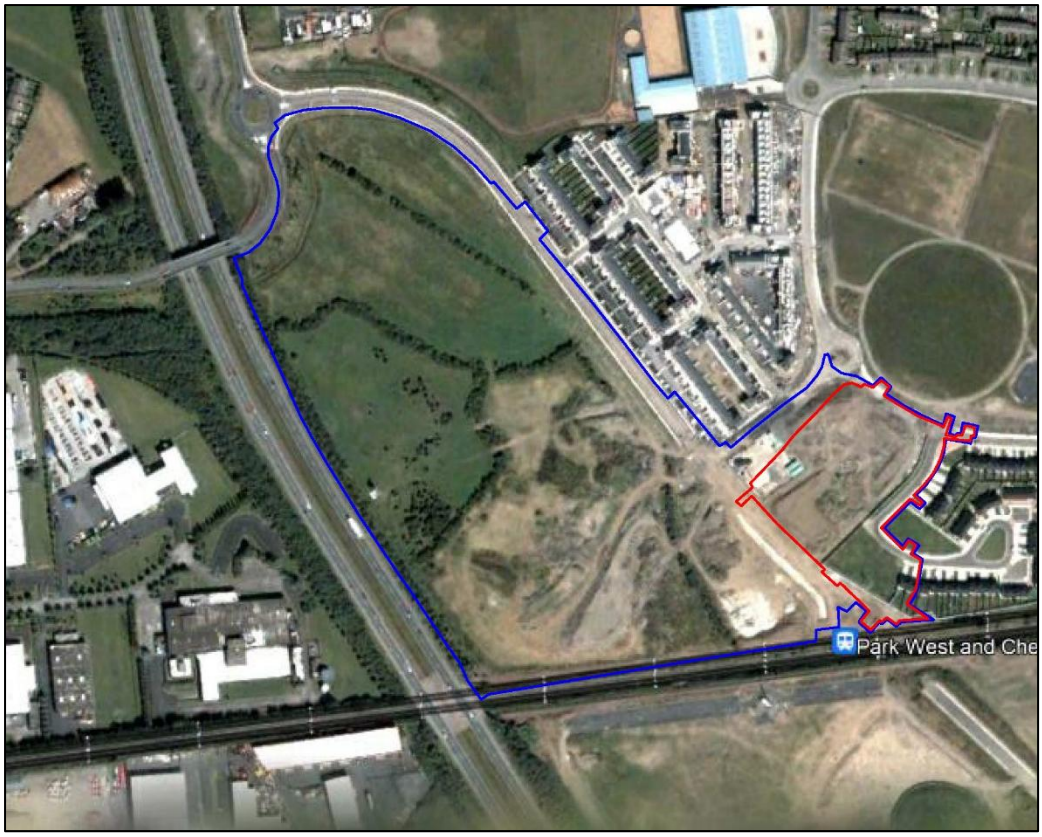


Figure 9-4 Google Earth 2003-09

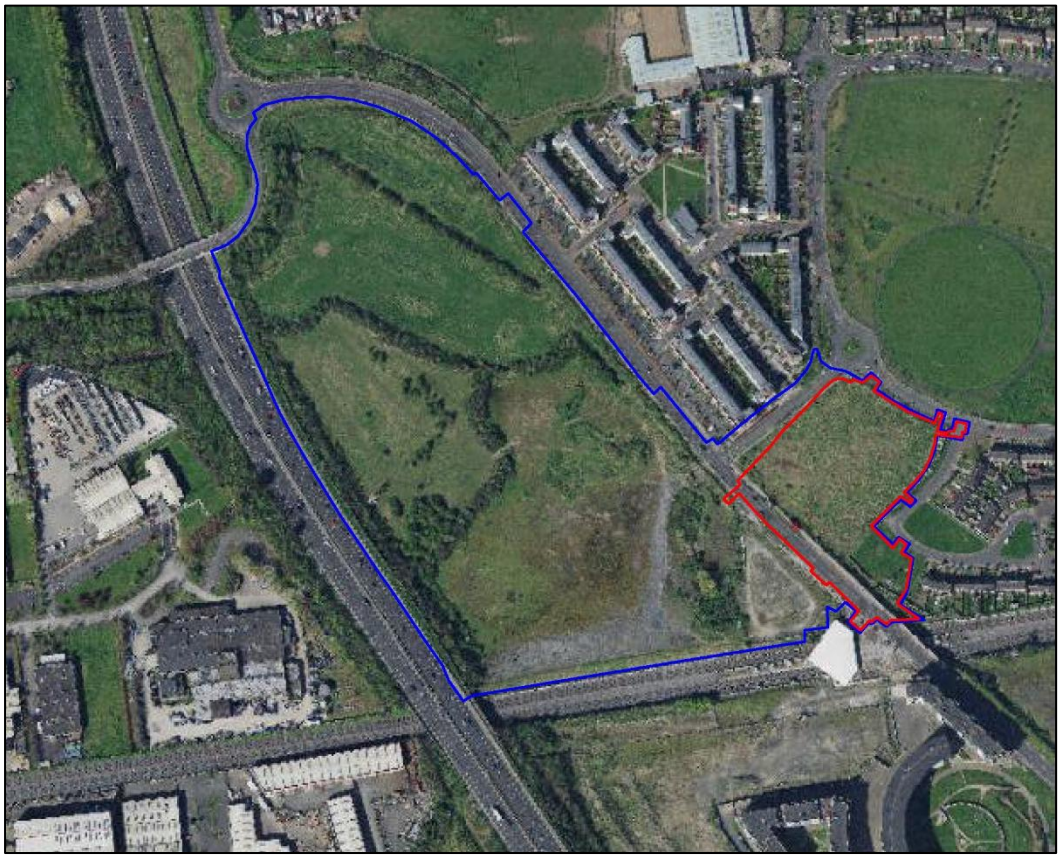


Figure 9-5 OSi Aerial Photography 2013-18

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9.3.7 National Inventory of Architectural Heritage

There are no Protected Structures within the Subject Area and no protected structures within 2km radius of the site.

9.3.8 Summary of Geophysical Survey in Site 4 (Phase 1 and 2)

Geophysical survey was undertaken by Bart Korfanty of Archer Heritage Planning Ltd under Licence No 22R0221. It identified a variety of magnetic anomalies (Figure 9.6 & Figure 9.7). The overwhelming majority of registered anomalies appeared to be directly associated with underlying geology (yellow). None of the readings were interpreted as potential archaeological features. The surveyed area contained a large amount of magnetically active objects within the soil. This most probably represents the presence of various iron fragments in the topsoil. Mean magnetic response across the area was -0.05 nT. Randomly distributed localised spikes of between 25 and 45 nT across the site are likely to be naturally occurring magnetised minerals. Localised strongly dipolar magnetic anomalies indicate modern material spread across the site (red).

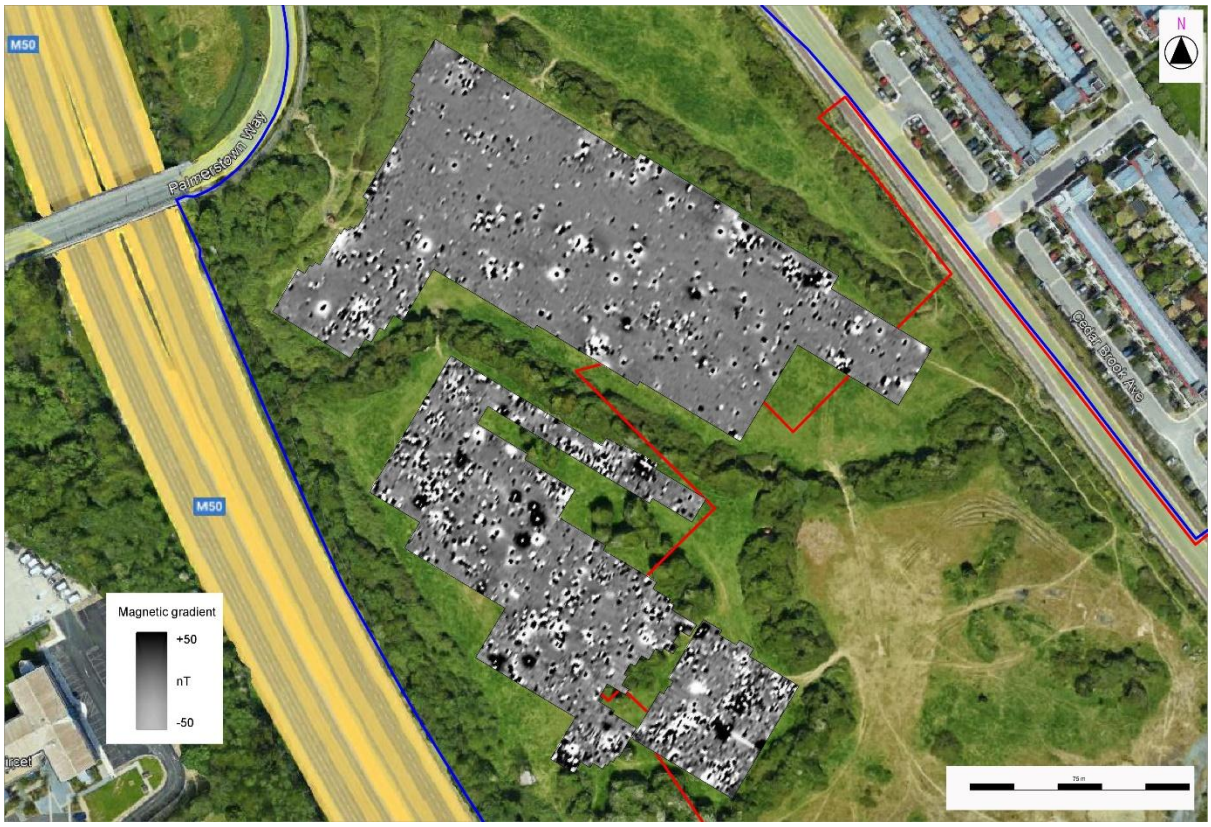


Figure 9-6 Grayscale plot of geophysical anomalies

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Figure 9-7 Interpretation plot of geophysical anomalies

Following the Geophysical survey it was recommended that test excavations should be carried out across the site to determine exact nature of geophysical findings and whether archaeological features exist in the wider area that have not left a magnetic trace.

9.3.9 Summary of Archaeological Testing Results in Site 4

Test excavation was undertaken on the 11-13th July 2022 in sunny conditions under Licence No 22E0522 to Maeve McCormick of Archer Heritage Planning Ltd. A total of 14 trenches were excavated measuring 1584 linear metres (3168 m sq.) using a 14-ton tracked excavator with a 1.8m grading bucket under constant archaeological supervision.(Figure 9.8 & 9.9)

9.3.9.1 Constraints on methodology

An overhead power line is located in the north of Site 4 and affected the location of Trench 5 requiring it to be reorientated from N/S to NE/SW and reducing the length of Trench 1 by c.10m to the north. Similarly, Trench 9 was also reorientated slightly from NW/SE to NNW/SSE due to overhead powerlines. Trench 11 was reorientated slightly from N/S to NNW/SSE due to overgrown shrubs and bushes. Finally, Trench 12 was shortened by c.20m due to heavily disturbed ground on its eastern end.

9.3.9.2 Results

Topsoil (C1) was dark, orange-brown, silty-clay between 0.15-0.0.4m in depth with compact, brownish-yellow, stoney clay subsoil (C2). Archaeological features in the form of patches of burnt mound material were recorded in Trench 12 located in the south-east of Site 4 (Figure 9.9). In order to investigate these features, five small perpendicular trenches were added to Trench 12; 4 to the north aligned N/S, measuring between 2 and 5m long and one to the south aligned N/S measuring 3.5m long. See Table 9.4 for further details. No further features or artefacts of archaeological significance were recorded during the excavation.

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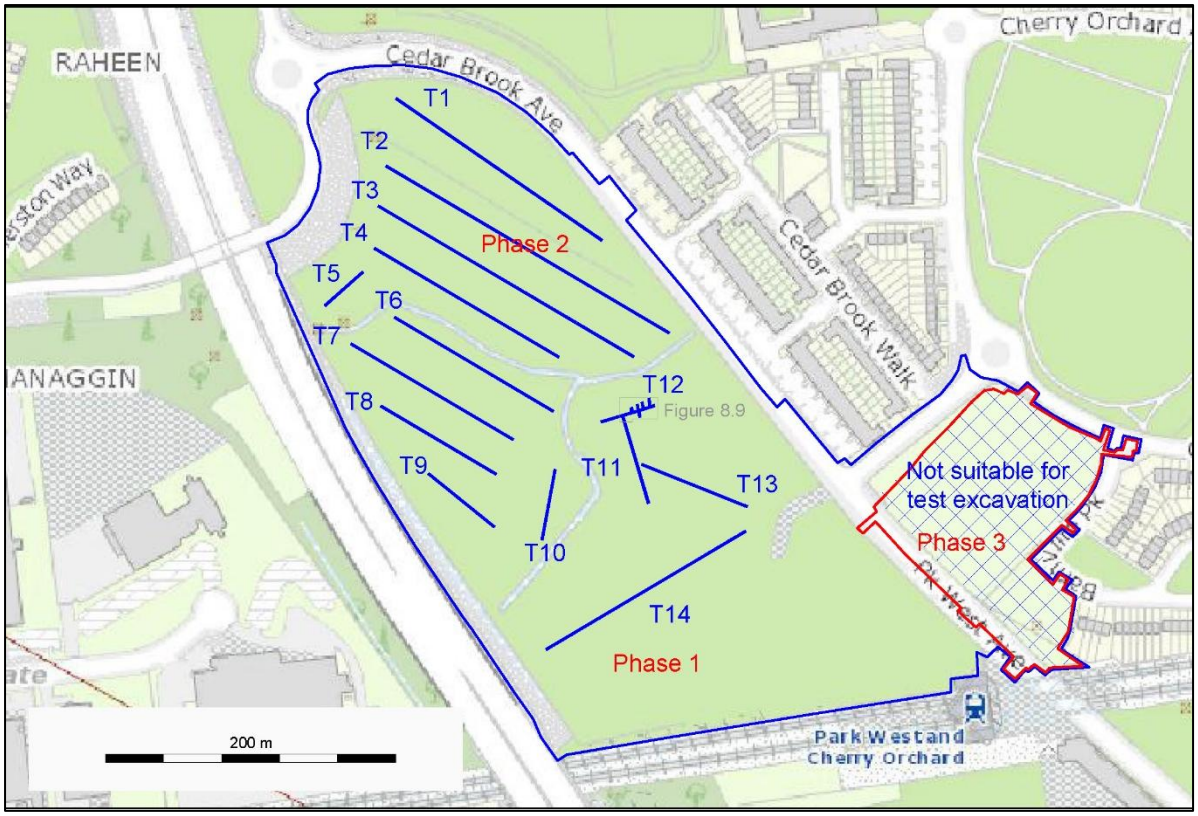


Figure 9-8 Test Trench Location

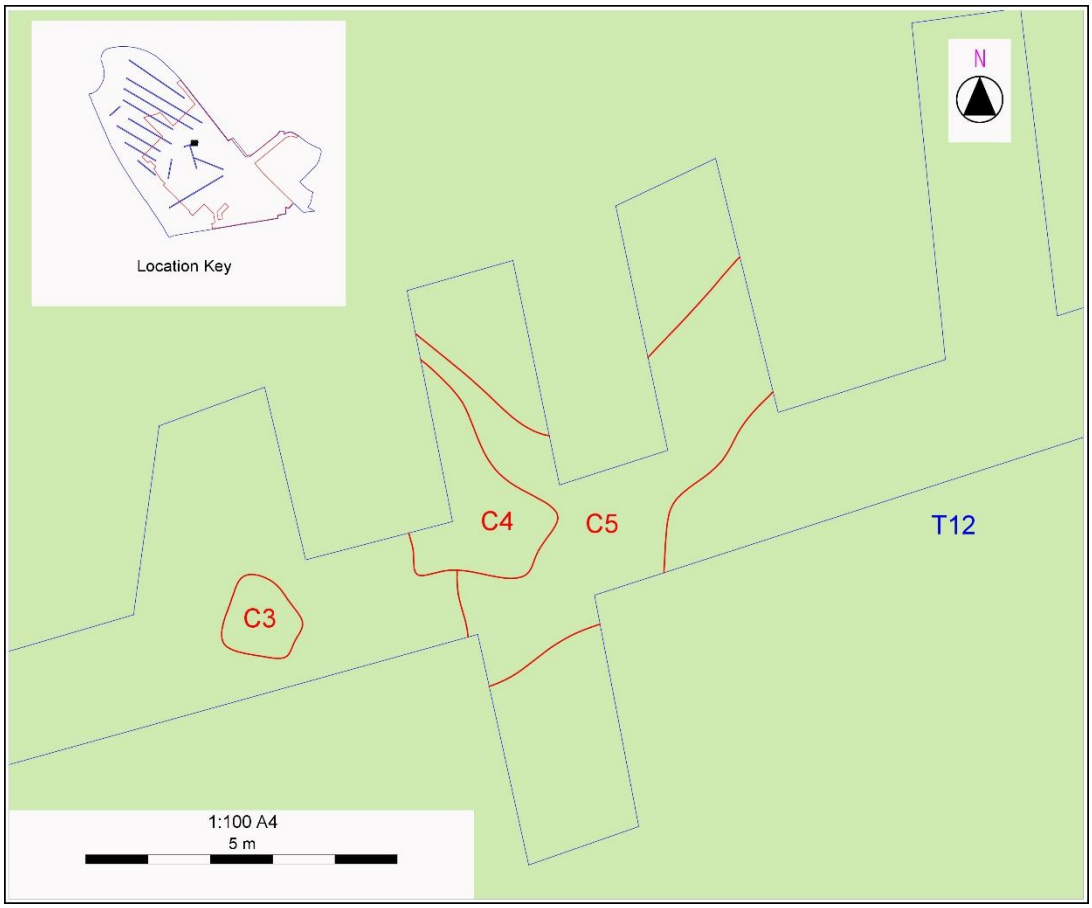


Figure 9-9 Detail of Trench 11 and 12

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Table 9-4 Test Trench Details

Trench	L x B x D (metres)	Orientation	Description
1	170 x 2 x 0.4	NW/SE	Trench reduced in length by 10m to the north due to power lines. No Archaeology
2	225 x 2 x 0.3	NW/SE	No Archaeology
3	205 x 2 x 0.4	NW/SE	No Archaeology
4	148 x 2 x 0.3	NW/SE	No Archaeology
5	35 x 2 x 0.3	NE/SW	Reorientated from N/S to NE/SW due to overhead powerlines No Archaeology
6	127 x 2 x 0.4	NW/SE	No Archaeology
7	130 x 2 x 0.25	NW/SE	No Archaeology
8	92 x 2 x 0.25	NW/SE	No Archaeology
9	59 x 2 x 0.35	NW/SE	Reorientated from NW/SE to NNW/SSE due to overhead powerlines No Archaeology
10	50 x 2 x 0.35	N/S	No Archaeology
11	63 x 2 x 0.15	NNW/SSE	Reorientated slightly from N/S to NNW/SSE due to shrubs and bushes No Archaeology
12	40 x 2 x 0.2	ENE/WSW	Trench shortened by c.60m due to disturbed ground. 5 x small perpendicular trenches placed to investigate archaeological material. Trench contained one patch of burnt mound material measuring c.1.3m diameter, One patch of burnt stone in grey clay measuring 3.8m N/S and one large patch of grey clay measuring 7.1m NE/SW.
13	80 x 2 x 0.5	NW/SE	No Archaeology
14	160 x 2 x 0.1	NE/SW	No Archaeology
Total	1584 linear metres 3168 m sq.		

9.3.9.3 Details of archaeology

Archaeological features were recorded in Trench 12, located towards the south-east of Site 4 (Figure 9.8). The features comprised a concentration of burnt mound activity (Figure 9.9-9.12). They consisted of one sub-circular pit (C3; 1.4m in diameter) which may represent the remains of a trough located at ITM 707741, 732960. The fill consisted of burnt and heat shattered stone in a matrix of black carbonised silty clay. A spread of burnt stone in a matrix of grey clay (C4; 3.8m N/S x 2.3m E/W) was located c. 2m to the east. This spread was less carbonised and may be material raked out from the original burnt mound. No trace of the putative covering mound was identified during test excavation. However, a large irregular concentration of grey clay (C5; 7.1m NE/SW x 5m NW/SE) was identified to the east of C4 and centred on ITM 707746, 732962. This may mark the location of a large pit or well.

The features are suggestive of burnt mound/fulacht fia deposits. Burnt mounds/fulachtaí fia are prehistoric sites that use hot stones to heat/boil water for one or a variety of domestic, industrial or ritual purposes. They are commonly found throughout Ireland and are usually associated with wet or boggy areas such as pool- or riverside locations. Additional test trenching was undertaken around the archaeological features in order to define their horizontal extent (see Figure 9.9).

No further features or artefacts of archaeological significance were recorded during the excavation of the remaining trenches.

Full archaeological excavation of this site (burnt mound/fulacht fia deposits)was undertaken between 9th and 17th of October 2025 under licence 25E0914 issued to Maeve McCormick by the Department of Housing, Local Government and Heritage (DHLGH) in consultation with the National Museum of

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Ireland (NMI). Excavation comprised one 20m x 20m cutting (aligned N/S) which encompassed archaeological features discovered during test excavation and provide a suitable excavation buffer zone to allow for the possible discovery of additional associated features. In total, there were 5 archaeological features (F3, F4, F6, F7 & F12) and two patches of natural clay subsoil which were investigated (F5 & F8). The archaeological features comprised one burnt spread (F3), two pits (F4 & F12) and two postholes (F6 & F7).



Figure 9-10 Trench 12, Circular feature (C3), facing N

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Figure 9-11 Trench 12, irregular features C4 & C5 facing N



Figure 9-12 Trench 12, C3, C4 & C5, facing NW

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9.3.10 Summary of Archaeological Excavation Results in Site 4

Full archaeological excavation of the site was undertaken between 9th and 17th of October 2025 under licence 25E0914 issued to Maeve McCormick of Archer Heritage. The cutting was roughly square in shape measuring 20m x 20m, aligned N/S, centred on the archaeological features discovered during Test excavation in July 2022 (22E0522). It was located in a green field at the centre of the development area (Site 4) near to the original townland boundary between Raheen, Ballymanaggin and Gallanstown, which also formed the Barony boundary between Ballyfermot and Clondalkin.

9.3.10.1 Results

Topsoil (F1) comprised a loose, mid brown, silty clay which varied in depth from 0.25m to 0.40m across the cutting. It overlaid a moderately compact, yellow brown, silty clay subsoil (F2) with frequent small and medium stone and occasional patches of clay. All archaeological features were cut through this layer.

In total, there were 4 archaeological features (F3, F4, F6 & F7) and three patches of natural clay subsoil which were investigated but deemed non archaeological (F5, F8 & F12). The excavated features comprised one burnt spread (F3), one pit (F4) and two postholes (F6 & F7) (Figure 9.13-9.16).

Two dark patches of grey brown clay (F5 & F8) were located in the centre of the cutting. Clay patch F5 was first discovered during the 2022 testing, labelled C5. Both F5 & F8 were assumed to be archaeological and investigated with narrow sondages (Sondage 1 and 2). Testing proved both these patches to have been a natural pocket of grey, brown clay in the general yellow brown subsoil. They were deemed non-archaeological.

Clay patch (F12) was located in the centre of the cutting it was believed to be an archaeological pit feature and investigated and recorded as such. It was oval in plan and aligned NW/SE. It had steeply sloped sides and an undulating base. It measured c.1.5m long x c.1.2m wide x c.0.4m deep. This pit like feature had a single fill (F13) which comprised loose, friable, blue grey silty clay with frequent stone inclusions very similar to the natural features F5 & F8. Analysis of the soil sample (S3) taken from this fill confirmed it contained no charcoal or seeds suggesting F12 was a natural clay feature similar to F5 & F8. It has been deemed non-archaeological.

Pit F4 was located in the centre of the cutting. It was first discovered during the 2022 testing and labelled C4. The pit was roughly oval in shape, aligned E/W, deeper at the west end. It measured c.2m E/W x c.1m N/S x c.0.2m deep at west end. It had a single fill (F9) which comprised a compact grey black clayey silt with frequent charcoal and frequent heat cracked and heat reddened stones. This spread is also similar in material to that of a burnt mound or Fullacht Fia. One fragment of Alder was identified from the sample (S4) taken from this fill.

Burnt spread F3 is located to the west of the cutting. It was first discovered during the 2022 testing and labelled C3. It comprised an irregular patch of black carbonised silty clay with heat shattered stones. This spread is similar in material to that of a burnt mound or Fullacht Fia. It measured c. 2.5m NW/SE x c.1.5m NE/SW x 0.15m deep.

Two postholes F6 and F7 were located in the SE of the cutting. Both postholes were circular in plan with steeply sloped sides with U shaped undulating bases. Posthole F6 measured c.0.65m in diameter x c.0.35 deep. It had a single fill (F11) from which Sample 2 (S2) was taken. Posthole F7 measured c.0.5m in diameter x c.0.4m deep. It also had a single fill (F10) from which Sample 1 (S1) was taken. Both fills, F10 & F11, comprised compact grey black clayey silt with frequent charcoal and heat cracked and heat reddened stones, also similar in material to that of a burnt mound or Fulacht Fia as with the earlier features. A fragment of Alder collected from the fill (F10, S1) of posthole F7 (25E0914:10:S1) returned a Late Bronze Age radiocarbon date of 999-835calBC (UBA-59736, 2774±26 BP).

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Sample 1 (F10, S1) from Posthole F7 contained 2 fragments of Alder. Sample 2 (F11, S2) from Posthole F6 was dominated by Maloideae (apple type) and also contained alder and ash with 'weak insect channels' (O'Carroll, 2026). These are very light-demanding trees often associated with mixed dryland woodland with some cleared areas. Fuel for burnt mounds are often sourced near to the burnt mound, so it can be inferred the surrounding landscape from which the fuel was gathered was mixed dryland woodland. It was also noted that larger branches instead of twigs and brush were used as fuel, some of which showed insect channels indicating they had been lying on the ground for some time prior to burning (ibid).



Figure 9-13 Mid ex of F3, east facing half section (Section A-A1)

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Figure 9-14 Mid ex of F4, south facing half section (Section B-B1)



Figure 9-15 Pre-ex of F6 (left) and F7, facing SW

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Figure 9-16 Post ex of cutting, facing NW

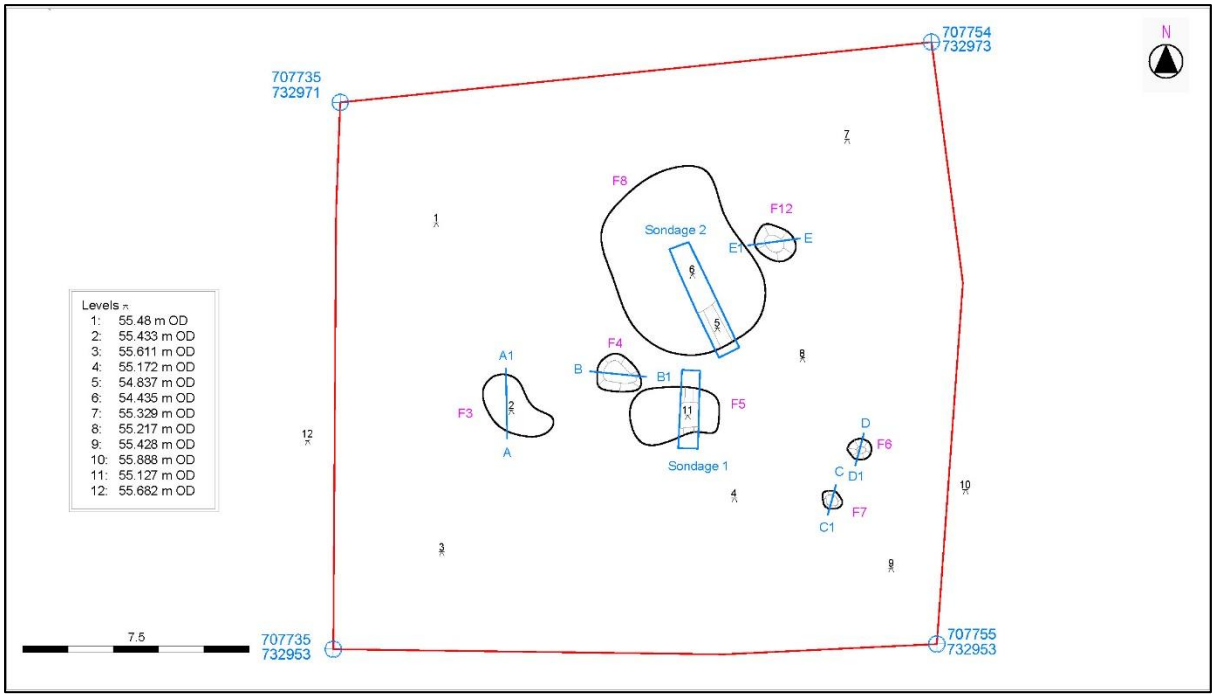


Figure 9-17 Excavation Results

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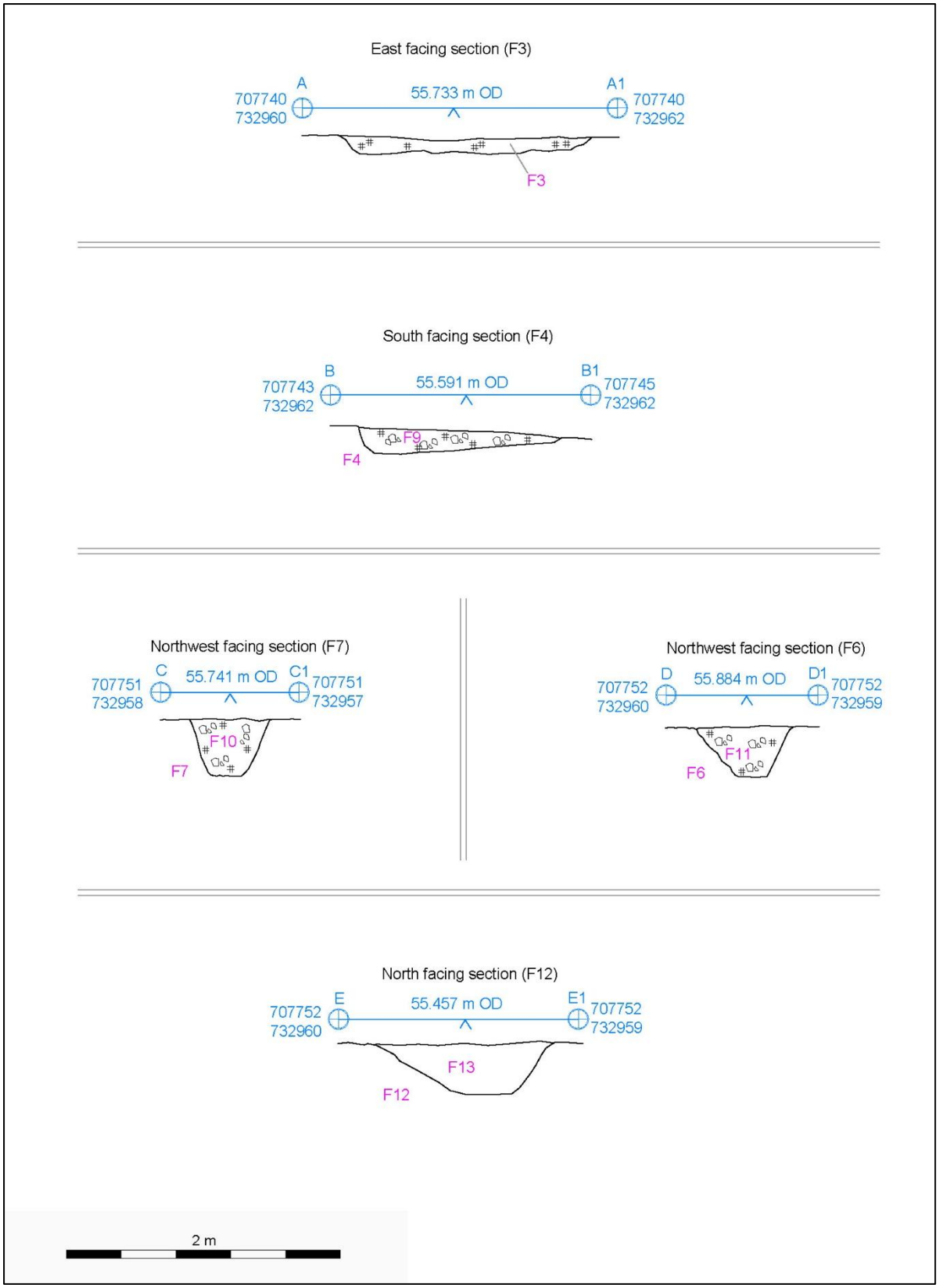


Figure 9-18 Excavation Results

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9.3.11 Summary of Archaeological Monitoring Results in Site 4 (Phases 1 and 2)

Archaeological Monitoring was undertaken during the topsoil stripping and initial ground works across the site intermittently along with the construction schedule from September 2025 through to March 2026 under Licence No 25E0914 to Maeve McCormick. Nothing of archaeological significance was recorded.

9.3.12 Cultural Heritage

The subject area is located across three townlands; Raheen, Gallanstown and Ballymanaggin. Raheen and Ballymanaggin are both located in the Barony of Uppercross and the Parish of Clondalkin. Gallanstown is located in the Barony of Uppercross and the Parish of Ballyfermot. Analysis of cartographic sources (see above Section 9.3.4) shows the location of townland and parish boundaries in relation to the site. The townland name Raheen is derived from '*an Ráithín*', the small ring-fort. This may indicate the presence of an enclosed early medieval settlement within the townland. The townland name Gallanstown is derived from '*Baile an Ghalóntaigh*', the town/homestead of An Ghaltóntach and refers to a previous landholder with the surname Galónt. The townland name Ballymanaggin is derived from '*Baile Mhic Cnagáin*', and again, refers to a townland/town/homestead of an individual named Mac Cnagáin.

9.3.13 Field Inspections

The sites were visited by Bart Korfanty of Archer Heritage Planning Ltd on 31st of May 2022 The overall site is divided into two sections; Site 4 and Site 5/Phase3 (the subject site).

Site 4: This is a large, roughly rectangular flat greenfield area. It is bisected by hedgerows which mark the location of townland and parish boundaries. The southern portion of the site, which was previously disturbed by construction activities is now partially covered with hardcore material. This site is bounded on all sides with galvanised steel fencing (Figure 9.5).

Site 5/Phase 3: This is an irregularly shaped field with uneven ground surface. It appears to be disused and overgrown, was heavily disturbed during previous construction activity in the area (Figure 9.5). The ground level in this area is significantly higher than all surrounding areas, indicating the presence of 'made ground' across this site.

9.3.14 Conclusions

This archaeological impact assessment undertaken at Cherry Orchard, Dublin 10, Phase 3 (ITM 707990, 732892, Figure 9.1) comprises a desktop study, a geophysical survey licence No 22R0221 and licensed test-excavations undertaken under licence 22E0522 and an excavation and monitoring, both under License 25E0914. The test excavation was carried out between 11th and 13th of July 2022. The following factors were identified:

- The subject site is moderate in scale at 1.72 Hectares
- There are no artefacts listed in the Topographical Files as found within or in close proximity to the subject site.
- There are no RMP's within the site. Burial Ground (DU017-083) is located c. 200m SE of Site 4.
- A series of townland boundaries and a parish boundary were recorded on cartographic sources.
- No potential archaeological features were recorded within the subject site during analysis of aerial photographs. The site was observed as having previously been disturbed by construction activity.
- No previous archaeological excavation works were undertaken on subject site.
- There are no Protected Structures within either subject area and the site does not lie within an ACA.
- No potential archaeological features were recorded during the site walkover survey of Site 5/Phase 3. It appears to be disused and overgrown; it was heavily disturbed during previous construction activity in the area making it unsuitable for further assessments.

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- Licensed geophysical survey (22R0221) of Site 4 (Phases 1 and 2) did not discover any potential archaeological features.
- Licensed Test Excavation (22E0522) of Site 4 (Phases 1 and 2) uncovered three features of archaeological significance were identified in Trench 12. They comprised the ploughed out remains of a fulacht fia.
- No test excavation could take place in Site 5 (subject site) due to unsuitable ground conditions.

The features in Trench 12 (Site 4) were excavated between 9th and 17th of October 2025 under licence 25E0914. The archaeological features comprised one burnt spread, two pits and two postholes.

Full archaeological excavation of the features recorded during testing was undertaken between 9th and 17th of October 2025 under licence 25E0914 issued to Maeve McCormick by the Department of Housing, Local Government and Heritage (DHLGH) in consultation with the National Museum of Ireland (NMI). Excavation comprised one 20m x 20m cutting (aligned N/S) which encompassed archaeological features discovered during test excavation and provide a suitable excavation buffer zone to allow for the possible discovery of additional associated features. In total, there were 4 archaeological features (F3, F4, F6 & F7) recorded. The archaeological features comprised one burnt spread (F3), one pit (F4) and two postholes (F6 & F7). One fragment of Alder taken from the fill (F10) of posthole F7 (25E0914:10:S1) returned a Late Bronze Age radiocarbon date of 999-835calBC (UBA-59736, 2774±26 BP). The feature was deemed to be a Late Bronze Age Fulacht Fia.

Archaeological Monitoring of groundworks in Site 4 took place intermittently between September 2025 and March 2026 also under Licence No 25E0914. Nothing of archaeological significance was recorded in the course of the works.

9.4 Predicted Impacts

9.4.1 Methodology

The description of the likely significant effects on the archaeological features, architecture and cultural heritage should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the project.'

9.4.2 Significance of Effects

Significance of effects is usually understood to mean the importance of the outcome of the effects (the consequences of the change). Significance is determined by a combination of (objective) scientific and subjective (social) concerns.

The proposed development will involve considerable ground disturbance works across the subject site including excavations and other groundworks (e.g. provision of access roads and service trenches), movement of machines and storage of material in sensitive areas. Open area topsoil stripping has the greatest potential to expose and damage these remains.

No upstanding archaeological remains have been identified within the proposed development site. Therefore, there will be no direct or indirect impacts on any known archaeological sites or monuments during the construction phase of the proposed development. The greatest threat to buried archaeological deposits occurs during large-scale removal of topsoil during the initial construction phase groundworks.

9.4.3 Archaeology

Future development would involve ground disturbances over the entirety of the subject area. Test excavations at Site 4 revealed the remains of a Fulacht Fia within Trenches 11 and 12, this site has now been archaeologically resolved under License 25E0914. The potential impact is based on Guidelines for the Information to be contained in Environmental Impact Assessment Reports (EPA 2022). It is concluded that, in the absence of the mitigation measures described below, significant

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impacts on the potential buried archaeological remains at the subject site would be **Profound, Negative, Permanent and Direct**.

9.4.4 Architecture

There are no Protected Structures within the Subject Area and no protected structures within 2km radius of the site. Consequently, the effect of future development on architecture would be **None**.

9.4.5 Cultural Heritage

No townland boundaries or parish boundary have been identified within the subject site following analysis of cartographic sources and place name evidence.

9.5 Do Nothing Impact

If the proposed development were not undertaken, any remaining buried archaeological features within the subject site would be preserved beneath the existing ground surface. Consequently, the remains of the Fulacht Fia uncovered in Trench 11 and 12 would be preserved in situ.

However, the site is zoned for development, and it is likely that in the absence of this subject proposal, that a development of a similar nature would be progressed on the site that accords with national and regional policies to promote the provision of high quality new residential environments with good layout and design, with adequate public transport and cycle links and within walking distance of community facilities. The impact on the archaeological environment would likely be similar to this proposed development.

9.6 Worst Case Impact

Should the development proceed within the subject area in the absence of mitigation measures, the effect of groundworks on archaeological remains would be Profound, Negative, Permanent and Direct.

9.7 Mitigation Measures

Mitigation measures shall be undertaken as directed by the DHLGH in compliance with national policy guidelines and statutory provisions for the protection of archaeology and cultural heritage.

9.7.1 Archaeology

Advance archaeological assessments were commissioned at the site at design stage in order to identify adverse effects on archaeological and cultural heritage sites/features at an early stage and to inform the design process.

9.7.1.1 Pre-Construction Phase Mitigation

Due to the discovery of a Bronze Age Fulacht Fia within the subject area, it was recommended as mitigation prior to any further ground works within the subject area that a full archaeological excavation take place in order to preserve the identified archaeological features by record (Policy and Guidelines on Archaeological Excavation Page 19(d)). This has now been completed under License 25E0914.

9.7.1.2 Construction Phase Mitigation

All ground disturbance works across the development site will be monitored by a suitably qualified archaeologist. In the event that further archaeological material is recorded during monitoring, discussion/consultation with the DHLGH will be sought in order to ascertain the appropriate treatment (i.e. preservation by record/preservation in situ) of any additional archaeological remains. Should the DHLGH recommend preservation by record/full archaeological excavation, this work will be undertaken under the appropriate licence. The DHLGH may recommend preservation in situ, should avoidance of any newly discovered archaeological remains be possible.

9.7.1.3 Operational Phase Mitigation

No operational phase mitigation is anticipated. Issues of archaeological and cultural heritage interest will have been resolved prior to or during the construction phase.

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9.7.2 Architecture

There are no Protected Structures or structures entered on the NIAH located within or in the immediate vicinity of the subject area. No mitigation measures are required.

9.7.3 Cultural Heritage

9.7.3.1 Pre-Construction Phase Mitigation

There are no townland boundaries within Site5/Phase 3.

9.8 Residual Impacts

The residual effects are the final predicted or intended effects which occur after the proposed mitigation measures have been implemented. It is not anticipated that there will be any residual impacts with the appropriate mitigation measures in place during the construction phase. No significant residual impacts are predicted in light of the mitigation measures identified above

9.9 Cumulative Impacts

It is noted that previous archaeological assessment and excavation has been carried out in advance of development to the west of the M50 Motorway at Gallanstown/Yellowmeadows/Ballymanaggin townlands. This work identified a ring ditch, burnt spreads and metalworking, largely of prehistoric date. Also, previous pre-development assessments at the Parkwest commercial complex identified an early medieval cemetery. Consequently the likely cumulative impacts of the proposed development are site specific and the proposed mitigation outlined in this Chapter will ensure that cumulative effects will not be significant.

9.10 Interactions

Should archaeological material be recorded in the course of monitoring, this may necessitate areas being left open to the elements for a period in order to facilitate consultation with DHLGH, processing of licences and/or full excavation/preservation-by-record of archaeological features. Consequently, in this scenario, there may be interactions (should a possible find be preserved in-situ) with landscape and visual (Chapter 10 Landscape and Visual) land and soils (Chapter 11 Land, Soils and Geology).

9.11 Monitoring

All ground disturbance works across the development site will be monitored by a suitably qualified archaeologist. In the event that archaeological material is recorded during monitoring, further discussion/consultation with the DHLGH will be sought in order to ascertain the appropriate treatment (i.e. preservation by record/preservation in situ) of any additional archaeological remains. Should the DHLGH recommend preservation by record/full archaeological excavation, this work will be undertaken under the appropriate licence. The DHLGH may recommend preservation in situ, should avoidance of any newly discovered archaeological remains be possible. All future archaeological works will be undertaken under the appropriate licence and subject to approval of proposed method statements by the DHLGH in consultation with the NMI

9.12 Difficulties Encountered

No major difficulties were encountered during the course of the assessment. Some minor changes were made to the approved method statement for archaeological test trenching on account of overhead powerlines and ground conditions. Some negative interaction with local youths was experienced during test excavations, although no injury or loss/damage to persons or equipment occurred.

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10 Landscape and Visual

10.1 Introduction

This Landscape and Visual Impact Assessment (LVIA) report assesses the potential effects of the proposed development on the receiving environment in respect of the landscape and key views/visual amenity.

Mitchell + Associates was engaged on behalf of The Land Development Agency, by Van Dijk Architects in February 2022, to prepare a Landscape and Visual Impact Assessment (LVIA) for the proposed Cherry Orchard Point residential scheme. The parent LVIA for Phase 1 was completed in October 2023. A subsequent addendum was completed in February 2025 for Phase 2. This LVIA deals with Phase 3.

This assessment relates to the Proposed Development Site, comprising Development Site 5 (Barnville) within the Park West Cherry Orchard Local Area Plan lands. Site 5 is located to the northeast of Cherry Orchard railway station and Park West, between Park West Avenue and Cherry Orchard Park.

This LVIA has been prepared with reference primarily to the 'Guidelines for Landscape and Visual Impact Assessment', prepared by the Landscape Institute and the Institute of Environmental Assessment, 3rd Edition 2013 (GLVIA) and with reference to the 'Guidelines on the information to be contained in Environmental Impact Assessment Reports' - Environmental Protection Agency (EPA), May 2022.

The assessment has been carried out by Feargus McGarvey BA(Hons) Dip LA Greenwich University, Associate Director with Mitchell + Associates, Landscape Architects. Feargus is a full member and former president of the Irish Landscape Institute, the professional body for landscape architects in Ireland. He has over 33 years' experience in working as a Landscape Architecture. He has written and collaborated on many LVIA and VIA in both an urban and rural context, including Dundrum Town Centre LVIA, Donaghcumper Cellbridge Town Centre LVIA, Wonderful Barn Leixlip LVIA, Hermitage Clinic, Liffey Valley VIA, , Merrion Road Office Development VIA, Marry's Pig Farm Boyne Valley LVIA, Rathgar (Rathdown Motors) Residential Development VIA, Chivers Coolock LVIA, Project Liver (Naas Rd) LVIA and Southwest Gate (also Naas Rd) LVIA.



Figure 10-1 View of the proposed Cherry Orchard Point Phase 3 scheme (courtesy vDA architects)

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10.2 Methodology

This LVIA describes the impact of the proposed development on the landscape character and visual amenity of the site and on the contiguous landscape and its environs. It describes the landscape character of the subject site and its hinterland, together with the visibility of the site from key viewpoints in the locality. It includes descriptions of the receiving environment (baseline), an outline of the methodology utilised to assess the effects, descriptions of the potential impacts of the development and of the resultant potential effects. Mitigation measures introduced to ameliorate or offset impacts are outlined and the resultant predicted (residual) effects are assessed.

'Landscape' can be described broadly as the human, social and cultural experience of one's surroundings. It is derived from the interplay between the physical, natural and cultural components of our surroundings, as experienced by people. The combination of these components elicits responses whose significance will be partially dependent on how people perceive a particular landscape and how much changes will matter in relation to other senses, as experienced and valued by those concerned. This assessment seeks to understand the potential effects of a development on the landscape as a 'resource', but also considers the aesthetic, perceptual and experiential aspects of landscape that make a place distinctive. Despite the extremely large part played by our visual experience in forming our views on landscape, one's perception and indeed memory also play an important part, if the changes brought about in landscape character are to be fully understood. It is clear therefore that different people doing different things will experience the surrounding landscape in different ways. Such sensitivities and variations in response, including where and when they are likely to occur, are broadly taken into consideration in the assessment.

Visual amenity as expressed through views, refers to the interrelationship between people and the landscape. In accordance with the guidelines, the effects on views and visual amenity are assessed separately from the effects on landscape, though the two are inherently linked. Visual assessment is concerned with the changes that arise in the composition of available views, the response of people to these changes and the overall effects on the area's visual amenity. Generally, these are evidenced by the comparison of baseline (existing) images and photomontages illustrating the proposed development in context.

10.2.1 Use of the Term 'Effect' vs 'Impact'

The Guidelines for Landscape and Visual Impact Assessment recognise the complex and potentially confusing nature of terminology used within LVIAs as part of Environmental Impact Assessments, particularly the use of the words 'impact' and 'effect.' The Guidelines advise that these terms should be clearly distinguished and consistently used in the preparation of an LVIA and that these terms should clearly be defined at the outset to avoid any confusion or misinterpretation.

'Impact' is defined as the action being taken. In the case of the proposed works, the impact would include the construction of the proposed development.

'Effect' is defined as the change or changes resulting from those actions, e.g., a change in landscape character, or changes to the composition, character and quality of views in the receiving environment. This report focuses on these effects.

10.2.2 Methodology for Landscape Assessment

The assessment of potential landscape effects involves (a) classifying the sensitivity of the receiving environment (i.e., the nature of receptors), and (b) identifying and classifying the magnitude of landscape change (i.e., the nature of the effect), which would result from the proposed development. These factors are combined to arrive at a classification of significance of the landscape effects. The degree of significance is succinctly described in the EPA Guidelines on the information to be contained in Environmental Impact Assessment Reports 2022, described below. Effects noted as Imperceptible to Moderate are not considered significant, and Significant to Profound are considered significant in this assessment.

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Table 10-1 Describing the significance of effects EPA Guidelines on EIAR 2022

Describing the Significance of Effects	
Imperceptible	An effect capable of measurement but without significant consequences.
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences
Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Significant Effects	An effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the environment.
Very Significant	An effect which, by its character, magnitude, duration or intensity, significantly alters most of a sensitive aspect of the environment.
Profound Effects	An effect which obliterates sensitive characteristics.

10.2.2.1 Landscape Sensitivity

The sensitivity of the landscape is a function of its land use, patterns and scale, visual enclosure, the distribution of visual receptors, and the value placed on the landscape. The nature and scale of the development in question is also taken into account, as are any trends of change, and relevant policy. Five categories are used to classify sensitivity (refer to Table 10.2, below).

Table 10-2 Categories of Landscape Sensitivity

Sensitivity	Description
Very High	Areas where the landscape exhibits very strong, positive character with valued elements, features and characteristics that combine to give an experience of unity, richness and harmony. The landscape character is such that its capacity to accommodate change is very low. These attributes are recognised in policy or designations as being of national or international value and the principal management objective for the area is protection of the existing character from change.
High	Areas where the landscape exhibits strong, positive character with valued elements, features and characteristics. The landscape character is such that it has limited/low capacity to accommodate change. These attributes are recognised in policy or designations as being of national, regional or county value and the principal management objective for the area is the conservation of existing character.
Medium	Areas where the landscape has certain valued elements, features or characteristics but where the character is mixed or not particularly strong, or has evidence of alteration, degradation or erosion of elements and characteristics. The landscape character is such that there is some capacity for change. These areas may be recognised in policy at local or county level and the principal management objective may be to consolidate landscape character or facilitate appropriate, necessary change.

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Low	Areas where the landscape has few valued elements, features or characteristics and the character is weak. The character is such that it has capacity for change; where development would make no notable change or would make a positive change. Such landscapes are generally unrecognised in policy and the principal management objective may be to facilitate change through development, repair, restoration or enhancement.
Negligible	Areas where the landscape exhibits negative character, with no valued elements, features or characteristics. The character is such that its capacity to accommodate change is high; where development would make no discernible change or would make a positive change. Such landscapes include derelict industrial lands, as well as sites or areas that are designated for a particular type of development. The principal management objective for the area is to facilitate change in the landscape through development, repair or restoration.

10.2.2.2 Magnitude of Landscape Change

The magnitude of change is a factor of the scale, extent and degree of change imposed on the landscape by the proposed development, with reference to its key elements, features and characteristics (also known as 'landscape receptors'). Landscape receptors include individual aspects of the landscape, e.g., landform/topography, vegetation, and the density, mix, pattern and scale of building typologies, which may be directly changed by the development. The surrounding landscape character areas are also receptors whose character may be altered by these changes. Five categories are used to classify magnitude of change (refer to Table 10.3, below).

Table 10-3 Categories of Magnitude of Landscape Change

Magnitude of Change	Description
Very High	Change that is large in extent, resulting in the loss of or major alteration to key elements, features or characteristics of the landscape, and/or introduction of large elements considered totally uncharacteristic in the context. Such development results in fundamental change in the character of the landscape.
High	Change that is moderate to large in extent, resulting in major alteration to key elements, features or characteristics of the landscape, and/or introduction of large elements considered uncharacteristic in the context. Such development results in change to the character of the landscape.
Medium	Change that is moderate in extent, resulting in partial loss or alteration to key elements, features or characteristics of the landscape, and/or introduction of elements that may be prominent but not necessarily substantially uncharacteristic in the context. Such development results in change to the character of the landscape.
Low	Change that is moderate or limited in scale, resulting in minor alteration to key elements, features or characteristics of the landscape, and/or introduction of

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	elements that are not uncharacteristic in the context. Such development results in minor change to the character of the landscape.
Negligible	Change that is limited in scale, resulting in no alteration to key elements, features or characteristics of the landscape, and/or introduction of elements that are characteristic of the context. Such development results in no change to the landscape character.

10.2.2.3 Landscape Effects

A conclusion on the relative importance of landscape effects (whether on the physical landscape elements or on the landscape character), can be arrived at by combining the landscape sensitivity and the magnitude of landscape change - this is indicated in Table 10.4 below.

Table 10-4 Classification of the relative importance of Landscape Effects

		Sensitivity of the Landscape				
		Very High	High	Medium	Low	Negligible
Magnitude of Change to the Landscape	Very High	Profound	Profound	High	High-Moderate	Moderate-Slight
	High	Profound	High	High-Moderate	Moderate	Moderate-Slight
	Medium	High	High-Moderate	Moderate	Moderate-Slight	Slight
	Low	High-Moderate	Moderate	Moderate-Slight	Slight	Imperceptible
	Negligible	Moderate-Slight	Moderate-Slight	Slight	Imperceptible	Imperceptible

The classifications of the relative importance of landscape effects as set out in Table 10.4 above and as used throughout this LVIA, may be defined as follows:

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Table 10-5 Description of the classifications of Landscape Effects

Importance	Description
Imperceptible	An effect which may be capable of measurement but is without important consequences.
Slight	An effect which causes few noticeable changes in the character of the environment but without important consequences.
Moderate-Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate	An effect that alters the character of the environment in a manner that is consistent with the landscape context and with existing and emerging baseline trends.
High-Moderate	An effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the environment.
High	An effect which, by its character, magnitude, duration or intensity, alters most of a sensitive aspect of the environment.
Profound	An effect which obliterates sensitive characteristics.

10.2.2.4 Quality of effects

The quality of potential visual and landscape effects is assessed according to EPA Guidelines on the information to be contained in Environmental Impact Assessment Reports Table 10.6 Descriptions of Effects as follows:

Table 10-6 Quality of Effects

Quality	Definition
Positive Effects	Changes which affect the quality of the landscape/view.
Neutral Effects	Changes which do not affect the quality of the landscape/view.
Negative Effects	Changes which reduce the quality of the visual environment or adversely affect the character of the landscape.

10.2.3 Methodology for Visual Assessment

10.2.3.1 Methodology for Assessment of Visual Effects

Assessment of visual effects, based on guidance in the GLVIA, involves identifying a number of key viewpoints in the site's receiving environment which overall, are representative of the existing visual environment, and for each viewpoint: (a) classifying the visual sensitivity of the viewpoint/visual receptor

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(i.e., the nature of the receptor), and (b) classifying the magnitude of change imposed on the view by the proposed development (i.e., the nature of the effect). These factors are combined to arrive at a classification of relative importance of the effects on the visual amenity/views.

10.2.3.2 Visual Sensitivity

Viewpoint/visual receptor sensitivity is a function of two main considerations:

Susceptibility of the visual receptor to change; this depends on the occupation or activity of the people experiencing the view, and the extent to which their attention is focussed on the views or visual amenity they experience at that location. Visual receptors most susceptible to change include for example, residents at home, people engaged in outdoor recreation focused on the landscape (e.g., trail users), and visitors to heritage or other attractions and places of community congregation where the setting contributes to the experience. Visual receptors less sensitive to change include for example, travellers on road, rail, and other transport routes (unless on recognised scenic routes), people engaged in outdoor recreation or sports where the surrounding landscape does not influence the experience, and people in their place of work or shopping where the setting does not influence their experience.

Value attached to the view; this depends to a large extent on the subjective opinion of the visual receptor but also on factors such as policy and designations (e.g., scenic routes, protected views), or the view or setting being associated with a heritage asset, visitor attraction or having some other cultural status.

Five categories are used to classify a viewpoint/visual receptor's sensitivity (refer to Table 10.7, below):

Table 10-7 Categories of Viewpoint Sensitivity

Sensitivity	Description
Very High	Iconic viewpoints (views towards or from a landscape feature or area) that are recognised in policy or otherwise designated as being of national or international value. The composition, character and quality of the view are such that its capacity for change is very low. The principal management objective for the view is its protection from change.
High	Viewpoints that are recognised in policy or otherwise designated as being of value, or viewpoints that are highly valued by people that experience them regularly (such as views from houses or outdoor recreation features focused on the landscape). The composition, character and quality of the view may be such that its capacity for accommodating change may or may not be low. The principal management objective for the view is its protection from change that reduces visual amenity.
Medium	Views that may not have features or characteristics that are of particular value, but have no major detracting elements, and which thus provide some visual amenity. These views may have capacity for appropriate change and the principal management objective is to facilitate change to the composition that does not detract from visual amenity, or which enhances it.
Low	Views that have no valued feature or characteristic, and where the composition and character are such that there is capacity for change. This category also includes views experienced by people involved in activities with no particular focus on the landscape. For such views an important management objective is to facilitate change that does not detract from visual amenity or enhances it.

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Negligible	Views that have no valued feature or characteristic, or in which the composition may be unsightly (e.g., in derelict landscapes). For such views the principal management objective is to facilitate change that repair, restores, or enhances visual amenity.

10.2.3.3 Magnitude of Change to the Visual Amenity/Views

Classification of the magnitude of change takes into account the size or scale of the intrusion of development into the view (relative to the other elements and features in the composition, i.e., its relative visual dominance), the degree to which it contrasts or integrates with the other elements and the general character of the view, and the way in which the change will be experienced (e.g., in full view, partial or peripheral view, or in glimpses). It also takes into account the geographical extent of the change, as well as the duration and reversibility of the visual effects.

Five categories are used to classify magnitude of change to visual amenity/views (refer to Table 10.8, below):

Table 10-8 Categories of Magnitude of Visual Change

Magnitude of Change	Description
Very High	Full or extensive intrusion of the development in the view, or partial intrusion that obstructs valued features or characteristics, or introduction of elements that are completely out of character in the context, to the extent that the development becomes dominant in the composition and defines the character of the view and the visual amenity.
High	Extensive intrusion of the development in the view, or partial intrusion that obstructs valued features, or introduction of elements that may be considered uncharacteristic in the context, to the extent that the development becomes co-dominant with other elements in the composition and affects the character of the view and the visual amenity.
Medium	Partial intrusion of the development in the view, or introduction of elements that may be prominent but not necessarily uncharacteristic in the context, resulting in change to the composition but not necessarily the character of the view or the visual amenity.
Low	Minor intrusion of the development into the view, or introduction of elements that are not uncharacteristic in the context, resulting in minor alteration to the composition and character of the view but no change to visual amenity.
Negligible	Barely discernible intrusion of the development into the view, or introduction of elements that are characteristic in the context, resulting in slight change to the composition of the view and no change in visual amenity.

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10.2.3.4 Visual Effects

As for landscape effects, to classify the relative importance of visual effects, the magnitude of change to visual amenity/views is measured against the sensitivity of the viewpoint and a conclusion on the relative importance of visual effects (whether on visual amenity or on the views), can be arrived at by combining the visual sensitivity and the magnitude of visual change - this is indicated in Table 10.9 below.

Table 10-9 Classification of the relative importance of Visual Effects

		Sensitivity of the Visual Amenity/View				
		Very High	High	Medium	Low	Negligible
Magnitude of Change to the Visual Amenity/View	Very High	Profound	Profound	High	High-Moderate	Moderate-Slight
	High	Profound	High	High-Moderate	Moderate	Moderate-Slight
	Medium	High	High-Moderate	Moderate	Moderate-Slight	Slight
	Low	High-Moderate	Moderate	Moderate-Slight	Slight	Imperceptible
	Negligible	Moderate-Slight	Moderate-Slight	Slight	Imperceptible	Imperceptible

The classifications of the relative importance of visual effects as set out in Table 10.9 above and as used throughout this LVIA, may be defined as follows:

Table 10-10 Description of the classifications of Visual Effects

Importance	**Description**
Imperceptible	An effect which may be capable of measurement but is without important consequences.
Slight	An effect which causes few noticeable changes in the character of the environment but without important consequences.
Moderate-Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.

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Moderate	An effect that alters the character of the environment in a manner that is consistent with the visual context and with existing and emerging baseline trends.
High-Moderate	An effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the environment.
High	An effect which, by its character, magnitude, duration or intensity, alters most of a sensitive aspect of the environment.
Profound	An effect which obliterates sensitive characteristics.

10.2.3.5 The Use of Photomontages and the Selection of Viewpoints

The primary method adopted for the assessment of visual effects relies largely on a comparative visual technique, whereby accurate verified views (photomontages), incorporating the proposed development are compared to the existing corresponding baseline photograph so that an assessment of effects can be made. These 'before' and 'after' images are prepared for each of the selected viewpoints.

The selection of viewpoints has been carried out in accordance with the 'Guidelines for Landscape and Visual Impact Assessment' (GLVIA), prepared by the Landscape Institute and the Institute of Environmental Assessment, published by Routledge, 3rd Edition 2013. The guidance on viewpoint selection and baseline photography requires that the proposed development is considered in context and that photomontages used to illustrate the proposed development include sufficient landscape context for proper assessment. In accordance with the GLVIA guidance, views are selected from the public realm, in this case, that is from public roads and public open spaces. The parent views were agreed with Dublin City Council. The potential for views was considered following desktop analysis and reconnaissance of the environs, resulting in views from a radius of approx. 1 km from site 5 being selected. Practical choices have to be made regarding the viewpoints which are most likely to illustrate the greatest maximum impact. This resulted in the selection of the original 16 views submitted in the parent LVIA (Oct 2023), which are representative of the landscape context and the Phase 1 proposed development site. A total of 11 views (numbered 1-9 & 12-13) have been selected for this Phase 3 LVIA, from the same viewpoints as the original except for views 6 and 12 which have been adjusted to focus more directly in Phase 3. The views that have been omitted (view no.s 10 & 11, and 14-16 are not considered relevant to this LVIA as they do not show the site in question or are at such a distance and screened as to be imperceptible. The views range from approx. 500m to 20m distant from the site. The photomontages are prepared by GNET3D Ltd, experienced specialists, to a specific detailed methodology to ensure accuracy. The adopted methodology for the preparation of photomontages is described by the photomontage specialist in the A3 document of photomontages (verified views) submitted with the planning application. The timescale of the project allowed for winter and summer views to be assessed as best practice and in the interest of thorough evaluation of the visual effects.

In recognition of the potential sensitivities of this location and to enable a full and detailed assessment of the development proposal, a total of 11 views were selected for photomontage preparation. Figure 10.14 below illustrates the location of viewpoints selected for assessment and for which photomontages are included in the separate A3 document prepared by GNET3D Ltd, submitted with the Phase 3 planning application.

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10.2.4 Quality and Timescale

10.2.4.1 Quality of Effects (Landscape and Visual)

The quality of effects can be assessed as 'positive' or 'negative' depending on whether the change is considered to improve or reduce the quality of the landscape character or visual environment. The quality of impact/effect may also be assessed as 'neutral' if the quality of the environment is unaffected. The assessment of quality needs to consider and weigh-up a range of issues and potentially conflicting standpoints. The nature of the proposed change, its context, appropriateness, quality of design and the sensitivities of the viewers may all be important considerations for this aspect of assessment.

10.2.4.2 Duration of Effects (Landscape and Visual)

The duration of effects is another aspect of assessment needing consideration. Effects may range from temporary to permanent. The temporary/short term effects during the construction of the proposed development are also considered in this assessment. The categorisation of effect duration outlined in the EPA 'Guidelines on the information to be contained in Environmental Impact Assessment Reports' 2022, (Section 3.7 Assessment of Effects), is used for this assessment, whereby effects arising from the proposed development may be considered in terms of duration as follows:

- Temporary: Effects lasting less than one year
- Short-term: Effects lasting one to seven years
- Medium-term: Effects lasting seven to fifteen years
- Long-term: Effects lasting fifteen to sixty years
- Permanent: Effects lasting over sixty years

10.3 Baseline Environment

10.3.1 Receiving Environment – Policy Context: Dublin City Development Plan

10.3.1.1 Planning context

The Dublin City Development Plan 2022-2028 sets out policies and objectives for the city. Chapter 10 contains specific landscape-related policies and objectives under the heading of Green Infrastructure and Recreation. These include Policies specifically relevant to: Green Infrastructure including Ecosystem Services; Biodiversity; Landscape; Parks and Open Spaces; Rivers and Canals; the Coast and Dublin Bay; Urban Forest; and Sports, Recreation and Play.

Chapter 3 sets out Strategic Development Regeneration Areas (SDRA), with SDRA 4 Park West/Cherry Orchard identifying Sites 4 & 5 of the development plan for this project, noting the drive in development of the area which stalled at the time of the economic downturn, leaving many vacant sites, including the subject site. Site 5 is the location for Phase 3 of the Cherry Orchard Point Development.

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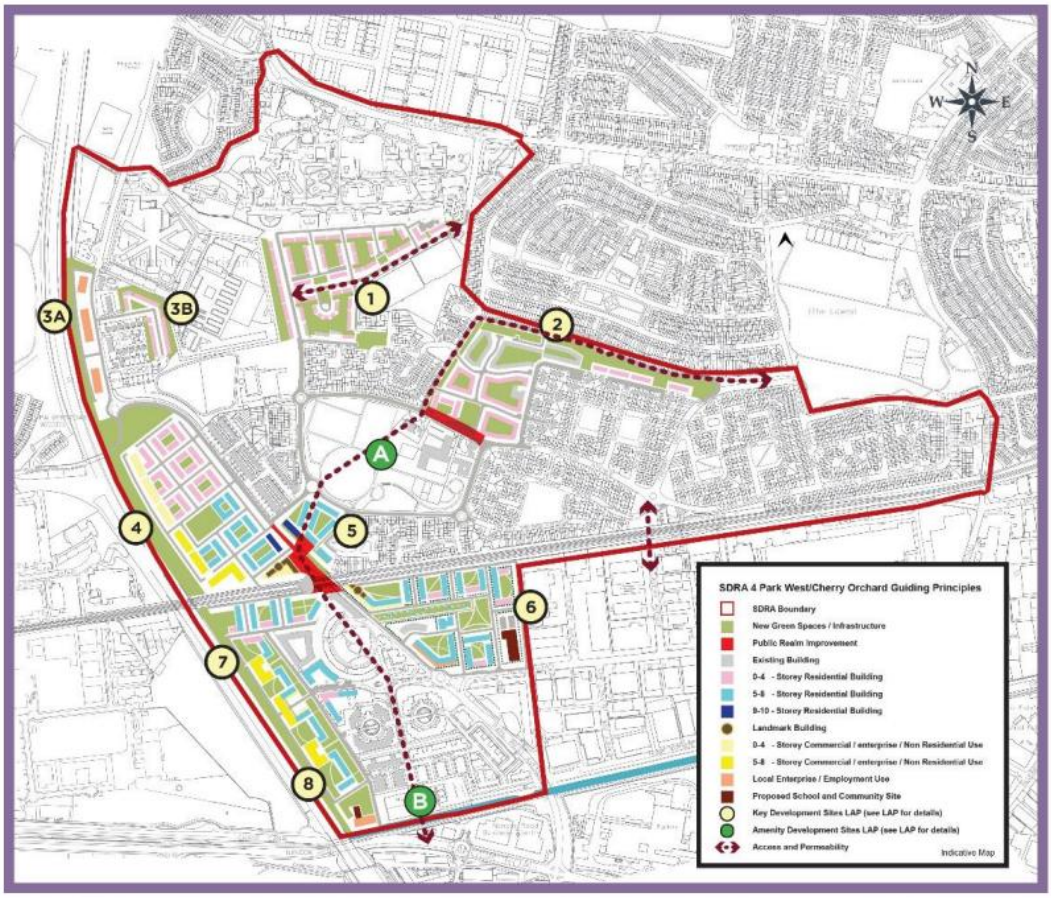


Figure 10-2 Extract of the SDRA4 Park West/Cherry Orchard 'Guiding Principles' map.

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The SDRA4 identifies guiding principles of the area, including an adjacent landmark building to the south-east of the railway station. It also advocates a landmark building to the north of the railway station on the site, as well as varying heights for residential buildings from 0-4, 5-8 and 9-10 storeys on the site, as well commercial buildings to 8 storeys. It is based on the earlier Park West and Cherry Orchard Local Area plan dating from 2019 which also addresses urban planning, compact cities, climate change resilience, and green infrastructure issues. This in turn in is underpinned by national and regional policies such as:

- National Planning Framework: First Revision, April 2025
- National Adaption Framework: Planning for a Climate Resilient Ireland 2018
- Climate Action Plan 2025
- National Sustainable Mobility Policy (2022)
- Regional Spatial and Economic Strategy (RSES) 2019-2031
- Greater Dublin Area Transport Strategy 2022–2042 Dublin City Development Plan 2016-2022 (superseded by CDP 2022-2028 and incl. SDRA4)
- Dublin City Biodiversity Action Plan 2021 – 2025
- National Biodiversity Action Plan 2023–2030
- Dublin City Local Economic and Community Plan (LECP)
- "Making Cherry Orchard Better" Area Action Plan 2017

10.3.1.2 Zoning

The proposed development is located within the lands covered by the Park West and Cherry Orchard Local Area Plan 2019 and the CDP Land-Use Zoning refers back to the Strategic Development

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Regeneration Areas (SDRA), with SDRA 4 Park West/Cherry Orchard identifying Sites 4 & 5 of the development plan for this project.

10.3.1.3 Protected Spaces

There are no protected spaces in the vicinity of the site. However, the development objectives in the Park West and Cherry Orchard LAP 2019 indicate that the townland boundaries should be retained where feasible, along with the green buffer along the M50 corridor as follows:

- The residential quarter shall include provision of a new neighbourhood park linking into the overall Green Strategy for the LAP. Where feasible, retention of planting to old field boundaries will be encouraged.
- A green buffer zone shall be accommodated along the boundary with the M50 as part of a green corridor. Existing green infrastructure in the form of mature trees and hedgerows shall be retained and incorporated into landscape proposals for the central open space to be provided within the residential development area of the site, and the open space located at the northern end of the site.

Neither townland boundaries or buffer planting exists on Site 5 (Phase 3).



Figure 10-3 Extract from Dublin City Development Plan 2022-2028. Areas within the city boundary to the east of the M50 are part of the SDRA4. (Site mark-up in red courtesy of VDA and CCK architects)

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10.3.1.4 Views

There are no protected views in the vicinity of the site.

10.3.1.5 Built Heritage

There are no conservation areas or protected structures in the vicinity of the site.

10.3.2 Receiving Environment – Site Character

10.3.2.1 Introduction

The site 5 parcel (Phase 3) is part of a development plan site within the Park West Cherry Orchard Local Area Plan. It is currently a brownfield site of approx. 1.72 ha within the broader parcels of land that form the development plan, of which Phases 1 & 2 to the southern end have a grants of permission (planning ref ABP-318607-23 and Part X (Section 175) Planning Application for a Proposed Residential Development at Cherry Orchard, Dublin 10respectively) and are both under construction. Phase 3 is located to the northeast of Cherry Orchard railway station and to the southwest of Cherry Orchard Park. This park is currently subject of a DCC Part 8 consultation on upgrades to the amenities, including a running track facility, and perimeter streetscapes. The site is defined on its southwestern by Park West Avenue, to the northwest is a residential area, Cedar Brook Way, to the southeast Barnville Park residential area, and to the northeast Cherry Orchard Park open space. Phases 1 & 2 are under construction, including alterations to the road connection between Park West Avenue and Cherry Orchard Park.

10.3.2.2 Physical context – land use, topography and vegetation

The broader landscape setting is of the long-established Cherry Orchard residential area to the east, consisting of two-storey terraced housing forming a ring around Cherry Orchard Park. In between, Cedarbrook is a more recent residential development of 2-4 storey apartments. To the south, beyond the railway station, are the Academy, Crescent and Concert buildings which are residential and commercial. A vacant site sits between the Academy building, and another vacant site is on the eastern side of Park West Avenue to the south of the railway line. The site 5 in discussion therefore forms another development site in a series of sites to the west of Cherry Orchard.

Site 5 consists of rough ground and emerging vegetation on top of spoil, secured by a high palisade fence.

The land is rough and undulating given that it contains spoil heaps, however the base level of natural ground is relatively flat.

There are no water courses on the site.

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Figure 10-4 A view across Cherry Orchard Park, with a swale in the foreground, and horses grazing on pitches beyond. The view shows two storey housing to the right, punctuated by taller buildings with Wheatfield prison in the middle distance, and Cedarbrook to the



Figure 10-5 View of the southern boundary, railway cutting and Cherry Orchard railway station, with the Concert and Crescent buildings in the background.

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Figure 10-6 view from Barnville looking northwards with Site 5 on the left and Cherry Orchard Park on the right. Phase 1 of the Cherry Orchard Point Development can be seen under construction in the middle distance.



Figure 10-7 This view is taken from close to the junction of Barnville and Cedarbrook Way looking southwards. Site 5 is on the right, and the railings of Cherry Orchard Park are on the left. The roadworks in the foreground are associated with Cherry Orchard Point Phase 1. The site under construction in the middle distance is the LDA scheme Park West Pointe.

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Figure 10-8 Dublin City Council Part 8 Consultation Image of upgrades to Cherry Orchard Park, including a running track. (Image courtesy of DCC)



Figure 10-9 Dublin City Council Part 8 Consultation Image of upgrades to Cherry Orchard Park, showing the upgraded streetscape proposal at Barnville (Image courtesy of DCC)

10.3.3 Views and Visual Amenity

The visual quality of the site is low, as it is a now a site of spoil heaps with rough vegetation surrounded by a security fence. However, the adjacent area of Cherry Orchard Park is maturing as a public green space and is subject of an upgrade scheme that is currently under Part 8 consultation. The Cedarbrook residential scheme presents an active residential edge with maturing tree planting and vegetation that is a positive visual amenity. The streetscape and public space around Barnville Park appear neglected and will be partially upgraded as part of the Cherry Orchard Park scheme.

10.3.4 Summary of Landscape Characteristics and Values

10.3.4.1 Introduction

The design for the proposed development is outlined in the consultants' submitted planning drawings and reports. The Architectural Design Report, prepared by VDA Architects, contains a full description of the development, including the design rationale, and materials proposed.

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The Landscape Design Report prepared by Mitchell + Associates describes the proposed landscape strategy and design for the scheme. These are all included separately with the submission. documents.

10.3.5 Project Description

10.3.5.1 Proposed Scheme Design

The proposed development will consist of the construction of a residential led mixed-use scheme containing 312no. residential apartments comprising 244no. cost rental and 68no. social units, 8no. local retail and commercial units, landscaped public and communal open space. The proposed development includes a new principal access via Barnville Park to the south, providing entry to an internal undercroft parking court, upgraded pedestrian and cycle footpaths, Barnville link connecting the Park West Avenue and Cherry Orchard railway station and all associated site and development works. The proposed development represents Phase 3 of the overall planned development at Cherry Orchard Point scheme for Development Sites 4 and 5 of the LAP lands. Phase 1 of the overall planned development was granted permission in July 2024 (ACP Case Ref: 318607-23) and Phase 2 was granted in September 2025 (ACP Case Ref: 321931-25). The proposed development comprises the works to be undertaken on Site 5: Barnville, which forms the subject of this planning application.

The proposed development (Total GFA of c. 28413 sq.m) involves construction of 312no. residential apartments (c. 24556 sq.m), across 7 core blocks consisting of 4 to 10 floors, comprising 16no. studio units, 146no. one-bed units, 139no. two-bed units (15no. two-bed three-person and 124no. two-bed four person), 9 no. 3-bed units (9no. three-bed five-person) and 2no. 4-bed units (2no. four-bed seven-person) together with 8no. Local Retail and Commercial units (c. 1441 sq.m GFA), and all ancillary and sundry accommodation (c. 2,416sq.m total GFA). The proposed development also includes the provision of landscaped public open spaces of c.1691 sq.m. and Communal open space of c. 2390 sq.m. The communal open space has been designed to provide a high-quality amenity area, incorporating a community garden with seating, play and fitness facilities, and associated landscaping. The scheme also provides private open space for all residential units.

The proposed development will involve the provision of car parking (including accessible and EV car parking spaces), car sharing spaces, bicycle parking spaces, motorbike spaces and loading bays. The scheme includes a Barnville link to the south of the site connecting Barnville Park with Park West Avenue and providing direct pedestrian access to the railway station, along with overall 4no. pedestrian crossing points connecting Park West Avenue, Barnville Park and New Cherry Orchard Park.

The development will also provide for all associated ancillary site development infrastructure including site clearance, boundary treatment, associated public lighting, internal roads and pathways, substations, switch room, water tank rooms, storage room, meter room, sprinkler tank room, bin storage, bicycle stores, hard and soft landscaping, play equipment, boundary walls, attenuation area, green and blue roof systems, photovoltaic panels and all associated works and infrastructure to facilitate the development including connection to foul and surface water drainage and water supply.

Please refer to the statutory notices for full and complete description of the proposed development.

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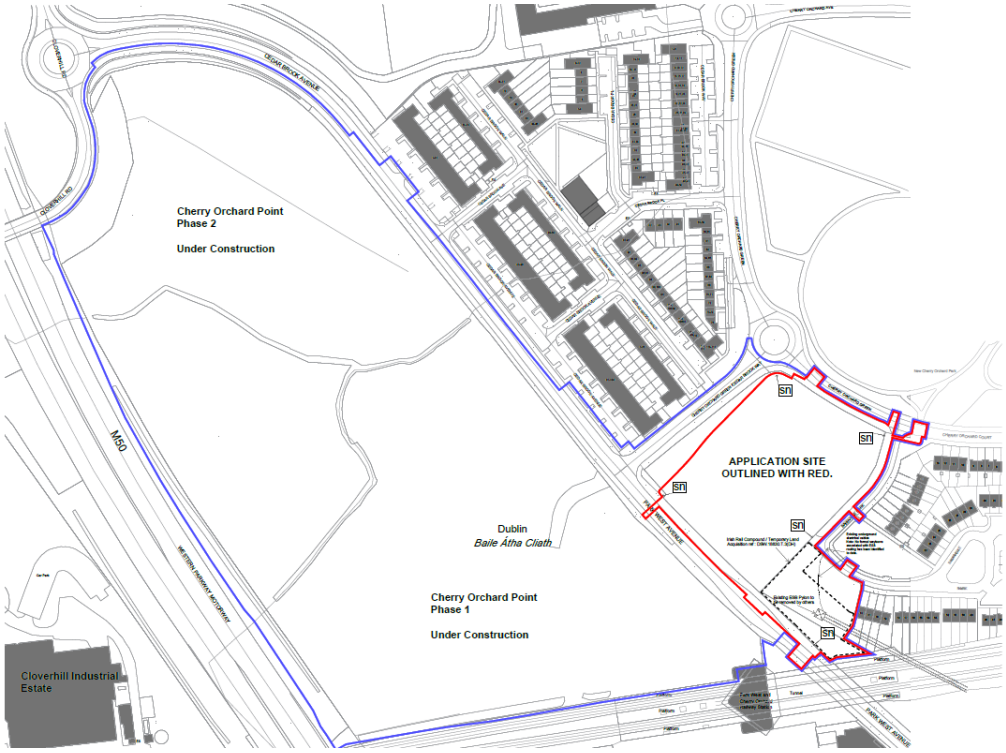


Figure 10-10 Extract of site location plan (courtesy of VDA)

The Phase 3 scheme concludes the eastern site development of Site 5.

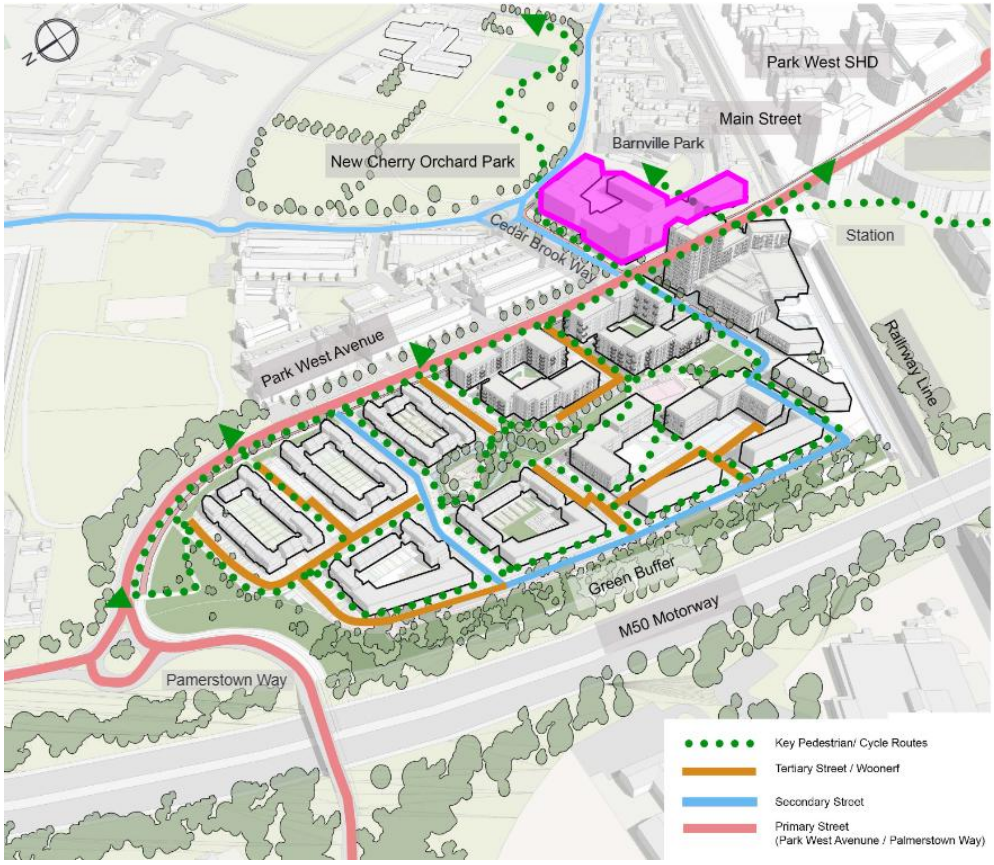


Figure 10-11 Aerial diagram of the development plan for the site (courtesy vDA & CCK Architects)

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The open space is structured in a way to have passive supervision over a series of amenities incidental and free play and linking to the linear open space of Phase 1 and on to Phase 2. This hierarchy of linked spaces responds to the ambitions of the Park West and Cherry Orchard Local Area Plan in relation to Green Infrastructure. It supports biodiversity and climate change resilience through its retention and creation of habitats and inclusion of nature-based drainage systems that ultimately link to groundwater or the river Camac. Phase 3 consists of public open space along Cedarbrook Way and Barnville Park, and a green link and ramped and stepped access from the railway station to Barnville Park. Its communal open space is within the courtyard.

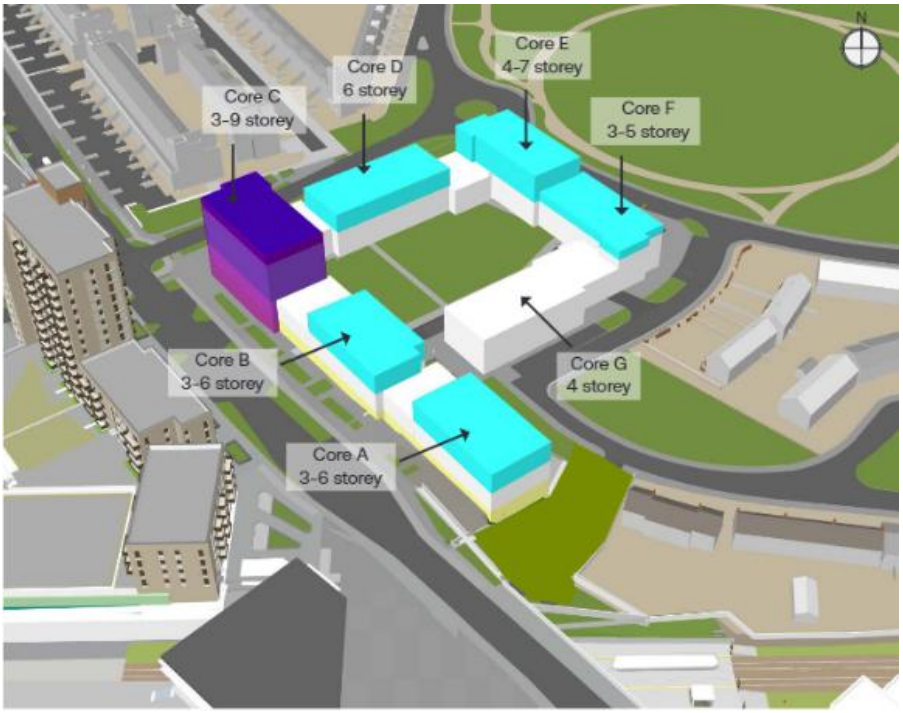


Figure 10-12 Site 5 proposed heights diagram (courtesy vDA & CCK)



Figure 10-13 View of the proposed scheme at the corner of Park West Avenue and Cedarbrook Way. (courtesy vDA & CCK Architects)

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10.4 Predicted Impacts

10.4.1.1 Introduction

A proposed development such as this has the potential to impact upon the landscape and visual aspects of the existing environment in a number of ways, at both construction and operational stages. Effects can be short or long term; temporary or permanent. The purpose of this section of the report is to outline and describe the potential effects of such proposed development; upon the visual and landscape aspects of the immediate area, and further afield, where relevant.

10.4.1.2 Construction Phase

Potential impacts during the construction phase are related to temporary works, site activity, and vehicular movement within and around the subject site. Vehicular movement may increase in the immediate area, and temporary vertical elements such as cranes, scaffolding, site fencing, gates, plant and machinery etc., will be required and put in place. Most of the construction impacts will be temporary, and may include the following:

- Site preparation works and operations;
- Site excavations and earthworks;
- Site infrastructure and vehicular access;
- Materials storage, spoil heaps etc;
- Construction traffic, dust and other emissions;
- Temporary fencing/hoardings, site lighting and site buildings (including office accommodation);
- Cranes and scaffolding;

Where trees are to be felled, or hedgerows cleared, these impacts will be permanent, however any proposed new planting will offset such effects, increasingly so as the proposed development matures.

10.4.1.3 Operational Phase

The designed scheme seeks to consolidate a key part of the urban plan and harmonise and integrate the development within the existing landscape and the broader urban environment, in line with the Dublin City Development Plan 2022-2028, the Park West and Cherry Orchard LAP, and associated policies and objectives. It must do this whilst adhering to national planning policy which seeks the densification and the provision of increased height on appropriate urban sites. The design rationale and detail employed seeks to mitigate potential negative effects on the landscape character and visual amenity of the area by:

- Establishing an integrated relationship between the proposed development and surrounding buildings, infrastructure, green infrastructure and permeability, and the broader urban landscape beyond, incorporating aspects of current and emerging trends in built-form, scale, texturing, colour and materials.
- The insertion, positioning and detailed modelling of the buildings, in order to assist in the appropriate visual assimilation of their mass.
- Appropriate architectural detailing to assist in the integration of the external building facades – including the modulation of openings and fenestration.
- Rationalisation of all services elements and any other potential visual clutter and its incorporation internally within building envelopes (as far as practically possible).
- Simplification and rationalisation of the proposed roof lines.
- Use of appropriate materials in the architectural expression of the buildings. In this instance, brick is used in the facades across the scheme, with variation in colour, pattern, texture and tone occurring in the individual character areas or emphasising specific parts of facades. This approach reinforces the articulation of the massing of the blocks, as well as lending importance and interest to specific areas.
- The provision of community uses within the development, including public open space.
- Sustainable approach to drainage and enhancement of biodiversity.

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- Detailing in the architectural and landscape design to mitigate wind and shadow effects to create positive microclimates.
- Comprehensive planting of vegetation, particularly trees to ground the scheme in the landscape and provide amenity, habitat, shelter and screening.
- Implementation of maintenance and management of buildings, infrastructure and vegetation.

In terms of potential visual impacts, whilst the proposed scheme is not uncharacteristic within the broader context, there is a clear change of scale between the existing brownfield site, the adjacent existing housing and what is proposed. Sensitivities may well be somewhat mitigated by the degraded nature of the site and the anticipation of new homes and infrastructure. The quality of the proposed buildings and their setting offer a coherent and vibrant completion of this quarter. The potential for a measure of visual impact, experienced by people visiting, living in, or using these areas, is therefore reasonably high. The selected viewpoints for the preparation of photomontages takes this into account by taking views from corresponding locations.

The design rationale adopted and the architectural and landscape architectural approach to the design of the proposed scheme and the details employed, seek to respond to such issues and to mitigate negative effects on both the broader landscape character and visual amenity of the area.

10.5 Predicted Landscape Effects

10.5.1.1 Introduction

In assessing landscape and visual effects, there are two main inter-related aspects to be addressed in considering the impact of the development proposals:

- The landscape as a resource and landscape character – these relate primarily to the landscape's physical components, which may include topography; vegetation; built elements etc, and how they translate into the perceived character of the existing landscape of the site in its context. This will include assessment of the effects of the proposed development on the social and cultural amenity aspects of landscape. The predicted landscape effects are outlined below.
- The visual amenity and the proposed views of the development, relative to the existing site and the associated impact on the visual environment and on visual amenity. These are outlined in below.

The effects of each are assessed for the Operational Phase of the proposed development, in accordance with the methodology for each, as set out below, and a qualitative value is included. The duration of effects is also assessed below, and the Construction Phase effects are considered and assessed below. The cumulative effects caused by the proposed development when considered in conjunction with other proposed developments of the same or different types, are assessed in below.

10.5.1.2 Duration of effects

The duration of effects is determined by the life of the proposed development, as tempered by any mitigating effect of the maturing designed landscape which is proposed as an integral part of the development. In this case the development may have an expected/design life of up to 60 years or beyond. Effects on both landscape character and visual amenity during the Operational Phase of the proposed development are therefore deemed to be of **long-term or permanent** duration in this instance. Construction Phase effects are of much shorter duration and are considered below.

10.5.1.3 Construction Phase Effects

Initially the erection of site hoarding and hedgerow/ tree protection measures will be completed, site access points established, and site accommodation units placed. Early in the construction period, demolitions, surface/topsoil stripping, vegetation removal and the required excavations for the construction of building foundations will commence. The erection of cranes and/or scaffolding as

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appropriate will take place and temporary site lighting will be established. Removal and/or storage of excavated materials from site and the delivery of construction materials will generate increased traffic within, to and from the site. As construction progresses over the construction period, impacts will vary with the on-going business of construction, delivery and storage of materials, the erection of the buildings, etc. Mitigation measures have been proposed to minimise the impact of the construction works on the site environs and generally where this occurs, they are effective in limiting construction phase effects.

The landscape and visual effects of these changes are most likely to be experienced as adverse or negative effects by adjacent residents and users of Park West Avenue, Barnville Park and Cedarbrook Way.

Generally, landscape and visual effects during the Construction Phase are likely to vary from **slight and neutral** to **moderate and negative**, depending on the stage of construction, and the intensity of site activity. The construction impacts will be of **short-term** duration.

10.5.1.4 Operational Phase - Landscape Effects

The landscape of the site currently has a rather degraded nature and appearance. The poor quality across the site represents a neglect through lack of impetus in developing the site dating since the most recent economic downturn. The proposed new buildings, infrastructure and its associated landscape provide an appropriate contemporary and designed solution for the area which fits with the longer-term aspiration as expressed in its development plan and the Local Area Plan. The resultant proposed scheme is not uncharacteristic within the context of this and similar parts of the city close to transport hubs. The design for the proposed development is a well-considered, high-quality scheme which is appropriate to the area and includes both design and specific mitigation measures that successfully address localised potential adverse landscape impacts. It also creates a number of landscape, and public realm improvements with positive attributes and which, with the appropriate future maintenance and management will further improve as the scheme and its community mature over time.

10.5.1.5 Landscape Sensitivity

The existing site is a degraded brownfield site of spoil heaps. It has no landscape designations or policies which protect its status. In light of its current condition and the contrast this represents with its surroundings, it is not considered sensitive to change. Overall, the sensitivity of the landscape subject to change, is assessed to be **low**.

10.5.1.6 Magnitude of change

The scale of change proposed may be considered substantial in terms of the quantum of development and building height proposed. The proposed changes are from a degraded brownfield site to a new residential quarter, and associated improvements in scale and character to the adjacent streetscapes. The magnitude of change is assessed as **high**.

10.5.1.7 Landscape effects

It is important to note that the proposed development is located on lands on the urban periphery which are zoned for the proposed type of residential and mixed-use development. The regeneration of degraded lands for higher density residential and mixed use is an ongoing trend in this landscape context. The poor quality of the site and environs is assessed as a low landscape sensitivity.

The proposed development has been designed to introduce a consolidated urban quarter and greater connectivity to and through the site by way of the integration with the existing and proposed network of routes in the area, taking into account Phase 1 of the development plan, and in respect of the Local Area Plan. The magnitude of change in this context is assessed as high. Landscape effects created by such new development on this compartmentalised site are relatively localised and will not be notably evident in the wider landscape.

The assessment is based on the methodology including corresponding tables contained earlier in the report under 2.2. The landscape effect resulting from a low landscape sensitivity, and a high magnitude

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of change, is **moderate**; the predicted effects are not significant. Qualitatively the landscape effect is **positive**.

10.5.2 Visual Effects

10.5.2.1 Operational Phase - Visual Effects

The assessment of visual effects, using comparative 'before' and 'after' photomontages assists in identifying the nature and magnitude of the proposed change on the visual environment. The value placed on these is inevitably influenced by the perceptions of the receptor and what they are engaged in at the time. The visual effects of the proposed development will primarily be felt by residents who live nearby, in this case, to the east of the site. In these cases, the effects of the development are experienced by people near to the site, where the effect is potentially greater and is frequently recurring. Views from a distance tend to occupy smaller portions of the field of view and there are many more competing elements within the view – this creates a diluting effect. It should also be remembered that the visual qualities of a place contribute significantly to its character and these create a large proportion of one's memory of a place – this is particularly so for say, visitors whose experience is often fleeting.

The photomontages are important in illustrating the effects of the proposed scheme from the more sensitive viewpoints. In this instance, they also serve to support and illustrate an aspect of the assessment of effects on landscape character. It is important to remember that whilst photomontages are a useful tool in illustrating comparative visual impact, they are recognised as having their limitations. The guidelines for their use in assessment clearly advocate their use in the context of a site visit to the viewpoint locations and point out that photomontages alone should not be expected to capture or reflect the complexity underlying the full visual experience (refer to the GLVIA, 3rd Edition).

In general, the changes to the visual environment created by this proposed development will produce noticeable visual effects upon a range of receptors that are considered **moderate,** where visible, in the context of the LAP and the local developments that it is driving. The predicted effects therefore are not significant. The definition of moderate in the EPA Guidelines is *An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends*. The illustrated views are a representative selection of views from around Site 5, which are considered potentially the most sensitive, taken from public streets and open space where local residents, workers and visitors are most likely to encounter the scheme on a regular basis. In accordance with the guidelines they are also selected in order to provide sufficient landscape context to be able to properly assess the nature and scale of the effect.

Because the expected life of the proposed development is up to 60 years or beyond, the duration of predicted visual effects for all views is assessed as **long term or permanent** - as is the case for predicted landscape effects.

10.5.2.2 Assessment of views

A total of 11 viewpoints has been selected for which photomontages (verified views) have been prepared - these are included in the submission documents, within a separate A3 report prepared by GNET3D Ltd. The locations are illustrated in Figure 10.14 below. They illustrate the visual effect of the proposed development on the selected views taken from the surrounding landscape. The adjacent sites of Phase 1 & 2 are under construction, and are therefore rapidly changing. The baseline summer and winter views were taken originally for the parent LVIA. The amended view locations 6 & 12 were taken in March and August 2026.

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Figure 10-14 Map showing view locations (courtesy GNET)

The assessment of the visual effects of the proposed development from these viewpoints is provided as follows:

10.5.2.2.1 View 1

10.5.2.2.1.1 Existing View 1

This is a view from the Cloverhill Road bridge over the M50. It is close to the northern end of the development plan site looking south eastwards in the direction of Park West Cherry Orchard railway station. It is looking through the protective mesh fence on the bridge. The foreground consists of the degraded greenfield site and scrub vegetation (which is now the Phase 2 construction site) , and tree screening and acoustic barrier to the M50 motorway. In the distance to the left is the Cedarbrook development, and to the right are the apartment buildings of the development to the south of the railway station at Park West. The sensitivity is low.

10.5.2.2.1.2 Proposed View

The proposed view shows the Phase 3 scheme in the distance partially behind the Cedarbrook Way development, and rising to the centre of the view with the tallest block. The arrangement of the massing of the blocks, with the central higher corner building is distinct, as is the variation of colour in the brick facades. The pale brick facades change to a deeper coloured brick, emphasising the tallest building of the scheme. At this distance the fenestration and balconies are visible, giving scale to the buildings. It is notable that no plant is visible at roof level, creating a clean stepped roofline. There is a sense of the merging of scale of the proposed buildings with the scale of the existing apartment developments to the south of the railway line. The magnitude of change is high.

10.5.2.2.1.3 Visual Effect;

The visual effect of the proposed development in this view is assessed as **moderate** and **neutral**.

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10.5.2.2.2 View 2

10.5.2.2.2.1 Existing View 2

This is a view is looking southwards towards the site from close to the junction of Park West Avenue and Cloverhill Road. The view is directly of the galvanised palisade security fence to the site. There is a similar fence on the left-hand side of Park West Avenue as it sweeps around the corner towards the Cedarbrook residential blocks. The scale Cedarbrook gives a welcome definition to the alignment of Park West Avenue in an otherwise poor-quality setting defined by road infrastructure and palisade fencing. The sensitivity is low.

10.5.2.2.2.2 Proposed view 2

The proposed view shows the Phase 3 scheme in the distance, partially behind the Cedarbrook development. The massing of the blocks is visible at this distance. The corner block is distinctive in this view as the tallest building, emphasised by it darker brick tone. The magnitude of change is high.

10.5.2.2.2.3 Visual Effect;

The visual effect of the proposed development in this view is assessed as **moderate** and **neutral**.

10.5.2.2.3 View 3

This is a view looking south-westwards across Cherry Orchard Park. The foreground is a raised grass plain. The railway station can be seen to the far left of the image, and Cedarbrook is visible through winter trees on the right. Between them lies the site, with some glimpses of road infrastructure and the high voltage pylon that is to the south west of the site. Site 5 is in the middle distance, and can be discerned by the security fence and rough ground. The sensitivity is low.

10.5.2.2.3.1 Proposed View

The proposed view shows the proposed development addressing Cherry Orchard Park, stepping down from 7 storeys to 3 storeys to the left side of the image. The view is truncated to the left, as the focus is on the gap of Cedarbrook Way. The 10 storey block is also visible as it addresses Cedarbrook Way and Parkwest Avenue. The change in scale of the proposed development in this context, without the rest of the development plan for Cherry Orchard Point is noticeable, especially in relation to the Cedarbrook Way apartments. However, the lower middle block opposite the Cedarbrook Way apartments is of note. The magnitude of change is high.

10.5.2.2.3.2 Visual Effect;

The visual effect of the proposed development in this view is assessed as **moderate** and **neutral.**

10.5.2.2.4 View 4

10.5.2.2.4.1 Existing View 4

This is a view from Cherry Orchard Court, which is adjacent to the Cherry Orchard Park, looking westwards towards the site. This view along the street shows two storey red brick and render terraced houses to the left, looking across to Cherry Orchard Park on the right. The park is defined by a green fence on a plinth wall. Cedarbrook Way is seen in the distance. The street has no tree planting, but maturing trees are within the park boundary. The sensitivity is low.

10.5.2.2.4.2 Proposed view 4

The proposed view shows the Phase 3 scheme terminating the end of the view along the street. The masing of the blocks is clear, stepping up from the existing two storey residences of Barnville Park to address Cherry Orchard Park. The taller block which addresses Parkwest Avenue can also be seen rising above the rest of the scheme. Variation height, and stepping back of blocks well as the façade treatment of brick tones are employed to break up the massing The magnitude of change is high.

10.5.2.2.4.3 Visual Effect;

The visual effect of the proposed development in this view is assessed as **moderate and neutral**.

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10.5.2.2.5 View 5

10.5.2.2.5.1 Existing View 5

This is a view along the same street as View 4, now called Barnville Park, but some 150m closer to the site. The existing two storey housing of Barnville Park are visible on the left. Site 5, which forms part of the overall development plan is more visible with its security fence and spoil heaps with rough grass. The Cedarbrook development is also more visible to the right. The two-storey red brick and render houses are to the left. The sensitivity is low.

10.5.2.2.5.2 Proposed view 5

The proposed view shows the scheme addressing Cherry Orchard Park with the apartments of Cedarbrook Way in the background to the right. The massing of the proposed blocks steps up from the left, where they address the existing two storey houses of Barnville Park. Similar to other views, the stepping back and the changes in block height assist with the massing of the scheme, supported by the simple language of tones of brick giving emphasis to different blocks. The magnitude of change is high.

10.5.2.2.5.3 Visual Effect;

The visual effect of the proposed development in this view is assessed as **moderate** and **neutral** .

10.5.2.2.6 View 6

10.5.2.2.6.1 Existing View 6

This is a view from the front of the Park West Cherry Orchard railway station looking northwards towards the site. The open and unfinished streetscape lacks a civic quality and demonstrates the stall in the development in the area. There is unregulated parking on the edge of the station's plaza. The cranes to the left are associated with the Phase 1 development which begins to suggest the context for Phase 3. The sensitivity is low.

10.5.2.2.6.2 Proposed view 6

The proposed view shows the Phase 3 scheme forming a well-defined streetscape on Park West Avenue formed by three blocks (with set-backs). The fenestration and balconies to the southern façade emphasise the sense of the Barnville Link pedestrian route to the right. As the scheme slopes down from the railway bridge, the end block rises, forming the corner with Cedarbrook Way and Park West Avenue. The summer view shows the most recent context of the Phase 1 development being built on the left-hand side of Park West Avenue. The magnitude of change is high.

10.5.2.2.6.3 Visual Effect;

The visual effect of the proposed development in this view is assessed as **moderate** and **positive**.

10.5.2.2.7 View 7

10.5.2.2.7.1 Existing View 7

This is a view from south of Park West Cherry Orchard railway station along Park West Avenue close to the roundabout junction with Park West Road. The view is looking northwards towards the site. The Park West area is typical of many mixed-use business zones in that there are large swathes of grass that represent constraints in infrastructure (note the pylon for high voltage cables to the left); signage and artwork that are needed to generate a sense of place and reinforce wayfinding; and buildings of individual styles. There is a sense of the road corridors not being fully developed, as sites have yet to be completed, but the maturing tree planting assists in giving character and structure. The sensitivity is medium.

10.5.2.2.7.2 Proposed View 7

The proposed view in winter illustrates the Phase 3 scheme at the end of the vista along Park West Avenue. Of note the visibility of the gable of the southern block lends definition and the anticipation of a destination to the scene. In summer, the trees in this specific view is obscure much of the view towards the site. The magnitude of change is medium.

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10.5.2.2.7.3 Visual Effect;

The visual effect of the proposed development in this view is assessed as **moderate** and **positive**.

10.5.2.2.8 View 8

This is a view taken from the bridge over the Grand Canal on Park West Avenue looking towards the site. The view illustrates the green infrastructure corridor links of the Grand Canal joining and the planted road corridor of Park West Avenue. The tall office block in the view signals the Park West office campus, and its massing is emphasised by the use of brick and glass on the façade which reduces its visual bulk and make sit appear slender. That is a similar design technique to buildings in the proposed development. The sensitivity is medium.

10.5.2.2.8.1 Proposed view

The proposed scheme is outlined in red – it is not visible from this location. The magnitude of change is imperceptible. This demonstrates the limits of visibility of the proposed scheme.

10.5.2.2.8.2 Visual Effect;

The visual effect of the proposed development in this view is assessed as **imperceptible**.

10.5.2.2.9 View 9

10.5.2.2.9.1 Existing View 9

This is a view taken from the bridge over the railway on Cloverhill Road, to the west of the site looking eastwards. The view looks towards a commercial warehouse which is spart of the Clover Hill Industrial Estate. The railway corridor leading to Cherry Orchard Railway station can be seen to the right. High voltage overhead cables cross between two pylons in the view. The scene is of large infrastructure and light industry. The sensitivity is low.

10.5.2.2.9.2 Proposed view 9

The proposed view shows the Phase 3 scheme as a red line outline as it cannot be seen through the buildings in the foreground. The magnitude of change is imperceptible. This demonstrates the limits of visibility of the proposed scheme.

10.5.2.2.9.3 Visual Effect;

The visual effect of the proposed development in this view is assessed as **imperceptible**.

(Views 10 & 11 of the parent scheme are omitted as they are taken further to the north of site 5 with less likelihood of visibility than views 8 & 9 above.)

10.5.2.2.10 View 12

10.5.2.2.10.1 Existing View 12

This is a view adjacent to the site looking southwards towards the railway station along Park West Avenue. In the winter view, an imposing galvanised palisade fence runs the length of the site on the left with the Phase 1 cranes rising to the right. The summer view shows the construction of the Phase 1 scheme more advanced as it was taken more recently than the winter view. The residential scheme of Cedarbrook is partially visible beyond trees on the left in winter and even less visible in summer. In the distance, the buildings of the Academy can be seen behind the railway station. The street appears as an uncomfortable place for cyclists and pedestrians, despite the cycle track, given the width of the road and the scale of the space and with little visible passive supervision. The sensitivity is low.

10.5.2.2.10.2 Proposed View 12

The proposed view shows the norther gable of the corner block to Cedarbrook Way and Park West Avenue. The taller section is emphasised by the darker tone of brick suggesting a more slender tower. The summer view gives an indication of the context with Phase 1 as the adjacent site is under construction. The magnitude of change is high.

10.5.2.2.10.3 Visual Effect;

The visual effect of the proposed development in this view is assessed as **moderate** and **positive**.

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10.5.2.2.11 View 13

10.5.2.2.11.1 Existing View 13

This is a view from Blackditch Road which is orientated south-westwards towards the site. The street appears as part of a busy residential area of two storey terraced houses with front gardens, off street parking and pocket park open space and public transport. At the end of the street the Church of the Holy Sacrament, which sits adjacent to Cherry Orchard Park, can be seen with a group of mature trees behind it. The sensitivity is medium.

10.5.2.2.11.2 Proposed view 13

The proposed view shows the upper part of Phase 3 building appearing over the roofs of the houses, locating the environs of Park West Avenue and the railway station. In the summer view, the building is partially obscured by vegetation. The magnitude of change is medium.

10.5.2.2.11.3 Visual Effect;

The visual effect of the proposed development in this view is assessed as **moderate** and **neutral.**

10.5.3 Cumulative Effects

10.5.3.1 Introduction

Current guidelines suggest that a determination should be made as to whether cumulative effects are likely to occur – these are outlined in the current GLVIA guidelines (3rd edition) as '*additional effects caused by the proposed development when considered in conjunction with other proposed developments of the same or different types*'. Such determination needs to be made in respect of any permitted development of a similar nature which will have a bearing on the assessment of the proposed development - this is subject to the assessor's judgement in the matter. The predicted cumulative effects currently related to the proposed development are discussed below.

A comprehensive list of permitted schemes in the area is contained in the EIAR at Chapter 13 Population and Human Health, Section 13.5.5 Planning and Development Pipeline. This list sets out the project locations in relation to Site 5, planning reference numbers, and status from this list, there are three residential schemes and two commercial schemes within the LAP area. There is a total of four residential planning applications, of which the three noted above are within the Dublin City administrative boundary and one within the South Dublin administrative boundary. The residential planning pipeline includes a total of 1,052 units.

The DART + South West is the second of the infrastructural projects of the DART+ Programme expected to be delivered and is authorised under Railway Order (ABP Ref. 316119)

It is expected that once this project is delivered, it will increase the train capacity to double the current (12) trains per hour per direction and increase passenger capacity from the current peak capacity of approximately 5,000 passengers per hour to around 20,000 passengers per hour per direction.

The Rail Order will authorise CIÉ to carry out all associated railway works necessary to enable construction, operation, maintenance, and improvements to the railway line between Hazelhatch and Celbridge Station, County Kildare to Heuston Station County Dublin (extending c. 16km) on the Cork Mainline, and Heuston Station to Glasnevin via the Phoenix Park Tunnel Branch line.

The Dart + South West is proposing to use the Phase 4 site of the Cherry Orchard Point development as a site compound for the implementation of the works. As such the duration for this aspect of the work is considered short term. In the long term, the effect of greater capacity on the line noted above will result in greater footfall and civic vibrancy in the vicinity of the station. This supports the LAP and ongoing trends in active travel, and the intention to consolidate the urban centre around the railway station. The assessment is therefore moderate and positive from both a landscape and visual perspective. There is no significant effect.

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Of the schemes noted above, Park West Pointe, the permitted scheme with the planning reference 312290 for 750 no. apartments, creche and associated site works. is most relevant, being adjacent to the southern side of the railway line, and some 75m from Site 5. Along with Phase 1 of Cherry Orchard Point, it too proposes a landmark building. It will consolidate the residential aspects of the LAP at the area adjacent to Park West Avenue and the railway station. The Park West Pointe scheme supports the LAP and will help to consolidate the urban centre around the railway station. The assessment is therefore moderate and positive from both a landscape and visual perspective. There is no significant effect.

Cherry Orchard Point has two phases currently under construction. Phase 1 includes the higher and medium density units, including the landmark tower. Phase 2 includes lower density units located to the north, at the far end of the Cherry Orchard Point development site from the railway station. Both phases have been evaluated in earlier assessments and are in alignment with the LAP. The assessment is therefore moderate and positive from both a landscape and visual perspective. There is no significant effect.

The Cherry Orchard Park upgrade scheme has been the subject of Part 8 consultation and will likely lead to the scheme being implemented should the Part 8 be successful and when funding is secured. Its upgrade will be supported by the new communities in Cherry Orchard Point development plan. Dublin City Council Parks Department has demonstrated successful upgrades to public open spaces across the city. As part of this ongoing trend, the upgrades to Cherry Orchard Park are assessed as moderate and positive. There is no significant effect.



Figure 10-15 Park West Pointe – currently under construction (image courtesy of Darmody Architecture & LDA)

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10.5.3.2 Cumulative Landscape effects

The cumulative effects are generated by schemes noted above and in the context of the Park West Cherry Orchard Local Area Plan. It is clear from the assessment that the gap sites are causing urban dereliction and antisocial behaviour, with a notable effect on the quality of the public realm. This results in an assessment of low sensitivity The granting of schemes and the completion of permitted development will further consolidate the ambitions of the LAP and SDRA4 of the Dublin City Development Plan. Such ambitions represent a high magnitude of change. As schemes are permitted following national, regional and local guidance, it is fair to assume that the quality of design will be required to adhere to those standards. In that regard, the generation of public realm with a good sense of place, innate wayfinding and definition in the streetscape is seen in a positive light. Increasing the population and amenity in proximity to public transport and connecting it through green infrastructure to the local area, should be a positive way to make new, integrated communities. The cumulative effects are therefore seen as **moderate** and **positive.**

10.5.3.3 Cumulative Visual Effects

The cumulative views have been selected to best illustrate the likely effects of adjacent developments, focussing on the proposed overall Cherry Orchard Point development plan, of which Phases 1 and 2 are under construction. The selected views therefore illustrate the detail of Phases 1 and 2, and less detail for Phase 4 which has yet to be designed and is based on the requirements of the LAP. Views 8, 9 & 13 have been omitted as they are more distant or imperceptible as already assessed. Each of the 8no verified views 1,2,3,4,5,6,7 & 12 have been assessed for the visual cumulative effects. Apart from view 7, assessed as medium sensitivity due to much of the urban structure is already formed, the other views have a low sensitivity as already assessed earlier, given their poor visual quality. The magnitude of change high, given the scale of the developments. The selected views represent key aspects of the scheme, noting the proposed phasing of the Cherry Orchard Point development. The basic block forms of buildings are generally shown to demonstrate mass and scale only where detail is not available – in these images it represents Phase 4. The selected views best demonstrate the potential for cumulative effects.

Cumulative View 1

Existing View 1

The Baseline view described above is assessed as low sensitivity.

Cumulative Proposed View 1

The proposed Phase 3 is partially visible as it is obscured by the later commercial phase of the development shown in white block form, and the Cherry Orchard Point Phase 1 (currently under construction). They have the effect of completing the scheme by filling in the area of scrub beyond the M50. The blocks obscure the lower parts of the medium density area of Phases 1 & 3, with part of the taller block of Phase 3 visible, but the landmark building can still be seen. The landmark building associated with the grant of permission 312290 (Park West Pointe, also under construction) appears to be behind the proposed scheme and is not visible in this view. These effects show urban consolidation and generation of a sense of place. The magnitude of change is high.

Visual Effect;

The cumulative visual effect of cumulative development in this view is assessed as **moderate** and **positive.**

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Cumulative View 2

Existing View 2

The Baseline view described above is assessed as low sensitivity.

Cumulative Proposed View 2

This is a view is looking southwards towards the site from close to the junction of Park West Avenue and Cloverhill Road. The view shows the proposed Phase 2 in detail (currently under construction) , with a small portion of the upper floors of the landmark tall building for Phase 1 above the rooftop in the middle of the image. Phase 3 cannot be seen and is outlined in red. The magnitude of change is high.

Visual Effect;

The cumulative visual effect of cumulative development in this view is assessed as **moderate** and **positive.**

Cumulative View 3

Existing View 3

The Baseline view described above is assessed as low sensitivity.

Cumulative Proposed View 3

The proposed view shows the upper floors of the tall landmark building of Phase 1 in the distance to the left, rising above the Phase 3 scheme. The medium density part of the Phase 1 scheme is shown to the right of the image. The gap between them is the Cedarbrook Way road and green infrastructure corridor that continues in to Phase 1. Phase 4 shown as a block form in the distance. The effect is to consolidate this part of the LAP plan and starts to convey the idea of a permeable urban centre. The magnitude of change is high.

Visual Effect;

The visual effect of the proposed development in this view is assessed as **moderate** and **neutral/ positive.**

Cumulative View 4

Existing View 4

The Baseline view described above is assessed as low sensitivity.

Cumulative Proposed View 4

The proposed view shows the upper floors of the tall landmark building of Phase 1 in the distance to the left, rising above the Phase 3 scheme. The stepping of the building heights, rising from Phase 3 towards Phase1, is particularly clear in this image. The effect is to consolidate this part of the LAP plan and starts to convey the idea of an urban centre. The magnitude of change is high.

Visual Effect;

The visual effect of the proposed development in this view is assessed as **moderate** and **neutral.**

Cumulative View 5

Existing View 5

The Baseline view described above is assessed as low sensitivity.

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Cumulative Proposed View 5

The proposed view is similar to View 4 above, but some 150m closer to site 5. It also shows the upper floors of the tall landmark building of Phase 1 in the distance to the left, rising above the Phase 3 scheme. The stepping of the building heights, rising from Phase 3 towards Phase1, is clear in this image. The effect is to consolidate this part of the LAP plan and starts to convey the idea of an urban centre. The magnitude of change is high.

Visual Effect;

The visual effect of the proposed development in this view is assessed as **moderate** and **neutral.**

Cumulative View 6

Existing View 6

The Baseline view described above is assessed as low sensitivity.

Cumulative Proposed View 6

This is a view from the Cherry Orchard and Park West railway station looking northwards along Park West Avenue. Phase 3 is visible to the right, and Phase 1 creates a new street edge to the left, with Phase 2 seen in the distance at the end of the street. The image gives a sense of the Local Area Plan's vision for consolidating urban form around the railway station, and a sense of place. The magnitude of change is high.

Visual Effect;

The visual effect of the proposed development in this view is assessed as **moderate** and **positive.**

Cumulative View 7

Existing View 7

The Baseline view described above is assessed as medium sensitivity.

Cumulative Proposed View 7

This is a view from the southern end of Park West Avenue looking northwards towards the railway station and Cherry Orchard Point. Phase 3 is visible at the end of the road, through trees in winter, with less visibility in summer. Parts of Phase 1 – particularly the landmark building is also visible through the trees. The image gives a sense of the Local Area Plan's vision for consolidating urban form around the railway station, and a sense of place. The magnitude of change is medium.

Visual Effect;

The visual effect of the proposed development in this view is assessed as **moderate** and **positive.**

Cumulative View 12

Existing View 12

The Baseline view described above is assessed as low sensitivity.

Cumulative Proposed View 12

This is a view from Park West Avenue looking southwards towards the railway station. The left side of the street is defined by the mature tree planting of the Cedarbrook development which is visible in this winter view. Phase 3 is visible in the middle distance. Phase 1 creates a built edge and streetscape to the righthand side of Park West Avenue, with Phase 2 seen in the distance at the end of the street. The

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image gives a sense of the Local Area Plan's vision for consolidating urban form around the railway station, and a sense of place. The magnitude of change is high.

Visual Effect;

The visual effect of the proposed development in this view is assessed as **moderate** and **positive.**

The visual effects are summarised in the following table:

Table 10-11 Summary of views

Views					
View	Location	Sensitivity	Magnitude of Change	Effect	Quality
1	Cloverhill Road M50 Bridge	Low	High	Moderate	Neutral
2	Park West Avenue	Low	High	Moderate	Neutral
3	Cherry Orchard Park	Low	High	Moderate	Neutral
4	Cherry Orchard Court	Low	High	Moderate	Neutral
5	Barnville Park	Low	High	Moderate	Neutral
6	Cherry Orchard Railway Station	Low	High	Moderate	Positive
7	Park West Avenue	Medium	Medium	Moderate	Positive
8	Park West Avenue	Medium	Imperceptible	Imperceptible	-
9	Cloverhill Road Railway Bridge	Low	Imperceptible	Imperceptible	-
12	Park West Avenue	Low	High	Moderate	Positive
13	Blackditch Rd	Medium	Medium	Moderate	Neutral
Cumulative					
View	Location	Sensitivity	Magnitude of Change	Effect	Quality
1	Cloverhill Road M50 Bridge	Low	High	Moderate	Positive
2	Park West Avenue	Low	High	Moderate	Positive
3	Cherry Orchard Park	Low	High	Moderate	Neutral/ Positive
4	Cherry Orchard Court	Low	High	Moderate	Neutral
5	Barnville Park	Low	High	Moderate	Neutral

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6	Cherry Orchard Railway Station	Low	High	Moderate	Positive
7	Park West Avenue	Medium	Medium	Moderate	Positive
12	Park West Avenue	Low	High	Moderate	Positive

In summary, the assessment from a low baseline of a poor-quality environment, combined with a strong urban design plan that follows the guidance of the Park West and Cherry Orchard Local Area Plan and the SDRA4, as well as thoughtful detailing leads to generally **moderate** and **neutral** to **positive** effects when the scheme is visible. There are no significant effects.

10.5.4 Construction Phase mitigation measures – landscape and visual

10.5.4.1 Construction Phase

The building site including a site compound with site offices, site security fencing, scaffolding and temporary works will be visible during the Construction Phase, from a range of viewpoints around the site. The activities will generate disturbance in the local landscape, particularly related to noise, dust, lighting as well as visual effects. Such elements are generally viewed as temporary and unavoidable features of construction in any setting. The perimeter site hoarding will screen from view much of the construction activity and materials at ground level. Other mitigation measures proposed during this delivery stage of the development, revolve primarily around the implementation of appropriate site management procedures during the construction works – such as the control of lighting, storage of materials, placement of site offices and compounds, control of vehicular access, and effective dust and dirt control measures, etc. Such mitigation will be set out in the Construction Management Plan prepared for the scheme. This will be a working document which will be continually reviewed and amended through the Construction Phase to ensure effective mitigation throughout.

The Construction Management Plan to be prepared by the appointed contractor, and agreed with the Local Authority prior to the commencement of any construction works, will deal with all issues related to the construction, delivery and management of the scheme during the construction stage and will ultimately include details on the following:

Daily and weekly working hours;

- Agreed haul routes for incoming materials;
- Licensed hauliers to be used;
- Disposal sites;
- Travel arrangements for construction personnel;
- Appropriate on-site parking arrangements for construction personnel to prevent overspill parking on the local road network;
- Temporary construction entrances to be provided;
- Wheel wash facilities if required;
- Road cleaning and sweeping measures to be put in place if required;
- Temporary construction signage to be put in place and maintained.

The planning application includes an Outline Construction Management Plan, prepared by Waterman Moylan Consulting Engineers, which outlines a range of Construction Phase mitigation measures. Many of these measures are relevant to the reduction of the temporary impacts on the landscape and visual environment during the Construction Phase as they reduce or control noise, dust, lighting and regulate an orderly running of the site including the visual quality of orderly placement of parking, storage and cabins withink a defined and screened perimeter. This Outline Construction Management Plan forms the basis for the required measures to be included in the appointed Contractor's Construction

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Management Plan. As such it references Construction Phase mitigation measures which are relevant to the assessment of Landscape and Visual Impact.

10.5.5 Operational Phase mitigation measures – landscape and visual

10.5.5.1 Operational Phase

The design rationale and detail employed seeks to mitigate potential negative effects on the landscape character and visual amenity of the area by:

- Establishing an integrated relationship between the proposed development and surrounding buildings, infrastructure, green infrastructure and permeability, and the broader urban landscape beyond, incorporating aspects of current and emerging trends in built-form, scale, texturing, colour and materials;
- The insertion, positioning and detailed modelling of the buildings, in order to assist in the appropriate visual assimilation of their mass
- Appropriate architectural detailing to assist in the integration of the external building facades – including the modulation of openings and fenestration;
- Rationalisation of all services elements and any other potential visual clutter and its incorporation internally within building envelopes (as far as practically possible);
- Simplification and rationalisation of the proposed roof lines, including green roofs
- Use of appropriate materials in the architectural expression of the buildings. In this instance, brick is used in the facades across the scheme, with variation in colour, pattern, texture and tone occurring in the individual character areas or emphasising specific parts of facades. This approach reinforces the articulation of the massing of the blocks, as well as lending importance and interest to specific areas.
- The provision of community uses within the development, including public open space and associated amenities, in turn combining with internal cultural spaces.
- The provision of secure communal space.
- Sustainable approach to nature-based drainage and to enhance biodiversity
- Detailing in the architectural and landscape design to mitigate wind and shadow effects to create good microclimates.
- Comprehensive planting of vegetation, particularly trees to ground the scheme in the landscape and provide amenity, habitat, shelter and screening.
- Implementation of maintenance and management of buildings, infrastructure and vegetation.

10.6 Residual Impacts

The proposed development will impact on the urban landscape to varying degrees in terms of its perceived nature and scale. These effects are tempered and conditioned by sensitivities associated with the receptor. The duration of such impacts is determined by the design life of the proposed development. In this case the building development has a design life of up to 60 years, giving a long-term duration. In that time, with the implementation of maintenance and management regimes, the built fabric will remain in good repair and the landscape, particularly tree planting, will mature.

In assessing the landscape character and visual impacts, there are three main inter-related aspects to be addressed in considering the development proposals, namely:

- The perceived character of the area, how it is affected by the proposal and how well it integrates, particularly in the context of a changing environment.
- Effects of the proposed development on social and cultural amenity
- The proposed views of the development, relative to the existing site and context and the associated impact on visual amenity.

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Table 10-12 Table of residual effects.

Receptor	Sensitivity	Magnitude of Change	Mitigation measures	Effect and quality
Landscape	Low	High	As detailed in mitigation measures above. Summarised as follows: • Masterplanning quality • Building design quality • Rationalisation of services, roof lines and visual clutter. • Materials quality • Landscape design quality • Maintenance and management quality In addition, the long term maturing of tree planting will be of benefit.	Moderate Neutral/Positive
Visual	Low	High	As detailed in mitigation measures above. Summarised as follows: • Masterplanning quality • Building design quality • Rationalisation of services, roof lines and visual clutter. • Materials quality • Landscape design quality • Maintenance and management quality In addition, the long term maturing of tree planting will be of benefit	Moderate Neutral/Positive

The assessment of the landscape and visual characteristics show a low sensitivity and proposed high magnitude of change. The implementation of the mitigation measures, summarised in table 10.12 above, result in a moderate effect of neutral/positive quality. There are no significant effects.

10.7 Difficulties Encountered

There were no difficulties encountered in the assessment.

10.8 Interactions

The landscape and visual aspects of the development invariably intertwine in relation to the social qualities of passive and active amenities and civic qualities in the public realm, transport, natural heritage particularly relating to enhancing biodiversity and creating resilience to climate change.

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10.9 Summary of Mitigation Measures and Residual Impacts

10.9.1 Introduction

The assessment for Cherry Orchard Point identifies mitigation measures for minimising the impacts and effects of the scheme which are summarised below.

10.9.2 Mitigation Measures

The design rationale and detail employed seeks to mitigate potential negative effects on the landscape character and visual amenity of the area. The mitigation measures are described in the body of the main report, in section 2, and summarised as follows:

- Masterplanning quality
- Building design quality
- Rationalisation of services, roof lines and visual clutter.
- Materials quality
- Landscape design quality
- Maintenance and management quality

10.9.3 Landscape and Visual

10.9.3.1 Construction Phase mitigation measures – landscape and visual

The Construction Management Plan to be prepared by the appointed contractor, and agreed with the Local Authority prior to the commencement of any construction works, will deal with all issues related to the construction, delivery and management of the scheme during the construction stage, detailed in the main body of the report, in section 2. The duration will be short-term and there will be no significant effects.

10.10 Residual Impacts

The assessment of the landscape and visual characteristics show a low sensitivity and proposed high magnitude of change. The implementation of the mitigation measures, summarised in table 10.12 above, result in a moderate effect of neutral/positive quality. There are no significant effects.

10.10.1 Landscape and Visual

The degree of impact is seen as **moderate** in the context of a baseline of a brown and greenfield site with appropriate zoning and a landscape character that is not particularly sensitive in this locality.

The design of the scheme produces a **neutral** to **positive** quality in this context. There will be no significant effects.

10.10.2 Construction Stage

No residual Impacts; the conclusion of the construction stage will be the completion of the scheme, and the short-term nature of the effects will no longer exist.

10.10.3 Operational Stage

In demonstrating the trend for increased density for housing as a national policy the scheme is demonstrating an intensification of the current suburban and derelict landscape. The effect is described as **moderate** in that it follows the principles and trends currently extant in the neighbourhood, and **positive** in that it asserts these new spatial definitions in a considered way and brings with it the vibrancy of a consolidated urban plan.

Moderate effects occur closer to the subject site, and the massing and treatment of the facades where there is sufficient detailing tends to lead towards a mitigated **neutral** to **positive** effect. There will be no significant effects.

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10.11 Cumulative Effects

The cumulative effects are generated by schemes noted above and in the context of the Park West Cherry Orchard Local Area Plan. It is clear from the assessment that the gap sites are causing urban dereliction and antisocial behaviour, with a notable effect on the quality of the public realm. This results in an assessment of low sensitivity The granting of schemes and the completion of permitted development will further consolidate the ambitions of the LAP and SDRA4 of the Dublin City Development Plan. Such ambitions represent a high magnitude of change. As schemes are permitted following national, regional and local guidance, it is fair to assume that the quality of design will be required to adhere to those standards. In that regard, the generation of public realm with a good sense of place, innate wayfinding and definition in the streetscape is seen in a positive light. Increasing the population and amenity in proximity to public transport and connecting it through green infrastructure to the local area, should be a positive way to make new, integrated communities. The cumulative effects are therefore seen as **moderate** and **positive.**

There will be no significant effects.

10.12 Summary

In summary, the landscape effects resulting from a **low** landscape sensitivity, and a **high** magnitude of change, is **moderate**. Qualitatively the landscape effect is **neutral** to **positive**. There will be no significant effects.

10.13 References

Guidelines for Landscape and Visual Impact Assessment, prepared by the Landscape Institute and the Institute of Environmental Assessment, published by Routledge, 3rd Edition 2013.

'Guidelines on the information to be contained in Environmental Impact Assessment Reports' - Environmental Protection Agency (EPA), May 2022.

Visual Representation of Development Proposals: Technical Guidance Note 06/19, Landscape Institute UK (LI) September 2019.

Urban Development and Building Heights Guidelines (2018)

Sustainable Residential Development and Compact Settlements Guidelines (2024)

The Dublin City Development Plan 2022-2028.

Park West and Cherry Orchard Local Area Plan 2019

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11 Land, Soils, and Geology

11.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) has been prepared by Waterman Moylan Consulting Engineers on behalf of the Land Development Agency (LDA) in partnership with Dublin City Council and assesses the potential effects of the proposed Phase 3 development at Cherry Orchard Point, Dublin 10, on the surrounding land, soils and geological environment.

The assessment addresses the existing and receiving environment, the characteristics of the proposed development relevant to land, soils and geology, potential construction and operational effects, cumulative effects, mitigation and monitoring measures, and the resulting residual effects.

The proposed development forms Phase 3 of the Cherry Orchard Point masterplan development and is located within Development Site 5 (Barnville) of the Park West and Cherry Orchard Local Area Plan lands in Dublin 10, within the administrative area of Dublin City Council. The Cherry Orchard Point masterplan development is bisected by Park West Avenue and comprises a number of development phases. Site 4, west of Park West Avenue, comprises development Phases 1, 2, and 4 while Site 5, east of Park West Avenue comprises the subject Phase 3 development. A full description of the proposed development is available in Chapter 1.

The proposed development will hereafter be referred to as the “proposed development” or “subject site”.

11.1.1 Expertise and Qualifications

This chapter was undertaken by Penelope Ingle with Waterman Moylan Consulting Engineers who has 10 years’ experience as a Civil Engineer (BEng) and reviewed by Ian Worrell with Waterman Moylan Consulting Engineers who has 30+ years’ experience as a Civil Engineer (BscEng, DipEng, CEng, MIEI, DipPhysPlg).

11.1.2 Study Methodology

11.1.2.1 Regulations and Guidelines

The assessment has been undertaken having regard to the following legislation, guidance and technical sources:

- Environmental Protection Agency (EPA), Guidelines on the Information to be Contained in Environmental Impact Assessment Reports, 2022.
- Planning and Development Regulations and relevant Environmental Impact Assessment legislation, as amended.
- Institute of Geologists of Ireland (IGI), Geology in Environmental Impact Statements – A Guide, 2002.
- Institute of Geologists of Ireland (IGI), Guidelines for the Preparation of Soils, Geology and Hydrogeology Chapters of Environmental Impact Statements, 2013.
- CIRIA C532, Control of Water Pollution from Construction Sites: Guidance for Consultants and Contractors, 2001.
- CIRIA C741, Environmental Good Practice on Site Guide, 4th Edition, 2015.
- Relevant waste management legislation and EPA guidance relating to the classification, reuse, recovery and disposal of excavated soil and stone.

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11.1.2.2 Phased Approach

A phased approach has been adopted for the assessment in accordance with the EPA and IGI guidelines. The assessment comprises the following elements:

Element 1: Assessment and Impact Determination

The first element of the assessment involved establishing the location, type and scale of the proposed Phase 3 development and establishing the baseline conditions of the land, soil and geological environment.

This element included a desktop review of available information from the Geological Survey Ireland (GSI), Environmental Protection Agency (EPA), Ordnance Survey Ireland (OSI) and other relevant sources. The review included available information relating to bedrock geology, subsoils, aquifer classification, groundwater vulnerability, historical land use and other geological and environmental characteristics of the subject site and surrounding area.

The proposed development layout and associated construction activities were also reviewed to identify the potential interactions between the proposed development and the existing land, soil and geological environment and to establish the potential impacts requiring further assessment.

Element 2: Direct and Indirect Site Investigation and Studies

The second element involved the review and incorporation of direct and indirect site investigation information to further establish the ground conditions and refine the assessment of potential impacts associated with the proposed development.

Site investigation information relevant to the subject site includes the Ground Investigations Ireland (GII) Barnville Park Site Investigation undertaken in 2018, the GII Cherry Orchard Site 4 and 5 Phase 2 Site Investigation undertaken in 2024 and the associated Waste Classification Report, together with the further Site 5 Phase 3 Site Investigation undertaken by GII in August 2026 and the associated Waste Classification Report.

The investigations included, as applicable, trial pits, boreholes, soakaway testing, geotechnical and environmental laboratory testing and waste classification testing. The findings of these investigations have been reviewed to establish the existing soil, subsoil and geological conditions, infiltration characteristics and potential environmental constraints associated with the proposed development.

Element 3: Evaluation of Mitigation Measures, Residual Impacts and Final Impact Assessment

The third element involved the detailed assessment of the potential impacts identified during the preceding stages, having regard to the proposed development design and construction strategy.

Mitigation measures were considered and incorporated into the proposed development, where practicable, to avoid, eliminate or reduce potential adverse effects on the land, soil and geological environment. These measures include appropriate management of excavated materials, protection of soils to be retained and reused, appropriate handling and storage of potentially contaminated or unsuitable materials, and measures to prevent pollution of soils and groundwater during construction.

The potential effects of the proposed development were subsequently assessed following the incorporation of the proposed mitigation measures, and the resulting residual impacts were determined for the construction and operational phases.

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Element 4: Final Assessment and Conclusions

The fourth element comprises the completion of the assessment based on the established baseline conditions, the proposed Phase 3 development, the findings of the site investigation information, the proposed construction methodology and the mitigation measures incorporated into the development.

The final assessment considers the potential direct, indirect and cumulative effects of the proposed development on land, soils and geology and identifies the resulting residual effects following implementation of the proposed mitigation measures.

11.1.2.3 Description and Assessment of Potential Impact

The assessment considers the importance and sensitivity of the receiving land, soil and geological attributes together with the predicted magnitude, extent, likelihood and duration of potential effects. The terminology used in this chapter is consistent with the EPA EIA Guidelines (2022).

Table 11-1 Criteria for Assessing Significance of Effects

Quality	Significance	Duration
Positive / Neutral / Negative	Imperceptible / Not Significant / Slight / Moderate / Significant / Profound	Temporary / Short-term / Medium-term / Long-term / Permanent

For the purposes of this chapter, site importance has been considered having regard to the quality, significance and sensitivity of the relevant soil and geological attributes, including the presence of made ground, underlying geological formations, groundwater characteristics and any geological or hydrogeological constraints.

11.1.2.4 Sources of Information

- GSI bedrock geology, aquifer and groundwater vulnerability mapping.
- EPA waterbody status and environmental mapping.
- OSI historical mapping.
- Site-specific topographical survey information.
- GII Barnville Park Cherry Orchard Ground Investigation Report, Revision A, 29 January 2018.
- GII Cherry Orchard Site 4 and 5 Phase 2 Ground Investigation Report, Revision C, 28 August 2024.
- GII Cherry Orchard Site 4 and 5 Phase 2 Waste Classification Report, Revision B, 22 August 2024.
- GII Cherry Orchard Site 5 Phase 3 Ground Investigation Report, August 2026.
- GII Cherry Orchard Site 5 Phase 3 Waste Classification Report, August 2026.
- Waterman Moylan Flood Risk Assessment for Cherry Orchard Point Phase 3, September 2026.
- Waterman Moylan EIAR Chapter 12 – Water, Cherry Orchard Phase 3.

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11.1.2.5 Description of Soil / Geological Site

The site is considered to represent a predominantly passive geological and hydrogeological environment, broadly corresponding to a Type A geological environment as described by IGI (2013). This assessment is based on the presence of predominantly cohesive subsoils, limited groundwater potential associated with the mapped Poor Aquifer, the absence of identified groundwater abstractions or springs in the immediate vicinity, and the previously modified nature of the site. The poor infiltration characteristics identified by site investigation further limit the role of infiltration in the surface water management strategy.

11.2 The Existing and Receiving Environment (Baseline Situation)

11.2.1 Current and Historical Land Use

The subject site is currently predominantly undeveloped/open land, with evidence of previous site modification and fill material. Previous investigations indicate that the subject site lands have been used as a construction compound, resulting in areas of made ground.

Historic mapping reviewed for the locality does not identify previous settlement or substantial permanent development within the subject site. The historic hydrological ditch system identified within the wider masterplan lands is addressed in detail in Chapter 12 – Water and is not considered to represent a current primary drainage feature of the subject site.

11.2.2 Topography

The existing topographical survey indicates that levels within the central portion of the subject site reach approximately 58.04m OD, with the site generally falling from the central area towards its boundaries. Existing boundary levels typically range from approximately 54.55m OD to 60.78m OD, with the higher levels occurring towards the southwest adjacent to the Park West Avenue bridge over the Dublin–Kildare railway line. Refer to for an extract of the existing site contours and spot elevations.

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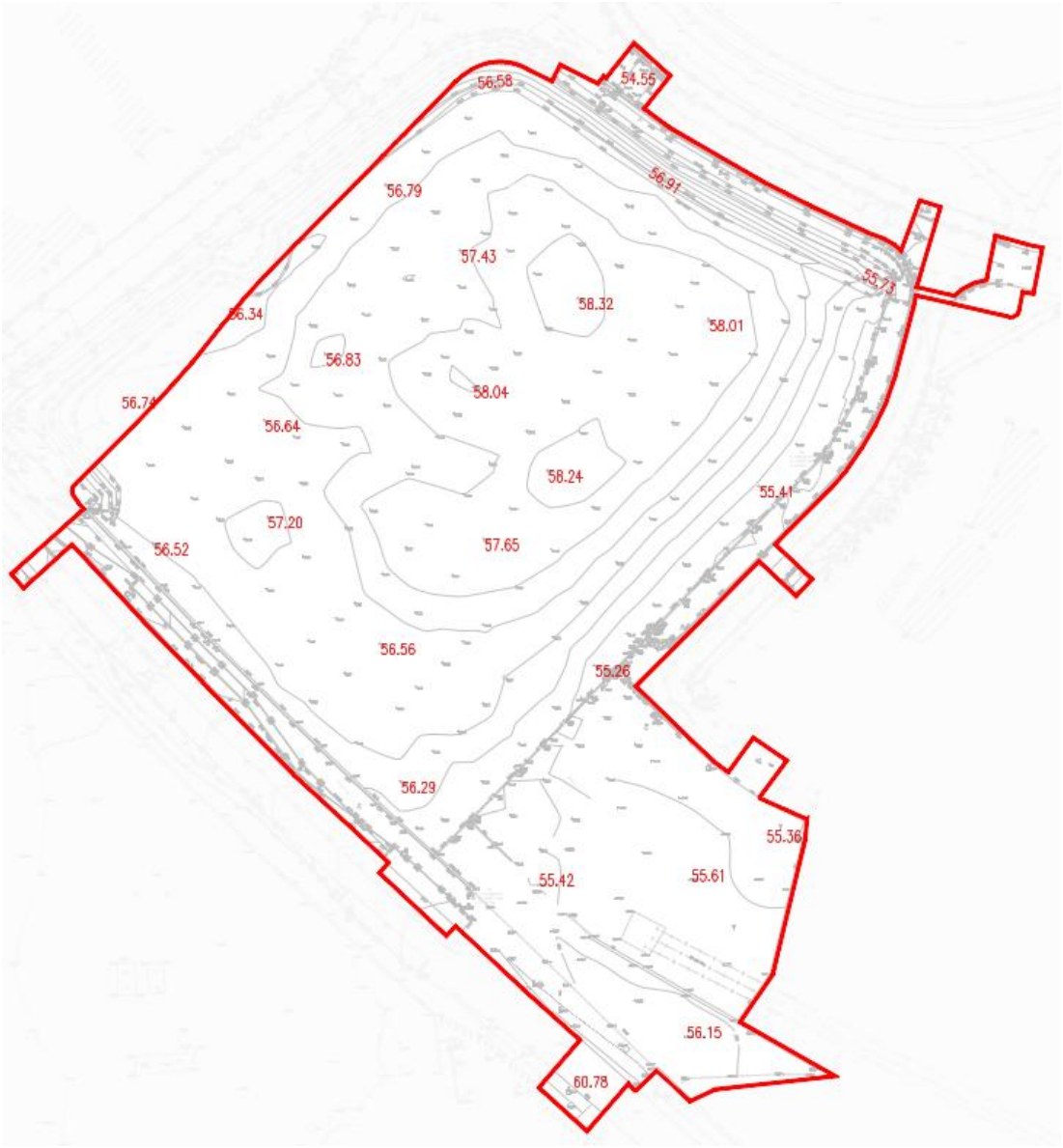


Figure 11-1: Existing Site Topography – Subject Site

11.2.3 Soils

11.2.3.1 Topsoil

Previous site investigation information indicates that topsoil is generally present across the investigated lands, typically to a maximum depth of approximately 0.3m below ground level. Localised areas of gravel fill or existing surfacing have also been encountered.

11.2.3.2 Made Ground

Made Ground has been identified within the subject site and is associated with previous site modification and construction-related use. The 2018 Barnville Park Site investigation recorded made ground at a number of exploratory locations, with recorded made ground depths of up to approximately 3.2m BGL at the investigated locations. The 2024 investigation of the wider Site 4 and Site 5 (subject site) lands also identified made ground beneath topsoil/surfacing at some locations, with depths of up to approximately 2.1m BGL across the investigated masterplan lands.

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The made ground encountered in previous investigations was generally described as sandy/gravelly clay or gravelly material with occasional cobbles and anthropogenic inclusions including fragments of concrete, brick, glass, timber, ceramics, metal and plastic. The presence and variability of made ground will be considered during excavation and materials management.

According to the 2026 investigation, the following is stated regarding the made ground conditions:

“Made Ground deposits were encountered from ground level or beneath the Topsoil and were present to a depth of 0.50m to 2.50m BGL. These deposits were described generally as brown / dark brownish grey / grey slightly sandy slightly gravelly Clay with low cobble and boulder content and contained rare fragments of concrete, red brick, glass, ceramic, rootlets, shells, metal and plastic.”

11.2.3.3 Cohesive Deposits

The 2022 and 2024 investigations identified cohesive deposits beneath the made ground, generally comprising brown sandy gravelly clay with occasional cobbles and boulders, overlying stiffer black sandy gravelly clay. The proportion of sand and gravel varies locally, with occasional granular lenses within the glacial till matrix.

According to the 2026 investigation, the following is stated regarding the made ground conditions:

“Cohesive deposits were encountered beneath the Made Ground and were described typically as brown slightly sandy gravelly CLAY with low cobble and boulder content overlying a dark grey sandy gravelly CLAY with low cobble and boulder content.”

11.2.3.4 Chemical and Environmental Testing

The 2026 Waste Classification Report indicates that two samples were classified as hazardous: TP-02 at 2.50 m, due to elevated total petroleum hydrocarbons (TPH), with associated carcinogenic and mutagenic hazardous properties; and TP-18 at 0.50 m, due to elevated zinc and the associated ecotoxic hazardous property. All other samples assessed were classified as non-hazardous.

Asbestos fibres were detected in sample TP-11 at 0.50 m; however, asbestos-containing material was not identified in the sample and the detected concentration was below the hazardous threshold of 0.1%.

Where excavated materials are required to be removed from site as waste, the report identifies the applicable List of Waste (LoW) codes as 17 05 04 or 17 09 04 for non-hazardous material, and 17 05 03* or 17 09 03* for hazardous material. Where more than 2% anthropogenic material is identified during excavation, the 17 09 04 or 17 09 03* codes, as applicable, should be used. The final waste classification is to be confirmed based on the material encountered during excavation and the requirements of the receiving facility.

11.2.4 Subsoil / Quaternary Sediments

The site investigation information indicates that the natural subsoil beneath the made ground generally comprises cohesive glacial deposits, principally sandy gravelly clay with variable sand and gravel content. Weathered rock has also been encountered locally above more competent bedrock. The available information indicates that the natural soils are not highly permeable and are not suitable for surface water management measures relying solely on infiltration.

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11.2.5 Geology

GSI bedrock geology mapping places the subject site within the Lucan Formation. Geological Survey Ireland (GSI) produces a wide range of datasets, including bedrock geology mapping, extracted overleaf to Figure 11-2: Extract from GSI Bedrock Geology Map (Source: Geological Survey Ireland).

The Lucan Formation comprises dark-grey to black, fine-grained, occasionally cherty micritic limestone, with locally occurring darker coarser-grained calcarenitic limestone and interbedded dark-grey calcareous material.

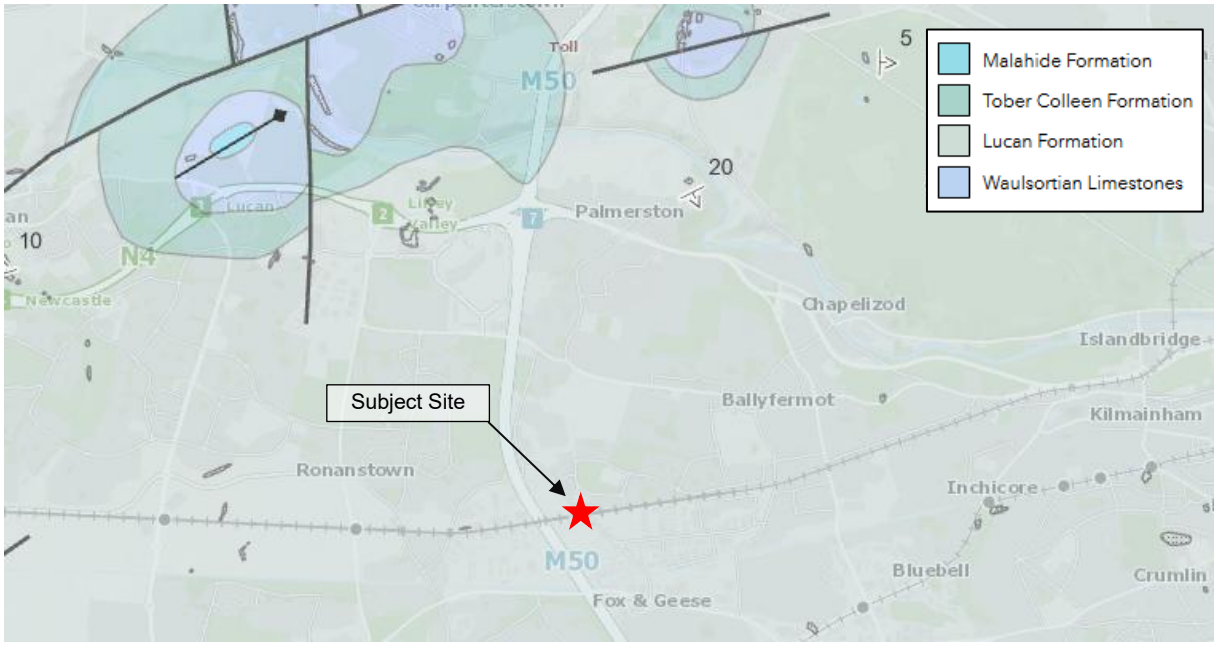


Figure 11-2: Extract from GSI Bedrock Geology Map (Source: Geological Survey Ireland)

The 2024 GII site investigation recovered medium strong to very strong grey/dark grey fine to medium grained laminated limestone interbedded with weak black fine grained laminated mudstone. Locally, the mudstone was weathered to black clay. GII described the recovered bedrock as typical of Calp limestone. Bedrock depths across the investigated masterplan lands varied locally, with the 2024 rotary boreholes encountering rock at depths of approximately 2.3m to 5.3m BGL.

The 2026 Phase 3 SI report states the following regarding weather bedrock conditions:

“The rotary core boreholes recovered *interbedded* medium strong to strong thinly bedded dark grey fine grained argillaceous LIMESTONE and black calcareous MUDSTONE. This is typical of the Lucan Formation, which is noted on Geological Survey Ireland’s (GSI) geological mapping of the site. The degree of weathering ranged from unweathered to partially weathered. Rare visible pyrite veins were noted during logging which are typically present within the Lucan Formation. The depth to rock varies from 3.20m BGL in BH-04 and BH-05, to a maximum of 4.20m BGL in BH01.”

11.2.6 Hydrogeology and Groundwater

11.2.6.1 Aquifer

The hydrogeological environment has been considered with reference to GSI information and site investigation data. The subject site is underlain by a Poor Aquifer – Bedrock which is Generally Unproductive except for Local Zones. This indicates that the underlying bedrock has limited groundwater potential and is generally unproductive other than in localised zones. The national Aquifer

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Bedrock Map prepared by the Geological Survey of Ireland is extracted to Figure 11-3: Extract from GSI Bedrock Aquifer Map (Source: Geological Survey Ireland).

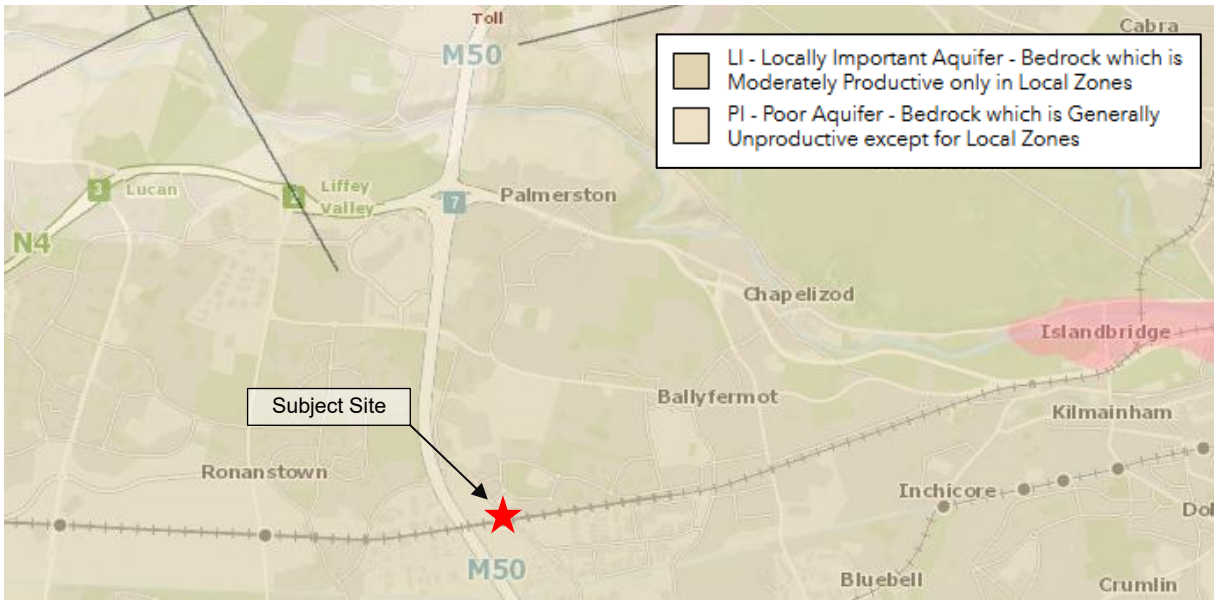


Figure 11-3: Extract from GSI Bedrock Aquifer Map (Source: Geological Survey Ireland)

11.2.6.2 Groundwater Vulnerability

The GSI groundwater vulnerability mapping indicates a high groundwater vulnerability classification in the vicinity of the subject site. Groundwater vulnerability relates to the susceptibility of groundwater to contamination and is distinct from aquifer productivity.

The groundwater vulnerability of the subject site is extracted to Figure 11-4: Extract from Groundwater Vulnerability Map.

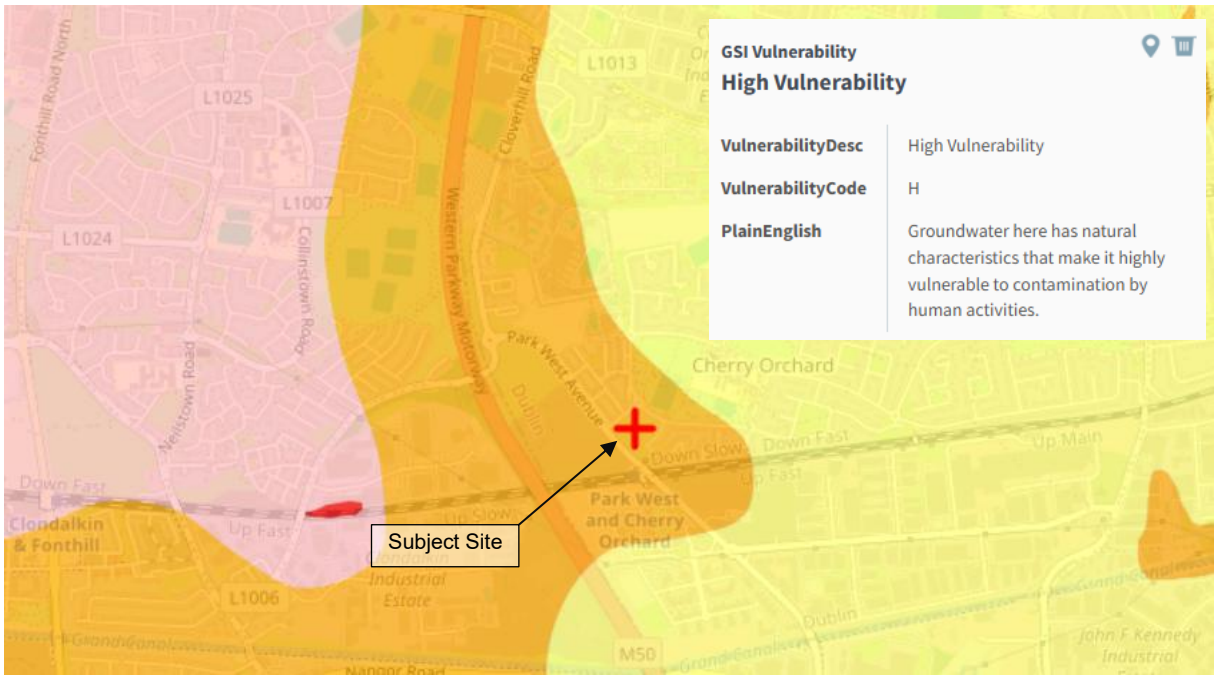


Figure 11-4: Extract from Groundwater Vulnerability Map

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11.2.6.3 Groundwater Body Status

The groundwater body underlying the subject site was classified as having Good status for the 2016–2021 assessment period based on EPA waterbody status information. This classification relates to the overall status of the groundwater body under the Water Framework Directive and provides an indication of the existing groundwater status against which potential effects are assessed. An extract of the EPA groundwater body status mapping is presented in Figure 12-2: EPA's Groundwater Body Status Map.

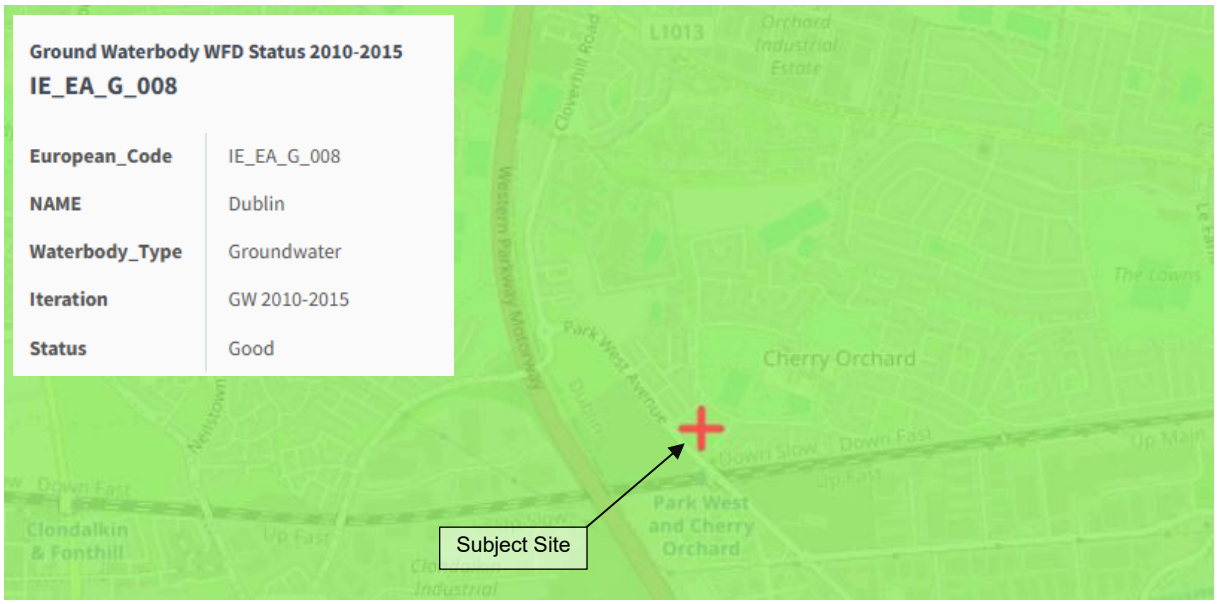


Figure 11-5: EPA's Groundwater Body Status Map

Groundwater flood risk at the subject site has also been considered having regard to available groundwater flood mapping and site investigation information. No recorded groundwater flooding has been identified at the subject site and the potential for groundwater flooding is considered low.

11.2.7 Site Investigation

All available Site Investigation reports discussed in this section are appended to the Waterman Moylan Preliminary Construction Environment Management Plan submitted as part of this application.

11.2.7.1 Barnville Park Site Investigation – January 2018

A site investigation for Site 5 was commissioned by Dublin City Council and undertaken by Ground Investigations Ireland (GII) in January 2018. The report, Ground Investigations Ireland Barnville Park Cherry Orchard Ground Investigation Report, Revision A, was issued on 29 January 2018.

The investigation comprised trial pits, soakaways, cable percussion boreholes, geotechnical and environmental laboratory testing and associated recommendations. Refer to Figure 11-6: Barnville Park Site Investigation Test Locations and Annotations (Source: GII, January 2018) for an extract of these test locations.

The Site Investigation Report is included as an appendix to the Preliminary Construction Environmental Management Plan.

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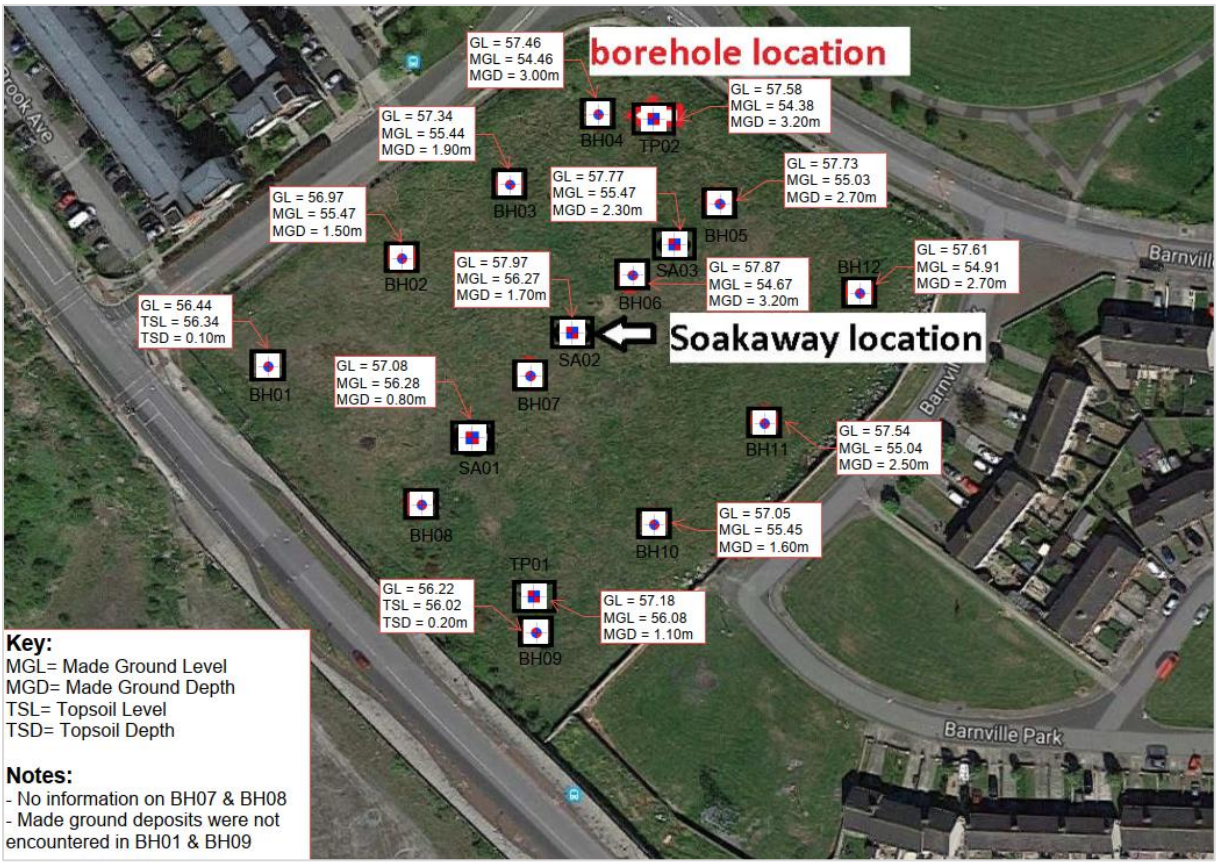


Figure 11-6: Barnville Park Site Investigation Test Locations and Annotations (Source: GII, January 2018)

Under Chapter 5.0 – Recommendations & Conclusions, the report states that at SA01, SA02 and SA03 the water level dropped too slowly to allow calculation of the soil infiltration rate and that these locations were therefore not recommended as suitable for soakaway design and construction. No groundwater was noted during the investigation.

11.2.7.2 Cherry Orchard Site 4 and 5 Phase 2 Site Investigation – August 2024

As part of the approved Phase 2 development, site investigations for the wider Site 4 and Site 5 masterplan lands were undertaken by GII in August 2024. The relevant reports are the Ground Investigation Report, Revision C, issued 28 August 2024, and the Waste Classification Report, Revision B, issued 22 August 2024.

The 2024 investigation comprised trial pits, soakaways, slit trenches, window sample boreholes, cable percussion boreholes, rotary core boreholes and geotechnical and environmental laboratory testing. The test location plan confirms that the investigation included locations within Site 5 (subject site). Refer to Figure 11-7: Cherry Orchard Site 4 and Site 5 Site Investigation Test Locations (Source: GII, August 2024) for an extract of these test locations.

The Site Investigation Report is included as an appendix to the Preliminary Construction Environmental Management Plan.

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Figure 11-7: Cherry Orchard Site 4 and Site 5 Site Investigation Test Locations (Source: GII, August 2024)

No soakaway tests were undertaken within Site 5 as part of the 2024 investigation. Five soakaway tests were undertaken within Site 4 to the west of Park West Avenue. At these locations, the water level dropped too slowly to allow calculation of the soil infiltration rate, and the locations were not recommended as suitable for soakaway design and construction.

11.2.7.3 Cherry Orchard Site 5 Phase 3 Site Investigation – August 2026

A further site investigation for the proposed Phase 3 development was undertaken by GII in August 2026. The investigation indicates that the soakaway testing undertaken as part of the Phase 3 investigation is consistent with the findings of the previous Site 5 and wider masterplan investigations, with the tested soils not considered suitable for soakaway design. Refer to Figure 11-8: Phase 3 Site Investigation Test Locations (Source: GII, August 2026) for an extract of the test locations undertaken.

The Site Investigation Report is included as an appendix to the Preliminary Construction Environmental Management Plan.

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Figure 11-8: Phase 3 Site Investigation Test Locations (Source: GII, August 2026)

11.2.7.4 Infiltration Rate Conclusion

The available site investigation information indicates that the soils within the subject site lands do not provide adequate infiltration rates for surface water management measures relying solely on infiltration. The proposed surface water management strategy therefore does not rely on soakaway systems for the primary attenuation requirements of the development and instead incorporates SuDS, attenuation and controlled discharge measures, as described in Chapter 12 – Water.

11.2.7.5 Waste Classification and Materials Management

Ground Investigations Ireland (GII) undertook a Waste Classification Assessment for the proposed development at Cherry Orchard Phase 3 Site 5, with site investigation works completed in June 2026. The assessment was undertaken to characterise materials that may be excavated during the construction works and to determine the appropriate waste management and disposal/recovery routes. The investigation comprised a site walkover, historical desk study, 30 no. trial pits, collection of soil samples and environmental laboratory testing, together with assessment of the excavated materials against waste classification and Soil Recovery Facility (SRF) criteria.

The ground conditions encountered generally comprised topsoil overlying Made Ground, with cohesive deposits beneath. The Made Ground was encountered to depths of approximately 0.8 m to at least 3.0 m below ground level and generally comprised sandy/gravelly clay with varying quantities of anthropogenic materials, including fragments of brick, glass, concrete, ceramic, plastic, timber, metal and mortar.

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A total of 86 samples were assessed using the HazWasteOnLine™ waste classification tool. The assessment determined that the majority of samples were non-hazardous. Two samples were classified as hazardous: TP-02 at 2.50 m, due to elevated total petroleum hydrocarbons (TPH), with associated carcinogenic and mutagenic hazardous properties; and TP-18 at 0.50 m, due to elevated zinc and the associated ecotoxic hazardous property. All other samples assessed were classified as non-hazardous.

Asbestos fibres were detected in sample TP-11 at 0.50 m; however, asbestos-containing material was not identified in the sample and the detected concentration was below the hazardous threshold of 0.1%.

Where excavated materials are required to be removed from site as waste, the report identifies the applicable List of Waste (LoW) codes as 17 05 04 or 17 09 04 for non-hazardous material, and 17 05 03* or 17 09 03* for hazardous material. Where more than 2% anthropogenic material is identified during excavation, the 17 09 04 or 17 09 03* codes, as applicable, should be used. The final waste classification is to be confirmed based on the material encountered during excavation and the requirements of the receiving facility.

The assessment also considered the potential suitability of the materials for acceptance at authorised Soil Recovery Facilities. While some materials were considered potentially suitable subject to the relevant geochemical domain criteria, acceptance is dependent on the specific facility and a visual assessment during bulk excavation. In particular, the report notes that material proposed for an SRF should contain less than 2% anthropogenic material and that acceptance remains at the discretion of the receiving facility.

From a construction management perspective, any hazardous material encountered during excavation should be segregated from other excavated materials and managed appropriately to prevent cross-contamination. GII recommends that excavation of identified hazardous material is supervised and validated by a suitably qualified environmental engineer or scientist and, where such material is to be removed from site, that it is excavated in advance of the main excavation works. Copies of the relevant laboratory and HazWasteOnLine™ reports should be provided to the appointed waste contractor and receiving facility.

The WAC Report is included as an appendix to the Preliminary Construction Environmental Management Plan.

11.2.7.6 Importance of the Receiving Environment

The receiving land and soil environment is considered to be of local importance, having regard to the previously modified nature of the site, the presence of made ground and the absence of identified high-value agricultural, geological heritage or mineral resource attributes within the subject site. The underlying geological environment is considered to have low to moderate sensitivity in the context of the proposed development, with groundwater protection considered relevant due to the mapped groundwater vulnerability.

The site is therefore considered suitable for the proposed development from a land, soils and geological perspective, subject to appropriate management of excavated material, construction activities and potential pollution sources.

11.3 Characteristics of the Proposed Development

11.3.1 Construction Phase

Construction of the proposed development will involve site clearance, stripping and management of topsoil, excavation and regrading, construction of building foundations, roads, parking, drainage and

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services, installation of surface water, foul drainage and water supply infrastructure, and associated landscaping and reinstatement works.

The development comprises 312 residential apartments across seven core blocks of between four and ten storeys, together with approximately 1,441 m² of local retail and commercial floor area and associated ancillary accommodation. The works also include public and communal open space, internal roads and pathways, parking, attenuation areas, green and blue roof systems, and all associated infrastructure.

The proposed finished floor levels and site levels have been developed to integrate with the surrounding roads and the wider Cherry Orchard Point development. Excavation will therefore be undertaken to achieve the required formation levels and to facilitate foundations, underground drainage and services.

Excavated material will be assessed for suitability for reuse on site. Where material is unsuitable or surplus, it will be managed in accordance with the applicable waste legislation and the requirements of the Construction Environmental Management Plan and Construction and Demolition Waste Management Plan.

11.3.2 Operational Phase

During operation, there will be no ongoing excavation of soil or bedrock. The developed site will comprise buildings, roads, hardstanding, landscaped areas and associated infrastructure. The surface water strategy will incorporate SuDS, attenuation and controlled discharge, rather than relying on infiltration to the underlying soils.

The proposed water supply and foul drainage infrastructure will be designed, constructed, tested, commissioned and maintained in accordance with Uisce Éireann requirements. The foul drainage network will remain separate from the surface water network.

11.3.3 Do-Nothing Scenario

In the event that the proposed development does not proceed, the subject site would remain in its existing condition and the construction-related disturbance, excavation, soil removal and land use change associated with the proposed development would not occur. The existing land, soil and geological environment would continue to be influenced by the existing site condition and wider development of the Cherry Orchard Point lands.

11.4 Potential Impact of the Proposed Development

11.4.1 Construction Phase

11.4.1.1 Land Take and Land Use

The proposed development will result in the permanent redevelopment of approximately 1.72 hectares of land. The subject site has previously been modified and contains areas of made ground associated with previous site use. The change in land use is therefore considered to represent a localised change to a previously disturbed land resource. The potential effect on land use and the existing land resource is considered to be permanent, negative and slight.

11.4.1.2 Soil Stripping, Excavation and Regrading

Site clearance, topsoil stripping, excavation and regrading will result in the removal and disturbance of in-situ soils and exposure of subsoil. Exposed soils may be susceptible to erosion and deterioration during periods of rainfall, while construction traffic may result in localised compaction of retained soils.

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The potential effect on the existing soil resource is considered to be short-term, negative and slight during construction. The permanent loss of soil within building and hardstanding footprints is considered localised and not significant in the context of the previously modified nature of the site.

11.4.1.3 Soil Erosion and Sediment Mobilisation

Excavated areas and soil stockpiles have the potential to generate sediment-laden runoff during rainfall events. If uncontrolled, sediment could be mobilised beyond the site and enter the surrounding drainage network. This pathway is also considered in Chapter 12 – Water.

Subject to the implementation of temporary drainage, sediment control and stockpile management measures, the potential effect is considered short-term, negative and slight.

11.4.1.4 Soil Contamination

Construction plant, fuels, oils, chemicals, concrete and other potentially polluting materials represent potential sources of soil contamination in the event of accidental spills or poor handling. Made ground is present on the site and may contain anthropogenic inclusions; accordingly, appropriate inspection and management of excavated materials will be required.

Without mitigation, an accidental significant spill could result in a localised adverse effect on soil and underlying geology. With the proposed pollution prevention and spill response measures in place, the residual potential effect is considered short-term, negative and slight.

11.4.1.5 Excavated Material and Waste Soils

The construction works will generate excavated topsoil, made ground and natural subsoil. Suitable material may be reused within the development, while surplus or unsuitable material will require appropriate reuse, recovery or disposal. The removal of soil from the site has the potential to affect the soil resource and may also result in additional transport movements.

Where excavated material is appropriately classified, tracked and managed through authorised reuse, recovery or disposal routes, the potential effect on the receiving environment is considered neutral and imperceptible.

11.4.1.6 Geological Environment and Excavation

Excavation for foundations, drainage and services may locally disturb the underlying cohesive deposits and, where encountered, weathered or competent bedrock. The proposed works are not anticipated to affect any regionally or nationally significant geological feature. The potential effect on the geological environment is considered localised, negative and slight.

11.4.1.7 Groundwater and Hydrogeology

Excavation and removal of soil cover may temporarily increase the vulnerability of the underlying groundwater environment to accidental contamination. The potential for changes to groundwater levels is considered limited given the site conditions, the absence of groundwater encountered during the relevant site investigations and the absence of significant groundwater abstraction in the vicinity. The potential effect on groundwater is considered short-term, negative and slight, subject to the implementation of appropriate pollution prevention measures. Detailed assessment of effects on groundwater is provided in Chapter 12 – Water.

11.4.1.8 Dust and Soil Tracking

Earthworks, stockpiling and movement of excavated material may generate dust during dry or windy conditions. Soil may also be deposited on the surrounding road network by construction traffic. These effects are temporary and will be controlled through appropriate dust suppression, vehicle management

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and road-cleaning measures. The detailed assessment of air quality effects is provided in the relevant Air Quality and Climate chapter.

11.4.2 Operational Phase

Following completion of construction and reinstatement of landscaped areas, no ongoing significant adverse effects on the underlying soils or geology are anticipated during operation.

The increase in buildings and hardstanding will reduce the area of exposed natural soil and therefore reduce direct rainfall infiltration. However, the available site investigation information indicates poor infiltration characteristics and the proposed surface water strategy does not rely on infiltration to manage runoff. Surface water will instead be managed through SuDS, attenuation and controlled discharge.

There is a potential for localised soil or groundwater contamination in the unlikely event of leakage or failure of water supply or foul drainage infrastructure. The proposed infrastructure will be designed, tested, commissioned and maintained in accordance with Uisce Éireann requirements, and the potential effect is considered long-term, negative and imperceptible.

11.4.3 Cumulative Effects

Cumulative effects have been considered in relation to the wider Cherry Orchard Point development, including the approved Phase 1 and Phase 2 developments and the future Phase 4 development. The principal potential cumulative interactions for land, soils and geology relate to construction earthworks, the management and movement of excavated materials, soil stockpiling, dust, sediment mobilisation and the use of common authorised waste or recovery facilities.

The proposed development will implement appropriate soil management, materials tracking and pollution prevention measures and will coordinate construction activities with the wider masterplan. Subject to these measures, no significant cumulative effect on land, soils or geology is anticipated.

No additional interactions which may cause cumulative impacts on the surrounding environs are anticipated for the proposed Phase 3 subject site beyond those outlined within the Parent EIAR.

11.4.4 Do-Nothing Scenario

Under the Do-Nothing Scenario, the subject site would remain in its existing condition and the proposed construction-related disturbance, excavation and land use change would not occur. No additional effects on the land, soil or geological environment arising from the proposed development would therefore occur.

11.5 Avoidance, Remedial and Mitigation Measures

11.5.1 Construction Phase

A site-specific Construction Environmental Management Plan (CEMP) will be prepared and implemented by the appointed contractor. The CEMP will incorporate the relevant measures identified in this chapter and the Water chapter for the protection of soils, groundwater and surface water.

Topsoil will be stripped, segregated and stored separately from subsoil, made ground and construction waste where it is intended for reuse.

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Topsoil stockpiles will be protected from contamination, compaction, erosion and unnecessary trafficking. Stockpile heights and storage arrangements will be managed to preserve the suitability of topsoil for reuse.

Excavated made ground and subsoil will be segregated according to material type and intended reuse, recovery or disposal route.

Excavated materials will be inspected during excavation. Where unexpected staining, odours, unusual materials or other indications of contamination are encountered, the material will be isolated and subject to appropriate testing and classification before reuse or removal.

All soil and stone intended for removal from site will be classified and managed in accordance with applicable waste legislation and the requirements of the receiving facility. Authorised waste contractors and appropriately permitted/licensed facilities will be used.

Where feasible and subject to engineering and environmental suitability, excavated soils will be reused within the development to reduce unnecessary import and export of material.

Soil stockpiles and exposed ground will be managed to minimise erosion and sediment mobilisation. Stockpiles will be located away from drainage infrastructure and protected as required.

Temporary surface water management and sediment control measures will be implemented during construction, consistent with Chapter 12 – Water.

Fuels, oils and chemicals will be stored in secure, appropriately bunded areas. Refuelling and maintenance of plant will be undertaken in designated areas where practicable.

Spill kits will be available throughout the site and emergency spill response procedures will be implemented immediately in the event of a spill.

Concrete and cementitious materials will be managed to prevent uncontrolled discharge to soil, groundwater or the drainage network. Concrete washout will be undertaken in designated areas and managed appropriately.

Wheel-washing/road-cleaning measures will be implemented as required to prevent soil and debris being transferred onto the public road network.

Dust suppression measures will be implemented during dry weather and earthworks, including appropriate damping down, covering of loads and management of stockpiles.

Excavations will be appropriately supported and managed in accordance with the detailed geotechnical design and construction safety requirements.

11.5.2 Operational Phase

Landscaped and open areas will be reinstated with suitable topsoil and planting following completion of the construction works.

The proposed surface water drainage and SuDS infrastructure will be inspected and maintained in accordance with the relevant design and maintenance requirements.

Water supply and foul drainage infrastructure will be inspected, tested and maintained in accordance with Uisce Éireann requirements to minimise the potential for leakage or uncontrolled discharge.

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Any localised soil contamination arising during operation will be managed in accordance with the relevant environmental and waste management requirements.

11.5.3 Worst-Case Scenario

The principal worst-case scenario for land, soils and geology would involve an uncontrolled release of a significant quantity of fuel, oil, chemical or cementitious material during construction, or a failure of drainage infrastructure during operation resulting in contamination of soil or groundwater. Such events are considered unlikely and will be addressed through the pollution prevention, containment, emergency response, inspection and maintenance measures described above and in Chapter 12 – Water.

11.6 Residual Impacts

11.6.1 Construction Phase

Following implementation of the proposed avoidance, remedial and mitigation measures, the potential for construction activities to result in significant adverse effects on land, soils and geology will be minimised.

The residual effects associated with site clearance, soil stripping, excavation, construction traffic, temporary soil exposure and materials management are considered to be short-term, negative and slight in significance. The permanent loss of soil within the building and hardstanding footprints is localised and is not considered significant.

11.6.2 Operational Phase

Following completion of the development and reinstatement of landscaped areas, no significant ongoing adverse effects on land, soils or geology are anticipated. The residual effect during the operational phase is considered to be long-term, neutral and imperceptible overall.

11.7 Monitoring

11.7.1 Construction Phase

The following monitoring activities should be followed during the construction phase:

- Inspection of exposed soils and excavated made ground for unexpected contamination or anthropogenic materials.
- Monitoring and record keeping of topsoil stripping, stockpiling, reuse and removal.
- Inspection of soil stockpiles and exposed areas to ensure that erosion and sediment mobilisation are controlled.
- Monitoring of surface water management and sediment control measures in coordination with the measures set out in Chapter 12 – Water.
- Monitoring of fuel, chemical and concrete storage and handling arrangements.
- Monitoring of spill prevention and emergency response measures.
- Monitoring of the cleanliness of the adjoining road network and implementation of road-cleaning measures where required.

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- Materials management and waste audits to maintain records of soil classification, movements, reuse, recovery and disposal.

11.7.2 Operational Phase

The following monitoring activities should be followed during the operation phase:

- Routine inspection and maintenance of the surface water drainage and SuDS infrastructure.
- Inspection and maintenance of water supply and foul drainage infrastructure in accordance with Uisce Éireann requirements.
- Routine inspection of landscaped areas and reinstated soils to ensure appropriate establishment and prevent significant erosion.

11.8 Interactions

11.8.1 Water

There is a direct interaction between Land, Soils and Geology and Chapter 12 – Water. Construction excavation, exposed soils and stockpiling may result in sediment mobilisation or accidental contamination of surface water and groundwater. Conversely, the poor infiltration characteristics of the site influence the surface water management strategy. The proposed drainage and pollution prevention measures are designed to manage these pathways.

11.8.2 Biodiversity

Potential interactions with Biodiversity (Chapter 8) arise principally through the potential mobilisation of sediment or contaminants from exposed soils during construction. The implementation of the CEMP and associated sediment and pollution control measures will minimise the potential for such effects.

11.8.3 Air Quality and Climate

Earthworks, stockpiling and movement of excavated soils may generate dust during construction. These potential effects are addressed through the dust control measures described in this chapter and the detailed assessment in the Air Quality (Chapter 5) and Climate (Chapter 6).

11.8.4 Traffic and Transport / Material Assets

The removal of surplus excavated material from the site may generate construction traffic. The movement and management of excavated materials will be coordinated with the construction logistics and traffic management measures set out in the relevant Traffic and Transport and Material Assets chapters (Chapter 14).

11.8.5 Human Health

Potential human health interactions principally relate to the unlikely exposure of construction workers or other receptors to contaminated soil or construction materials. Previous environmental testing has not identified significant contamination in the samples tested. The proposed soil management, pollution prevention and construction safety measures will further minimise potential risks. The detailed assessment of human health is provided in the Population and Human Health chapter.

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11.9 Difficulties Encountered

No significant difficulties were encountered in compiling this EIAR chapter. The assessment was informed by available environmental information and site investigation data.

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12 Water

12.1 Introduction

This chapter assesses the likely significant effects of the proposed development on the hydrological and hydrogeological environment. The assessment considers the existing surface water, groundwater and drainage environment within and surrounding the subject site and assesses the potential effects associated with the construction and operational phases of the proposed development.

The proposed development forms Phase 3 of the Cherry Orchard Point masterplan development and is located within Development Site 5 (Barnville) of the Park West and Cherry Orchard Local Area Plan lands in Dublin 10, within the administrative area of Dublin City Council. The Cherry Orchard Point masterplan development is bisected by Park West Avenue and comprises a number of development phases. Site 4, west of Park West Avenue, comprises development Phases 1, 2, and 4 while Site 5, east of Park West Avenue comprises the subject Phase 3 development. A full description of the proposed development is available in Chapter 1.

The assessment considers the potential effects of the proposed development on surface water and groundwater resources, including potential changes to surface water runoff and drainage patterns, surface water quality, groundwater, flood risk and existing and proposed drainage infrastructure. Potential effects associated with both the construction and operational phases of the proposed development are considered.

The assessment also considers the relationship between the proposed development and the Cherry Orchard Point masterplan, including existing and proposed surface water, foul drainage and water supply infrastructure serving the development lands.

The proposed development is located within the Liffey and Dublin Bay Catchment (Hydrometric Area 09) and the Liffey_SC_090 sub-catchment. The local surface water environment is associated with the Blackditch Stream, a predominantly culverted watercourse within the Cherry Orchard area. The Blackditch Stream forms part of the hydrological pathway towards the River Camac and the CAMAC_040 Water Framework Directive (WFD) river waterbody.

The proposed surface water drainage strategy has been developed having regard to the Greater Dublin Strategic Drainage Study (GDSDS), relevant Dublin City Council requirements and the principles of Sustainable Drainage Systems (SuDS). The proposed drainage strategy incorporates attenuation, controlled discharge and nature-based SuDS measures to manage surface water runoff and reduce the potential for adverse effects on the downstream drainage network and receiving water environment.

Flood risk associated with the proposed development has been assessed having regard to the Planning System and Flood Risk Management Guidelines for Planning Authorities and the relevant site-specific Flood Risk Assessment undertaken by Waterman Moylan. The assessment considers the potential for coastal, fluvial, pluvial and groundwater flooding, together with potential flooding associated with failure or blockage of drainage infrastructure.

The assessment has been undertaken having regard to relevant legislation, guidance, environmental information, site investigation information, drainage design information and previous assessments undertaken in relation to the Cherry Orchard Point development.

The proposed development will hereafter be referred to as the “proposed development” or “subject site”.

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12.1.1 Expertise and Qualifications

This chapter was undertaken by Penelope Ingle with Waterman Moylan Consulting Engineers who has 10 years' experience as a Civil Engineer (BEng) and reviewed by Ian Worrell with Waterman Moylan Consulting Engineers who has 30+ years' experience as a Civil Engineer (BscEng, DipEng, CEng, MIEI, DipPhysPlg).

12.1.2 Assessment Methodology

The assessment methodology has been developed to establish the baseline hydrological and hydrogeological conditions within and surrounding the subject site and to assess the potential effects of the proposed development on the identified water environment receptors.

The assessment considers:

the existing surface water drainage and hydrological characteristics of the subject site and surrounding area;

- the local surface water drainage network and downstream receiving watercourses;
- the relationship between the proposed development and the Blackditch Stream;
- the relevant downstream Water Framework Directive waterbody and its current status;
- the existing groundwater environment;
- the potential for construction activities to affect surface water and groundwater quality;
- potential changes to surface water runoff and drainage patterns during the operational phase;
- potential effects on existing and proposed drainage infrastructure;
- potential effects on flood risk within the subject site and surrounding area;
- the potential for water supply and foul drainage infrastructure to affect the water environment; and
- the effectiveness of the proposed surface water drainage, attenuation and Sustainable Drainage System measures in managing surface water runoff and water quality.

The assessment has been undertaken with reference to the Environmental Protection Agency (EPA) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022), the EU Water Framework Directive (2000/60/EC), the River Basin Management Plan 2022–2027, the Greater Dublin Strategic Drainage Study (GDSDS), the Planning System and Flood Risk Management – Guidelines for Planning Authorities and relevant Dublin City Council requirements.

The assessment of flood risk has had regard to the findings of the site-specific Flood Risk Assessment prepared for the proposed development. The assessment considers the potential sources, pathways and receptors associated with coastal, fluvial, pluvial and groundwater flooding, together with the potential for flooding arising from failure or blockage of drainage infrastructure.

The surface water drainage assessment has had regard to the proposed drainage network, catchment areas, attenuation requirements, discharge rates, Sustainable Drainage Systems and hydraulic modelling undertaken for the proposed development.

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The assessment of water supply and foul drainage considers the potential for the construction and operation of these networks to result in effects on surface water or groundwater, including in the event of accidental damage, leakage or failure.

In assessing likely potential and predicted effects, account is taken of the importance and sensitivity of the relevant environmental attributes, together with the predicted magnitude, extent, likelihood and duration of the potential effects.

In accordance with the EPA EIA Guidelines (2022), the following terms are used in the assessment of effects:

- Quality of an effect is described as either Positive, Neutral or Negative.
- Significance of an effect is described as either Imperceptible, Slight, Moderate, Significant or Profound.
- Duration of an effect is described as either Temporary, Short-term, Medium-term, Long-term or Permanent.

12.1.3 Relevant Legislation and Guidance

The assessment of the potential effects of the proposed development on the water environment has been undertaken having regard to relevant European, national and local legislation, statutory guidance and recognised best practice.

The principal legislation and guidance considered in the assessment includes:

- Environmental Impact Assessment Directive 2011/92/EU, as amended by Directive 2014/52/EU;
- European Communities (Environmental Impact Assessment) Regulations 2018;
- EU Water Framework Directive 2000/60/EC;
- European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended;
- European Communities Environmental Objectives (Groundwater) Regulations 2010, as amended;
- River Basin Management Plan 2022–2027;
- EPA Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022);
- Planning System and Flood Risk Management – Guidelines for Planning Authorities (2009);
- Greater Dublin Strategic Drainage Study (GDSDS);
- relevant Sustainable Drainage Systems guidance;
- relevant Dublin City Council Development Plan policies and objectives;
- relevant Dublin City Council drainage requirements and standards;

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- Geological Survey Ireland groundwater and geological information; and
- relevant Uisce Éireann requirements, Codes of Practice and Standard Details in relation to water supply and wastewater infrastructure.

The assessment has also had regard to relevant guidance and requirements relating to the protection of surface water and groundwater resources and the management of surface water runoff from new development.

12.1.4 Sources of Information

The assessment has been informed by a review of available information relating to the proposed development, the Cherry Orchard Point masterplan development and the surrounding hydrological and hydrogeological environment.

The following sources of information have been considered:

- Environmental Protection Agency water quality and Water Framework Directive information;
- EPA and Catchments.ie catchment information;
- Geological Survey Ireland geological and hydrogeological mapping;
- Office of Public Works flood mapping;
- relevant Dublin City Council planning and drainage information;
- the Dublin City Development Plan 2022–2028;
- the Park West and Cherry Orchard Local Area Plan;
- available topographical survey information;
- existing drainage records and infrastructure information;
- relevant site investigation information;
- proposed development and civil engineering drawings;
- proposed surface water drainage and Sustainable Drainage System design information;
- hydraulic modelling undertaken for the proposed development;
- the site-specific Flood Risk Assessment;
- relevant Uisce Éireann correspondence and Confirmation of Feasibility documentation; and
- previous planning and environmental assessments undertaken for the Cherry Orchard Point development.

12.1.5 Consultation

Consultation undertaken in relation to the proposed development has been considered as part of the assessment of the water environment.

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Particular regard has been given to consultation and correspondence with Dublin City Council in relation to surface water drainage, Sustainable Drainage Systems and flood risk, and with Uisce Éireann in relation to the provision of water supply and wastewater infrastructure.

Relevant consultation and correspondence undertaken in connection with the Cherry Orchard Point masterplan and previous development phases have also been considered where applicable to the proposed development.

12.2 Subject Site Characteristics

12.2.1 Surface Water

Hydrological Environment

The proposed development forms part of the Cherry Orchard Point masterplan and is located within the Liffey and Dublin Bay Catchment (Hydrometric Area 09) and the Liffey_SC_090 sub-catchment.

The local surface water environment is associated with the Blackditch Stream, a predominantly culverted watercourse within the Cherry Orchard area. The Blackditch Stream represents the principal local hydrological pathway relevant to the subject site and ultimately drains towards the River Camac.

The Blackditch Stream is not designated as a Water Framework Directive (WFD) River Waterbody by the Environmental Protection Agency (EPA). It nevertheless forms part of the local hydrological pathway towards the CAMAC_040 WFD river waterbody.

The drainage pathway from the Cherry Orchard area includes the Blackditch Stream and associated downstream drainage and watercourse systems before ultimately reaching the River Camac. The River Camac forms part of the Liffey Estuary and Dublin Bay drainage system.

The existing surface water environment has been established through a review of available topographical survey information, drainage records, EPA and WFD mapping, catchment information, historic Ordnance Survey Ireland (OSI) mapping and previous assessments undertaken in relation to the Cherry Orchard Point development. Historic maps for the locality indicate that the ditch system identified on Site 4 (west of Park West Avenue) historically had hydrological connectivity from the east, merging within the site and flowing towards the west. **No ditch system is identified on Site 5** (the site for which the proposed development is located on). This historical hydrological connectivity has subsequently been interrupted by the development of the M50 to the west and residential development to the east. Based on the available mapping and existing site conditions, the historic ditch system is not considered to represent the current primary drainage pathway for the subject site. Refer to Figure 12-1: Site Location (Source: OSI Viewer Historic Maps) below for an extract of this historic map.

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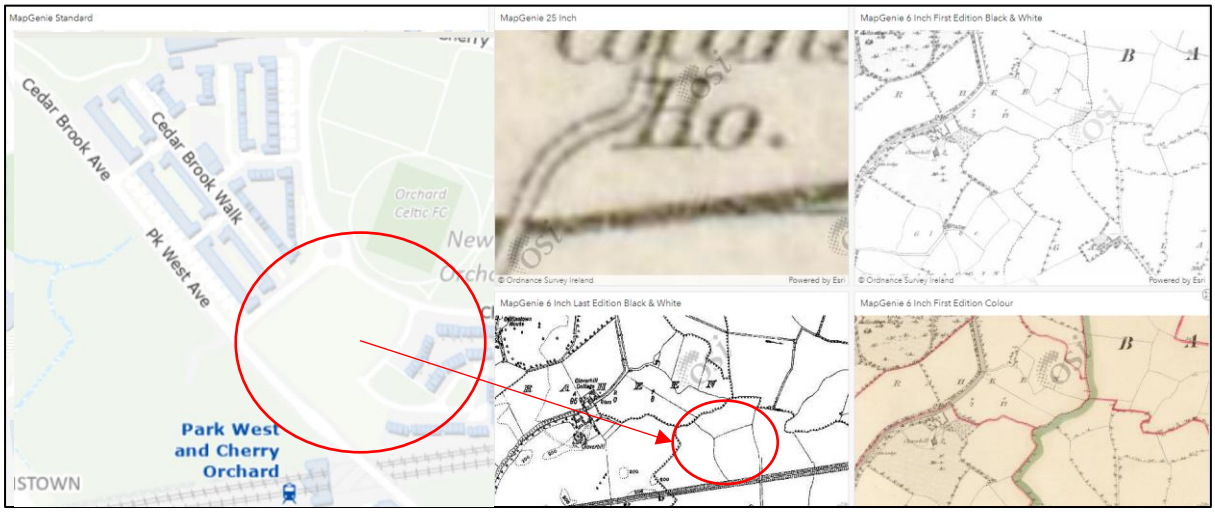


Figure 12-1: Site Location (Source: OSI Viewer Historic Maps)

Watercourses and Receiving Waterbodies

The Blackditch Stream represents the principal local watercourse and hydrological pathway relevant to the subject site. The watercourse is predominantly culverted through the Cherry Orchard area and forms part of the downstream drainage pathway towards the River Camac.

The relevant downstream WFD river waterbody is CAMAC_040. The River Camac subsequently discharges towards the River Liffey and the Liffey Estuary and Dublin Bay system.

The relevant hydrological pathway is therefore considered to comprise:

Proposed development → existing/proposed surface water drainage network → Blackditch Stream →
→ River Camac (CAMAC_040) → River Liffey / Liffey Estuary → Dublin Bay.

The potential for the proposed development to affect these downstream watercourses and waterbodies is considered within the assessment of potential effects.

Surface Water Quality and WFD Status

The relevant downstream WFD waterbody for the purposes of this assessment is CAMAC_040**.**

CAMAC_040 was classified as having Poor WFD status for the 2016–2021 assessment period and is identified as At Risk of failing to achieve its WFD objectives. Identified pressures on the waterbody include urban runoff, urban wastewater and hydromorphological pressures.

The Blackditch Stream itself does not have an assigned WFD status as it is not designated as a WFD River Waterbody. Its connection to the drainage system means that it remains a relevant hydrological pathway between the proposed development and the downstream WFD waterbody.

The existing condition of the downstream receiving water environment has therefore been considered in assessing the potential for the proposed development to affect surface water quality, particularly in relation to the mobilisation of suspended solids, hydrocarbons and other pollutants during construction and potential changes to the quantity and quality of surface water runoff during operation.

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Flood Risk

A site-specific Flood Risk Assessment (FRA) has been prepared by Waterman Moylan Engineers and is submitted with the planning application. The assessment has been undertaken in accordance with the Planning System and Flood Risk Management: Guidelines for Planning Authorities (DEHLG/OPW, 2009) and considers potential sources of flooding including coastal, fluvial, pluvial and groundwater flooding, together with potential flooding associated with failure or blockage of drainage infrastructure.

The subject site is located approximately 13.1 km inland from the Irish Sea, with the nearest area identified as being potentially at risk of coastal flooding located at Islandbridge on the River Liffey, approximately 4.7 km from the subject site. The OPW flood mapping indicates that the subject site is not at risk of coastal flooding. Given the separation distance, site levels and absence of a viable pathway between the coastal flood source and the subject site, the risk of coastal flooding is considered negligible.

The Cherry Orchard Point masterplan development is located within the Blackditch Stream catchment. There is no direct hydrological connection between the subject site and the Blackditch Stream through a natural watercourse or direct surface water drainage connection. An indirect hydrological pathway may occur where overland flows from the site enter the surface water drainage network serving the adjacent roads, which ultimately drains towards the Blackditch Stream and River Camac.

OPW fluvial flood mapping indicates that the subject site is not at risk of fluvial flooding, including during the 0.1% Annual Exceedance Probability (AEP) event (1-in-1,000-year event). The nearest identified flood node on the River Camac is located approximately 975 m south of the subject site, with the predicted 0.1% AEP flood level at this location approximately 3.47 m below the lowest existing ground level of the subject site. Recorded historical flood events in the wider area are also located approximately 975 m south of the subject site and are associated with the identified floodplain of the River Camac.

The potential for pluvial flooding has been considered having regard to the existing site topography and surrounding drainage infrastructure. While the potential for surface water accumulation and overland flow exists during periods of intense rainfall, the proposed development incorporates appropriate surface water management measures, including attenuation, Sustainable Drainage Systems (SuDS), controlled discharge, appropriate finished floor levels and defined exceedance flow routes.

Groundwater flood risk has also been considered. No recorded groundwater flooding has been identified at the subject site and the potential for groundwater flooding is considered low.

The FRA concludes that the overall flood risk to the proposed development is low to negligible, with the residual risk associated with coastal, fluvial, pluvial and groundwater sources considered low or negligible following incorporation of the proposed drainage and flood risk management measures. Potential flooding associated with human or mechanical error, including failure or blockage of the drainage network, is also addressed through appropriate finished floor levels, exceedance flow routing and regular inspection and maintenance of the surface water drainage system.

Designated Sites and Hydrological Connectivity

The potential for hydrological connectivity between the proposed development and downstream designated sites has been considered having regard to the surface water pathway from the subject site through the local drainage network and Blackditch Stream to the River Camac and downstream receiving waters.

The River Camac ultimately connects to the River Liffey and the Liffey Estuary and Dublin Bay system. Potential effects on European sites associated with the downstream receiving environment are

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considered separately within Chapter 8 – Biodiversity and, where relevant, the Natura Impact Statement.

12.2.2 Groundwater

Hydrogeological Environment

The hydrogeological environment underlying the subject site has been considered with reference to available Geological Survey Ireland information, site investigation data and the characteristics of the proposed development.

The subject site is located within an established urban environment and has previously been subject to development and site modification. Made ground/fill material is present within the site.

Site investigation and infiltration testing undertaken at the subject site identified poor infiltration characteristics, with the tested locations not considered suitable for soakaway design. No groundwater was encountered during the relevant site investigation.

The potential for the proposed development to affect groundwater has therefore been considered primarily in relation to construction activities, excavation and the potential for accidental releases of fuels, oils or other potentially polluting substances, together with potential leakage or failure of water supply and foul drainage infrastructure.

Groundwater Body Status and Flood Risk

The groundwater body underlying the subject site was classified as having Good status for the 2016–2021 assessment period based on EPA waterbody status information. This classification relates to the overall status of the groundwater body under the Water Framework Directive and provides an indication of the existing groundwater status against which potential effects are assessed. An extract of the EPA groundwater body status mapping is presented in Figure 12-2: EPA's Groundwater Body Status Map.

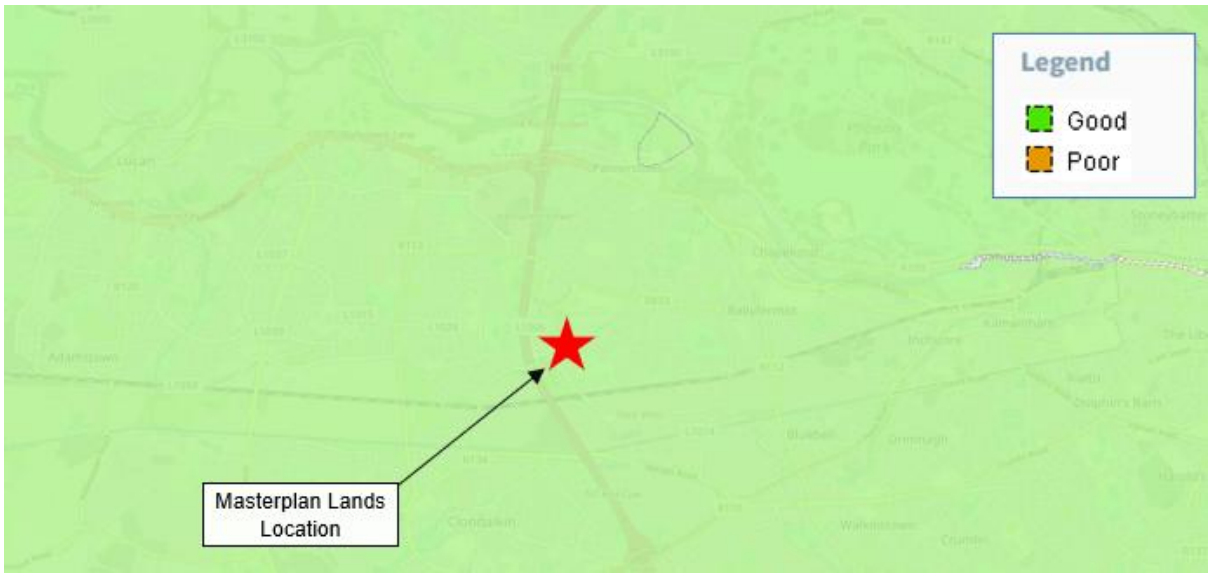


Figure 12-2: EPA's Groundwater Body Status Map

Groundwater flood risk at the subject site has also been considered having regard to available groundwater flood mapping and site investigation information. No recorded groundwater flooding has been identified at the subject site and the potential for groundwater flooding is considered low.

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Aquifer

The National Aquifer Bedrock Map prepared by the Geological Survey of Ireland (GSI) was consulted and an extract is presented in Figure 12-3: Extract from GSI's Bedrock Aquifer Map. The subject site is underlain by a Poor Aquifer – Bedrock which is Generally Unproductive except for Local Zones (Pl), indicating that the underlying bedrock has limited groundwater potential and is generally unproductive except in localised zones.



Figure 12-3: Extract from GSI's Bedrock Aquifer Map

12.2.3 Water Supply and Foul Water Infrastructure

Water supply for the proposed development will be provided through connection to the public water supply network operated by Uisce Éireann. Foul wastewater generated by the proposed development will be collected through a dedicated foul drainage network and conveyed to the public wastewater network.

The proposed water supply and foul drainage infrastructure will be designed and constructed in accordance with the requirements of Uisce Éireann and the relevant Codes of Practice and Standard Details. The proposed foul drainage network will remain separate from the surface water drainage network.

During construction, there is potential for accidental damage to existing or newly installed water supply or foul drainage infrastructure, which could result in leakage or uncontrolled discharge and a potential localised effect on surface water or groundwater quality. During operation, failure or damage to water supply or foul drainage infrastructure could similarly result in leakage.

The potential for such effects will be minimised through the appropriate design, installation, testing, commissioning and maintenance of the proposed infrastructure in accordance with the requirements of Uisce Éireann.

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12.3 Characteristics of the Proposed Development

12.3.1 Surface Water Drainage

The proposed surface water drainage network has been designed to collect, convey, attenuate and discharge surface water runoff generated within the proposed development.

The proposed development has been divided into four surface water sub-catchments, with runoff managed through a combination of Sustainable Drainage Systems (SuDS), attenuation storage and controlled discharge. The surface water drainage strategy has been developed having regard to the Greater Dublin Strategic Drainage Study (GDSDS), relevant Dublin City Council requirements, the existing site topography and the drainage infrastructure serving the Cherry Orchard Point development.

The proposed surface water drainage system has been designed to accommodate the 1-in-100-year rainfall event with a 30% allowance for climate change. Surface water discharge will be restricted to 2 l/s/ha prior to connection to the downstream drainage network.

The proposed drainage strategy also incorporates appropriate exceedance flow routes to manage surface water in the event of rainfall exceeding the design capacity of the drainage system or localised blockage.

Four connections to the existing public surface water network are proposed, one for each surface water sub-catchment, subject to final design and agreement with Dublin City Council.

12.3.2 Sustainable Drainage Systems and Attenuation

The proposed development incorporates a range of Sustainable Drainage Systems (SuDS) to manage surface water runoff at source and provide treatment prior to discharge. The proposed SuDS measures include blue and blue-green roof systems at roof and podium level, bio-retention tree pits and rain gardens, permeable paving within parking areas, permeable surfacing within public spaces, and a shallow detention basin with below-ground stone void storage within the proposed open green space.

Approximately 1,700 m³ of attenuation storage will be provided within the proposed drainage system. The proposed attenuation and flow-control measures will limit peak surface water discharge and reduce the potential for the proposed development to increase downstream flood risk.

The proposed SuDS measures will also provide treatment of surface water runoff and reduce the potential for pollutants, including suspended solids and hydrocarbons, to enter the downstream drainage network and receiving water environment.

12.3.3 Water Supply and Foul Water

Potable water for the proposed development will be provided through connection to the public water supply network operated by Uisce Éireann. Foul wastewater will be collected through a dedicated foul drainage network and conveyed to the public wastewater network.

The proposed water supply and foul drainage infrastructure will be designed and constructed in accordance with the requirements of Uisce Éireann and the relevant Codes of Practice and Standard Details, including the Uisce Éireann Code of Practice for Water Infrastructure (CDS-5020-03, Revision 3, August 2025) and Code of Practice for Wastewater Infrastructure (CDS-5030-03, Revision 3, August 2025), together with the associated Water Infrastructure Standard Details (CDS-5020-01, Revision 5, August 2025) and Wastewater Infrastructure Standard Details (CDS-5030-01, Revision 5, August 2025), as applicable.

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A Confirmation of Feasibility (CoF) dated 05 August 2026, under Uisce Éireann reference CDS26004704, confirms that the proposed water and foul water demand associated with 312 residential units and associated commercial and non-commercial space can be accommodated, subject to completion of the planned public foul water network upgrades. The CoF confirms that no water network infrastructure upgrades are required to accommodate the proposed water demand.

The current programme provided by Uisce Éireann indicates that the relevant public foul water network upgrade works are scheduled for completion in early 2027, subject to change. The proposed development will connect to the public water and wastewater networks subject to final design approval and the requirements of Uisce Éireann.

The proposed foul drainage network will remain separate from the surface water drainage network. Appropriate testing, inspection and commissioning of the proposed water supply and foul drainage infrastructure will be undertaken prior to operation.

12.3.4 Construction of Drainage Infrastructure

Construction of the proposed development will require the installation of new surface water, foul drainage and water supply infrastructure, including associated excavation, pipe laying, manholes, connections and reinstatement works.

Temporary drainage and water management measures will be implemented during construction to manage surface water runoff and prevent uncontrolled discharges from active construction areas. The installation of the proposed infrastructure will be coordinated with the existing and proposed infrastructure serving the Cherry Orchard Point development.

12.4 Predicted Impacts

The following sections assess the potential impacts of the proposed development on the hydrological and hydrogeological environment during the construction and operational phases. The predicted impacts identified below are assessed prior to the implementation of the mitigation measures set out in Section 12.5. The residual effects remaining following implementation of the mitigation measures are assessed separately in Section 12.6.

12.4.1 Construction Phase

Surface Water Quality

Construction activities associated with the proposed development, including site clearance, excavation, earthworks, stockpiling and the installation of drainage and other underground infrastructure, have the potential to result in the mobilisation of suspended solids and other pollutants in surface water runoff.

There is also potential for accidental releases of hydrocarbons, fuels, oils, cementitious materials and other potentially polluting substances associated with construction plant, materials and activities to enter the surface water drainage network. Given the hydrological pathway from the proposed development through the local drainage network and Blackditch Stream towards the River Camac, uncontrolled releases could potentially affect downstream surface water quality.

In the absence of mitigation measures, the mobilisation of sediment and the accidental release of potentially polluting substances could therefore result in a temporary deterioration in surface water quality within the local drainage network and downstream receiving environment. Accordingly, the potential impact on surface water quality is considered to be ***temporary, negative and of slight significance.***

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Groundwater Quality

Construction activities, including excavation and the installation of underground infrastructure, have the potential to affect groundwater quality through the accidental release of fuels, oils, chemicals or other potentially polluting substances.

Excavation of soils and groundworks may temporarily remove the protective soil cover and increase the vulnerability of groundwater to localised contamination, particularly where excavations remain open during construction. Construction plant and machinery may also present a potential source of contamination through accidental spillages of fuels, oils, paints, solvents and other potentially polluting substances. Concrete and cementitious materials used during construction could also affect groundwater quality if they enter open excavations or infiltrate into the underlying ground.

In the absence of mitigation measures, construction activities therefore have the potential to result in a temporary adverse effect on groundwater quality. The potential for construction activities to affect groundwater levels is considered limited given the nature of the proposed development and the existing site conditions. Accordingly, the potential impact on groundwater quality is considered to be ***temporary, negative and of slight significance.***

Hydrological Effects

Construction activities, including site clearance, excavation, earthworks and the progressive development of buildings, roads and hardstanding areas, have the potential to temporarily alter existing surface water runoff patterns and local drainage pathways within the subject site.

Temporary changes to ground levels, exposed areas and the use of temporary construction areas could result in increased, redirected or concentrated surface water runoff. The obstruction or alteration of existing drainage pathways during construction could also result in localised changes to the existing hydrological regime.

In the absence of appropriate temporary drainage and surface water management measures, these changes could result in uncontrolled runoff, localised ponding or increased flows to surrounding drainage infrastructure. Accordingly, the potential impact on the local hydrological regime is considered to be ***temporary, negative and of slight significance.***

Flood Risk

The subject site is located within Flood Zone C and is not identified as being at risk of coastal or fluvial flooding. Construction activities, including excavation and earthworks, will be confined to the subject site, with no works proposed outside the site boundary. The construction works are therefore not expected to affect floodplain storage or conveyance associated with coastal or fluvial flooding.

However, exceptionally high intensity rainfall during the construction phase has the potential to result in localised surface water accumulation and pluvial flooding within the subject site or surrounding areas, particularly where temporary drainage pathways are altered or obstructed.

In addition, uncontrolled surface water runoff or accidental releases of potentially polluting substances could affect the local drainage system and downstream receiving water environment.

In the absence of mitigation measures, the construction phase therefore has the potential to result in a temporary adverse effect in relation to localised pluvial flood risk and water quality. Accordingly, the potential impact on flood risk is considered to be ***temporary, negative and of slight significance.***

Water Supply and Foul Drainage

Construction of the proposed water supply and foul drainage infrastructure will require excavation, pipe laying, manholes, connections and associated works.

There is potential for accidental damage to existing services or newly installed infrastructure during construction, which could result in leakage or uncontrolled discharge. Such an occurrence could result in a localised effect on surface water or groundwater quality.

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In the absence of mitigation measures, accidental damage or failure of water supply or foul drainage infrastructure during construction could therefore result in a temporary localised adverse effect on the receiving water environment. Accordingly, the potential impact on water supply and foul drainage infrastructure is considered to be ***temporary, negative and of slight significance.***

12.4.2 Operational Phase

Surface Water Quality

The proposed development will result in an increase in the area of buildings, roads, footpaths and other hardstanding areas within the subject site. Surface water runoff from these areas has the potential to contain suspended solids, hydrocarbons and other pollutants associated with residential and urban land uses.

In the absence of surface water treatment and management measures, these pollutants could be conveyed from the developed site into the surface water drainage network serving the site and adjacent roads, providing an indirect hydrological pathway towards the Blackditch Stream and ultimately the River Camac.

The operational phase therefore has the potential to result in a long-term adverse effect on surface water quality through changes in the quality of surface water runoff. Accordingly, the potential impact on surface water quality is considered to be ***long-term, negative and of slight significance***.

Hydrological Effects

The proposed development will result in an increase in the area of hardstanding associated with buildings, roads, footpaths and other paved areas. In the absence of appropriate surface water management measures, the increase in impermeable area could result in an increase in the volume and rate of surface water runoff generated within the subject site.

This could result in increased peak flows being conveyed to the downstream drainage network and could alter the existing hydrological regime.

The operational phase therefore has the potential to result in a long-term adverse effect on the local hydrological regime and downstream drainage network. Accordingly, the potential impact on the local hydrological regime is considered to be ***long-term, negative and of slight significance***.

Flood Risk

The proposed development is located within Flood Zone C and is not identified as being at risk of coastal or fluvial flooding. The Flood Risk Assessment identifies that historical flood events recorded in the wider area are principally associated with the floodplains of the River Camac, located south of the Grand Canal, and are not considered to present a flood risk to the subject site.

Notwithstanding this, the increase in hardstanding associated with the proposed development has the potential to increase surface water runoff. In the absence of appropriate surface water management measures, this could increase the potential for localised pluvial flooding within the site and could contribute to increased downstream flood risk.

The operational phase therefore has the potential to result in a long-term adverse effect in relation to surface water and pluvial flood risk. Accordingly, the potential impact on flood risk is considered to be ***long-term, negative and of slight significance.***

Hydrogeological Effects

During the operational phase, the proposed development will not involve groundwater abstraction or other activities that would result in a significant alteration to the existing groundwater regime.

The potential for effects on groundwater quality is principally associated with the unlikely event of leakage or failure of the proposed water supply or foul drainage infrastructure. In the absence of appropriate design, testing, maintenance and management measures, such leakage or failure could

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result in the release of water or foul wastewater to ground and could potentially affect groundwater quality.

The operational phase therefore has the potential to result in a long-term adverse effect on groundwater quality in the event of failure or leakage of the proposed utility infrastructure. Accordingly, the potential impact on the hydrogeological regime is considered to be ***long-term, negative and of slight significance***.

Water Supply and Foul Drainage

The operational phase will result in an increase in potable water demand and foul wastewater generation associated with the proposed residential and non-residential uses.

The proposed water supply and foul drainage networks will connect to the existing public infrastructure. In the event of leakage, failure or uncontrolled discharge from the proposed infrastructure, there is potential for water or foul wastewater to be released to ground or the surrounding drainage network, with a consequent potential effect on groundwater or surface water quality.

In the absence of mitigation and appropriate design and maintenance measures, the operation of the proposed water supply and foul drainage infrastructure therefore has the potential to result in a long-term localised adverse effect on surface water and groundwater quality. Accordingly, the potential impact on water supply and foul drainage infrastructure is considered to be ***long-term, negative and of slight significance.***

12.4.3 Do-Nothing Scenario

In the event that the proposed development does not proceed, the subject site would remain in its existing condition and the changes to surface water runoff, drainage infrastructure, water demand and foul wastewater generation associated with the proposed development would not occur.

The existing hydrological and hydrogeological environment would continue to be influenced by the existing land use and drainage infrastructure within the Cherry Orchard Point masterplan development and surrounding area.

The Do-Nothing Scenario is therefore not anticipated to result in any additional effects on the hydrological or hydrogeological environment arising from the proposed development.

12.5 Mitigation Measures

The assessment has identified the following potential effects on the hydrological and hydrogeological environment which require management and mitigation during the construction and operational phases of the proposed development:

- Pollution of surface water or groundwater by chemicals and other potentially polluting substances;
- Pollution of surface water or groundwater by silt and suspended solids;
- Changes to surface water runoff and flow pathways; and
- Potential effects associated with the operation of the proposed surface water drainage, water supply and foul drainage infrastructure.

The construction phase will represent the greatest potential risk to the hydrological and hydrogeological environment due to the level of excavation, earthworks, construction activity and use of construction plant and materials. Appropriate mitigation measures will therefore be implemented throughout the construction phase to prevent or minimise potential effects.

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12.5.1 Mitigation During Construction

A site-specific Construction Environmental Management Plan (CEMP) will be prepared and implemented by the appointed contractor and maintained throughout the construction phase. The CEMP will incorporate measures for the protection of surface water and groundwater, including procedures for the management of surface water runoff, sediment control, chemical storage and accidental spillages.

The CEMP will also include appropriate emergency response procedures for dealing with accidental spillages or releases of potentially polluting substances and will identify the responsibilities of site personnel in responding to such incidents.

Surface Water Runoff

Temporary surface water management measures will be implemented during construction to collect, manage and appropriately treat runoff generated from active construction areas. Runoff will be managed to prevent uncontrolled discharge of sediment-laden water to the existing drainage network.

Temporary drainage measures will be maintained throughout the construction phase and will be adapted as construction progresses and areas of the site are progressively developed.

Weather conditions will be considered when planning earthworks and other activities with the potential to generate runoff. Soil stockpiles and exposed areas will be appropriately managed to minimise erosion and the mobilisation of sediment.

Chemical Pollution

Measures will be implemented to prevent pollution of surface water and groundwater from fuels, oils, chemicals, concrete and other potentially polluting substances used during construction.

Fuels, oils and chemicals will be stored in appropriately bunded and secure areas. Refuelling and maintenance of construction plant will be undertaken in designated areas located away from surface water drainage infrastructure where practicable.

Spill kits and appropriate spill response materials will be readily available on site. In the event of an accidental spill or release, the appropriate emergency response procedures will be implemented immediately to contain and prevent the migration of pollutants.

Concrete and cementitious materials will be managed to prevent uncontrolled discharge to the surface water drainage network or ground. Concrete washout will be undertaken only in designated areas with appropriate containment.

Silt and Suspended Solids

Measures will be implemented to minimise the mobilisation of silt and suspended solids from exposed soils, stockpiles, excavations and construction areas.

Soil stockpiles will be appropriately located and managed to minimise the potential for erosion and will be kept away from drainage infrastructure where practicable. Exposed areas will be stabilised or reinstated as soon as practicable following completion of works.

Where required, silt fencing, settlement measures or other appropriate sediment control measures will be installed to intercept and treat runoff prior to discharge.

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Changes to Runoff and Flow Pathways

Construction activities will be managed to minimise temporary changes to existing surface water runoff and flow pathways. Temporary drainage measures will be maintained as the development progresses to ensure that runoff is appropriately managed and that existing drainage pathways are not blocked or adversely affected.

Construction materials, plant and temporary works will be positioned to avoid obstructing surface water flow paths. Appropriate exceedance routes will be maintained where required to prevent a localised increase in flood risk during construction.

12.5.2 Mitigation During Operation

The proposed development incorporates Sustainable Drainage Systems (SuDS), attenuation and restricted discharge measures to manage surface water runoff during the operational phase.

The proposed surface water drainage system will be designed to accommodate the 1-in-100-year rainfall event with a 30% allowance for climate change, with surface water discharge restricted to 2 l/s/ha.

The proposed SuDS measures will provide treatment of surface water runoff prior to discharge and will reduce the potential for pollutants to enter the downstream drainage network and receiving water environment.

The proposed attenuation and surface water drainage infrastructure will be subject to appropriate inspection and maintenance to ensure that the required storage capacity and discharge rates are maintained.

The proposed water supply and foul drainage infrastructure will be designed, constructed and maintained in accordance with the requirements of Uisce Éireann and the relevant Codes of Practice and Standard Details. The foul drainage network will remain separate from the surface water drainage network.

12.6 Residual Effects

The residual effects are those which remain following implementation of the mitigation measures outlined in Section 12.5.

12.6.1 Construction Phase

Following implementation of the proposed construction-stage mitigation measures, including the management of surface water runoff, chemical pollution, silt and suspended solids, and changes to runoff and flow pathways, the potential for construction activities to adversely affect surface water and groundwater quality will be minimised.

The residual effects on surface water and groundwater quality, surface water runoff, drainage pathways and localised pluvial flood risk during the construction phase are considered to be short-term, negative and of slight significance.

12.6.2 Operational Phase

Following implementation of the proposed surface water drainage strategy, including SuDS, attenuation and restricted discharge, the potential for adverse effects on the downstream hydrological environment and flood risk will be minimised.

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The proposed SuDS measures will provide treatment of surface water runoff prior to discharge, while the proposed attenuation and restricted discharge arrangements will limit peak flows to the downstream drainage network.

The proposed water supply and foul drainage infrastructure will be designed, constructed, tested and maintained in accordance with the requirements of Uisce Éireann and the relevant Codes of Practice and Standard Details, thereby minimising the potential for leakage or failure to affect surface water or groundwater.

Following implementation of the proposed mitigation and ongoing inspection and maintenance measures, the residual effect during the operational phase is considered to be long-term, neutral and imperceptible overall.

12.7 In-Combination Effects and Cumulative Effects

12.7.1 In-Combination Effects

Potential interactions between the proposed development and other environmental receptors have been considered as part of the assessment.

During the **construction phase**, potential interactions are primarily associated with the mobilisation of silt, suspended solids and potentially polluting substances, which could result in effects on both the water environment and other receptors, particularly **Biodiversity (Chapter 8)** and **Land, Soils and Geology (Chapter 11)**.

During the **operational phase**, potential interactions are primarily associated with surface water runoff, drainage and water quality, including the potential for effects on downstream receiving waters and biodiversity. The proposed surface water drainage strategy, including SuDS, attenuation and restricted discharge, will manage surface water runoff and reduce the potential for adverse effects on the receiving environment.

The potential effects of the proposed development on biodiversity and land, soils and geology are assessed separately within Chapter 8 – Biodiversity and Chapter 11 – Land, Soils and Geology, respectively. Subject to implementation of the mitigation measures outlined in Section 12.5, no significant in-combination effects on the hydrological or hydrogeological environment are anticipated.

12.7.2 Cumulative Effects

Cumulative effects have been considered in relation to existing, permitted and proposed developments within the surrounding area, including the Cherry Orchard Point masterplan development and associated infrastructure.

The principal potential for cumulative effects relates to surface water runoff, drainage infrastructure, flood risk and water quality. The proposed development will incorporate SuDS, attenuation and restricted discharge at 2 l/s/ha, with the proposed surface water drainage system designed to accommodate the 1-in-100-year rainfall event with a 30% allowance for climate change.

The proposed development will form part of the Cherry Orchard Point development, with the surface water drainage strategy designed to integrate with the drainage infrastructure and maintain the relevant discharge rates. Subject to implementation and maintenance of the proposed drainage and pollution prevention measures, the proposed development is not anticipated to result in a significant cumulative effect on surface water, groundwater, flood risk or the hydrological and hydrogeological environment.

No additional interactions which may cause cumulative impacts on the surrounding environs are anticipated for the proposed Phase 3 subject site beyond those outlined within the Parent EIAR.

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12.8 Water Framework Directive Status

The potential for the proposed development to cause deterioration in the status of the relevant downstream surface water or groundwater bodies, or to compromise the achievement of their Water Framework Directive objectives, has been considered as part of the assessment. The proposed development does not involve a direct discharge to a WFD waterbody and incorporates surface water attenuation, SuDS, treatment and restricted discharge measures.

During construction, accidental discharges represent the principal potential risk to water quality. During operation, the potential for effects is principally associated with surface water runoff and the unlikely failure or leakage of water supply or foul drainage infrastructure. Subject to implementation of the proposed mitigation, design, inspection and maintenance measures, the proposed development is not anticipated to result in significant deterioration of WFD waterbody status or prevent the attainment of WFD objectives.

12.9 Risks to Human Health

Potential effects on human health in relation to the water environment are primarily associated with the unlikely contamination of groundwater or potable water supplies. The proposed development will connect to the public water supply operated by Uisce Éireann, and the proposed water supply and foul drainage infrastructure will be designed, constructed, tested and maintained in accordance with the relevant requirements. Construction-stage pollution prevention measures will further minimise the potential for contamination. No significant residual effect on human health in relation to the water environment is anticipated.

12.10 Difficulties Encountered

No significant difficulties were encountered in compiling this Water chapter. The assessment was informed by available environmental information, site investigation data, drainage design information, hydraulic modelling, flood risk assessment information and relevant consultation and correspondence.

12.11 Reinstatement

No specific reinstatement measures are anticipated in relation to the water environment beyond the normal reinstatement of temporary construction drainage, excavated areas and construction compounds on completion of the works.

12.12 Conclusions

The assessment has considered the potential effects of the proposed development on the hydrological and hydrogeological environment during both the construction and operational phases, including surface water quality, groundwater, hydrological effects, flood risk, water supply and foul drainage.

During construction, the principal potential effects relate to surface water and groundwater quality, mobilisation of silt and suspended solids, temporary changes to surface water runoff and flow pathways, localised pluvial flood risk and accidental releases of potentially polluting substances. Appropriate mitigation measures will be implemented through the Construction Environmental Management Plan (CEMP) and associated construction-stage drainage and pollution prevention measures.

During operation, the proposed surface water drainage strategy will incorporate SuDS, attenuation and restricted discharge at 2 l/s/ha. The proposed drainage system will accommodate the 1-in-100-year rainfall event with a 30% allowance for climate change, thereby managing surface water runoff and minimising the potential for adverse effects on the downstream drainage and receiving water environment.

The proposed development is located within Flood Zone C and is not identified as being at risk of coastal or fluvial flooding. Potential pluvial flood risk and historical flooding within the area have been

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considered, with the proposed surface water management measures designed to ensure that the development does not result in a significant increase in flood risk to surrounding areas.

The proposed water supply and foul drainage infrastructure will be designed, constructed and maintained in accordance with the requirements of Uisce Éireann and the relevant Codes of Practice and Standard Details. Subject to implementation of the mitigation, monitoring and maintenance measures outlined in this chapter, the proposed development is not anticipated to result in significant adverse effects on the hydrological or hydrogeological environment or significant deterioration in the status of relevant WFD waterbodies.

Overall, the residual effect of the proposed development on the hydrological and hydrogeological environment is considered to be long-term, neutral and imperceptible.

12.13 References

- Planning and Development Act 2000 (No. 30 of 2000), as amended.
- Planning and Development Regulations 2001 (S.I. No. 600 of 2001), as amended.
- European Communities (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018), as amended.
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- Uisce Éireann (2025), Code of Practice for Water Infrastructure – Connections and Developer Services, Design and Construction Requirements for Self-Lay Developments, CDS-5020-03, Revision 3, August 2025.
- Uisce Éireann (2025), Standard Details for Water Infrastructure, CDS-5020-01, Revision 5, August 2025.
- Uisce Éireann (2025), Code of Practice for Wastewater Infrastructure – Connections and Developer Services, Design and Construction Requirements for Self-Lay Developments, CDS-5030-03, Revision 3, August 2025.
- Uisce Éireann (2025), Standard Details for Wastewater Infrastructure, CDS-5030-01, Revision 5, August 2025.

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13 Human Health & Population

This section of the EIAR assess any potential impacts the proposed development may have on Population and Human Health in accordance with the requirements set out within the EIA legislation and guidance on preparation and content of EIAR. This chapter has been prepared by Abis Zaidi at KPMG Planning. Abis Zaidi is an RTPI and IPI qualified planner and Senior Consultant at KPMG Planning. He is a qualified Civil Engineer and Town Planner and has an overall 10 year plus work experience in Ireland and Internationally. Abis has been working as part of team projects and in the coordination and preparation of multiple EIA documents on behalf of multi-nationals and infrastructural providers. He has been involved in a diverse range of projects including contributions to numerous complex EIARs, and EIA screening reports.

Population and Human Health is a broad ranging topic and addresses the potential likely significant direct and indirect effects of the proposed development on population and human health. The assessment considers the existence, activities, and wellbeing of people. It comprises an important aspect of the environment to be considered. This chapter describes the demographic and socio-economic profile of the receiving environment and potential impact of the proposed development on population, i.e., human beings, and human health. Any likely negative impacts will be addressed through mitigating factors and actions to be applied to minimise these effects.

In assessing the approved Phase 1 application (ACP-318607-23), the Inspector concluded that:

> *"the proposed development would be consistent with the zoning objective of the site and the design brief in the LAP, and it is typical of the emerging, permitted, and envisaged character of the area. The increase in housing stock and proximity to high-capacity public transport would be a significant benefit in terms of population. I am satisfied that the potential for population and human health impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative population and human health impacts and there are significant positive outcomes in certain respects."*

In assessing the approved Phase 2 application (321931-25) Inspector's Report stated:

> *"The approach undertaken to derive the significance of effects from the receptor value and the magnitude of impacts is outlined. There are certain limitations with respect to the baseline demographic assessment relying on data collated up to 2016, and that more up-to-date census data for 2022 is not available in its entirety from the Central Statistics Office (CSO). In this regard I note that the area used for statistical analysis purposes in which the application site is located featured an increase of 1,309 persons over the 2016 to 2022 period. While the limitations in relying on 2016 data are noted, I would accept that this would be unlikely to have a significant impediment to the assessment of likely effects of the development on human health and population."*
>
> During Direct and Indirect Effects Conclusion, the inspector considered following:
>
> *"it is considered that the main significant direct and indirect effects on human health and population are, and will be mitigated as follows:*
>
> - *significant direct positive impacts for population, due to the substantive increase in the housing stock during the operational phase,*
> - *direct negative effects arising for human health during the construction phase, which would be mitigated by a suite of appropriate construction phase management*

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measures, including dust management, noise minimisation measures and monitoring, resulting in no residual impacts on human health."

Having regard to the above, it is considered that a similar approach to the impacts of the proposed development on population and human health has been adopted given that the scheme represents the logical continuation of the consented phases (Phase 1 and 2), of the overall the Cherry Orchard Point scheme will not in isolation or in combination give rise to adverse impacts on the environment that cannot be mitigated against.

13.1 Overview of Assessment Methodology

Population:

The impact on population has been assessed through consideration of socio-economic and social factors. Specifically, the assessment seeks to capture the social effects of the proposed scheme, visà-vis, impact of construction workforce on local services, impacts on quality of life and well-being issues reflected through a range of indicators including (but not limited to): existing health status of population in the area, access to facilities, and services etc., community health, participation etc. Economic impacts include any resulting employment and expenditure opportunities resulting from the scheme (at construction and operational stages of the scheme).

Human Health:

In addressing impacts on Population, it is important to consider the subsequent impacts of the proposed scheme on Human Health. This has been considered both separately and together to ensure the relationship between the two factors is considered in the assessment of impacts arising from the proposed scheme within the defined baseline.

Although there is no definition of Human Health within the EIA Directive, a commonly used (and widely accepted) definition of health is by The World Health Organisation (WHO), which defines health as *"a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity".*

In the assessment of impact on Human Health arising from the proposed development, the Parent EIAR set out the existing health status of the local study area catchment through relevant baseline information available in the local context. Where applicable (and information was inconsistent / inadequate at the local level) comparable data on Health, for a wider scale at Dublin Region level has also been set out. Subsequently the impact of the proposal during the different stages of construction and operation – on the welfare of the people, specifically the vulnerable groups (dependents) and quality of life, the impact on factors affecting human health, e.g., water supply, air, etc. and environment in general has been considered.

Chapter 13, Section 13.2 of the Parent EIAR sets out the detailed assessment methodology followed by the assessment of the impacts on Population and Human Health, including a detailed description of the baseline and indicators considered for both Population and Human Health covered in Section 13.2.3.

This Environmental Report provides an update to the baseline analysis that was not available at the time of drafting the Parent EIAR. The baseline update also covers any relevant updates in the baseline information since the Parent EIAR was drafted.

13.1.1 Baseline Data

The baseline data, as set out in the Parent EIAR, considered a range of Socio-Economic, Environmental and Wellbeing Factors for the defined study area / local environment. The assessment of impacts on Population and Human Health has been largely based on local population information sourced from the Central Statistics Office (CSO) Census data captured during the Census 2016 and 2022.

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Datasets analysed include:

- Population and Household Data
- Economic, Education and Employment Data
- General Human Health Data

Population and Household data capture the change (growth / decline) in the overall size of the area surrounding the subject development, the demographic profile, specifically age and gender distribution and the household composition within the area. This will help identify specific / potentially vulnerable groups, establishing a baseline for assessing possible effects on the receiving environment.

The Institute of Public Health's Guidance on Health Impact Assessment (2021) includes further details on who can be considered within the ambit of 'vulnerable / sensitive groups': young-age vulnerability (children and young people as potentially more vulnerable road users); old-age vulnerability (older people as potentially more vulnerable road users); low-income vulnerability (people living in deprivation, including those on low incomes for whom travel costs or alternatives may be limiting); poor health vulnerability (people with existing poor physical and mental health in relation to health trip journey times); and access and geographical vulnerability (people who experience existing access barriers or for whom close proximity to project change increases sensitivity)[5].

The economic and employment context draws on principle economic status data of persons in the Study Areas aged 15 years and older. The economic conditions of an area can have immense implications on the health of the population, for e.g., unemployment, income deprivation and social status can often have an impact on both physical and mental well-being of individuals. Negative impacts associated with unemployment include depression, anxiety, and self-esteem – this can in turn affect participation of such groups / individuals within the community and hence, often neglected. In addition, people living in deprivation also have reduced / limited access to financial resources, further restricting their access to healthcare, housing, travel, and other necessities.

Chapter 13 of the Parent EIAR set out the existing economic condition within the local study area to identify potential impacts as a result of the proposal on employment, and other economic activities. The baseline also captures the educational status of the receiving environment, which is a key contributing factor to improved employment, security, and therefore good health.

Census data has also been used to reflect on the (self-evaluated) general health status of residents in the Study Area. Where applicable and available, relevant health data has been presented for the local area and where local level data was limited, data representing the Dublin Region has been detailed to provide an overview of the health status within the administrative area. Some environmental indicators such as air and water quality data available for the local Cherry Orchard area have also been included in the baseline to provide a complete representation of health for the area.

Built Environment is considered another key factor impacting the health of population within an area. This includes (but is not limited to) access to green and blue spaces such as parks, playgrounds, recreational spaces, sports facilities, waterbodies, etc. Access to such facilities including the natural environment, is considered beneficial for mental health as it provides opportunities for community gatherings, recreation, activities that is inclusive of all age groups, and social connection[6]. Therefore, an assessment of the current provision of community and social infrastructure was conducted through spatial analysis.

[5] Health Impact Assessment Guidance: A Manual, 2021
[6] Ibid.

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This Chapter sets out the details of the approved mix of uses on Site 4 as provided under approved Phase 1 of the Scheme (ACP Ref: ACP-318607-23), specifically in terms of non-residential uses. The Phase 1 scheme includes a wide range of uses catering to the diverse needs and age groups, including, community, arts and cultural spaces, a childcare facility with associated external playing space, high-quality landscaped public open space which will include a public plaza, play space, outdoor fitness trail, communal amenity space, internal pedestrian, and cycle routes. The consequent impacts arising from the inclusion of these features as part of the proposal has been further discussed under Chapter 13, Section 13.6 of the Parent EIAR (and briefly discussed under this Chapter).

Chapter 13 of the Parent EIAR identified relevant proposed / upcoming schemes within the Study Area, to assess the effects / impact these may have in combination with the proposed scheme. The potential effects of these schemes in combination with the proposed development has been set out in Section 13.7 ‘Cumulative Impacts’’ of the Parent EIAR. Any relevance in the planning and development pipeline and subsequent impacts arising as a result of the same and in combination with the proposed scheme will be discussed in this Chapter.

Table 13.1 summarises planning applications for Key Development Sites and other lands in the Cherry Orchard LAP Area.

Table 13-1 Planning History – Residential Schemes within the Cherry Orchard LAP Area

Reg. Ref.	Address	Summary Development Description	Decision and Date
Planning History for the Subject Lands known as Key Development Sites 4 and 5 under the Park West Cherry Orchard Local Area Plan 2019: .			
Extant Planning Permission on designated Key Development Sites within Park West Cherry Orchard Local Area Plan (2019) Boundary			
4313/22 (Part 8)	Key Development Site 1	The proposed construction of a residential development comprising 172 no. homes (141 no. 3-bedroom two-storey terraced houses and 31 no. 2-bedroom two-storey terraced houses), 2 public open spaces approx. 0.83 ha /14% of site area, associated site infrastructure works/ supporting infrastructure, landscaping, public lighting, access roads/pavements, boundary treatments and provision for a link road/ pavements and cycleways to Ballyfermot. The Development also consists of a pocket park and children’s playground and 172 no. private parking spaces (1 no. in-curtilage parking per house) 14 no. on-street public car parking (includes 2 no. accessible parking spaces) and 20 no. public bicycle parking spaces.	Granted 03-10-2022
3490/25 (Part 8)	Key Development Site 2	Construction of a mixed-use development of 171 residential units and neighbourhood centre on a site of c.3.64 ha bound by Cherry Orchard Meadow, Blackditch Road, Croftwood Crescent and Cherry Orchard Avenue, Cherry Orchard, Dublin 10, which will consist of the following: • Construction of new neighbourhood centre block at the corner of Blackditch Road and Cherry Orchard Avenue, ranging in height from 4 to 5 storeys comprising; 4 no. retail units (599 sqm retail space) and 3 no. community, arts and	City Council – Approved 13 Apr 2026

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Reg. Ref.	Address	Summary Development Description	Decision and Date
		cultural space units (total 615 sqm) at ground floor level; and 107 'Older Persons' apartment units (94 no. 1-bed and 13 no. 2 bed) on all floors; and stores, bin and bicycle storage and a plant room; • Construction of 64 no. 2 storey semi-detached/terraced houses (13 no. 2-bed and 51 no. 3-bed) arranged in 3 clusters facing adjoining roads and new internal streets; • Provision of a new central park extending from Cherry Orchard Meadow to Cherry Orchard Avenue comprising 0.76 ha public open space which includes a restored watercourse feature from the daylighting of the Blackditch Stream (currently culverted underground), play area, civic plaza, pedestrian bridge and walkways along the stream; • A total of 638 sqm communal open space; • Provision of 91 no. car parking spaces, 4 no. motorcycle spaces and 1 no. loading bay; • Provision of 228 no. bicycle parking spaces; • Three vehicular accesses are proposed from Blackditch Road, Cherry Orchard Meadow and Cherry Orchard Avenue; • Road works and public realm improvements along Cherry Orchard Avenue between Blackditch Road, Croftwood Crescent comprising; demolition of roundabout at junction of Cherry Orchard Avenue and Cherry Orchard Grove and replacement with a T-junction; new pedestrian crossings and relocation of 2 no. existing bus stops (Stop ID:2909 and Stop ID: 7507); • Site clearance works including removal of existing fencing surrounding the site; • Boundary treatments, public lighting, drainage works, traffic calming measures, new pedestrian crossings, internal roads and footpaths, landscaping and ESB substation; and • All ancillary site services and development works above and below ground.	
N/A	Key Development Site 3a	None	N/A
N/A	Key Development Site 3b	None	N/A

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Reg. Ref.	Address	Summary Development Description	Decision and Date
318607 (Part 10)- LDA on behalf of DCC	Key Development Site 4	The proposed development (GFA of c. 66,399sqm) involves the construction of a residential led mixed use scheme across 16 blocks contained within 9 buildings ranging in height from 4 to 15 storeys. The development includes the provision of 708no. residential apartments comprising 547no. cost rental and 161no. social / affordable units, 7no. retail / commercial units (totalling 373sq,m GFA), community, arts and cultural spaces delivered across 13no. community and arts / cultural units (totalling 1,222sq.m GFA), and associated external events space and community gardens (1,157sq.m) and a childcare facility (672sq.m GFA) with associated external playing space (200sq.m) and all ancillary accommodation including sub stations, plant, refuse stores, cycle stores, and metre / comms rooms. The proposed development also includes the provision of landscaped public open space of 6,123 sq. m. including a public plaza, play space, outdoor fitness trail, communal amenity space of 5,596 sq. m. Private open space for the apartment units is achieved through the provision of balconies or terraces for all individual apartments. aThe proposed development will also involve the provision of sufficient car parking (including accessible car parking) and bicycle parking spaces at undercroft and surface level throughout the development. The development will also provide all associated ancillary site development infrastructure. (As applied)	Granted 01/07/2024 Commenced
321068 (Part 10)-LDA on behalf of DCC	Key Development Site 4	Proposed alterations to the previously granted ABP-318607-23, construction of a residential led mixed use scheme across 16 blocks within 9 buildings ranging in height from 4 to 15 storeys. (As applied)	Granted 11-03-2025
321931 (Part 10)- LDA on behalf of DCC	Key Development Site 4	The proposed development on a site of c. 3.185 hectares, located on lands at Cherry Orchard, Dublin 10 (known as Development Site 4 in the Park West Cherry Orchard Local Area Plan 2019). The development will consist of the construction of a residential scheme containing 137no. residential homes (comprising 31no. 2-bedroom units, and 106no. 3-bedroom units) through a mixture of houses, duplex units and own-door apartments. The proposed development also includes the provision of 2,133sqm landscaped public open space, in addition to 2,050sq.m of public open space as approved under the Phase 1 permission (Bord. Ref: ABP-318607-23).	Granted 22-09-2025

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Reg. Ref.	Address	Summary Development Description	Decision and Date
		The proposed development will also involve the provision of 141no. car parking spaces at curtilage and street level throughout the development, of which 7no. are accessible spaces and 71no. EV charging points (representing 50% of the total parking spaces). A total of 306no. bicycle parking spaces, of which 18no. are visitor spaces accommodated through a mixture of bike stores and external cycle parking stands. A total of 7no. motorbike parking spaces are also provided. Vehicular, pedestrian and cycle access routes to serve the proposed development are provided via the approved Phase 1 entrance to the east of the site along Park West Avenue with further connections provided to the north and to the south to the approved Phase 1 scheme. Provision is also made for the installation of a signalised access junction with associated traffic lights and below ground infrastructure and the relocation of bus stop and shelter along Park West Avenue. (As applied)	
	Key Development 5 (Subject Site)	None	
312290 – Greenseed Limited.	Key Development Site 6	The proposed development on a total site of 9.4 hectares will consist of 750 residential units in 7 separate blocks, ranging in height from 2 to 15 storeys, 6,175 sq. m of communal amenity space and 14% public open space. 522 no. car parking spaces and 1,676 bicycle spaces. The development also includes: Retail Unit – 156 sqm Crèche – 410 sqm (84 child spaces) Community Space – 48 sqm Café/bar – 91 sqm	Granted 16-06-2022 Commenced
	Key Development Site 7	None	
	Key Development Site 8	None	

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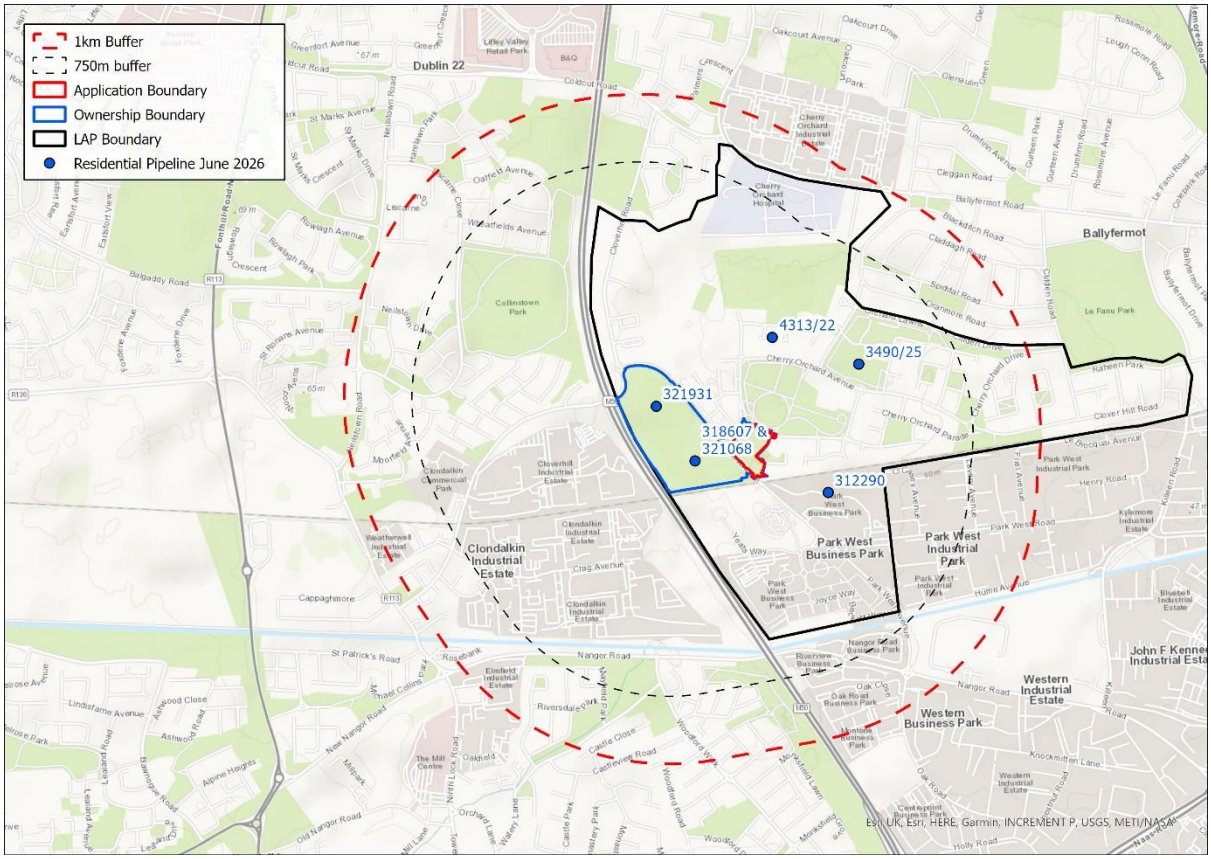


Figure 13-1 Extant Residential Schemes Granted Planning Permission within and bordering the LAP (2019) Boundary

Table 13-2 Planning Permission for Residential Schemes within and bordering the Local Area Plan (2019) Boundary

Reg. Ref.	Address	Summary Development Description	Decision and Date
Other Extant Planning Permission for Residential Schemes within and bordering the Local Area Plan (2019) Boundary			
3403/21	Site (1.26 ha) at Blocks 70 and 72 Park West Avenue and Park West Road, Park West, Dublin 12	Planning permission for the proposed development will consist of modifications to the permitted residential development of 86 no. residential units over retail/restaurant uses (reg. ref. 3798/18, 3941/20, 2517/21) within blocks 70 and 72 as follows: modifications to the private amenity spaces attached to 65 no. residential units at ground, first second and third floor levels to provide winter gardens in lieu of previously permitted balconies including alterations to the existing curtain walling and permitted elevations. The floor area of the apartments and private amenity spaces remains unchanged form that previously permitted. Omission of previously permitted canopy at fourth floor level. The total number of apartments (86 no.), designated car parking spaces (86 no.) bicycle parking spaces	Granted 6/12/2021

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		(167 no.) and gross floor area of blocks 70 and 72 all remain as previously permitted	
SD188/0006* (Part 8)	New Nangor Road, Clondalkin, Dublin 22.	Social Housing Development comprising of two and three storey housing and apartment units (44 units in total) on a site located at New Nangor Road, bounded by Riversdale Estate & Mayfield Park, Clondalkin, Dublin 22. The proposed development shall consist of: 19 3-bed, two storey houses, 1 two storey specially adapted unit and 24 2-bed apartments in 3 storey building. The works include: Landscaping works to boundaries and new park/play area, new pedestrian access routes to adjacent shopping facilities and transport, ancillary works to landscape housing areas, and all necessary associated ancillary works on the site and adjacent areas. The housing provision includes two storey houses in terraces and adjacent to the existing two storey housing, and three storey own door apartments of 3 units addressing the new Nangor Road.	Granted 08/10/2018 Commenced

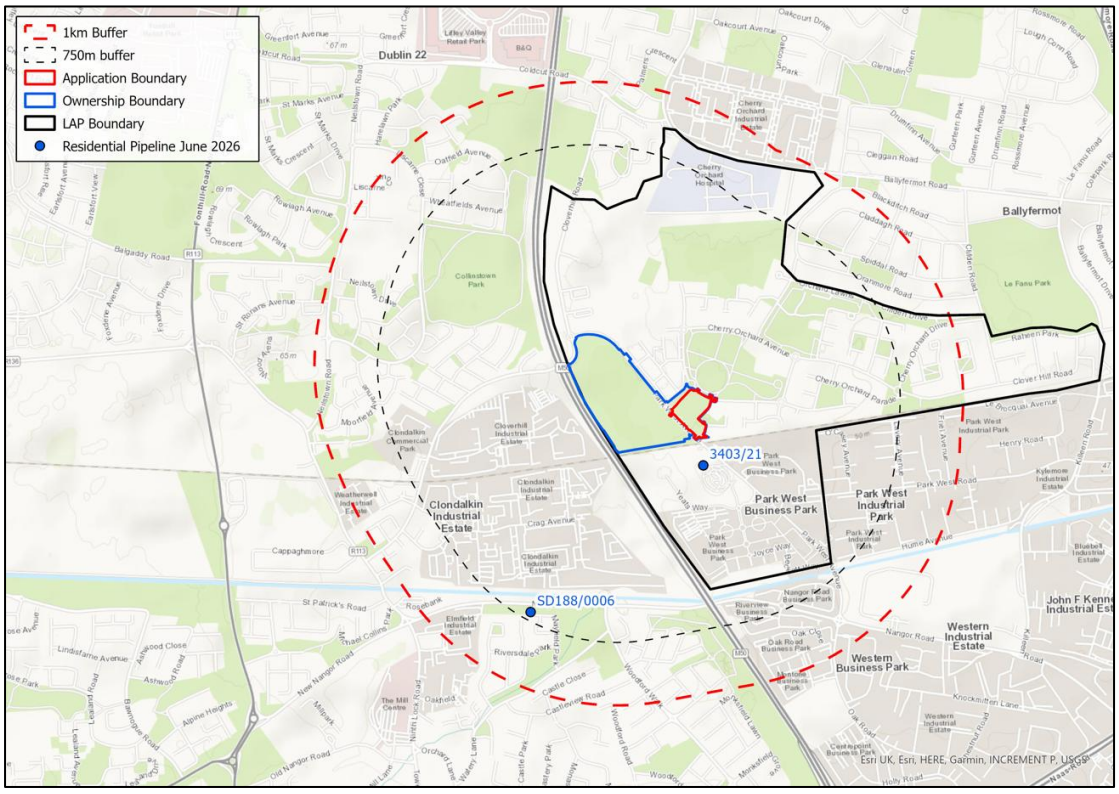


Figure 13-2 Other Extant Residential Schemes Granted Planning Permission within and bordering the LAP (2019) Boundary

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Table 13-3 Planning History – Retail / Commercial related Schemes within and bordering the Cherry Orchard LAP Area

Reg. Ref.	Address	Summary Development Description	Decision and Date
SD19A/0185 *	3-4 Crag Avenue, Clondalkin Industrial Estate, Clondalkin , Dublin 22	Alterations to approved plans (Grant of Permission ref PL06S.243151 and PA Reg Ref SD13A/0271 and SD18A/0068) to the previously granted planning permission for the construction of an ESB 110kV Gas Insulated Substation for the use by Crag Digital Limited in support of the development and to incorporate an ESB Network Substation to improve and upgrade power supply to Clondalkin and adjoining areas; the proposed ESB 110kV Gas Insulated Substation is a two storey building of gross floor area of 1,586sq.m and Client Control Room building of an area of 116sq.m; single storey 2MV ESB Substation of 38sq.m floor area is proposed to be constructed to facilitate the construction of the already granted development until completion and commissioning of the proposed ESB 110kV GIS Substation, including for 3 ESB external transformers and 3 Crag Digital Limited external transformers; alterations include for the relocation on site of previously granted client transformers, control building and energy centre ancillary building to facilitate the revised ESB 110kV Substation building layout; ESB Substation and client control building and transformer compound are to be secured with a 2.6m and 3m high palisade fence and access gates; all landscaping and ancillary site works as per previously granted planning permission SD18A/0068.	Granted 31-07-2019 Commenced
SD20A/0034	KN Group HQ, Cloverhill Industrial Estate, Cloverhill Road, Raheen, Dublin 22	Office accommodation extension to the rear of the existing office building (455sq,m at ground floor, 33.2sq.m at first floor); covered bicycle parking area to the front of the existing building 25.2sq.m; all necessary associated ancillary ground and drainage works.	Granted 30 Jun 2020
SD20A/0309 ; SD22A0093 *	3-4 Crag Avenue, Clondalkin Industrial Estate, Clondalkin , Dublin 22	Provision of 4 new information and communications technology (ICT) Facility buildings and associated development at the Subject Site, superseding elements of the extant planning permissions on site (Reg. Ref.: SD18A/0068 and Reg, Ref.: SD19A/0185). The application site is subject to an EPA Industrial Emissions Licence (Ref. No,: P1113-01) relating to the Energy Centre permitted on site, The single storey Energy Centre, gas pressure reduction station, and 110kV Gas Insulated Switchgear (GIS) substation	Granted 23-03-2021 Commenced

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Reg. Ref.	Address	Summary Development Description	Decision and Date
		permitted under Reg, Ref.: SD18AI0068 and Reg. Ref.: SD19AI0185 will be constructed as previously approved and are not affected by the current application. The proposed development will comprise the following: The construction of 4 ICT Facility buildings (ICT Facilities 1, 2, 3, and 4) with a combined total gross floor area {GFA) of c. 47,564.5 sq.m, Each ICT Facility building includes associated external plant areas, totalling c, 20,649.5 sq,m, ICT Facilities 1, 2, and 3 will be located in the eastern portion of the site, and each comprise a GFA of c. 15,196 sq.m (including ancillary office and administration space) over part two and part three levels with a maximum height of c, 25 metres and a parapet height of c, 19.5 metres, Each of the ICT Facilities will include an associated external plant area of c, 6,624 sq,m, ICT Facility 4 will be located in the southern portion of the site and comprises a GFA of c, 1,976.5 sq,m (including ancillary office and administration space) over two levels with a maximum height of c, 15 metres and a parapet height of c. 10.5 metres, This ICT Facility includes an associated external plant area of c. 777.5sq.m, Each ICT Facility building will accommodate ICT equipment halls, associated electrical and mechanical plant rooms, loading bays, maintenance and storage space, office administration areas, and screened plant. Construction of internal road network and circulation areas, footpaths, provision of 153 no. car parking spaces and 54 no, cycle parking spaces. Connections to vehicular access routes, roads, services and permitted infrastructure relating to the Energy Centre and 110kV GIS substation permitted under Reg, Ref.: SD18A/0068 and Reg, Ref.: SD19A/0185. Provision of emergency generators with associated flues, water storage tanks and associated pump rooms (comprising 150 sq,m in total) to serve each of the proposed ICT Facility Buildings. Hard and soft landscaping and planting, lighting, and all associated works, including underground foul and storm water drainage network, boundary treatments and security fencing, attenuation areas, and utility cables.	
SD21A/0100 *	Unit 15, Cherry Orchard Industrial Estate, Ballyfermo	Construction of a revised two storey mono-pitched Discount Foodstore (with ancillary off-licence use), with an increased total gross floor space of 2,415sq.m and an increased net retail sales area of 1,650sq.m (2,144sq.m and 1,400sq.m respectively permitted under SD19A/0286); Associated reconfiguration of site layout and all other associated and ancillary	Granted 17-06-2021 Commenced

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Reg. Ref.	Address	Summary Development Description	Decision and Date
	t Road, Dublin 10	modifications to SD19A/0286 above and below ground level, including modifications to pedestrian access and a new electricity substation and switch room building.	
3999/21	Unit 55, Park West Road, Park West Industrial Park, Dublin 12	PERMISSION AND RETENTION: The development will consist of extension to the existing office space at second floor level resulting in an overall office floorspace increase of 125 sqm approximately, construction of a new mezzanine level in the warehouse area (circa 257 sqm) and a new stairwell. Creation of 2no. openings to the south elevation and 1no. opening to the west elevation and associated site development works. The development will also include the retention of the existing office space at ground and first floor level of 250 sqm approximately.	Granted 04-02-2022
SD22A0060 *	Cloverhill Industrial Estate, Cloverhill Road, Dublin 22	Change of use of 464sq.m of warehouse mezzanine storage, approved under planning reference SD18A/0031, to office use, as well as associated and ancillary internal works, elevational changes and external ground works to facilitate this new use.	Granted 19/07/2022
5311/22	Block 7, Parkwest Business Campus, Parkwest, Dublin 12	The development will consist of the change of use of the ground, first and second floors from class 3 office use to class 8 for use as a health centre / clinic along with all associated works.	Granted 05-04-2023
SD24A/0125 W*	Unit 10, Clondalkin Business Centre, Crag Cres, Clondalkin Industrial Estate, Dublin 22, Co. Dublin	Gabor Construction Limited are applying for Permission for partial change of use as constructed under Reg. Ref. S99A/0146, from Warehouse to Office use (29sqm) to include for internal alterations and extension of current office floor areas on ground and first floor level.	Granted 04-07-2024 Commenced
SD24A/0106 *	Block 1, Units 10-13 Weatherwell Industrial Estate, Neilstown, Clondalkin Industrial	The construction of new office space at first floor level including enclosing the existing access stairs (total area @ 87.915 sq./mts), all works proposed are ancillary to the use of the existing building and business.	Granted 12-09-2024

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Reg. Ref.	Address	Summary Development Description	Decision and Date
	estate, Dublin 22, Co.Dublin		

**These applications are in the administrative area of South Dublin County Council*

Since the completion of the Parent EIAR, the DART+ South West Project has been granted permission and will provide a sustainable, electrified service with increased capacity and frequency for services between Park West Cherry Orchard and Dublin City Centre.

ABP Reference	Development Description	Status	Date
316119	DART+ South West Electrified Heavy Railway Order - Hazelhatch & Celbridge Station to Heuston Station, and Hesuton Station to Glasnevin	Make Railway Order w cons	**13/11/2024**

The planned infrastructure improvements include:

- 20 km of electrification and re-signalling of the Hazelhatch and Celbridge Line to Heuston and the south city via Phoenix Park Tunnel.
- Construction of a new station at Heuston West to serve the community of Clancy Quay and Island Bridge.
- Four-tracking of the rail line from Park West and Cherry Orchard Station to Heuston to enhance capacity.
- Civil, bridge and ancillary works as necessary to accommodate the project.
- Upgrading of the Phoenix Park Tunnel.
- New electric DART carriages for the DART+ Programme will be deployed on Hazelhatch and Celbridge services

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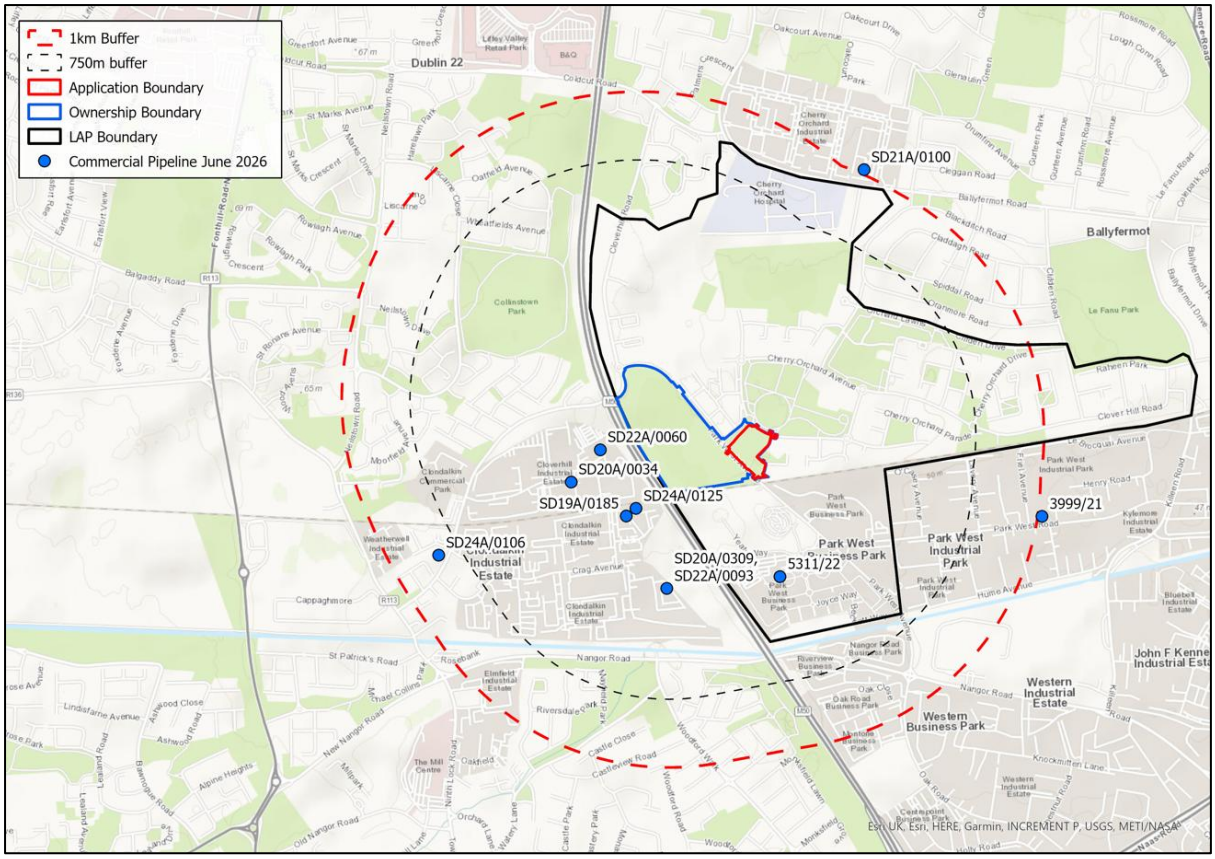


Figure 13-3 Extant Retail / Commercial Schemes Granted Planning Permission within and bordering the LAP (2019) Boundary

13.1.2 Site 5: Barnville Site

Review of the planning history for the Subject Site found no relevant or extant planning permissions. The Subject Site has no significant notable features except the ESB pylon and associated overhead power lines which traverse a section of the southern corner of the site (see Figure 13.4).



Figure 13-4 View of the site showing the existing network of Pylon and Overhead lines (Source: Google maps).

To facilitate the comprehensive development of the lands, the existing electrical infrastructure will be relocated underground in consultation with Iarnród Éireann (Irish Rail) and ESB, both of whom have provided letters of consent and confirmation respectively, in support of the proposed undergrounding of the overhead line and Pylon (referred to as Mast 26), to facilitate the proposed development.

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Additionally, as confirmed by ESB in their attached letter that the underground diversion of the existing overhead lines (38KV) is feasible and the Mast will remove once the line is de-energised. The existing underground cables will also be deenergised in tandem with the overhead line and will be marked as abandoned. A de-energised and abandoned cable could be removed by a contractor before any sub structure works commence under supervision from ESB.

The measures necessary to facilitate this relocation are already being progressed by Harcourt Developments as part of the development of Site 6. These works include the diversion and undergrounding of the electrical infrastructure traversing the subject area. Specifically, all 11 existing pylons within the wider Park West area are to be undergrounded as part of Phase 1A of the permitted Greenseed development, in accordance with Compliance Condition 4 of ACP Ref. 312290.

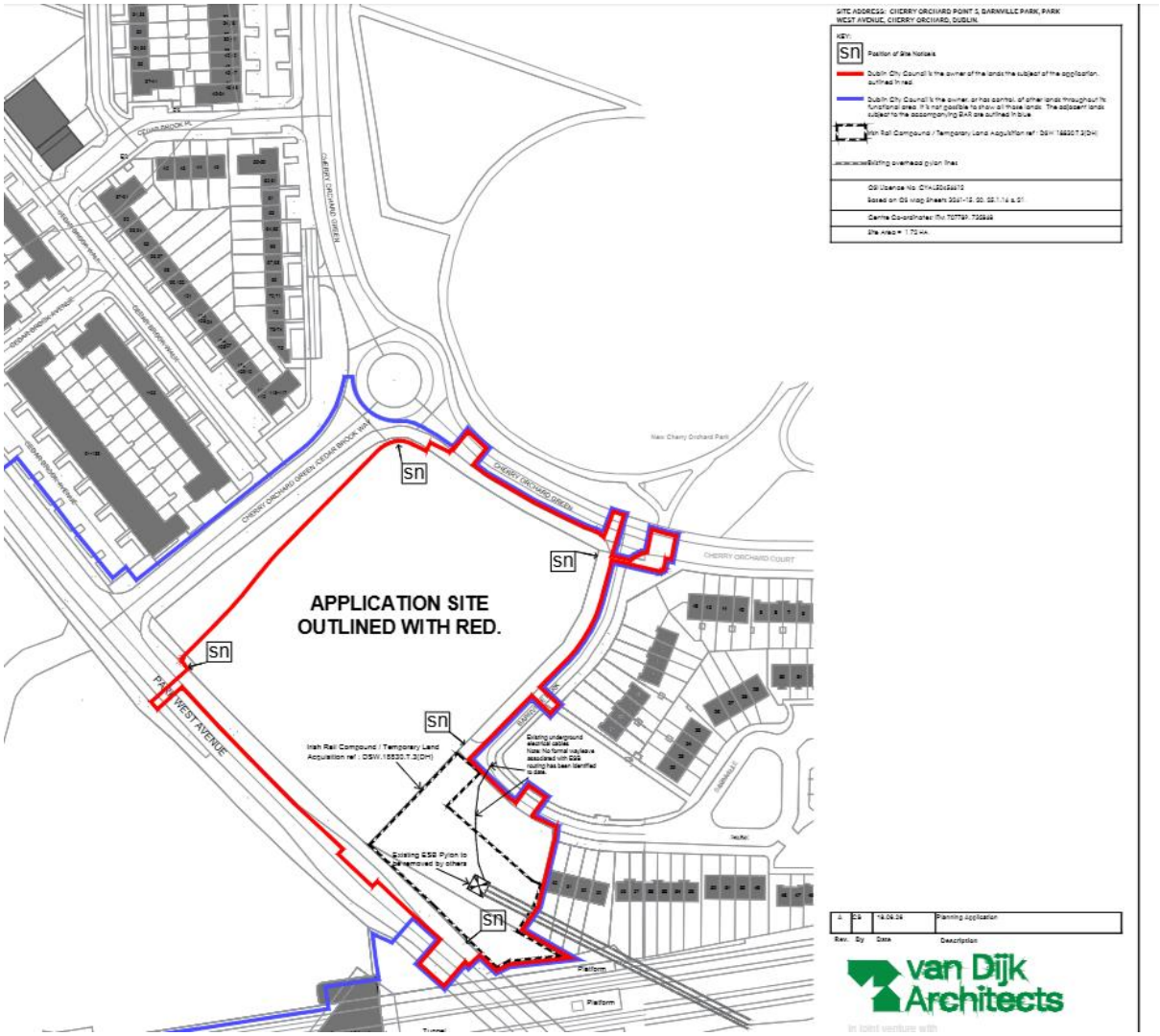


Figure 13-5 Site Location Map showing Subject Site in red and overall landownership in blue (VDA / CCK).

Furthermore, the approved Parent EIAR considered the potential cumulative effects arising from the proposed development in combination with the rail upgrade project and identified, where necessary, appropriate mitigation measures to avoid, reduce or minimise potential environmental effects. The electrification of the rail corridor, together with the increased capacity and frequency of rail services, will deliver significant benefits for future residents by enhancing connectivity to the city centre and wider metropolitan area while supporting a cleaner, more sustainable mode of public transport.

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For the purposes of environmental assessment, the proposed development has been assessed as a single construction and operational phase. The assessment has had regard to the potential interaction of the development with consented Phases of the scheme, DART+ South West infrastructure works, utility diversions and other permitted developments in the area. Any sequencing or interface requirements associated with those projects do not alter the overall assessment approach and have been considered, where relevant, within the cumulative impact assessments contained in this EIAR Addendum.

In addition, the Subject Lands have long been identified as a strategic growth location within the planning framework for the area. The lands were zoned for strategic development and regeneration under the Dublin City Development Plan 2016-2022 and were designated as a key development site within the Park West-Cherry Orchard Local Area Plan 2019 (as extended). This strategic objective is reinforced in the current Dublin City Development Plan 2022-2028, which continues to prioritise the comprehensive regeneration and redevelopment of the Park West-Cherry Orchard area. A central objective of the Local Area Plan is the integration of new development with the existing and emerging community to create a sustainable, inclusive and well-connected neighbourhood. The proposed development directly supports these objectives by facilitating the delivery of high-quality residential accommodation, associated amenities and supporting infrastructure within a coordinated regeneration framework.

13.2 Proposed Scheme – Phase 3

The proposed development will consist of the construction of a residential led mixed-use scheme containing 312no. residential apartments comprising 244no. cost rental and 68no. social units, 8no. local retail and commercial units, landscaped public and communal open space. The proposed development includes a new principal access via Barnville Park to the south, providing entry to an internal undercroft parking court, upgraded pedestrian and cycle footpaths, Barnville link connecting the Park West Avenue and Cherry Orchard railway station and all associated site and development works. The proposed development represents Phase 3 of the overall planned development at Cherry Orchard Point scheme for Development Sites 4 and 5 of the LAP lands. Phase 1 of the overall planned development was granted permission in July 2024 (ACP Case Ref: 318607-23) and Phase 2 was granted in September 2025 (ACP Case Ref: 321931-25). The proposed development comprises the works to be undertaken on Site 5: Barnville, which forms the subject of this planning application.

The proposed development (Total GFA of c. 28413 sq.m) involves construction of 312no. residential apartments (c. 24556 sq.m), across 7 core blocks consisting of 4 to 10 floors, comprising 16no. studio units, 146no. one-bed units, 139no. two-bed units (15no. two-bed three-person and 124no. two-bed four person), 9 no. 3-bed units (9no. three-bed five-person) and 2no. 4-bed units (2no. four-bed seven-person) together with 8no. Local Retail and Commercial units (c. 1441 sq.m GFA), and all ancillary and sundry accommodation (c. 2,416sq.m total GFA). The proposed development also includes the provision of landscaped public open spaces of c.1691 sq.m. and Communal open space of c. 2390 sq.m. The communal open space has been designed to provide a high-quality amenity area, incorporating a community garden with seating, play and fitness facilities, and associated landscaping. The scheme also provides private open space for all residential units.

The proposed development will involve the provision of car parking (including accessible and EV car parking spaces), car sharing spaces, bicycle parking spaces, motorbike spaces and loading bays. The scheme includes a Barnville link to the south of the site connecting

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Barnville Park with Park West Avenue and providing direct pedestrian access to the railway station, along with overall 4no. pedestrian crossing points connecting Park West Avenue, Barnville Park and New Cherry Orchard Park.

The development will also provide for all associated ancillary site development infrastructure including site clearance, boundary treatment, associated public lighting, internal roads and pathways, substations, switch room, water tank rooms, storage room, meter room, sprinkler tank room, bin storage, bicycle stores, hard and soft landscaping, play equipment, boundary walls, attenuation area, green and blue roof systems, photovoltaic panels and all associated works and infrastructure to facilitate the development including connection to foul and surface water drainage and water supply.

Refer to the enclosed statutory notices for a full description of development as part of this planning application.

13.3 Study Area

The study area as defined under Section 13.4 of the Parent EIAR is defined by a 1km buffer from the development/ownership boundaries of Sites 4 and 5 (Figure 13.6). This was considered on the basis that the development fell under a single ownership would be delivered in phases to align with the availability of essential services and amenities.

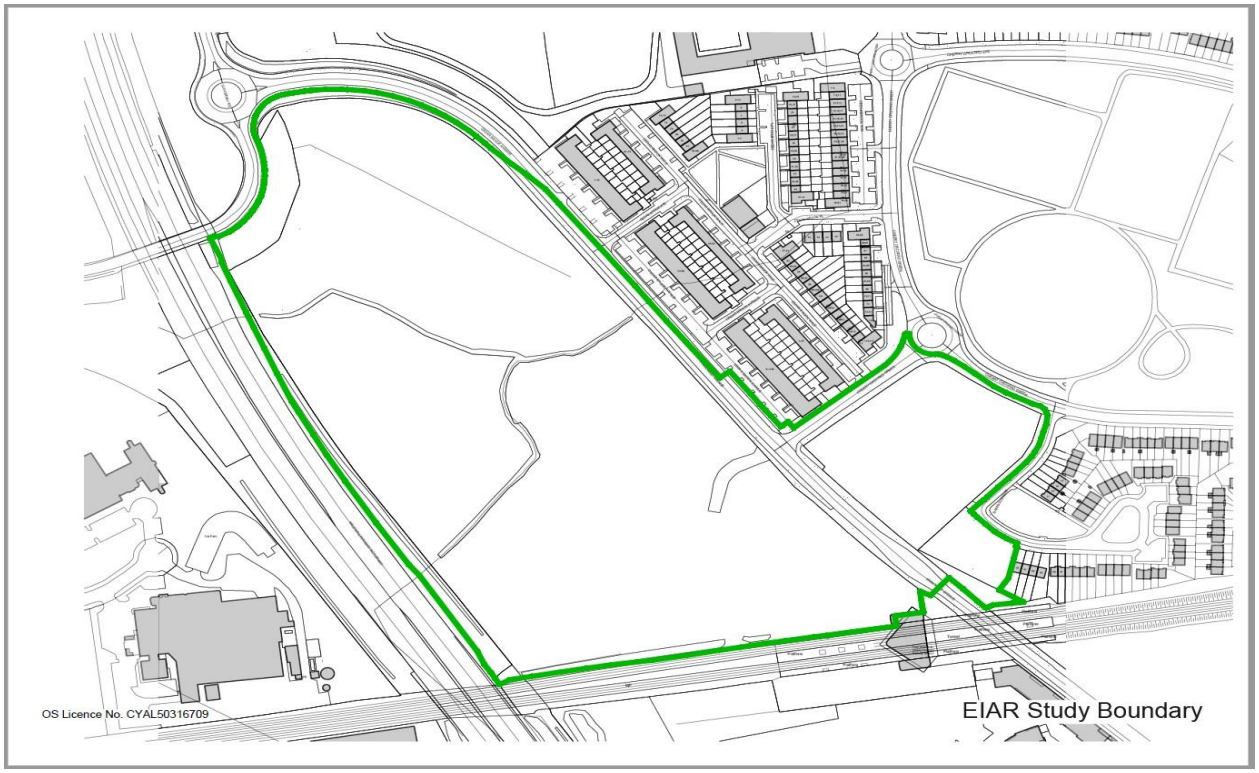


Figure 13-6 EIAR Boundary as part the Parent EIAR report covering the extents of Site 4 and 5.

The 1km study area catchment extending from the EIAR boundary comprises of 51 no. CSO Small Areas which encompass the entirety of the development sites (Figure 13.7). This consideration has been made on the basis that the wider development lands (all of LAP sites 4 and 5) fall under a single ownership and hence, will be delivered as a single scheme, delivered in phases to align with the availability of essential infrastructure, services and amenities. This would further remain consistent with the Study Area defined in other reports for this scheme. The demographic and socio-economic analysis is based on the Census 2022 Small areas data and provides a consistent and accurate picture of the

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study areas profile. This approach allows for a more granular analysis of the population profile at a localised level and provides a more consistent and accurate picture of the demographic and socioeconomic status of the study area.

The subject site is located on lands at Cherry Orchard, Dublin 10 on the east of Park West Avenue and forms part of the Site 5: Barnville Site as identified in the Park West Cherry Orchard Local Area Plan 2019. The site is bound by Cedar Brook Way to the north, Park West Avenue to the west, Barnville Park to the east, and the Park West - Cherry Orchard railway station is located on the south of the site along with existing residential developments at Barnville.

The site for the purposes of this application, represents part of Development Site 5 (outlined in red in Figure 13.5 above) and will form the Phase 3 of the wider redevelopment of Development Sites 4 and 5 (outlined in blue in Figure 13.5 above).

The site benefits from very good accessibility with its close proximity to numerous bus routes, the M50 and Park West and Cherry Orchard Railway Station.

The population within both the study area and wider Dublin Region have experienced an increase since 2016 Census – with the study area growing by 7.7% and Dublin Region by 8.2%. In terms of age profile, the largest cohort within both the study area and wider Dublin Region are those aged 15-64 years, with the study area representing around 70% and Dublin Region around 68% of the total population respectively.

The population growth noted between the intercensal period 2016 and 2022, and the population projections for the overall Dublin City area provide further justification and validation for the development proposal for new housing. Population and housing are intrinsically linked. An increase in population influences housing by creating demand. The availability of housing influences house and rental prices and can have a significant influence on who can potentially migrate into an area, affecting total population.

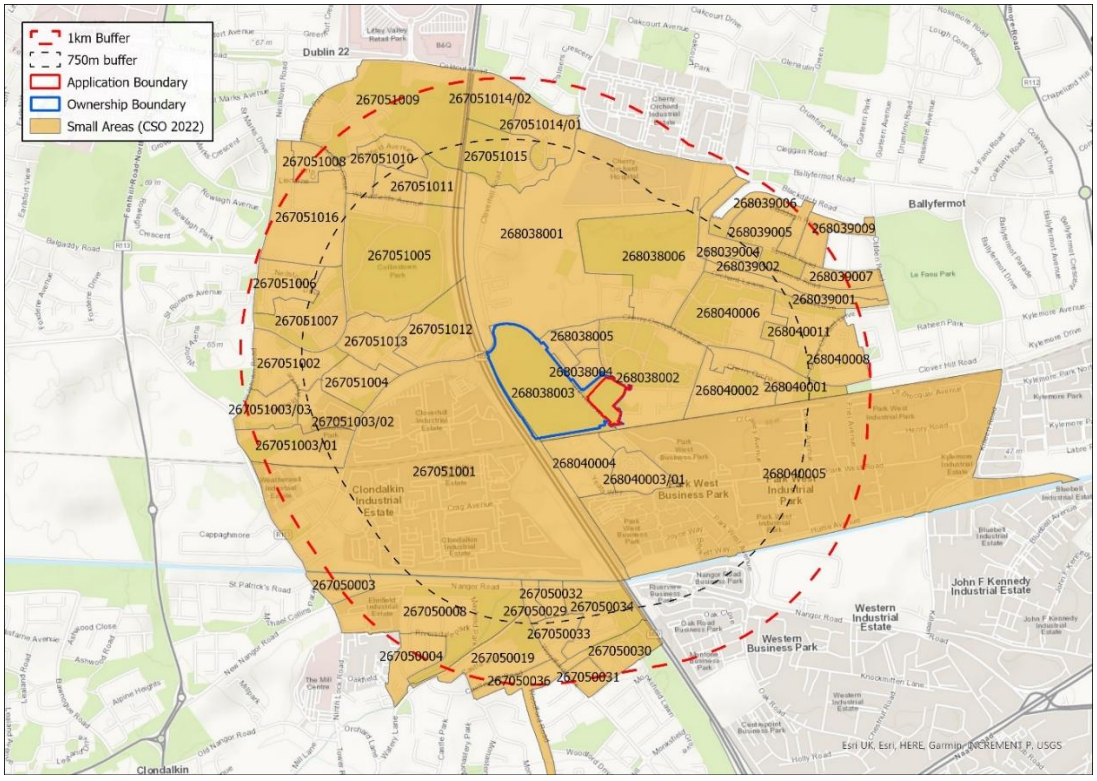


Figure 13-7 Extent of Demographic Study Area comprised of 51 no. SA Boundaries which covers a 1km radius from the application site (shown in red). The Ownership Boundary is shown in blue on the map. (Source: CSO 2022/KPMG-Planning.)

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The study area catchment also aligns with the principle of the 15-minute walking city concept introduced within the new DCC CDP – which seeks to ensure that people's daily requirements can be reached within 15-minute by foot, bike, or public transport.

It is considered that this study area provides a good representation of the socio-economic and demographic characteristics of the immediate populated area potentially impacted by the proposed development.

13.4 Receiving Environment: Overview of Baseline Analysis

This section presents the findings of the baseline analysis of datasets relevant to population and human health. This analysis informs the professional conclusions reached as to duration and significance of impacts.

13.4.1 Overview: Census 2022

Some of the key highlights of the Census 2022 results at State Level has been set out in the context of the socio-economic profile for comparison at the local level where applicable.

The Census 2022 results indicate that the population of Ireland has exceeded the five million thresholds (an increase of 8% since 2016). The average age of the State population has increased from 37.4 years in 2016 to 38 years in 2022. There was also an overall drop in the proportion of people who reported their health was good or very good since 2016, from 87% to 83%.

Around 22% of the population reported, as of April 2022, having experienced at least one long-lasting condition or difficulty. More than 34% of the population aged 15 years and older who experienced a long-lasting condition or difficulty were at work. 72% of professional workers reported 'very good' health as against 41% of unskilled workers.

Close to 9% of the total population smoked daily and just over 4% smoked occasionally. A total of 6% of the population provide regular unpaid care. Some 57% of unpaid carers (aged 15 years and over) were at work in 2022, as compared to 51% in 2016.

The average number of families as per Census 2022 was 59% higher than in 1996, however, the average number of children per family fell by 26% - the average number of children per family was c. 1.34 per family down from 1.38 in 2011 and 2016. An approximate one in three children in the State were in some form of childcare, but just over 4 in 10 children were in a creche or similar facility.

From the Human Health perspective, it is also important to highlight the growing 'old age' vulnerabilities of the Country. The population of Ireland is ageing, with life expectancy increasing and older people continuing to be an active and vibrant part of communities. The population aged 65 years and over is projected to double to 1.6 million by 2051. Hence, as part of any new development, consideration will need to be had to all vulnerable groups and appropriate provisions made. The impact of the scheme on such groups has also been assessed under the Impact Assessment Section of this report.

The following sections focus on the key socio-economic and health characteristics for the local area surrounding the subject site.

The Central Statistics Office (CSO) is Ireland's national body responsible for conducting censuses and publishing official population statistics to support evidence-based decision-making. The CSO provides a comprehensive range of demographic and socio-economic data at various geographic levels, including the State, counties, Local Electoral Areas (LEAs), Electoral Districts (EDs), and Small Areas (SAs).

The most recent census was carried out in April 2022. While preliminary Census 2022 results were published on 23 June 2022 and updated in September 2022, these have since been superseded by the final results released from May 2023 onwards. This chapter draws upon the most recent and detailed

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statistical information available from the CSO at the time of writing, ensuring that the analysis is based on the latest published census and thematic data.

The site of the proposed development is situated in the Local Electoral Area (LEA) of 'Ballyfermot-Drimnagh' as per the Dublin City Council LEA Map (see Figure 13.8). Hence, to the extent where local area level data is unavailable, the data at LEA level has been considered in the baseline analysis.

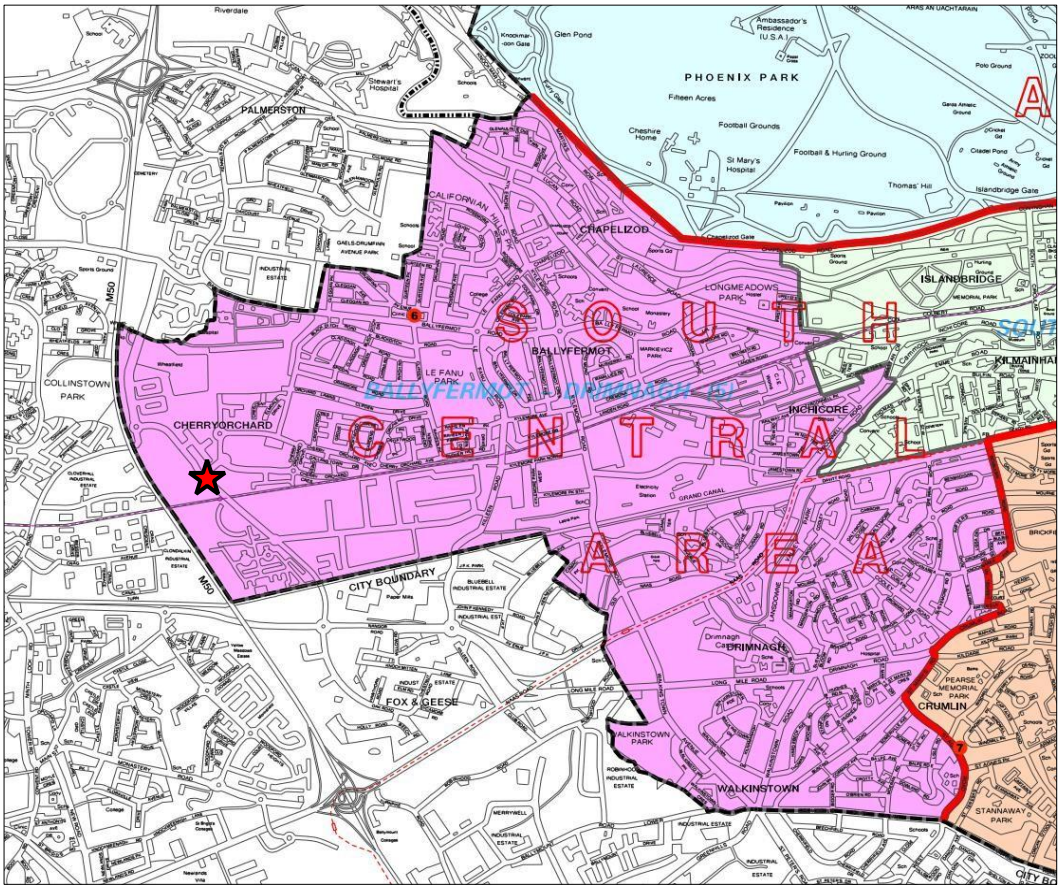


Figure 13-8 Ballyfermot-Drimnagh Local Electoral Area - 5 (Source: Dublin City Council Map 2022)

13.4.2 Population and Household Characteristics

Chapter 13 of the Parent EIAR, set out in detail, the existing conditions within the study area based on some Census 2011, 2016 and some Census 2022 data (as available at the time of drafting the Parent EIAR). The proposed development will consist of the construction of a residential led mixed use scheme containing 312no. residential apartments comprising 244no. cost rental and 68 no. social units, represents a welcome addition to the existing and planned housing stock of the area and will contribute positively to reversing trends of housing unaffordability in the area and wider region. Furthermore, the variety of the proposed housing in terms of typology, mix, size and tenure will add to the continuum of housing options in the area, particularly when considered in context with the approved Phase 1 and 2 of the overall Cherry Orchard Point scheme.

Table 13.4 below records the percentage change in population during the Census period 2016 and 2022 to highlight overall residential patterns and population profiles. Between 2016 and 2022, the population of the study area experienced a substantial increase of 7.7% from the previous Census period, which is close to the population increase observed at Dublin Region and State level, both of which experienced an increase of around 8% in the six years following Census 2016.

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Table 13-4 Population Change during the Census Period 2016 and 2022

Area	2016	2022	2016-2022 Change #	2016-2022 Change %
Study Area	17,089	18,398	1,309	+7.7%
Dublin Region	1,347,359	1,458,154	110,795	+8.2%

Data analysis on the Study Area and the Dublin City administrative area show similar trends in the distribution of the population across various age cohorts, although Dublin has experienced comparatively higher population growth between Census 2016 and 2022. The population aged between 15 and 64 years comprises c. 69.7% of the Study Area, which is slightly higher than Dublin and the State, at 68% and 65% respectively (see Table 13.5).

Table 13-5 Study Area, Dublin Region, and State Population by Age Group (Summary)

Age Group	Study Area		Dublin Region		State 2022 %
	2022%	Change	2022%	Change	
0-14	20.3%	3.3%	18.4%	3.5%	19.7%
15-64	69.7%	6.4%	68.1%	7.7%	65.3%
65 years and over	10%	29.9%	13.4%	18.6%	15.1%
Total	100%	7.7%	100%	8.2%	100%

There is a visible increase in the population aged 65 years and over within the Study Area, which has experience almost 30% increase between 2016 and 2022. This increase is greater than that of Dublin, which has observed around 19% increase in the same age cohort. The highest increase in the Study Area population was recorded for the population in the age group 70-74 years (+68.3%) and 75-79 years (53.7%). This is indicative of the fact that there has been an influx of elderly population within the Study Area in the period between 2016 and 2022, as well as of – the growing old age vulnerabilities within the area, which therefore calls for appropriate measures toward accommodating this age group. Although, the portion of population aged 65 years and over within the Study area consists about 10% and is comparatively lower than Dublin and the State which consists of 13% and 15% of people aged 65 years and over as of Census 2022.

According to Health in Ireland – Key Trends (2022), the proportion of working aged people to people over 65 will decrease from five to one, to three to one, in the next 20 years. A report prepared by the Institute of Public Health[7], in 2020 has also noted that the population in the State are *'getting older and the share of older people (65 years and over) is set to rise steeply over the coming decades… - to almost 1.6 million by 2051.'* This was further echoed in by the Central Statistics Office[8] in relation to ageing population, which notes that the number and the proportion of persons aged 65 years and over is increasing and is projected to continue an upward trend over the next three decades.

In terms of children population, the Study Area experienced around 13% decrease in the 0-4 years age cohort. However, there was c. 27% increase in the population aged 10-14 years of age. The decline in the level of 0-4 years within the Study Area is also somewhat reflective of the national drop in the children per family (c. - 26%).

[7] *Ageing and Public Health – an overview of key statistics in Ireland and Norther Ireland: 20200416-AGEING-PUBLIC-HEALTHhttps://publichealth.ie/sites/default/files/2023-02/wp-content/uploads/2020/04/20200416-AGEING-PUBLIC-HEALTH-MAIN.pdfMAIN.pdf (publichealth.ie)*
[8] *Ageing Population - CSO - Central Statistics Office*

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While there was a 15% decline observed in the total number of persons aged 25-29, the majority of the households within the Study Area still consisted of 'Adult families', i.e., families where the eldest child was 20 years or over at 35% (Figure 13.9). While 'Adult families' were the most prevalent family cycle type in Dublin and the State over, the proportion was comparatively lower than the Study Area, at c. 26% in Dublin and c. 27% in the State.

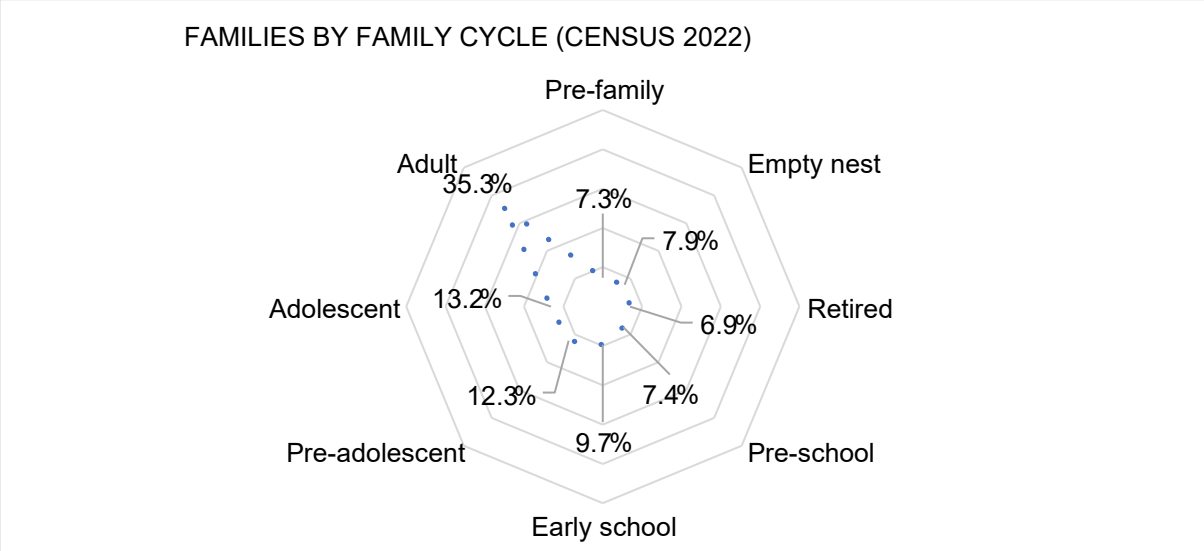


Figure 13-9 Families by Family Cycle as per Census 2022

There was an overall decline of 0.3% observed in the number of families, within the Study Area. Notwithstanding this, there was a significant increase of 48% in the number of retired families, within the Study Area between 2016 and 2022, which also reinstates the substantial increase in the total number of persons aged 65 years and over. This establishes the old age vulnerabilities within the area.

In terms of children population (who are considered as a vulnerable / dependent age group), it is noted that there has been an overall decline in the 'Pre-school' (-31%) and 'Early school' (-22.4%) families within the Study Area. The decline the 'Pre-school' families could also be attributed to a decline in the age profile of children between 0 and 6 years old, between 2016 and 2022, which has observed an overall decline of 14%, with the largest decline recorded in infants aged 1-year old (c. -30%) and 6years old (c. -23%). The Study Area is reflective of the overall decline in 'Pre-school' and 'Early School' families in the State, which is down by c. 14% between since 2016.

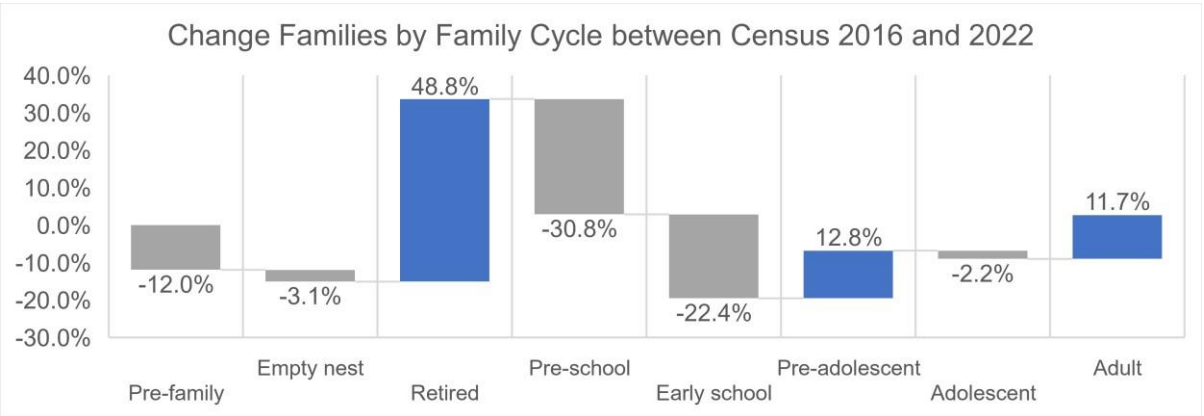


Figure 13-10 Changes in Families by Family Cycle - Census 2016, 2022

A decline in the number of children has been observed at the overall State Level, which as of Census 2022, recorded a decline of 26% in the average number of children per family (compared to 1996). This

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has been attributed to both demographic as well as economic factors, including (but not limited to) people starting families at a comparatively later stage as well as affordability constraints – resulting in higher costs of having children at a younger age. Section 13.5.3 below provides an overview of the current economic status of the Study Area in comparison to Dublin and the State.

It is noted that the Ballyfermot-Drimnagh Local Electoral Area has an average of 1.31 children per family and that of Dublin City Council administrative boundary has an average of 1.11 children per family.

13.4.3 Economic Activity and Employment

The CSO's Labour Force Survey (LFS) is the official source of labour market statistics in Ireland, including employment and unemployment rates. The survey is based on the International Labour Organisation (ILO) methodology.

The most recent survey results for Q1 2026 indicate an employment rate of 73.3% among persons aged 15-64 years, representing a decrease of 1.4 percentage points compared to 74.7% in Q1 2025. During the same period, the unemployment rate increased from 4.3% to 4.9%, an increase of 0.6 percentage points.

Table 13-6 Labour Force Survey Data for Ireland (2026)

Indicator	Q1 2025	Q1 2026	Change
Employment rate among 15-64 year olds	74.70%	73.3%	-1.4 percentage points
Unemployment rate among 15-74 year olds	4.3%	4.9%	+0.6 percentage points

Based on the available CSO census data for 2022, the economic profile of the study area has a similar distribution to the Dublin Region as outlined in Chapter 13 of the Parent EIAR. The majority of the population for both the Study Area and the Dublin Region are ‘At Work’, with around 54% in the Study Area and 58.5% in the Dublin Region as of 2022. The Parent EIAR further details the Unemployment figures and people that are Retired within the Study Area and Dublin Region. The delivery of the permitted retail / commercial units under the Phase 1 scheme, proposed local retail and commercial units under the Phase 3 (subject of the planning application) and delivery of enterprise uses in future Phase 4, will provide employment opportunities for the locality including future residents of the proposed development which is considered to represent a long term positive impact for the area.

The principle economic status as captured by the CSO, provides a breakdown of the number of people aged 15 years and older in the labour force at work as well as those looking for their first job or are unemployed (short term and long term unemployed). Persons or groups over 15 years of age not participating in the labour force are typically students, home makers, retirees, and persons unable to work due to illness or disability and they are considered not economically active.

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Table 13-7 Principle Economic Status (CSO 2022)

Principal Economic Status	Study Area 2022 #	% Total	Dublin 2022 #	% Total
At Work	7,865	53.7%	698,931	58.8%
Looking for First Regular Job	237	1.6%	10,330	0.9%
Short Term Unemployed	382	2.6%	21,889	1.8%
Long Term Unemployed	734	5.0%	30,176	2.5%
Student	1,452	9.9%	134,910	11.3%
Looking After Home/Family	1,044	7.1%	68,227	5.7%
Retired	1,491	10.2%	171,712	14.4%
Unable to Work due to permanent sickness or disability	1,069	7.3%	45,686	3.8%
Others not in labour force	383	2.6%	7,350	0.6%
Total	14,657	100%	1,189,211	100%

This higher proportion of people working within the study area and Dublin Region is reflective of the age profile, given that nearly 70% of the Study Area population and c. 68% of Dublin population are in the age group 15-64 years.The composition of those looking for their first regular job in both study area and Dublin Region was only minor, at 1.6% and 0.9% respectively.

The proportion of 'Unemployed' population in the study area was c. 7.6%, which is closer to the State average of 8%. Census 2022 now also records the proportion of people that are in 'Short Term Unemployment' and those in 'Long Term Unemployment'. The proportion of the former was comparatively smaller at 2.6%, than the latter at 5%. Dublin Region on the other hand recorded a total of 4.3% people that were 'Unemployed' as of 2022, with 1.8% in 'Short Term Unemployment' and around 2.5% in 'Long Term Unemployment'. In relation to the proportion of 'Student' population, even though the study area has a comparatively lower portion of students (c. 10%) than in Dublin (11.3%), the increase in the number of student population within the study area was considerably higher (+9.8%) than the Dublin Region (6.4%).

13.4.4 Education

Chapter 13 of the Parent EIAR set out in detail that the largest portion of residents within the Study Area constituted those that had completed 'Secondary' Education (46.5%) as of 2022, and around 33% within the wider Dublin Region. A total of 20% of the Study Area population have completed 'Third Level' Education, which is lower compared to the Dublin Region which recorded around 33% of the population to have completed 'Third Level' Education.

The largest portion of residents within the study area constituted those that had completed 'Secondary' Education (46.5%) as of 2022, and around 33% within the wider Dublin Region. A total of 20% of the study area population have completed 'Third Level' Education, which is lower compared to the Dublin Region which recorded around 33% of the population to have completed 'Third Level' Education. There has been a notable increase of c. 64% in the population that were recorded as having 'No Formal

Education', from 2.8% in 2016 to 4.3% in 2022 within the study area. There is a visible decline in the population with 'Primary Education' in both the study area and Dublin Region, by around 17% and 24% between 2016 and 2022. On the contrary, both the study area and Dublin Region demonstrated an increase in the number of people with 'Third Level Education' (by c. 23% and 17% respectively) and 'Postgraduate Education or Higher' (by c. 29% and 27% respectively) between 2016 and 2022.

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Table 13-8 Population aged 15 years and over with highest level of education completed (Census 2016, 2022)

Education Level	Study Area 2022	% Total	% Change 2016-2022	Dublin 2022	% Total	% Change 2016-2022
No Formal Education	493	4.3%	63.8%	18,836	2.0%	62.6%
Primary Education	1,387	12.0%	-17.4%	61,625	6.5%	-24.1%
Secondary Education	5,372	46.5%	4.2%	314,612	33.0%	-0.8%
Third Level Education	2,307	20.0%	22.8%	314,993	33.0%	17.2%
Postgraduate Education or Higher	1,048	4.5%	29.1%	164,586	17.2%	27.4%
Not Stated	1,474	12.8%	2.6%	79,921	8.4%	12.8%
Total	11,557	100.0%	6.4%	954,573	100.0%	8.6%

13.4.5 Pobal Deprivation Index

In order to better understand the socioeconomic status of the study area, the Pobal Deprivation Index for the small area population defining the study area boundary (in 2016) was derived. The Pobal HB

Deprivation Index is Ireland's most widely used social gradient metric, which scores each small area (c. 100 households) in terms of affluence or disadvantage. The Index uses information from Ireland's census, such as employment, age profile and educational attainment to calculate this score.

Despite the majority of the population being 'At Work', the Study Area recorded a predominantly disadvantaged population. The area surrounding the Subject Site has a population that is either 'disadvantaged' or 'very disadvantaged', with a portion to the south falling under the 'affluent' category (Figure 13.11). According to the 2022 Pobal Deprivation Index, the geographic distribution of disadvantage and affluence remains largely unchanged in relative terms, with persistently high levels of disadvantage in some areas.

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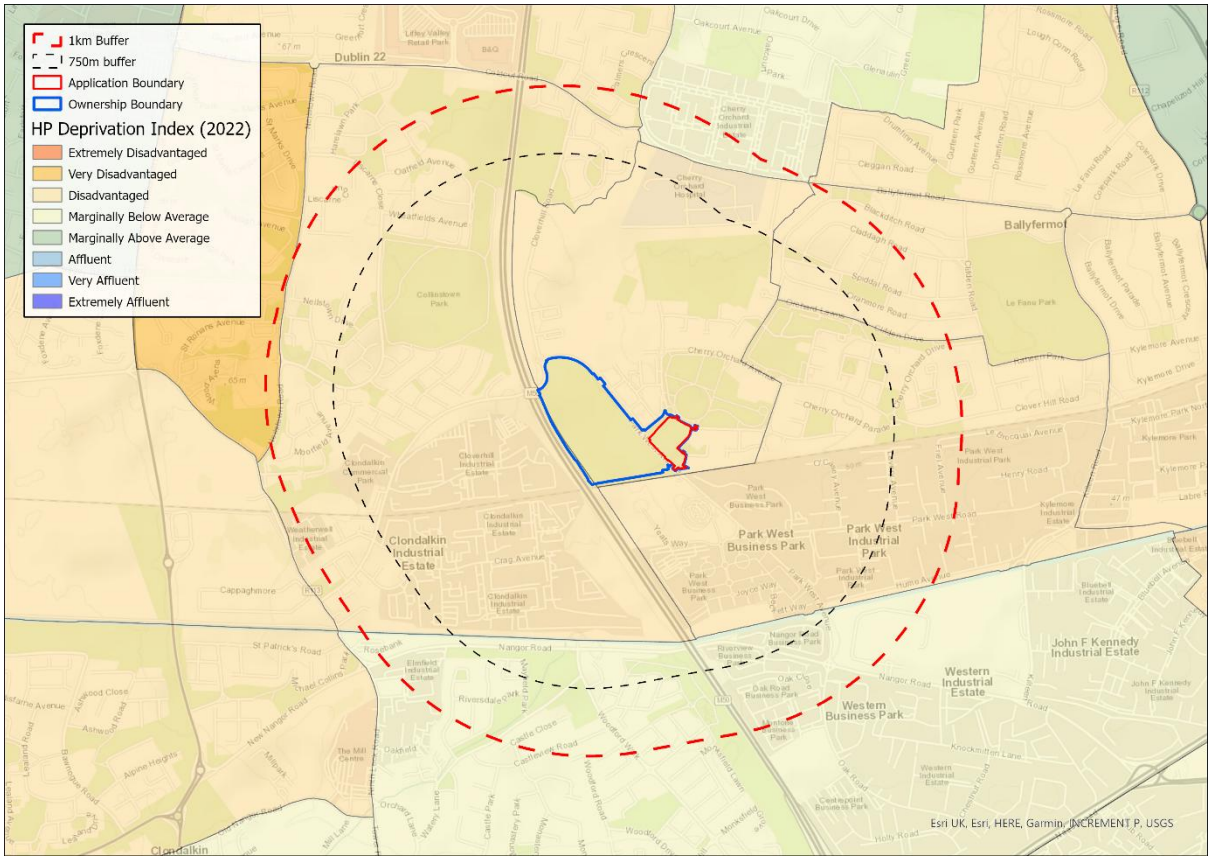


Figure 13-11 Pobal Deprivation Index 2022 for the study area with subject site outlined in red.

The higher proportion of disadvantaged population is indicative of the fact that most of the area is still experiencing higher levels of unemployment, low educational attainment and overcrowding.

In that regard, as recorded in the above sections, the study area has recorded an overall 'unemployment' level of 7.6% (closer to the State average), about 7.3% of those aged 15 years and over who are 'unable to work due to permanent sickness or disability', around 3% that are 'not in the labour force' and the 'retired' population consist of c. 10%. Majority (c. 47%) of the study area population consist of people with 'Secondary Education' as their highest level of education with a significant c. 64% increase in the population over the age of 15 years with 'no formal education'. However, it is also noteworthy that the study area has c. 20% of the population with a 'Third Level' education, an increase of c. 23% since Census 2016. There was also an increase of around 29% in the population with a 'Postgraduate or Higher' education level, since 2016.

A study by Wang, J., & Geng, L. (2019)[9], on the *'Effects of Socioeconomic Status on Physical and Phycological Health…'*, examined the impact of socioeconomic status on health and focused on the mediating role of lifestyle. The main findings of this study indicated that, socioeconomic status was significantly associated with physical health, but not phycological health. The study also concluded that lifestyle had a significant positive effect on both physical and phycological health and that lifestyle mediated the relationship between socioeconomic status and health.

The study also found that the impact from socioeconomic status on health is reflected in three aspects of an individual's life: occupation, income, and education. People with higher professional status enjoy more work autonomy, engage in less manual labour, have fewer occasions of being exposed to health risks. Likewise, higher incomes are usually associated with better nutritional status, housing conditions,

[9] *Wang, J., & Geng, L. (2019). Effects of Socioeconomic Status on Physical and Psychological Health: Lifestyle as a Mediator. International journal of environmental research and public health, 16(2), 281.* https://doi.org/10.3390/ijerph16020281

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medical services, etc. Additionally, people with higher levels of education tend to have better health awareness, access, and health-related knowledge.

The following section details the status of health within the study area, where available, and that of the wider Ballyfermot-Drimnagh Local Electoral Area (LEA), to establish how the proposed development might impact (positive, negative, no impact etc.) the existing population, their socioeconomic status and health conditions.

13.4.6 Human Health

The Healthy Ireland – Framework for Improved Health and Wellbeing 2013-2025 described 'Health' as being *a personal, social, and economic good...'.* Further stating that *'a healthy population is a major asset for society…'*, the framework continues to emphasise that a healthy population is essential to enable people to live their lives to their full potential, create the right environment, sustain jobs, help restore the economy, and to finally look after the most vulnerable people in the society. One of the key goals of this framework is to *'…Increase the proportion of people who are healthy at all stages of life'.*

As discussed under Section 13.2.3 'Description of Baseline', health and wellbeing are determined by various factors including, social, economic, and environmental conditions. While the sections above have provided details on current social and economic conditions of the local area, it is also important to note the existing health status and environmental conditions that are likely to affect the health of the existing and future population for the area. This section captures some information on the level of disability, persons that smoke, total number of carers, mortality and its causes and healthy life years at birth and at 65 years. While some data was available at the local (Study Area Level), some of the data was only made available at Local Electoral Area (LEA) Level, City / County Level or National Level. Therefore, the context has been analysed on the basis of granularity of the data. With regard to environmental factors – data in relation to Air and Water Quality for the local area have been noted.

The Local Electoral Area within which the subject site falls, as per the Dublin City Council LEA Map (see Figure 13.12), is the 'Ballyfermot-Drimnagh' Local Electoral Area. Hence, to the extent where local area level data is unavailable, the data at LEA level has been considered in the baseline analysis.

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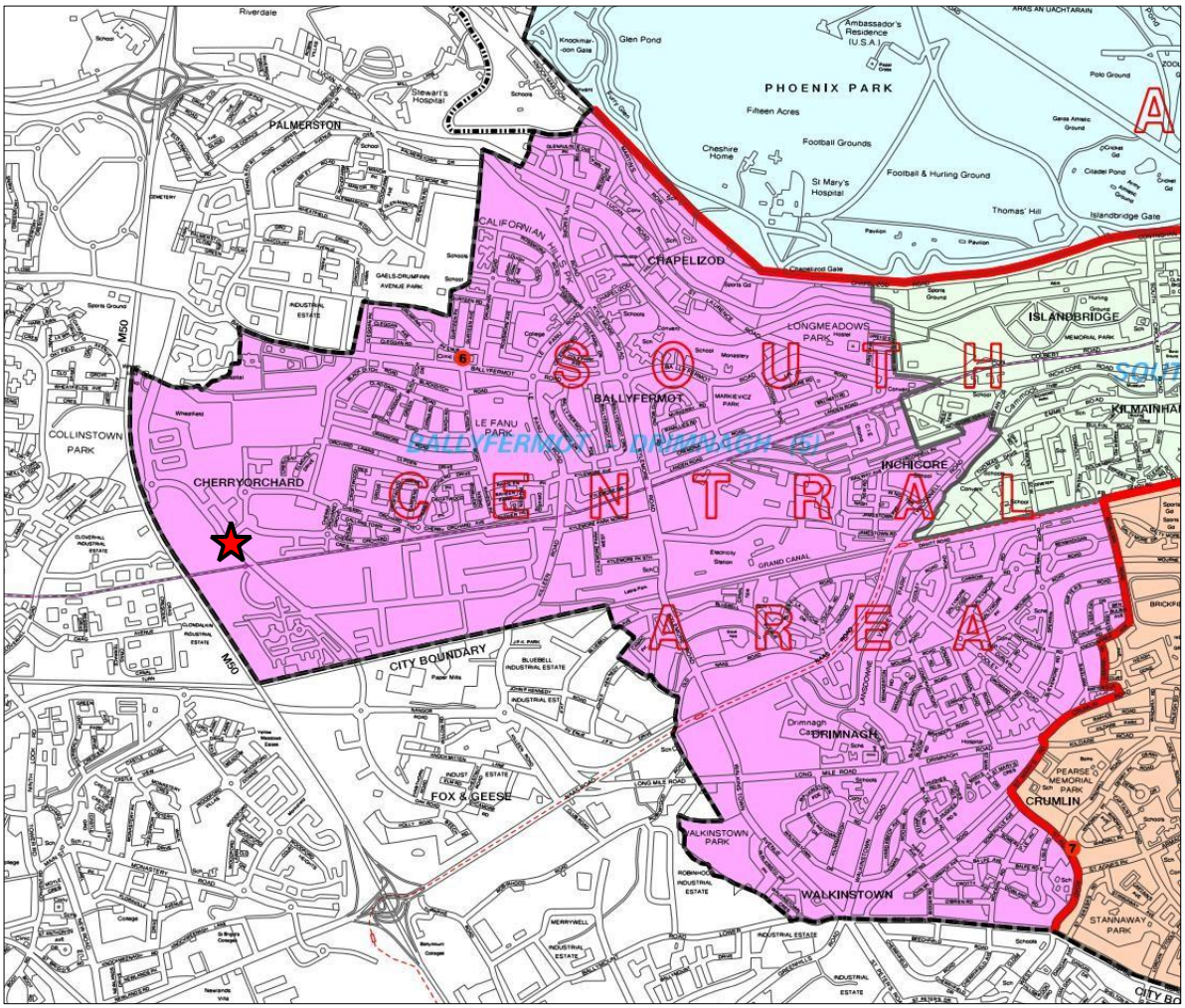


Figure 13-12 Ballyfermot-Drimnagh Local Electoral Area – 5 with site shown in red star (Source: Dublin City Council Map 2022)

Self-Evaluated Health Status:

The Census records the self-evaluated general health status of respondents (as opposed to health status confirmed by medical practitioners). In terms of general health and wellbeing, the Study Area recorded a total of 73.8% of the population as being in 'Very Good' and 'Good Health' combined, down from 81% in 2016. Table 13.9 provides a further breakdown across the health-status categories. Overall, around 2.5% of the Study Area population stated that they were in 'Bad Health' and 'Very Bad Health' combined, a slight increase from 2.3% in 2016.

Table 13-9 Study Area Population by General Health and Gender (CSO, 2022)

General Health	2022 Male (%)	2022 Female (%)	2022 Total (%)
Very good	43.4%	44.1%	43.7%
Good	28.6%	31.6%	30.1%
Fair	9.7%	11.1%	10.3%
Bad	2.2%	1.9%	2%
Very Bad	0.5%	0.5%	0.5%
Not Stated	15.7%	10.8%	13.3%
Total	100%	100%	100%

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The self-evaluated health status as per Census 2022 has also recorded a slightly higher portion of females as being in 'Very Good', 'Good' or 'Fair' health conditions than the male population within the Study Area.

Population with Disabilities:

Around 24.7% (up from 16% in 2016) of the Study Area population have some disability, and portion of people with disabilities seem to consist of an equal proportion of male and female at 12% and 12.7% respectively.

To further look at the prevalence of disabilities across age-groups, data for the Ballyfermot-Drimnagh LEA has been considered – as age wise information at the more local level was unavailable at the time of drafting this Chapter.

The total population for the Ballyfermot-Drimnagh LEA as of Census 2022 is c. 48,563, of which the total persons with a disability consisted of c. 26%. This is a similar proportion to the Study Area. Dublin City Council Administrative area on the other has a total proportion of around 22% people with a disability.

An age-wise proportion of persons with any extent of disability for the Ballyfermot-Drimnagh LEA is set out in Figure 13.13. As would be expected, there is some direct correlation between the proportion of the population with a disability and age. A comparatively higher proportion of people aged 55 to 85 years and over have a disability of some extent, compared with those below 50 years.

The Ballyfermot-Drimnagh LEA, similar to the Study Area have an almost equal proportion of male and female with a disability. However, there is a slightly higher proportion of male children between the ages 5 and 14 years (c. 19%), compared to female children of the same age group (12.5%). On the other hand, there is a slightly higher proportion of female elderly persons with a disability (74%) as compared to male (c. 69%) in the age group 85 years and over.

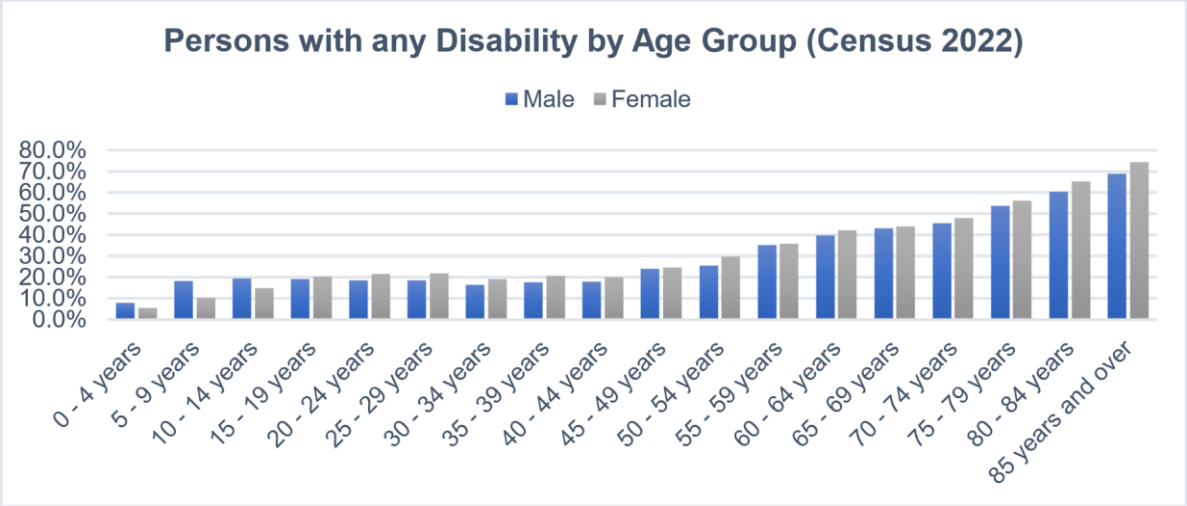


Figure 13-13 Persons with any Disability by Age-Group (Census 2022)

As per the WHO, persons with disabilities are generally more susceptible to poorer health, mortality, and experience increased limitations in everyday functioning than others. Poverty, exclusion from education and employment, and poor living conditions all add to the risk of poor health and unmet health care needs among persons with disabilities.

In that regard, as per Census 2022, the total number of carers for the Study Area was recorded at around 5% of the total population. This is an average of one carer for every 4-5 disabled persons within the Study Area.

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Population that Smokes:

As per the Healthy Ireland Outcomes Framework, lifestyle factors such as smoking, alcohol consumption, physical inactivity and obesity have the potential to reverse many health gains. In this regard, the Healthy Ireland Survey 2025 reported that 17% of the population were current smokers, comprising 13% daily smokers and 4% occasional smokers. The survey also found that smoking rates have remained broadly unchanged since 2019.

The Study Area, as per Census 2022, has around 20% of the total population that smoke and about 65% that do not smoke (Table 13.10). Around 18.2% of the total population in the Ballyfermot-Drimnagh LEA consists of people who either smoke daily (13.5%) or occasionally (c. 5%). The Dublin City Council administrative area has c. 15.5% of people who either smoke daily or occasionally. Both the Study Area and Ballyfermot-Drimnagh LEA have a comparatively higher proportion of smokers than the administrative area of Dublin City Council.

Table 13-10 Persons that smoke and do not smoke within the Study Area as of Census 2022

Category	Persons	% of Total
Persons who smoke	3,694	20%
Persons who don't smoke	11,983	65%
Non stated	2,721	15%
Total persons	18,398	100%

A number of smoking related health issues have been noted in the Healthy Ireland Outcomes Framework (2022), which states that while much progress has been made in tackling smoking in Ireland, there is a continuing toll of smoking-related disease, especially for groups with higher past or present smoking rates.

Mortality Rate and Cause:

Figure 13.14 shows that the mortality rate in Dublin increased from 591.7 deaths per 100,000 population in 2018 to a peak of 640.0 deaths per 100,000 population in 2021. The elevated mortality observed in 2020 and 2021 is likely attributable, in part, to the COVID-19 pandemic, although mortality rates also reflect a range of other health conditions and causes of death. Mortality rates subsequently declined to 630.0 deaths per 100,000 population in 2022 and 620.0 deaths per 100,000 population in 2023. While this indicates an improvement following the 2021 peak, the 2023 mortality rate remained above the levels recorded in 2018 and 2019.

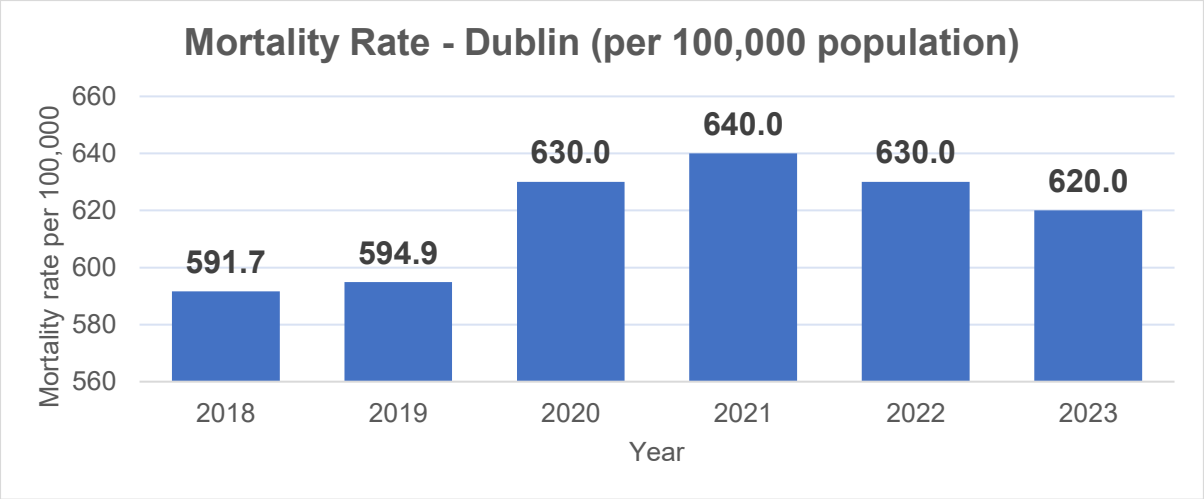


Figure 13-14 Mortality Rate per 100,000 Population in Dublin City and County

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One of the key reasons for a higher mortality rate in Dublin is observed to be associated with 'Neoplasms' and 'Selected Smoking related causes' (Figure 13.15). This is closely followed by 'Malignant Neoplasms' and 'Diseases of the Circulatory System'.

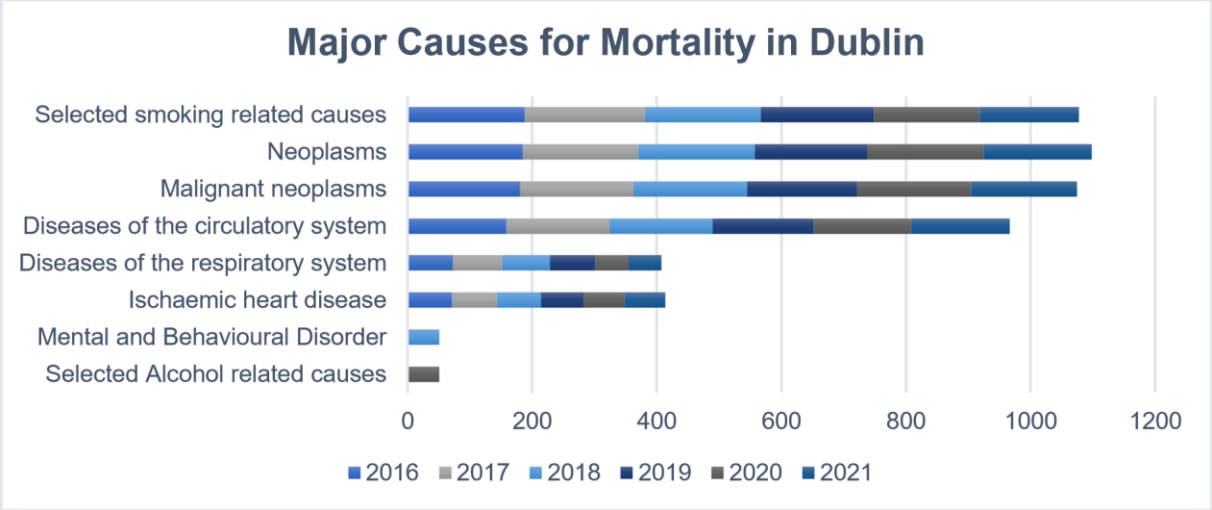


Figure 13-15 Major Causes for Mortality in Dublin City and County between 2016 and 2021 (CSO)

Healthy Life Years:

It is noted that national Healthy Life Years (HLY) at birth increased for both sexes between 2016 and 2019, from 68.5 to 69.6 years. However, there was a visible decline in 2020 to 66.2 years (Table 13.11), a drop of around 3.4 years between 2019 and 2020. Following this decrease, Healthy Life Years partially recovered to 67.2 years in 2021 before declining again to 66.0 years in 2022 and increasing marginally to 66.1 years in 2023. Despite some annual fluctuations since 2020, HLY at birth remained below the pre-pandemic peak recorded in 2019. A generally higher number of healthy life years is evident for females in the State than for males.

Table 13-11 National Healthy Life Years (HLY) at Birth (CSO)

	Healthy Life Years (HLY) at birth		
Year	Both Sexes	Male	Female
2016	68.5	67.2	69.8
2017	68.6	67.9	69.3
2018	69.4	68.3	70.4
2019	69.6	68.6	70.5
2020	66.2	65.3	67.1
2021	67.2	66.4	68.0
2022	66.0	65.2	66.8
2023	66.1	66.0	66.2

Healthy Life Year at birth is a measure used across EU and is defined as the average number of years that a new-born child can expect to live in a healthy condition and free from disability (Healthy Ireland Outcomes Framework 2022). A major implication of the reduced healthy life years / falling life expectancy in Ireland can be associated with the Covid19 Pandemic, which was also observed for most countries throughout 2020.

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Air Quality:

The PM2.5 ('Particulate Matter) levels city-wide average for Dublin City is recorded at 6.889µg/m^3, which is comparatively higher than the local area levels for Cherry Orchard, which falls within the 4-6 µg/m^3 range (Figure 13.16).

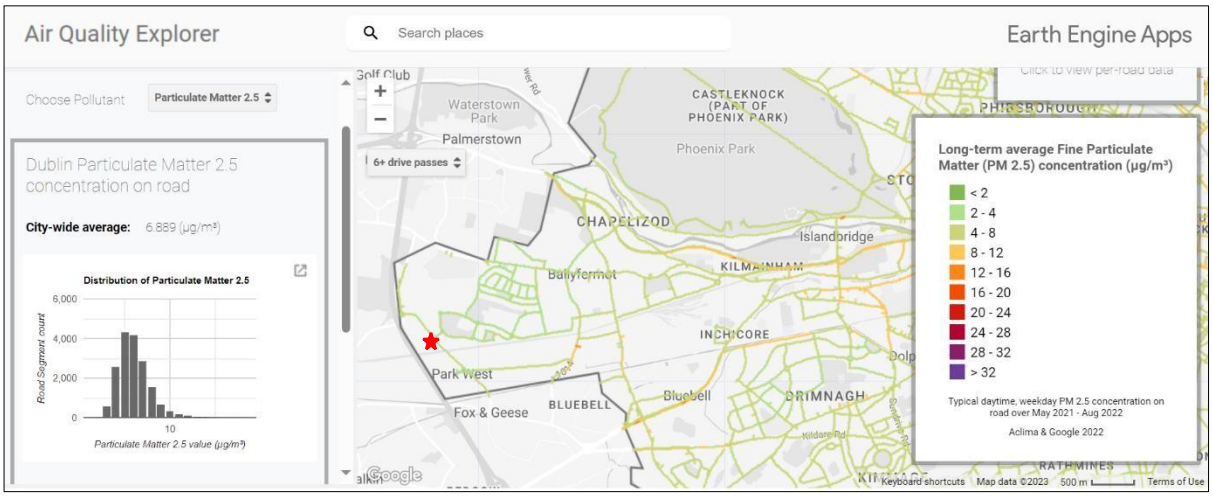


Figure 13-16 Air Quality for Cherry Orchard Local Area (Source: Google Environmental Insights Explorer)

As per the EPA Air Quality Index for Ballyfermot Local Area, the current index is rated as 'good' and with a 24-hour PM2.5 mean of 4.6 µg/m^3 (Figure 13.17). The air quality monitor for this area is located in the public library in Ballyfermot and is operated by Dublin City Council – monitoring is done using continuous monitors for particulates (PM10 and PM2.5).

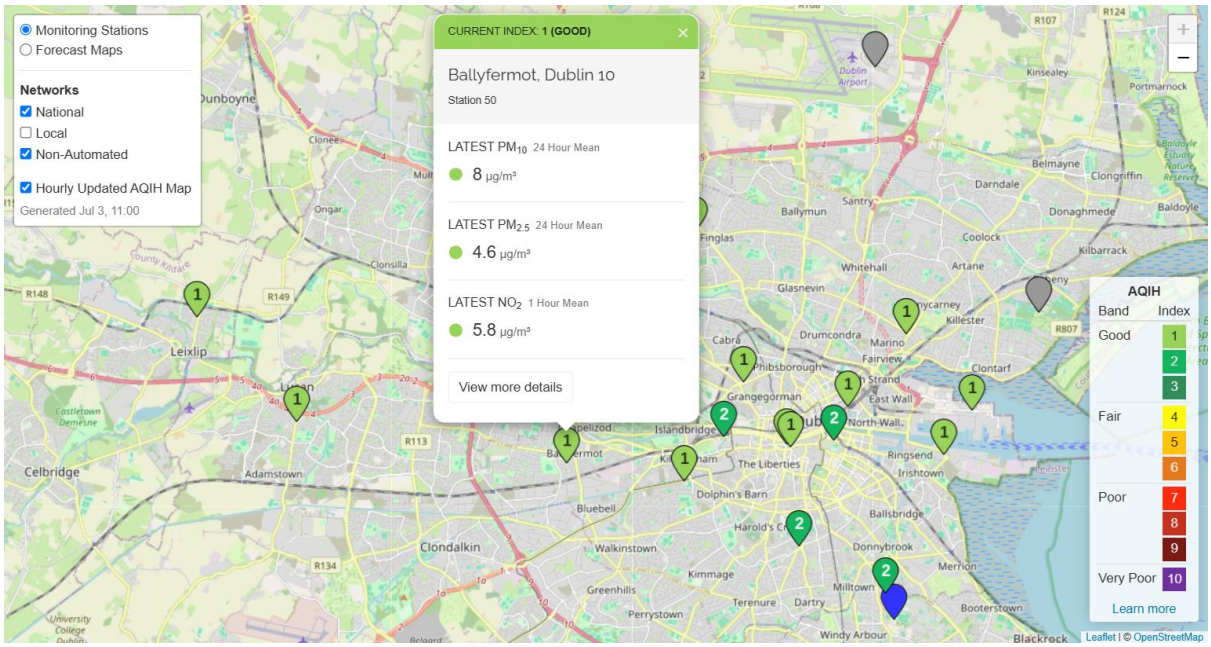


Figure 13-17 Air Quality Index for Health (AQIH) – Development Site demarcated in red. (Source: AirQuality.ie)

According to the WHO Global Air Quality Guidelines ('WHO 2021 Guidelines'), air pollution is now recognised as the single biggest environmental threat to human health and the burden of disease attributable to air pollution is now said to be on par with other major global health risks such as unhealthy diet and tobacco smoking.

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The Healthy Ireland Outcomes Frameworks notes that one of the major causes of air pollution in Ireland are particulate matter from domestic burning of solid fuels and nitrogen dioxide gas from vehicle emissions in urban areas. Subsequently the Frameworks also provides solutions, which include moving towards cleaner ways of heating homes, improving the energy efficiency of our buildings, and implementing the transport options outlined in the Government's Climate Action Plan.

Water Quality:

The Water Quality Zone for Cherry Orchard, Dublin is Water Supply Zone (WSZ): SD_ZONE2. As Uisce Éireann, when a water sample contains higher levels of a parameter than the regulations allow, it's called an exceedance. When this happens, Uisce Éireann carries out a risk assessment. If there is a risk to public health, the Health Service Executive (HSE) is consulted with, to agree on the next steps, which may include telling the public.

Parameter	Unit	Tests Undertaken	Exceedances	Pending Review	Tests within Exceedance Limit
Bacteria and Protozoa	N/A	324	0	0	100%
Chemicals	N/A	139	0	0	100%
Metals	N/A	418	0	0	100%
Other	N/A	487	1	0	99.79%

Figure 13-18 Summary of the Water Quality for the Water Supply Zone (WSZ): SD_ZONE2 generated for 2026. (Source: Uisce Éireann)

As per the report generated for the Water Quality Zone within which the subject site is located in, the water quality seems to be mostly in 100% compliance with limits. Chapter 12: Water of this Environmental Report discusses the impact of the proposed development on water quality and has set out and assessed the impacts accordingly.

13.4.7 Social Infrastructure and Amenities

Social Infrastructure is defined by the European Association of Long-Term Investors[10] as a subcategory of infrastructure that are physical assets in the social sector that provide personal (individual/household) benefits and community benefits to increase social cohesion. An overview of the social infrastructure available within close proximity of the site is presented in the series of tables and maps (figures) set out below.

As detailed in Figure 13.19, a range of Social Infrastructure (SI) and amenity facilities is available within the Study Area. This includes healthcare facilities, community and civic facilities, schools and childcare facilities located within 1km of the Subject Site (see Table 13.12 for the complete list of facilities serving the Subject Site).

[10] *Fransen, L., del Bufalo, G., Reviglio, E. (2018). Boosting Investment in Social Infrastructure in Europe, Report of the High-Level Task Force on Investing in Social Infrastructure in Europe 2018. [PDF File]. Retrieved from:* https://economy-finance.ec.europa.eu/system/files/2018-01/dp074_en.pdf

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Table 13-12 Community and Social Infrastructure within 1km buffer of the Subject Site

Services / Facilities	Total Facilities within the 1km Study Area
Creche	10
Primary School	5
Secondary School	1
Other Education	3
Community Facilities	14
Youth Services/Centre	2
Arts and Cultural Facilities	3
Pharmacy	4
Health Centres, Doctors, and Speciality Clinics	7
Hospitals	1
Religious Institutions	8
Sports Centres, Grounds and Stadiums	32
Total Facilities	**90**

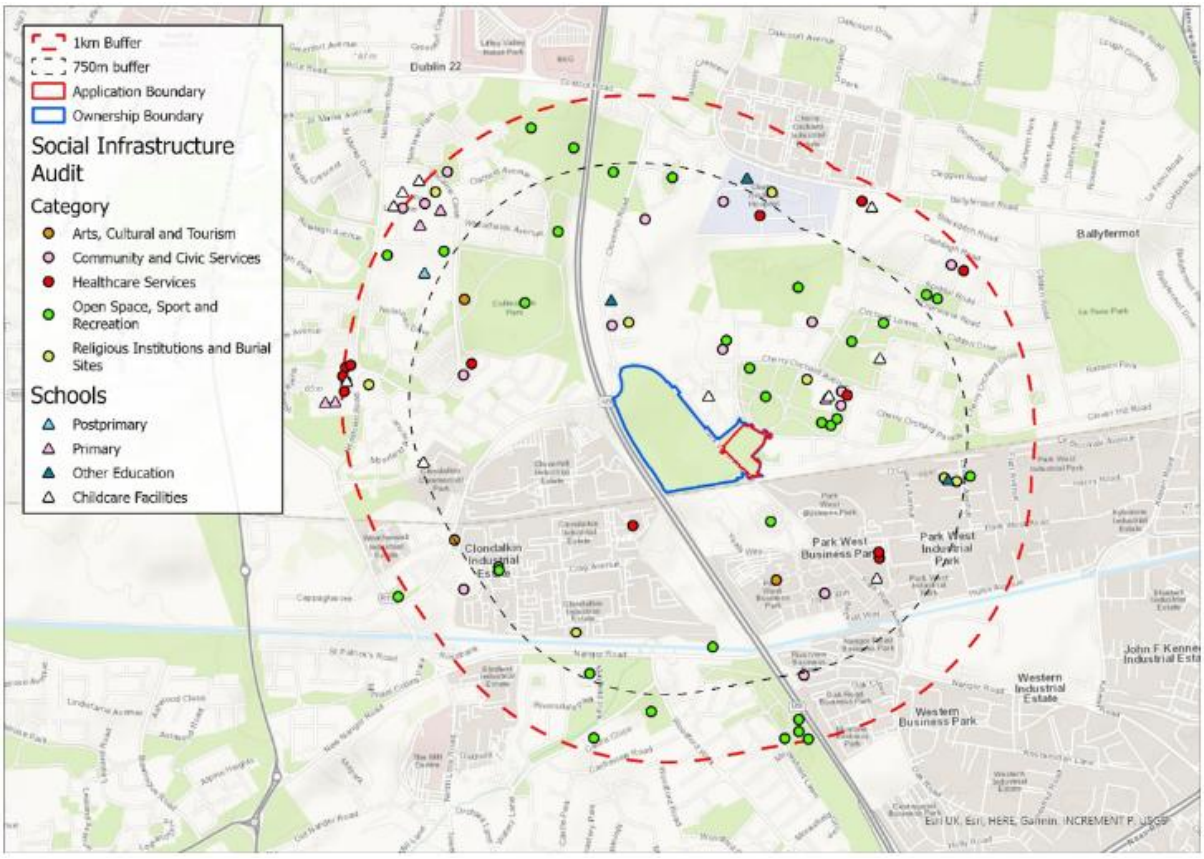


Figure 13-19 Social Infrastructure (SI) and Amenity facilities Facilities within the 1km buffer of the Subject Site

Retail Services

The various designated centres serving the subject site within a 5-minute drivetime catchment have been illustrated in the below Figure 13.20. Additionally, the subject site is also served by some local shops and retail facilities such as Spar, and a local grocers 'Tommy's shop' etc., within the 1km radius of the subject sites.

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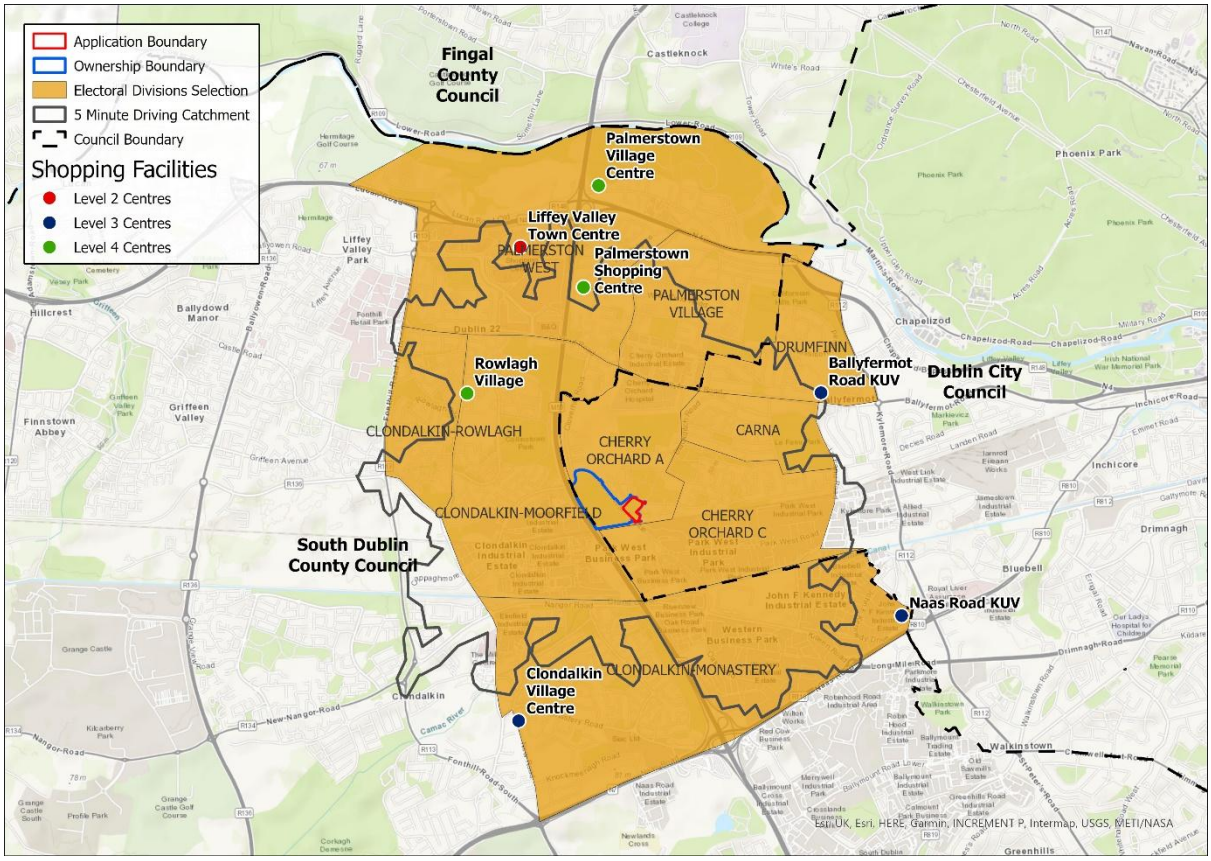


Figure 13-20 Shopping Facilities Serving the Subject Site within a 5-minute driving catchment.

The designated centres within or on the edge of the 5-minute drive time catchment area comprise:

- Liffey Valley Town Centre (Level 2) (SDCC)
- Naas Road Key Urban Village (Level 3) (DCC)
- Ballyfermot Key Urban Village (Level 3) (DCC)
- Clondalkin Town Centre (Level 3) (SDCC)
- Palmerstown Village (Level 4) (SDCC)
- Palmerstown Shopping Centre (Level 4) (SDCC)
- Rowlagh Village* (Level 4) (SDCC)

Access and Transport

The subject site is approximately 7km from the city centre and is located within equal distance from the M50 / N4 junction and the M50 / N7 junction. Only 2km away, the N4 connects Dublin to the northwest of Ireland while the N7 provides a direct connection to Limerick. The trainline runs regularly connecting the subject site to the city centre while also providing services to the midlands. The nearest stop to the light rail line (Luas Red Line) is approximately 4km to the south of the subject site.

Rail Services

The Park West train station is an intermediate station on the Kildare Commuter Line with regular commuter and inter-city services from Portlaoise and Newbridge to Heuston Station and from Hazlehatch and Celbridge to Grand Canal Dock.

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Bus Services

The subject site is served by the Spine / Branch Route (G1) under the Bus Connects services, which provides further connections to the D1 / D3 spine and other local, orbital, and peak time routes including the Red Line Luas.

However, it should be noted that the approved Phase 1 scheme includes c. 2,500sq.m of flexible community, arts and cultural space, as well as a creche, which will be a welcome addition to the area. The LDA though partnership with Dublin City Council, will also contribute to the provision of a community athletics running track approved under Phase 2 (ABP Ref: 321931-25), providing a direct response to identified local needs of dedicated 'community' facility as noted during the public consultation process.

Furthermore, the proposed Phase 3 development will contribute financially to the implementation of the Cherry Orchard Renewal Plan within the Park West–Cherry Orchard LAP area. When delivered and operational, these services and facilities will result in long term positive impacts on the population and human health of the area.

13.4.8 Surrounding Environment

The site is strategically positioned bounded by the Cedar Brook Way to the north, Park West Avenue to the west, Barnville Park to the east and the Park West Cherry Orchard rail station to the south which provides excellent accessibility and connectivity opportunities. The site also benefits from direct access via Barnville Park which connects with Park West Avenue and is served by the No.60 and G1 bus routes providing direct linkages to Dublin City Centre and the Docklands. The surrounding area of the site is mixed use in nature with two large industrial estates each to the southwest and southeast of the site, residential developments located further east, Cloverhill Prison to the north and a number of recreational and green spaces including Cherry Orchard Park.

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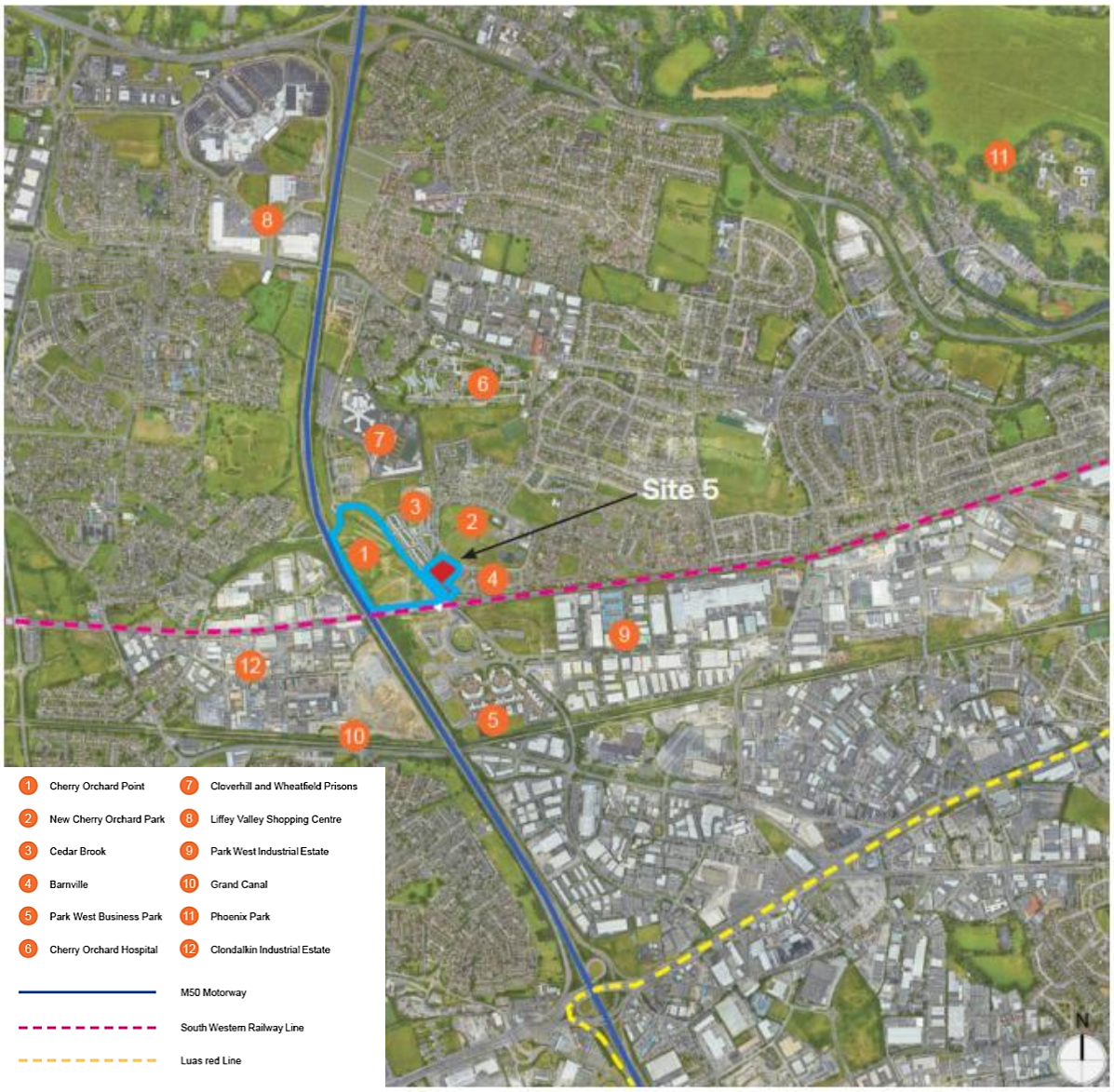


Figure 13-21 Aerial View showing Surrounding Environment (Source: VDA / CCK)

The Subject Site is part of the wider area identified under the Dublin City Development Plan 2022-2028 for regeneration which is reflected in the lands' designation as a Strategic Development Regeneration Area (SDRA 4). The Park West Cherry Orchard Local Area Plan for the area was adopted in 2019 (as extended), and identified 8 no. Key Development Sites within the wider LAP lands that offer the potential to deliver approximately 2,000 residential units in tandem with employment and commercial development. The subject site represents part of Development Site 5 and will form the third of four phases of development aimed at delivering upon the aspirations of the LAP for the redevelopment of these lands.

A planning history search was undertaken by KPMG Planning to identify any additional planning applications that may have been submitted since the authoring of the Parent EIAR. An analysis of the status of the applications was also undertaken to establish what developments have commenced construction and ultimately to better understand the surrounding environment and potential cumulative impact. This is set out in Section 15.5.3 Cumulative Impacts below.

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13.5 Potential Impacts: Assessment

This section provides a description of the potential impacts that the proposed development, may have on population and human health during both the construction and operational phase of the scheme. Potential impacts are assessed in terms of impact on socio-economic factors / conditions, impact on environmental factors such as air quality, noise and water quality and other physical factors such as traffic and transport and landscape and visual impact.

Where relevant, additional mitigation measures required to alleviate any such effects identified in relation to Phase 3 of the scheme (not previously captured in the Parent EIAR) has been set out in Section 13.5.4 below.

The analysis of impacts comprises a study of the key assessment themes, together with consideration of the construction and operational phases of the development, with a conclusion reached in relation to the proposed development and the environment. This has already been carried out for the consolidated scheme envisioned for Sites 4 and 5 of the LAP lands under the Parent EIAR. This section captures any additional impacts identified in relation to Phase 3 of the scheme as a result of design updates since the Parent EIAR was drafted. Table 13.13 below provides a summary overview of the impacts of the full extent of the development on Population and Human Health across the various environmental topics and sets out an assessment of the significance of those impacts.

Table 13-13 Potential Impacts Assessment Summary

Characteristics	Significance of Effects / Impact Assessment
Construction Phase	
Human Health	Slight or Non-Significant Impact
Air Quality	direct, short-term, negative, localised and not significant.
Climate Factors	direct, long-term, negative, moderate, not significant.
Noise and Vibration	negative, short-term, imperceptible to not significant.
Water	temporary, negative and slight significant
Traffic and Transport	No significant impact
Landscape and Visual	slight and neutral to moderate and negative
Operational Phase	
Human Health	Slight positive, long-term impact; no significant negative impact
Population	Positive permanent significant impact
Socio-Economic	Slight positive significant impact
Air Quality and Climate Factors	negative, long-term, direct, localised and imperceptible
Climate Factors	direct, long-term, negative, moderate, not significant.
Noise and Vibration	negative, imperceptible to slight and long-term.
Water	long-term, negative and slight significant
Traffic and Transport	No significant impact
Landscape and Visual	No significant negative impacts
Community and Social Amenities	Positive significant and long-term impacts

Whilst it is important to assess the significance of the potential effects arising from the proposed development, the substantial positive impacts on human health and wellbeing should also be recognised. The proposed scheme will deliver a highly permeable and legible network of streets, public spaces and pedestrian connections, facilitating and encouraging sustainable modes of travel, including walking and cycling.

The subject lands are currently vacant and have remained underutilised for many years, resulting in a degraded environment that has been susceptible to anti-social behaviour. The proposed development will transform the site through the provision of high-quality public realm, enhanced connectivity, active

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frontages and increased passive surveillance. Collectively, these measures will create a safer, more attractive and accessible environment for residents and visitors, thereby generating long-term positive effects on population, human health and overall quality of life within the area.

13.5.1 Construction Stage

This Section of the Report sets out the impacts of the proposed scheme on Population and Human Health during the construction phase of development insofar as the impacts are considered to have changed since the Parent EIAR was undertaken. The impacts on population and human health are presented below across the relevant environmental topics where interactions occur. The main impacts arising from the proposed development on population and human health relate to Air Quality, Climate, Noise and Vibration, Water Quality, Landscape and Transportation.

Population and Human Health

Chapter 11 on Land Soil and Geology note that there might be a potential risk to human health due to the unlikely exposure of the construction workers or other receptors to contaminated soil or construction materials. The chapter indicates that previous environmental investigations did not identify any significant contamination within the tested samples. In addition, the implementation of appropriate soil management, health and safety, and construction mitigation measures will further reduce any residual risk.

Additionally, the other main impact of the proposed development in the sole context of population and human health during the construction phase of the development is the employment opportunities that will be created when the scheme is being implemented. The impact is considered to be ***Positive, Imperceptible and Short-Term.***

Air Quality

The Institute of Air Quality Management in the UK (IAQM) guidance document '*Guidance on the Assessment of Dust from Demolition and Construction*' (IAQM, 2024) outlines an assessment method for predicting the impact of dust emissions from construction activities based on the scale and nature of the works and the sensitivity of the area to dust impacts. The IAQM methodology has been applied to the construction phase of this development to predict the likely risk of dust impacts in the absence of mitigation measures and to determine the level of site-specific mitigation required. The use of UK guidance is recommended by Transport Infrastructure Ireland in their guidance document *Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106* (TII, 2025).

The greatest potential impact on air quality during the construction phase of the proposed development is from construction dust emissions and the potential for nuisance dust. While construction dust tends to be deposited within 250 m of a construction site, the majority of the deposition occurs within the first 50 m (IAQM, 2024). The extent of any dust generation depends on the nature of the dust (soils, peat, sands, gravels, silts etc.) and the nature of the construction activity. In addition, the potential for dust dispersion and deposition depends on local meteorological factors such as rainfall, wind speed and wind direction. A review of Casement Aerodrome meteorological data indicates that the prevailing wind direction is south-westerly, and wind speeds are generally moderate in nature. Dust impacts are likely to occur during drier periods, as rainfall acts as a natural dust suppressant (IAQM, 2024). Days with less than 0.2mm of rainfall can be classified as days with little or no rainfall. A review of historical 30-year average data for Casement Aerodrome indicates that on average 194 days per year have rainfall over 0.2 mm (Met Éireann, 2025). Therefore, it can be determined that over 53% of the time dust generation will be reduced due to natural meteorological conditions.

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To determine the level of dust mitigation required during the proposed works, the potential dust emission magnitude for each dust generating activity needs to be taken into account, in conjunction with the previously established sensitivity of the area. The major dust generating activities are divided into four types within the IAQM guidance (IAQM, 2024) to reflect their different potential impacts. These are: demolition, earthworks, construction and trackout (movement of heavy vehicles).

When proposed mitigation is implemented where required there will be a further reduction of the predicted impacts on population and human health.:

- Demolition

The Phase 3 development does not propose any demolition and so no impacts are predicted in this regard.

- Earthworks

Given the scale of the full extent of the EIAR boundary which includes the Phase 3 lands and the total developable area exceeding 110,000sq.m the proposed earthworks (excavation, loading / unloading material, tipping and stockpiling) is considered large. When combining the large dust emission magnitude with a medium sensitivity to dust soiling and low sensitivity to dust-related human health impacts, there is an overall predicted high risk of dust soiling impacts and a ***low risk of dust-related human health impacts***. This risk is as a result of the proposed earthworks activities in the absence of mitigation.

- Construction

The dust emission magnitude for the proposed construction activities across the full extent of the development can be classified as large given the total building volume including the proposed Phase 2 scheme will be greater than 75,000 m3. When combining the large dust emission magnitude with a medium sensitivity to dust soiling and low sensitivity to human health impacts, there is an overall predicted high risk of dust soiling impacts and a ***low risk of dust-related human health impacts***. This risk is as a result of the proposed construction activities in the absence of mitigation.

- Trackout / Movement of Heavy Vehicles

The dust emission magnitude associated with the movement of heavy vehicles is classified as medium by virtue of there being 20- 50 outward vehicles (HGV) movements per day from construction site activities. As such, there is low risk of dust related human health impacts in the absence of mitigation measures.

An adverse air quality impact during the construction phase can cause health and dust nuisance issues. There is a low risk of dust-related human health impacts during the construction phase of the proposed development. Best practice mitigation measures will be implemented during the construction phase to ensure that the impact of the proposed development complies with all ambient air quality legislative limits. Therefore, the predicted impact is ***direct***, ***short-term***, ***negative***, ***localised*** and ***not significant*** with respect to Population and Human Health during the construction phase.

Climate Factors

Climate related impacts associated with the proposed development primarily arise from Greenhouse Gas emissions which tend to occur during the construction phase of development as a result of embodied carbon in construction materials and emissions from construction activities. Therefore, prior

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to mitigation, any impact to climate as a result of GHG emissions arising from the construction and operation of the proposed development is considered significant.

The Climate Change Risk Assessment section in the Climate chapter identifies that the development is likely to be exposed to potential weather extremes due to climate change during the construction phase, the potential length of the construction phase and its transient nature means that a detailed CCRA of this phase is scoped out concluded that the absence of design mitigation, there is a medium risk to the proposed development as a result of climate change and the impacts to the proposed development as a result of climate change are ***direct***, ***long-term***, ***negative***, ***moderate, not significant***.

As such, there are no climate related impacts to population or human health predicted at the construction stage of development. Consideration will be given to the following climate change hazards that have the potential to impact the population and human health during the operational stage of development which will be discussed in Section 13.5.2.

Noise and Vibration

This section provides an analysis of the impacts on population and human health during the construction stage of development in relation to noise and disturbance experienced by neighbouring residents. A number of residential receptors have been identified and categorised into three decibel threshold values i.e. category (A, B or C) based on exiting ambient noise levels in the absence of construction noise. In relation to vibration the main issues relate to the risk of cosmetic or structural damage to buildings and human perception of vibration. During construction phase piling is considered one of the primary sources of vibration and with humans being particularly sensitive to vibration stimuli can cause concern.

Construction activities associated with the proposed development, including site clearance, excavation works, construction plant operation and loading lorries, have the potential to generate temporary noise and vibration impacts on nearby residential receptors. The closest receptors from the area of construction works are residential properties at R1 – Ceder Brooke Avenue and R2 - Barnville Park at distances of approximately 10m. There is the potential for noise levels to reach 80 dB during the worst periods of construction works. This would occur when works are at the closest boundaries to the COP Phase 1 buildings, however, it is noted that for the vast majority of the construction works will be further from the boundary and associated noise levels will be much lower. At distances greater than approximately 40m from construction works, impacts would be not significant. On this basis, a ***negative, moderate to significant and short-term*** construction noise impact is concluded.

In relation to construction traffic, i the increased traffic noise levels by 1 dB traffic volumes would need to increase by the order of 25% along the local road network. Additional traffic introduced onto the local road network due to the construction phase of the proposed development will result in a ***negative, not significant and short-term*** noise impact.

Potential for vibration impacts during the construction phase programme are likely to be limited given that rock breaking is not expected. Considering the distance to the receptors vibration emissions from this activity will be significantly reduced. Vibration levels at the closest neighbouring buildings are expected to be orders of magnitude below the limits set out in Table 7-3 to avoid any cosmetic damage to buildings. Vibration levels are also expected to be below a level that would cause disturbance to building occupants. The impacts are predicted to be ***negative, not significant, and short-term.***

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Water Quality

Construction activities such as excavation, earthworks, stockpiling and drainage installation could mobilise sediments and pollutants, while accidental spills of fuels, oils, hydrocarbons or cementitious materials could enter the surface water drainage network and receiving watercourses/sewers. This has potential to cause a ***temporary, negative and slight significance***. on receiving watercourses/groundwater should no mitigation measures be implemented.

Although the site is located within Flood Zone C and is not at risk from coastal or fluvial flooding, construction activities and intense rainfall events could increase the potential for localised pluvial flooding and affect drainage performance. Uncontrolled runoff and pollution incidents could also adversely affect the receiving water environment. The impact is assessed as ***temporary, negative and slight significance***.

Construction of water supply and foul drainage infrastructure could result in accidental damage to existing or newly installed services, causing leaks or uncontrolled discharges that may affect surface water or groundwater quality. In the absence of mitigation, the impact is assessed as ***temporary, negative and slight significance***.

Landscape & Visual Impact

Potential impacts during the construction phase are related to temporary works, site activity, and vehicular movement within and around the subject site. Vehicular movement may increase in the immediate area, and temporary vertical elements such as cranes, scaffolding, site fencing, gates, plant and machinery etc., will be required and put in place. Most of the construction impacts will be temporary, and may include the following:

- Site preparation works and operations;
- Site excavations and earthworks;
- Site infrastructure and vehicular access;
- Materials storage, spoil heaps etc;
- Construction traffic, dust and other emissions;
- Temporary fencing/hoardings, site lighting and site buildings (including office accommodation);
- Cranes and scaffolding;

Where trees are to be felled, or hedgerows cleared, these impacts will be permanent, however any proposed new planting will offset such effects, increasingly so as the proposed development matures.

The landscape and visual effects of these changes are most likely to be experienced as adverse or negative effects by adjacent residents and users of Park West Avenue, Barnville Park and Cedarbrook Way.

Generally, landscape and visual effects during the Construction Phase are likely to vary from **slight and neutral** to **moderate and negative**, depending on the stage of construction, and the intensity of site activity. The construction impacts will be of **short-term** duration.

Transportation

The main impacts associated with the transportation environmental topic on population and human health that may occur during the construction stage of the development relates to construction traffic and increased movements of HGVs to and from the site and the disturbance this may cause to existing residents in the area. As outlined in Chapter 14 of the EIA Addendum Report, the day-to-day traffic movements associated with construction activities are predicted to be less than 3.1% of existing vehicular movements on Park West Avenue which is less than the recommended 10% threshold as

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set out in the TII Guidelines. Furthermore, it is predicted that the majority of increased trips arising from construction activities will take place outside of peak hours and are not therefore predicted to materially impact the existing traffic network or cause adverse disturbance to existing residents. It is therefore concluded that ***no significant impact*** on the population and human health of existing residents arising from increased construction traffic will take place.

13.5.2 Operational Stage

This Section of the Report sets out the impacts of the proposed scheme on population and human health during the operational phase of development insofar as the impacts are considered to have changed since the Parent EIAR was undertaken. The impacts on population and human health are presented below across the relevant environmental topics where interactions occur. The main impacts arising from the proposed development on population and human health relate to Air Quality & Climate, Noise and Vibration, Water Quality, Landscape and Transportation.

Population and Human Health

The main impacts of the proposed development in the sole context of population and human health during the operational phase of the development are the delivery of 312no. comprising social and cost rental residential units, the provision of dedicated pedestrian and cycle linkages and high quality public and communal open space. The operation stage of the development is unlikely to cause any adverse impacts on the existing and future residents of the locality in terms of human health.

Given the socioeconomic profile for the area, it is expected this unit mix will cater to the housing need within the locality, making it more affordable for people to live and work in the area.

It is reasonable to consider that positive impacts generated by the proposed development on the local economy will, in turn, give rise to improvements in vibrancy and vitality of the area contributing to a stronger sense of place which is positively related to health.

The impacts described above are considered to be ***Positive, Imperceptible and Long-Term.***

Phase 3 will provide a much-needed housing delivery on a vacant site adjacent to Park West Cherry Orchard Railway station. The overall scheme has been designed to encourage active travel and discourage private car use. The creation of safe and attractive paths and high quality communal and public open space can create more sustainable habits for the benefit of the neighbourhood.

Air Quality

Chapter 5 and 6 on Air Quality and Climate Factors conclude that traffic related air emissions have the potential to impact air quality which can affect human health. A detailed air dispersion modelling assessment of traffic emissions was conducted, and it was determined that emissions of air pollutants are predicted to be significantly below the ambient air quality standards which are based on the protection of human health. Therefore, it can be concluded that the impact of traffic emissions on air quality and human health during the operational phase is ***negative***, ***long-term, direct, localised and imperceptible,*** which is an overall non-significant effect in EIA terms.

Climate Factors

The Climate chapter indicates that no fossil fuels are used within the proposed development. Therefore, operational energy demand is assumed to be fully electrified, and associated GHG emissions are calculated solely based on electricity consumption using SEAI grid emission factors. A number of measures have been incorporated into the design to ensure the operational phase emissions are minimised.

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In terms of operational traffic emissions, the use of fossil fuel powered vehicles by new occupants of the proposed development will result in GHG emissions. Traffic data was provided by Waterman Moylan and is included in Chapter 14 Material Assets – Traffic and Transport. The data include the cumulative flows of the proposed development, committed developments from the surrounding area and background, existing traffic flows. The predicted transport GHG emissions for 2027 and 2042 shown in Table 6-10 demonstrate that the operational emissions from transport are a small fraction of the transport sector emission ceiling, and a smaller fraction of the national emission ceiling.

To assess the vulnerability of the proposed development to climate change, it is first necessary to determine the sensitivity and exposure of the development to a range of potential climate hazards. Following a qualitative assessment of climate hazards relevant to the proposed development, the following hazards have been screened in the context of the proposed scheme:

Table 13-14 Physical Climate Hazard Screening (Table 6.6 of EIAR Climate chapter)

Climate-related Hazard	Hazard Screening Rationale	Screening
Extreme heat (including extreme heat events and increasing temperatures overtime)	Screen in	High temperatures are a key consideration for both construction and long-term operation of the proposed development. Heat can affect the performance of materials, roofing, road surfaces, electrical systems while also affecting the lifecycle of assets. Extreme heat should therefore be further considered and screened in.
Extreme cold (including frost and snow)	Screen in	Snow and ice events pose significant risks to health, safety, and site operations. Road access may be disrupted, and low temperatures can affect water mains. Freeze-thaw cycles may cause cracking in concrete and road surfaces, with snow clearance and requiring management. Cold temperatures are therefore screened in.
Flooding (pluvial)	Screen in	Surface water is a key vulnerability for any proposed development during both construction, operational and decommissioning phases due to the sensitivity of construction materials, site access, and site assets to water exposure therefore it is screened in.
Flooding (fluvial)	Screen out	The FRA by Ground Investigation Ireland states the proposed development is entirely in Flood Zone C therefore fluvial flooding is screened out.
Flooding (coastal)	Screen out	Proposed development approximately 13.1km from the coast.
Drought	Screen out	Drought is more likely to occur in the future but it is not considered a fundamental issue for the operation of a residential development.
Wildfire	Screen out	The area surrounding the proposed development is largely developed and in close proximity to urban centres.
Extreme wind	Screen in	High winds and storms may cause localised disturbances such as road blockages and flying small debris. Damage would be expected to be minor and easily repairable but should be further assessed so is screened in.
Fog	Screen out	Fog is not considered a significant hazard for the proposed development, as it does not involve transport, aviation, or activities requiring high visibility.
Lightning and hail	Screen out	Proposed development is not at an elevated location and is surrounded by other tall buildings. Nonetheless, lightening protection to IS EN 62305 will be specified.

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Climate-related Hazard	Hazard Screening Rationale	Screening
Landslides	Screen out	Geological Society of Ireland (GSI) landslide susceptibility mapping database categorised location as low for landslide susceptibility.

Chapter 6 further outlines the each of the climate-related Hazards.

Based on the screening results, the Climate Change Risk Assessment further examined the vulnerability of the proposed development to climate change by assessing its sensitivity and exposure to those climate hazards identified as significant and relevant to the proposed scheme. The assessment focused on the following climate hazards:

- Extreme Heat
- Extreme Cold
- Flood (Pluvial)
- Extreme Wind

The aim of the sensitivity analysis is to identify which climate hazards are relevant to the specific type of project, irrespective of its location. Individual components within the type of proposed development i.e. a large residential development, are assessed against each climate hazard. While, the exposure of the proposed development to climate risks is highly dependent on the project location.

This assessment combines the outcomes of the sensitivity and exposure analysis to determine which climate hazards pose a risk to the proposed development. The vulnerability of the proposed development to climate risks is determined based on the sensitivity and the exposure as follows:

Vulnerability = Sensitivity x Exposure

Thie likelihood of the climate hazard is scored on a scale of high (3), medium (2) and low (1).

Table 13-15 Vulnerability of the proposed development to the risks of climate change impacts (Table 6.14 of the EIAR climate chapter)

Receptors	Sensitivity to Climate Hazards (No consideration of site location)			
	Extreme Heat	Extreme Cold	Flood (Pluvial)	Extreme Wind
Buildings and Structures	1	1	2	1
Drainage	1	1	2	1
Health, safety and wellbeing	2	1	2	2
Roads	2	1	2	1
Public and communal open spaces	2	2	2	1

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Critical systems	2	1	2	2
1 = Low; 2 = Medium; 3 = High				

The CCRA concluded that:

> *" In the absence of design mitigation, there is a medium risk to the proposed development as a result of climate change. In accordance with the EPA Guidelines (EPA, 2022), the significance of effect of the impacts to the proposed development as a result of climate change are **direct** as climate extremes have a direct physical effect on buildings and infrastructure, **long-term** due to the response times of the climate in relation to changes in anthropogenic emissions, **negative** as climate extremes have been shown to damage or adversely affect infrastructure, and **moderate** due to the medium vulnerability of the proposed development to the effects of climate change, which is overall **not significant** in EIA terms."*

Noise and Vibration

Noise and vibration has been considered in terms of two aspects. The first is the outward impact of the development (i.e. the potential impact of the Proposed Development on existing sensitive receptors in the study area) and the inward impact of existing noise and vibration sources on the development itself (with a particular focus on road traffic and rail noise).

An environmental noise survey has been conducted at the site in order to quantify the existing noise environment. The survey was conducted in general accordance with ISO 1996: 2017: Acoustics – Description, measurement and assessment of environmental noise.

During operation, the principal potential effect on population and human health relates to traffic-generated noise associated with vehicle movements on the surrounding road network. The assessment indicates that a major short term and moderate long term noise impact may occur at some junctions. Chapter 7 on Noise and Vibration provides assessment and indicates that overall noise levels remain consistent with the existing urban noise environment. Consequently, operational traffic noise effects are considered ***negative, imperceptible to slight and long-term***.

The proposed development has also been assessed in respect of inward noise impacts on future residents. Noise modelling demonstrates that, with appropriate façade design, enhanced glazing and ventilation systems where required, recommended internal and external amenity noise criteria can be achieved. Once these mitigation measures are applied the inward impact is ***neutral, not significant and long-term***.

It can be concluded that the development site may be categorised as Medium to High Risk and as such an Acoustic Design Strategy is required to demonstrate that suitable care and attention has been applied in mitigating and minimising noise impact to such an extent that an adverse noise impact will be avoided in the final development.

It should be noted that *Professional Guidance on Planning & Noise* (ProPG) states the following with regard to how the initial site noise risk is to be used,

> *"2.12 It is important that the assessment of noise risk at a proposed residential development site is not the basis for the eventual recommendation to the decision maker. The recommended approach is intended to give the developer, the noise practitioner, and the decision maker an early indication of the likely initial suitability of the site for new residential development from a noise perspective and the extent of the acoustic issues that would be faced. Thus, a site considered to be high risk will be recognised as presenting*

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more acoustic challenges than a site considered as low risk. A site considered as negligible risk is likely to be acceptable from a noise perspective and need not normally be delayed on noise grounds. A potentially problematical site will be flagged at the earliest possible stage, with an increasing risk indicating the increasing importance of good acoustic design."

Therefore, following the guidance contained in ProPG does not preclude residential development on sites that are identified as having medium or high-risk noise levels. It merely identifies the fact that a more considered approach is required to ensure the developments on the higher risk sites are suitable designed to mitigate the noise levels. The primary goal of the approach outlined in ProPG is to ensure that the best possible acoustic outcome is achieved for a particular site.

All plant associated with the development will be designed such that the rating level does not exceed background noise levels at noise sensitive locations, in accordance with BS 4142:2014+A1:2019, and will not contain audible tones at any noise sensitive locations. Plant items will be selected, designed and located so that there is no negative impact on sensitive receivers within the development itself. Taking into account that sensitive receivers within the development are much closer than off-site sensitive receivers, then once the relevant noise criteria is achieved within the development it is expected that there will be no negative impact at sensitive receivers off site. There are no expected sources of vibration associated with the operation phase of development, therefore there is no predicted impact in that regard.

Water Quality

The proposed development will increase impermeable surfaces, generating surface water runoff that may contain pollutants such as suspended solids and hydrocarbons. Without appropriate treatment and management measures, these pollutants could enter the drainage network and downstream receiving waters/drainage network. The increased runoff from new impermeable surfaces could increase the potential for localised pluvial flooding and contribute to downstream flood risk if not appropriately managed. The impact is assessed as ***long-term, negative and slight significance.***

Operational activities are not expected to significantly alter groundwater levels. However, leakage or failure of water supply or foul drainage infrastructure could result in the release of water or wastewater to ground, with potential effects on groundwater quality. The impact is assessed as ***long-term, negative and slight significance.***

The development will increase potable water demand and wastewater generation. In the event of infrastructure failure, leakage or uncontrolled discharge, there is potential for adverse effects on both surface water and groundwater quality. The impact is assessed as ***long-term, negative and slight significance.***

Landscape & Visual Impact

The designed scheme seeks to consolidate a key part of the urban plan and harmonise and integrate the development within the existing landscape and the broader urban environment, in line with the Dublin City Development Plan 2022-2028, the Park West and Cherry Orchard LAP, and associated policies and objectives. It must do this whilst adhering to national planning policy which seeks the densification and the provision of increased height on appropriate urban sites. The design rationale and detail employed seeks to mitigate potential negative effects on the landscape character and visual amenity of the area by:

- Establishing an integrated relationship between the proposed development and surrounding buildings, infrastructure, green infrastructure and permeability, and the broader urban

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landscape beyond, incorporating aspects of current and emerging trends in built-form, scale, texturing, colour and materials.

- The insertion, positioning and detailed modelling of the buildings, in order to assist in the appropriate visual assimilation of their mass.
- Appropriate architectural detailing to assist in the integration of the external building facades – including the modulation of openings and fenestration.
- Rationalisation of all services elements and any other potential visual clutter and its incorporation internally within building envelopes (as far as practically possible).
- Simplification and rationalisation of the proposed roof lines.
- Use of appropriate materials in the architectural expression of the buildings. In this instance, brick is used in the facades across the scheme, with variation in colour, pattern, texture and tone occurring in the individual character areas or emphasising specific parts of facades. This approach reinforces the articulation of the massing of the blocks, as well as lending importance and interest to specific areas.
- The provision of community uses within the development, including public open space.
- Sustainable approach to drainage and enhancement of biodiversity.
- Detailing in the architectural and landscape design to mitigate wind and shadow effects to create positive microclimates.
- Comprehensive planting of vegetation, particularly trees to ground the scheme in the landscape and provide amenity, habitat, shelter and screening.
- Implementation of maintenance and management of buildings, infrastructure and vegetation.

In terms of potential visual impacts, whilst the proposed scheme is not uncharacteristic within the broader context, there is a clear change of scale between the existing brownfield site, the adjacent existing housing and what is proposed. Sensitivities may well be somewhat mitigated by the degraded nature of the site and the anticipation of new homes and infrastructure. The quality of the proposed buildings and their setting offer a coherent and vibrant completion of this quarter. The potential for a measure of visual impact, experienced by people visiting, living in, or using these areas, is therefore reasonably high. The selected viewpoints for the preparation of photomontages takes this into account by taking views from corresponding locations.

The design rationale adopted and the architectural and landscape architectural approach to the design of the proposed scheme and the details employed, seek to respond to such issues and to mitigate negative effects on both the broader landscape character and visual amenity of the area. Mitigation Measures, are outlined in Chapter 18 below.

Transportation

Notwithstanding that the traffic impact from the proposed development is predicted to be 10% or greater at all of the seven road junctions included in the traffic modelling undertaken for this project, the results of the traffic modelling predict that all of assessed junctions, except Junctions 4 and 7, will operate within capacity in the AM and PM peaks hours with the proposed development in place in the Opening Year 2027 through the Design Year in 2032 to the Future Year 2042.

Junction 4 is a new junction approved under Phase 1 and under construction at the time of writing in June 2026. It was designed to the requirements of the Design Manual for Urban Roads and Streets (DMURS). An alternative design could reduce delays but at the cost of longer delays for cyclists and pedestrians. However, DMURS is a mandatory national standard for roads in urban areas and the applicants had no option but to incorporate its requirements in the new junction.

Junction 7 is a pre-existing issue at an existing junction located approx. 0.6km to the south of Phase 3 on the other side of the railway line. Future delays are predicted to occur at this junction irrespective of whether the proposed development is implemented or not. In these circumstances, no significant impact is predicted to arise from the proposed development.

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In fact, the proposed development, which incorporates the strategic Barnville Link and extensive active travel infrastructure that prioritises walking and cycling, is expected to deliver significant long-term positive effects on human health and wellbeing.

13.6 Cumulative Impacts

Table 13.1 summarises planning applications for Key Development Sites and other lands in the Cherry Orchard LAP Area.

The main cumulative impacts arising from the proposed development when considered in combination with the abovementioned developments on Population and Human Health are potential pollution and nuisance resulting from the construction phase, vis-à-vis, air quality, dust, construction noise and traffic etc. During the operational phase of development, the proposed scheme including the approved Phase 1 and 2 development, there will be 1157 units for the area that will result in a population increase and the creation of a new sustainable community in the area. The additional population created by the proposed scheme in tandem with other neighbouring developments will contribute to creating a critical mass needed to support additional services and amenities. As outlined in the Parent EIAR, the approved Phase 1 scheme (under construction) provides for additional retail, commercial and community floorspace for the area along with contribution towards Cherry Orchard Park Renewal project, which will create employment opportunities for existing and future residents and enhance the existing offering in the area.

However, it should be considered that the proposed development, alongside the relevant residential and commercial planning applications cited above, form part of a key growth area as identified in Local Area Plan and DCC CDP. The cumulative impact of the development of adjacent lands within Study Area will be the resulting rise in population, in line with national, regional, and local planning policy for Park West and Cherry Orchard. This impact will be long term and positive in the context of the development zoning objectives for the subject site, and wider local, regional, and national planning policy. This is further supported by the strategic location of lands within the Study Area and their proximity to high-quality public transport services, and social and community services. The cumulative impact of the full development of lands in line with the objectives of the Local Area Plan will enhance the social and economic viability of the area and is considered to be a long term positive for the area.

13.7 Mitigation Measures

13.7.1 Construction Stage

A range of construction related remedial and mitigation measures are proposed throughout this Environmental Report with reference to the various environmental topics examined, and the inter-relationships between each topic. Through the provision of these remedial and mitigation measures, any negative impacts on Population and Human Health during the construction phase shall be appropriately mitigated. Chapter 18 '*Summary of Mitigation Measures and Residual Impacts'*, of this Environmental Report provides a summary of mitigation measures proposed.

Air Quality

The proactive control of fugitive dust will ensure the prevention of significant emissions, rather than an inefficient attempt to control them once they have been released. The relevant mitigation measures for medium-risk sites as recommended by IAQM construction dust guidance (2024) are outlined in Chapter 5 of Air Quality. These measures as outlined Chapter 5, shall be incorporated into the Construction Environmental Management Plan (CEMP) prepared for the site.

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Climate Action

Embodied carbon of materials and construction activities will be the primary source of climate impacts during the construction phase. The Preliminary Construction Environmental Management Plan (CEMP), prepared by Waterman Moylan, sets out a suite of mitigation measures designed to reduce greenhouse gas emissions and minimise the carbon impacts associated with the construction of the proposed development.

In addition to the above, during the construction phase the following best practice measures shall be implemented on site to prevent significant GHG emissions and reduce impacts to climate:

- Construction staff will be encouraged to reduce car use by car sharing and / or travelling by public transport.
- Workers will be encouraged by their employer to keep themselves informed about the public transport options and active mode facilities provided in the surrounding area.
- Shut down all plant and equipment in intermittent use in the intervening periods between work or throttle down to a minimum.
- Plan deliveries and vehicle movements so that vehicles are not waiting or queuing. If unavoidable, engines to be turned off.
- Prohibition of on-site burning of materials.
- Prevention of on-site or delivery vehicles from leaving engines idling, even over short periods.
- Engines and exhaust systems will be maintained so that exhaust emissions do not breach stationary emission limits set for the vehicle / equipment type and mode of operation.

In terms of impact on the proposed development due to climate change, during construction the contractor will be required to update the CEMP and plan to adapt against the effects of extreme rainfall/flooding, extreme temperatures and wind and storms through site risk assessments, method statements and good site management practice.

Noise & Vibration

With regard to construction activities, best practice control measures for noise and vibration from construction sites are found within BS 5228 (2009 +A1 2014) Code of Practice for Noise and Vibration Control on Construction and Open Sites Parts 1 and 2. Predictions indicate that moderate construction noise impacts are expected to occur when work is ongoing at boundary locations adjacent to noise sensitive locations; such impacts would occur intermittently and for limited durations as construction progresses across the site. Hence, the contractor will ensure that all best practice noise and vibration control methods will be used.

Water

A site-specific Construction Environmental Management Plan (CEMP) will be prepared and implemented by the appointed contractor and maintained throughout the construction phase. The CEMP will incorporate measures for the protection of surface water and groundwater, including procedures for the management of surface water runoff, sediment control, chemical storage and accidental spillages.

The CEMP will also include appropriate emergency response procedures for dealing with accidental spillages or releases of potentially polluting substances and will identify the responsibilities of site personnel in responding to such incidents.

All works will be undertaken in accordance with the latest and applicable guidelines.

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Landscape and Visuals

The building site including a site compound with site offices, site security fencing, scaffolding and temporary works will be visible during the Construction Phase, from a range of viewpoints around the site. The activities will generate disturbance in the local landscape, particularly related to noise, dust, lighting as well as visual effects. Such elements are generally viewed as temporary and unavoidable features of construction in any setting. The perimeter site hoarding will screen from view much of the construction activity and materials at ground level. Other mitigation measures proposed during this delivery stage of the development, revolve primarily around the implementation of appropriate site management procedures during the construction works – such as the control of lighting, storage of materials, placement of site offices and compounds, control of vehicular access, and effective dust and dirt control measures, etc. Such mitigation will be set out in the Construction Management Plan prepared for the scheme. This will be a working document which will be continually reviewed and amended through the Construction Phase to ensure effective mitigation throughout.

The Construction Management Plan to be prepared by the appointed contractor, and agreed with the Local Authority prior to the commencement of any construction works, will deal with all issues related to the construction, delivery and management of the scheme during the construction stage and will ultimately include details on the following:

Daily and weekly working hours;

- Agreed haul routes for incoming materials;
- Licensed hauliers to be used;
- Disposal sites;
- Travel arrangements for construction personnel;
- Appropriate on-site parking arrangements for construction personnel to prevent overspill parking on the local road network;
- Temporary construction entrances to be provided;
- Wheel wash facilities if required;
- Road cleaning and sweeping measures to be put in place if required;
- Temporary construction signage to be put in place and maintained.

The planning application includes an Outline Construction Management Plan, prepared by Waterman Moylan Consulting Engineers, which outlines a range of Construction Phase mitigation measures. Many of these measures are relevant to the reduction of the temporary impacts on the landscape and visual environment during the Construction Phase as they reduce or control noise, dust, lighting and regulate an orderly running of the site including the visual quality of orderly placement of parking, storage and cabins withink a defined and screened perimeter. This Outline Construction Management Plan forms the basis for the required measures to be included in the appointed Contractor's Construction Management Plan. As such it references Construction Phase mitigation measures which are relevant to the assessment of Landscape and Visual Impact.

Transportation

The primary mitigation and monitoring measures during the Construction Stage will be the implementation by the selected Contractor of the *Construction Management Plan* and the *Construction Traffic Management Plan*.

The assessment of predicted impacts concluded that the construction stage of the proposed development is not anticipated to impact on the operational performance of the local road network. However, good practice requires the preparation of a Construction Management Plan (CMP) and a Construction Traffic Management Plan (CTMP), both of which set out measures to manage construction traffic.

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Parking will not be provided for construction staff on public roads. Construction staff will be encouraged by their employer to reduce the use of the car for the journey to work by car sharing and / or travelling by public transport. Workers will be encouraged to keep themselves informed about the public transport options and active mode facilities provided in the surrounding area.

The main Contractor as part of their site set up arrangements, will appoint a Coordinator responsible for the implementation of the Construction Stage Mobility Management and Travel Plan and shall carry out the following tasks as part of their role:

- Provide an extensive information service for public transport options and routes at a public location(s) within the development for construction workers.
- Update the public transport information adjacent to the development on an ongoing basis; and
- Advise company staff of tax incentives for public transport and bicycles.

For those wishing to cycle to and from the development, dedicated cycle parking will be provided for the duration of the works within the site. Shower facilities and lockers will also be provided.

Adequate signposting will be located on-site to ensure the safety of all road users and construction workers.

Dedicated construction haul routes will be identified and agreed upon with Dublin City Council before the commencement of construction activities on site.

A dedicated “construction site”’ access/egress system will be implemented during the construction phases. Hoarding will be set up around the perimeter to prevent pedestrian access.

A material storage zone will also be provided in the construction compound area. This storage zone will include material recycling areas and facilities.

A detailed Construction and Traffic Management Plan (CTMP) will be prepared by the contractor and agreed with Dublin City Council before commencing works on site.

The contractor will be obliged to ensure that any sub-contractors engaged on the site are made fully aware of the required mitigation measures and that they are properly implemented as part of any works that they undertake.

13.7.2 Operational Stage

The Proposed Development has been designed to avoid negative impacts on population and human health through the design and provision of physical and social infrastructure as described in Chapter 2 of this EIA Report. Compliance with the proposed design and layout will be a condition of any permitted development. Monitoring will be undertaken by the Building Regulations certification process and by the requirements of specific conditions of a planning permission. Furthermore, measures outlined in the Chapters of this EIA Report which address other environmental matters such as Water, Air Quality, Climate Factors, Landscape and Visual Impact and Noise sufficiently address monitoring requirements. Chapter 18 of this Environmental Report provides a summary of mitigation measures proposed as a result of this Environmental Report.

Air Quality

The operational air quality assessment concluded that the development will not give rise to significant air quality impacts and, therefore, no specific air quality mitigation measures are required. Nevertheless, the scheme incorporates several embedded mitigation and enhancement measures that support population and human health, including:

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- Provision of high-quality pedestrian and cycle infrastructure.
- Integration with existing and proposed public transport services.
- Extensive public open space, landscaping and green infrastructure.
- Energy-efficient buildings and sustainable travel initiatives.
- Safe and accessible public realm design.
- Provision of community, recreational and local service facilities within the wider Cherry Orchard Point development.

Climate Action

To reduce the climate impacts associated with the proposed development, a suite of mitigation measures has been integrated into the scheme design. These measures, as detailed in the Climate Action and Energy Statement prepared by Waterman Moylan (July 2026), include a range of energy conservation and efficiency initiatives designed to minimise operational energy demand, reduce carbon emissions, and support national and local climate action objectives.

The Climate chapter sets out a range of adaptation measures for the operational stage in response to the climate hazards identified as relevant following the climate risk screening assessment. The Climate chapter sets out a range of adaptation measures for the operational stage in response to the climate hazards identified as relevant following the climate risk screening assessment. In light of the adaptation measures, the proposed development is at low risk at low risk.

Noise & Vibration

At the detailed design stage, best practice measures relating to building services plant will be taken to ensure there is no significant noise impact on noise-sensitive locations within the development. Due to the relative proximity of the nearest sensitive locations (NSLs) within the development, this will also prevent a negative impact on NSLs in the surrounding area.

The internal noise criteria can be achieved through consideration of the proposed façade elements at the design stage. The calculated glazing and specifications are preliminary and are intended to form the basis for noise mitigation at the detailed design stage.

Water

The proposed development incorporates Sustainable Drainage Systems (SuDS), attenuation and restricted discharge measures to manage surface water runoff during the operational phase.

The proposed surface water drainage system will be designed to accommodate the 1-in-100-year rainfall event with a 30% allowance for climate change, with surface water discharge restricted to 2 l/s/ha.

The proposed SuDS measures will provide treatment of surface water runoff prior to discharge and will reduce the potential for pollutants to enter the downstream drainage network and receiving water environment.

The proposed attenuation and surface water drainage infrastructure will be subject to appropriate inspection and maintenance to ensure that the required storage capacity and discharge rates are maintained.

The proposed water supply and foul drainage infrastructure will be designed, constructed and maintained in accordance with the requirements of Uisce Éireann and the relevant Codes of Practice

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and Standard Details. The foul drainage network will remain separate from the surface water drainage network.

Landscape and Visuals

The design rationale and detail employed seeks to mitigate potential negative effects on the landscape character and visual amenity of the area by:

- Establishing an integrated relationship between the proposed development and surrounding buildings, infrastructure, green infrastructure and permeability, and the broader urban landscape beyond, incorporating aspects of current and emerging trends in built-form, scale, texturing, colour and materials;
- The insertion, positioning and detailed modelling of the buildings, in order to assist in the appropriate visual assimilation of their mass
- Appropriate architectural detailing to assist in the integration of the external building facades – including the modulation of openings and fenestration;
- Rationalisation of all services elements and any other potential visual clutter and its incorporation internally within building envelopes (as far as practically possible);
- Simplification and rationalisation of the proposed roof lines, including green roofs
- Use of appropriate materials in the architectural expression of the buildings. In this instance, brick is used in the facades across the scheme, with variation in colour, pattern, texture and tone occurring in the individual character areas or emphasising specific parts of facades. This approach reinforces the articulation of the massing of the blocks, as well as lending importance and interest to specific areas.
- The provision of community uses within the development, including public open space and associated amenities, in turn combining with internal cultural spaces.
- The provision of secure communal space.
- Sustainable approach to nature-based drainage and to enhance biodiversity
- Detailing in the architectural and landscape design to mitigate wind and shadow effects to create good microclimates.
- Comprehensive planting of vegetation, particularly trees to ground the scheme in the landscape and provide amenity, habitat, shelter and screening.
- Implementation of maintenance and management of buildings, infrastructure and vegetation.

Transportation

The primary mitigation and monitoring measure during the Operational Stage will be the implementation of the *Mobility Management and Travel Plan.*

To reduce traffic impact, mitigate against possible overspill car parking and to promote more sustainable modes of transport, a Mobility Management and Travel Plan has been prepared for the development and will be updated on an ongoing basis.

A single Plan has been prepared for the overall development notwithstanding the fact that the development is being implemented in stages.

The proposed development will include car parking for residents at less than the maximum rate set out in the Dublin City Development plan 2022 – 2028. The level of car parking proposed has been informed by national standards for transport strategy and car parking for new apartments. The implementation of the measures set out in the Mobility Management and Travel Plan are designed inter alia to promote

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non-car modes of travel thereby discouraging high levels of car ownership and demand for car parking from residents.

A management company will be appointed by the developer to manage the overall development. A senior member of staff from the management company who supports the philosophy of the Plan will be appointed as the Coordinator. The Coordinator will be responsible for:

- Implementation and maintenance of the Plan.
- Monitoring progress of the Plan
- Liaison with public transport operators and officers of the Planning and Roads Authority.
- Production of information reports for the developer, the occupier(s) and the Planning and Road Authorities; and
- Ongoing assessment of the objectives of the Plan.

Up to date, local bus and rail timetables will be maintained within the resident amenity areas and other fixed points within the buildings on the site. Residents will be advised of their location. In addition, internet access to travel information will be provided. The developer will provide all new residents with a travel pack showing alternative modes of travel to the development. Where possible, the developer will advise visitors to the site of alternative modes of travel to that of the car.

Adequate and secure bicycle parking facilities with a total provision of 2,877 spaces will be provided within the overall development for residents, visitors, Creche users and staff at Cherry Orchard Point scheme. Local cycle route information will also be provided in the resident amenity areas and at other fixed points within the development. Residents will be advised of these locations.

The Mobility Management and Travel Plan Co-ordinator will be responsible for the management of inappropriate parking within the development. This parking management will ensure that spaces are reserved for those who have been allocated the space and will be accessible only to those users.

13.8 Interactions and Residual Impacts

There are numerous inter-related environmental topics described in detail throughout this Environmental Report which are of relevance to population and human health. The main high-level interactions between Population and Human Health and other environmental factors include Air Quality and Climate Factors, Noise and Vibration, Landscape and Visual Impact, Water, Waste Management, and Traffic and Transportation. Although these have been covered in detail in the respective Chapters of this Environmental Report, it was considered prudent to provide a robust description of the same within this section.

Air Quality and Climate Factors

An adverse impact due to air quality in either the construction or operational phase has the potential to cause health and dust nuisance issues. The mitigation measures that will be put in place at the proposed development will ensure that the impact of the proposed development complies with all ambient air quality legislative limits. Therefore, the predicted impact is ***direct***, ***short-term***, ***negative***, ***localised*** and ***not significant*** with respect to population and human health during construction, and ***long-term, direct, localised, negative***, and ***not significant*** during the operational phase.

Noise and Vibration

The interaction with Noise and Vibration can have an impact on Population and Human Health, during the construction and operation phase. Chapter 7 on Noise and Vibration notes that increased traffic movements, the noise levels in the surrounding area have the potential to increase. The impacts of the proposed development on the noise environment are assessed by reviewing the change in traffic flows

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on roads close to the site. In this assessment, the impact of the interactions between traffic and noise are considered to be imperceptible to not significant on all junctions.

Overall, the residual construction and vibration impacts is predicted to be ***negative, not significant, and short term.***

All assessed junctions indicate that operational stage impacts will be ***neutral to negative, imperceptible to slight and long term.***

Following implementation of the sound insulation mitigation the residual inward noise impacts are predicted to be ***long-term, neutral and not significant.***

Noise emissions from operational plant and activities shall be designed in accordance with BS 4142 Methods for Rating and Assessing Industrial and Commercial Sound. The residual impacts are predicted to be ***long-term, negative and not significant.***

As a result, there is no significant impact perceived from the same on population and human health.

Landscape and Visual Impact

The landscape and visual aspects of the development invariably intertwine in relation to the social qualities of passive and active amenities and civic qualities in the public realm, transport, natural heritage particularly relating to enhancing biodiversity and creating resilience to climate change.

The proposed development will impact on the urban landscape to varying degrees in terms of its perceived nature and scale. These effects are tempered and conditioned by sensitivities associated with the receptor. The duration of such impacts is determined by the design life of the proposed development. In this case the building development has a design life of up to 60 years, giving a long-term duration. In that time, with the implementation of maintenance and management regimes, the built fabric will remain in good repair and the landscape, particularly tree planting, will mature.

In assessing the landscape character and visual impacts, there are three main inter-related aspects to be addressed in considering the development proposals, namely:

- The perceived character of the area, how it is affected by the proposal and how well it integrates, particularly in the context of a changing environment.
- Effects of the proposed development on social and cultural amenity
- The proposed views of the development, relative to the existing site and context and the associated impact on visual amenity.

Water

Potential effects on human health in relation to the water environment are primarily associated with the unlikely contamination of groundwater or potable water supplies. The proposed development will connect to the public water supply operated by Uisce Éireann, and the proposed water supply and foul drainage infrastructure will be designed, constructed, tested and maintained in accordance with the relevant requirements. Construction-stage pollution prevention measures will further minimise the potential for contamination. No significant residual effect on human health in relation to the water environment is anticipated.

Material Assets – Traffic and Transportation

As per Chapter 14 on ‘Material Assets – Traffic and Transport’, during the construction stage, some of the construction traffic movements will be undertaken by heavy goods vehicles (HGVs), including vehicles movements associated with appointed contractors and staff. The Chapter notes that the expected increase in the day-to-day traffic movements associated with construction activities is less than the benchmark of 10% set out in the TTA Guidelines published by TII.

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The Chapter concluded as such no significant impact on roads and traffic will arise from the construction and operational stage of the proposed development.

During operation, six of the eight assessed junctions are forecast to operate within capacity in the Opening Year (2027), Design Year (2032) and Future Year (2042). While Junction 4 is predicted to operate above capacity during peak periods, this arises from the application of DMURS-compliant design standards which prioritise pedestrian and cyclist movements over vehicular traffic. Junction 7 is identified as an existing constraint on the road network and is predicted to experience capacity issues with or without the proposed development, consistent with the findings of the Park-West Cherry Orchard LAP, which provides for future capacity enhancements, key new connections and enhanced public transport.

In addition, Site 5 incorporates the Barnville Link providing a direct connections between the proposed development and Park West and Cherry Orchard Railway Station, together with associated active travel infrastructure that will enhance accessibility, support the proposed parking strategy, and encourage a modal shift towards walking, cycling and public transport. Accordingly, having regard to the performance of the assessed road network, planned transport improvements within the wider area, the provision of active travel infrastructure and the available public transport capacity, the assessment concludes that no significant impact on roads, traffic or public transport services will arise from the operational stage of the proposed development.

Due to the proposed mitigation measures outlined above, the residual impact of the proposed development during the operational stage will be slight to moderate, negative and long term for the duration of the operation of Cherry Orchard Point.

Material Assets – Waste Management

During the construction phase, improper handling, storage or removal of construction waste has the potential to give rise to litter, interaction of vermin and short-term odour or contamination risks, all of which could adversely affect workers on site and the local population if unmanaged.

Waste will be segregated at source, stored in covered containers and collected by permitted waste collectors in accordance with the Waste Management Acts. No waste will be stockpiled in public areas and no on site burning or uncontrolled disposal will occur.

With these measures in place, the potential for human exposure to waste, litter or vermin is very low. Following mitigation, the construction phase effects on population and human health will be ***short-term, imperceptible and neutral.***

If unmanaged, operational waste has the potential to affect human health through exposure to improperly stored or handled waste, particularly organic and hazardous materials. However, the implementation of the OWMP will ensure that waste is segregated, stored in appropriate receptacles and collected regularly by authorised contractors. These measures will minimise risks associated with odours, pests and contamination, thereby protecting the health and wellbeing of future residents, workers and the surrounding community. Following mitigation, the effects are expected to be ***long-term, imperceptible and neutral.***

The Chapter 15 Material Assets – Waste Management outlines that subject to implementation of all mitigation measures as set out in this chapter (section 15.6) and the attached RWMP (appendix 15.1) and the OWMP (appendix 15.2), the overall predicted impact of the proposed development is *long-term, imperceptible and neutral.*

As a result, it is considered that there is no subsequent significant impact on population and human health from the proposed development during the construction or operational phases.

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Please refer to Chapter 17 Interactions for more information from each Chapter.

13.9 Difficulties Encountered

There were no significant difficulties encountered in compiling the information contained in the Population and Human Health Chapter.

13.10 References

Reference below as cited in Parent EIAR and updated for the Addendum report:

- Guidelines on the Information to be contained in Environmental Impact Assessment Report
- (Environmental Protection Agency, May 2022).
- Environmental Impact Assessment of Projects. Guidance on the Preparation of the
- Environmental Impact Assessment Report (European Commission 2017).
- Guidelines on the Information to be contained in Environmental Impact Statements (EPA, 2002)
- EUPHA) Human Health: Ensuring a High Level of Protection. A reference paper on addressing
- Human Health in Environmental Impact Assessment.
- Health Impact Assessment in Planning (IEMA 2020).
- Healthy Ireland - A Framework for Improved Health and Wellbeing 2013 – 2025 (the Healthy
- Ireland Framework) (Department of Health 2019).
- Health in Environmental Impact Assessment – A Primer for a Proportionate Approach (Cave et
- al. on behalf of Institute of Environmental Management and Assessment (IEMA)) (hereafter referred to as the IEMA Primer) (IEMA 2017).
- Healthy Ireland Framework 2013-2025
- Ageing and Public Health: An overview of the key statistics in Ireland and Northern Ireland,
- published by The Institute of Public Health 2020.
- Wang, J., & Geng, L. (2019). Effects of Socioeconomic Status on Physical and Psychological
- Health: Lifestyle as a Mediator. International journal of environmental research and public health, 16(2), 281. https://doi.org/10.3390/ijerph16020281
- Fransen, L., del Bufalo, G., Reviglio, E. (2018). Boosting Investment in Social Infrastructure in Europe, Report of the High-Level Task Force on Investing in Social Infrastructure in Europe 2018. [PDF File]. Retrieved from: https://economy-finance.ec.europa.eu/system/files/2018 01/dp074_en.pdf
- The Central Statistics Office (CSO), available at: Home - CSO - Central Statistics Office
- Pobal Deprivation Index Mapping, available at: Pobal | Pobal Programmes and Initiatives throughout Ireland
- Dublin City Development Plan 2022-2028, available at: Development Plan 2022 - 2028 | Dublin City Council
- Tusla Data, available at: Tusla - Child and Family Agency
- Department of Education and Youth, available at: gov.ie (education.ie)
- European Environment Agency: Health Impacts of air pollution in Europe, 2022, available at: Health impacts of air pollution in Europe, 2022
- Water Quality for the Water Supply Zone (WSZ): SD_ZONE2 generated for 2026. (Source: Uisce Éireann)
- Environmental Protection Agency's Air Quality Index for Health (AQIH), available at: Monitoring Stations | AirQuality.ie
- Air Quality Explorer, available at: Labs - Google Environmental Insights Explorer - Make Informed Decisions (sustainability.google)

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14 Material Assets – Traffic and Transport

14.1 Introduction

14.1.1 Background

This chapter of this Environmental Report - Addendum to Permitted Phase 1 Parent EIAR (This Environmental Report) provides an assessment of the impact that Phase 3 of the proposed development at Cherry Orchard Point, Park West Avenue, Dublin 10 will have on traffic and transportation infrastructure and network in the surrounding area.

This chapter was completed by Brian McCann, BE, MSc (Eng), DIC, CEng, FIEI, MIStructE, MConsEI with input from the other members of the design team. . Brian has in excess of 30 years' experience of transportation planning and assessment.

This chapter sets out the existing receiving environment in terms of roads conditions, traffic activity and transportation accessibility. It also describes the proposed development in terms of construction and operational traffic impact on the receiving environment and any appropriate mitigation measures.

A full description of the proposed development can be found in Chapter 3.0: *Description of Scheme* on this Environmental Report.

A Traffic & Transport Assessment (TTA) for Phase 3 was also prepared by Waterman Moylan in February 2026 in compliance with Section 2.3 of Appendix 5: *Transportation and Mobility Technical Requirements* of the Dublin City Development Plan 2022 – 2028.

The TTA presents survey data for the existing traffic conditions and a detailed estimation of the transport demand that will be generated by the development. The TTA also addresses the existing capacity on the public transport network. The traffic generated during both the morning and evening peak times is assessed as well as an estimation of the construction stage traffic. An assessment of the percentage impact of traffic on local junctions, and accessibility of the site by sustainable modes including walking, cycling and public transport is also included.

14.2 Methodology

The methodology for the preparation of this chapter of this Environmental Report included: -

(a) Desktop review of the planning stage documentation provided by the project design team.

(b) Visits to the site and surrounding area including survey of existing transportation facilities and observation of traffic movements.

(c) Review of public transport services, routes, and timetables .

(d) Review of proposals for transportation improvements by Transport Infrastructure Ireland (TII), National Transport Authority (NTA) and Dublin City Council (DCC).

(e) Review of the Traffic & Transport Assessment – Phase 2 prepared by Waterman Moylan in November 2024.

(f) Review of future trips to and from the proposed development.

(g) Review of trips from future contiguous developments.

(h) Review of public transport, both existing and proposed.

(i) Assessment of the transportation impacts of the development.

Guidance for the preparation of this chapter was obtained from the following documents:

- Park West – Cherry Orchard Local Area Plan (LAP), Dublin City Council, November 2019
- Dublin City Development Plan 2022 – 2028.
- Park and Ride Strategy for the Greater Dublin Area, NTA, May 2022.

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- Scoping for TTA, Waterman Moylan, September 2022.
- Greater Dublin Area Transport Strategy 2022 – 2042, NTA.

14.3 Receiving Environment

14.3.1 Site Location and Zoning

The two sites for the overall development (part of the overall the Park West – Cherry Orchard Local Area Plan) are located in the administrative two sites for the overall development area of Dublin City Council (DCC) within the area bounded by the M50 Motorway to the west, Ballyfermot Road to the north, Le Fanu Road to the east and the Grand Canal to the south. See Figure 14.1.

The LAP extends to an area of 267.5 ha of which Sites 4 M50-Cedarbrook Avenue and Site 5 Barnville extend to a total of 14.0 ha.

At the time of writing in June 2026, the construction of Phase 1 was in progress on Site 4.

In the Dublin City Development Plan 2022 – 2028, the subject site is zoned Z14 *Strategic Development and Regeneration Area* (SDRA). SDRA 4 Park West / Cherry Orchard guided the preparation of a new Local Area Plan for Park West / Cherry Orchard, which came into effect in November 2019. The objective of the Plan is to deliver private, social and affordable housing, schools, sports and recreational facilities, retail facilities and employment opportunities in consultation with local community and youth services. The T & TA assesses the traffic impact of Sites 4 and 5 at Cherry Orchard Point on the basis of a single development notwithstanding the fact that the site is being developed in a number of phases.

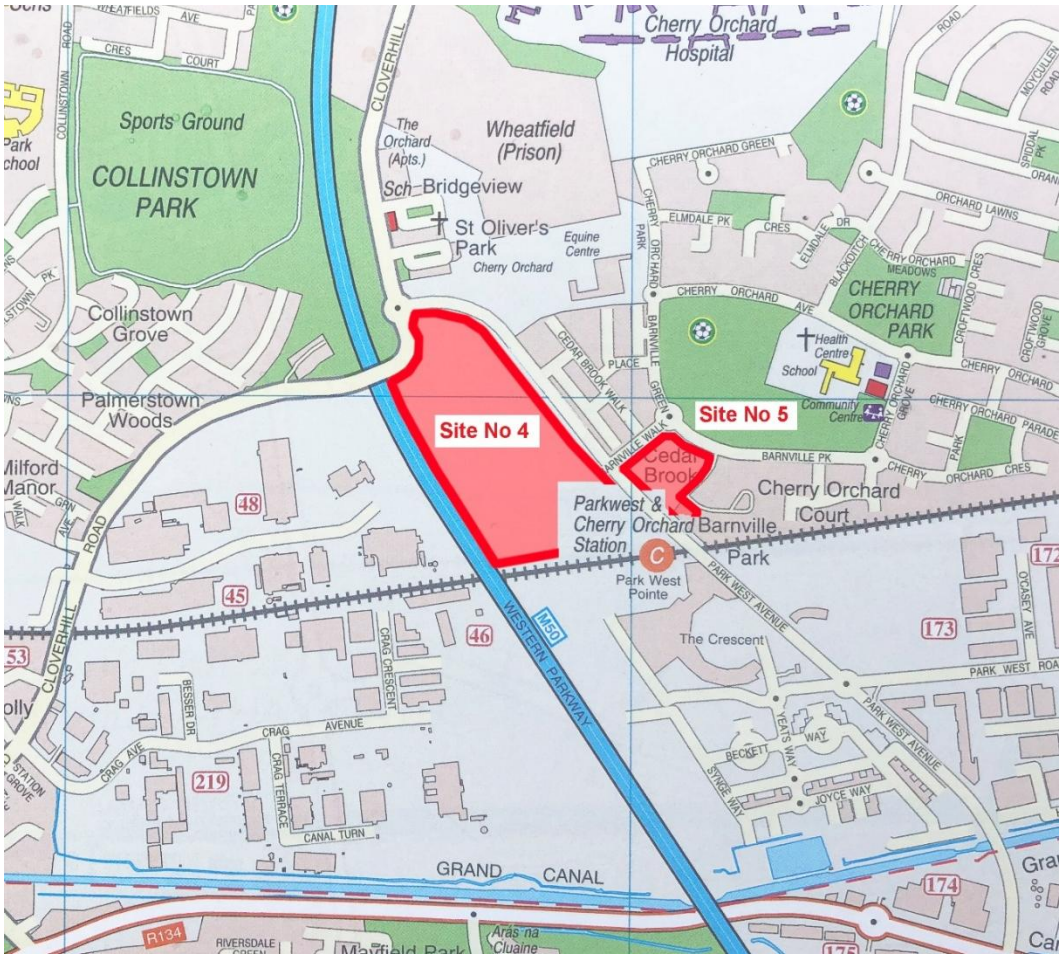


Figure 14-1 Location Map – Overall Development

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14.3.2 Phasing

Sites 4 and 5 are being developed in four phases as shown on Figure 14.2.

The T & TA for Phase 3 assesses the traffic impact of Cherry Orchard Point on the basis of a single development notwithstanding the fact that the site is being developed in a number of phases.



Figure 14-2 Project Phasing

14.3.3 Project Timescale

For the purpose of this chapter of the Environmental Report, the Base Year has been taken as 2022, the Opening Year as 2027, the Design Year as 2032 (Opening Year + 5) and the Future Year as 2042 (Opening Year + 15).

14.3.4 Local Road Network

The proposed development is located on either side of Park West Avenue between the R134 Nangor Road and Ballyfermot Road / Coldcut Road.

Park West Avenue is a wide single carriageway road with a north – south alignment and a posted speed limit of 50 kph. It is linked to Cloverhill Road via a roundabout junction at its northern end and to the R134 Nangor Road via a signalised crossroads at its southern end.

Park West Avenue has a 9.0-metre-wide carriageway with footpaths and cycle tracks on both sides. Speed ramps are provided for traffic calming. There are no parking restrictions. See Figure 14.3.

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Figure 14-3 Park West Avenue looking north from the bridge over the railway.

14.3.5 Existing Traffic Conditions

Park West - Cherry Orchard LAP

The existing traffic conditions on the road network in the area of the proposed development were obtained from a classified traffic surveys which were carried out in November 2022 and in April 2026.

Traffic Survey 2022

The 2022 survey was carried out by IDASO on Tuesday 8th November 2022 over a period of 24 hours at the locations shown in Figure 14.4.

In addition to motorised traffic, the survey recorded pedestrians and pedal cycle movements. The survey confirmed the AM and PM Peak Hours to be 08:00 – 09:00 and 17:00 – 18:00.

From the results of the survey, the 24-hour traffic flow recorded on Park West Avenue was some 11,004 vehicles per day. The two-way traffic flow on Park West Avenue was some 1,103 vehicles per hour (vph) during the AM peak hour 8 – 9 reducing slightly to 1,046 vph during the PM peak hour 5 - 6.

Similarly, the 24-hour traffic flow recorded on Barnville Walk was some 4,092 vehicles per day. The two-way traffic flow on Barnville Walk was some 329 vehicles per hour (vph) during the AM peak hour 8 – 9 increasing to 422 vph during the PM peak hour 5 - 6.

The pedestrian movements recorded on Park West Avenue varied from 200 persons per hour at the railway station to 40 persons per hour at Junction 4. The corresponding cycle movements varied from 6 – 18 cyclists per hour. Pedestrian and cycle movements recorded at the other junctions were significantly lower.

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Traffic Survey 2026

To ascertain any changes in the levels of traffic in the area of the subject site since the original survey in November 2022, a classified traffic survey on the roads in the area of the proposed development was carried out by IDASO on Wednesday 22nd April 2026 over a period of 24 hours at the locations shown in Figure 14.4

In addition to motorised traffic, the 2026 survey recorded pedestrians and pedal cycle movements. The survey confirmed the AM and PM Peak Hours to be 08:00 – 09:00 and 17:00 – 18:00.

Comparison between 2022 and 2026 Surveys

The results of the 2022 and 2026 surveys were compared by comparing the approach flow to the four junctions on Park West Avenue during the AM and PM peak hours as recorded in 2022 and 2026.

The comparisons recorded that

- The overall level of traffic fell by 10% between 2022 and 2026.
- The decrease varied from -4% at Junction 1 to -14% at Junction 4
- The recorded HGV content on Park West Avenue was some 6 -8%.

Junction Assessment

In the absence of an identifiable cause(s) for the recorded decreases in traffic movements between 2022 and 2026, the results of the 2022 traffic survey have been used in the TTA for the generation of the traffic predictions for the future operational stage.

Natural changes in traffic flow between the Survey Year and the Opening Year are addressed by the application of factors from the TII Publication – Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections (May 2021).

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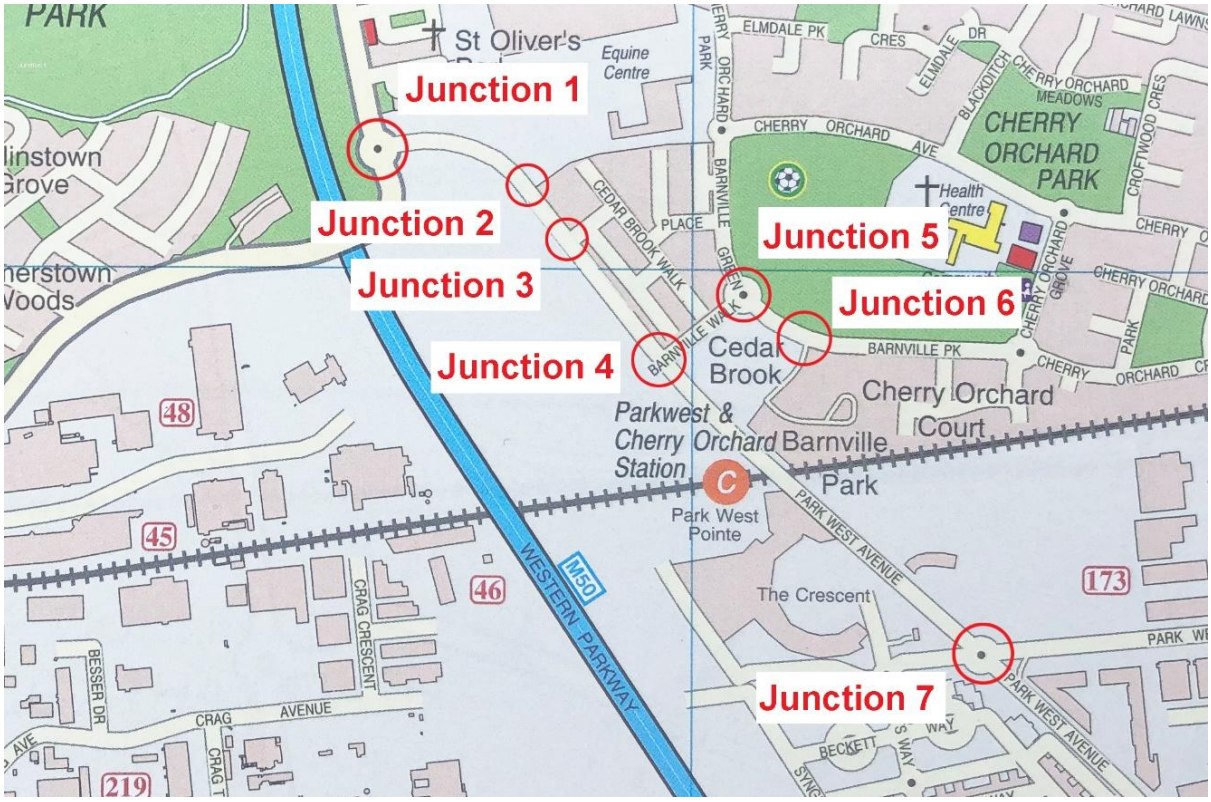


Figure 14-4 Locations of Traffic Surveys

Park West - Cherry Orchard LAP

Section 4.5.2 of the Park West - Cherry Orchard Local Area Plan 2019 advised that

'*The road network serving Park West – Cherry Orchard experiences some traffic congestion during peak hours in areas such as Cloverhill Road, Park West Avenue and Le Fanu Road with the highest delays occurring where these roads connect to regional roads such as Ballyfermot Road and the New Nangor Road.*'

14.3.6 Existing Bus Service

Park West Avenue

Bus services in the area of the proposed development are a combination of historic services operated by Dublin Bus and new services provided under the auspices of Bus Connects. See Figure 14.5.

Dublin Bus Routes 79 and 79a which formerly served Park West Avenue, and the Park West & Cherry Orchard Station were replaced by Bus Connects Routes G1 and 60 in October 2022. See Figure 14.5. Timetables for Routes G1 and 60 are included in Appendix B of the TTA.

Route G1 is a 24-hour service which is part of the G spine. It links the site for the proposed development to New Wapping Street in the City Centre via Inchicore and to the Luas Red Line at the Red Cow. Services operate at 15-minute intervals in both directions Monday – Saturday reducing to 20-minute intervals on Sundays. A reduced frequency operates during the early morning and at night.

Route 60 links the site to Sir John Rogerson's Quay in the City Centre via Heuston Station and to the Luas Red Line at the Red Cow via Clondalkin. Services operate at 60-minute intervals in both directions.

Bus stops for these services are located on Park West Avenue, Barnville Walk and Cedar Brook Way.

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Passenger Capacity

Based on a review of the fleet of double deck buses operated by Dublin Bus in the area of the proposed development, the average capacity of each bus including standing passengers was found to be 87 passengers per bus.

Current timetables for Routes G1 and 60 provide for 5 buses per hour in each direction with a total capacity of 435 passengers per hour in each direction (5 buses x 87 passengers per bus).

For an assessment of future capacity to cater for future demand post development, See Section 14.6.4 of this chapter.

Nangor Road

Other contiguous services continue to be provided by Dublin Bus Route 151 along Nangor Road at a walking time of 16 minutes (1.3km) from the proposed development. Services operate at 20-minute intervals in both directions Monday – Saturday reducing to 30 minute intervals on Sundays. A reduced frequency operates during the early morning and at night.

Future Changes

As part of the Bus Connects project, the existing Route 151 is due to be replaced by Routes D1 and D3.

14.3.7 Existing Car-Sharing Service

An existing car sharing base operated by GoCar Ireland is located at The Crescent Building in the Park West Business Park. This base is located in the Information Centre car park off Yeats Way at a walk time of 8 minutes (600 metres) from the subject site.

14.3.8 Existing Cycle Facilities

The existing cycle facilities in the area of the subject site comprise cycle tracks on both sides of Park West Road, partly on-road and partly off-road. See Figure 14.3.

14.3.9 Existing Pedestrian Facilities

Existing pedestrian facilities in the area of the subject site comprise footpaths on both sides of Park West Avenue, Barnville Walk, Barnville Place, Cedar Brook Walk and Cedar Brook Way.

There are no footpaths on Cedar Brook Avenue which is primarily a residential parking area.

Pedestrian crossing facilities are provided at the following locations:

- Junction 1: Uncontrolled Crossing (Cloverhill Road / Park West Avenue)
- Junction 4: Signalised Crossing (Park West Avenue / Barnville Walk).

14.3.10 Existing Rail Services

Existing Railway Station

Park West & Cherry Orchard Station which opened in 2008, is an intermediate station on the Kildare Commuter Line with regular commuter and inter-city services including stopping services from Portlaoise and Newbridge to Heuston Station and from Hazelhatch & Celbridge to Grand Canal Dock.

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Services

In common with established practice and other transportation studies and reports, the TTA for Cherry Orchard Point – Phase 2 assessed the impact of the proposed development on the rail service during the AM peak.

The journey time to Heuston is some 9 - 11 minutes and the journey time to Grand Canal Dock is some 40 – 45 minutes. There are 5 existing services from Park West and Cherry Orchard to the City Centre during the AM Peak Hour 8 – 9.

At other periods outside the AM Peak, rail services at Cherry Orchard & Park West are provided between Hazelhatch and Grand Canal Street at hourly intervals.

Rail Mode Share

Section 2.9.1 of the Park West - Cherry Orchard Local Area Plan 2019 advised that

'In examining the Census data and the breakdown of sustainable modes of transport, rail represent a very low 2%. This is despite its central location and despite 2,550 people having access to the station within a 15-minute walk.

Passenger Capacity – AM Peak

Commuter services in both directions from at Park West & Cherry Orchard are provided by four / eight car 29000 class railcar sets each with capacity of 640 / 1,280 passengers per set or a 6-car High Capacity Inter City railcar set with a capacity of 406 passengers.

Train Loadings

Table 23 of the National Rail Census 2024, the most recently available at the time of writing in June 2026, shows the most heavily loaded train in the morning period at Park West and Cherry Orchard to be the 07.19 Newbridge - Grand Canal Dock with 529 passengers.

From Table 24 of the Census Report , the corresponding most heavily loaded train in the evening period is the 17.29 Grand Canal Dock to Newbridge with 409 passengers.

Each of the other trains operating in both the AM and PM peak hours carry lesser loadings with adequate spare capacity to cater for passengers from Park West and Cherry Orchard.

For an assessment of future capacity to cater for future demand post development, See Section 14.6.3.

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14.3.11 Access to Services and Amenities

Overall, walking and cycling access to the various services and amenities in the area of the subject site is good for some facilities but not so good for others.

Access is good to the rail based public transport serving an east west corridor. Access is moderate to the bus based north-south corridor.

Access also is good to local amenities and community services.

However, access is not good to retail or other commercial services with the nearest retail provision located to the northeast in the Ballyfermot area at a walking distance of 20 – 40 minutes or a cycling distance of up to 10 minutes.

The permitted supermarket at Phase 1 of Cherry Orchard Point is expected to make good this deficit.

14.3.12 Access to Public Transport

In terms of public transport accessibility, the maps published by the National Transport Authority (NTA) for 2025 show that Sites 4 and 5 at Cherry Orchard Point are rated to have a Medium – High Level of Service for the periods 07h00- 08h00 and 08h00 – 09h00 as shown in Figure 14.5.

The Public Transport Accessibility Level (PTAL) analysis combines the walk or cycle journey time to a Public Transport stop with the level of service at that stop. It gives an idea of how well connected an area is to Public Transport services.

In general, an area will have a higher PTAL if:

(a) It is a short walk to the nearest station or stop.
(b) There are short waiting times.
(c) Multiple services passing the stop.
(d) A nearby major rail station.

In summary, Phase 3 is located in an area well served by public transport and with a high level of accessibility to these services.



Figure 14-5 PTAL Level for Sites 4 and 5

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14.3.13 Road Collision Statistics

Road traffic statistics for the area around the subject site are normally available on the Road Safety Authority (RSA) website www.rsa.ie.

Data current at 27/04/2026, recorded that during the nine years between 2016 and 2024, there were a total of 32 fatal traffic collisions in the administrative area of Dublin City Council and 1,113 serious traffic collisions. See Figure 14.6.

None of the collisions occurred in the area of the subject site and two in the surrounding area.

One collision occurred in June 29012 when a cyclist was seriously injured at the junction of Cherry Orchard Avenue and Blackditch Road some 0.6km to the east of the subject site. A second occurred in October 2019 when a pedestrian was seriously injured at Palmerston Woods 0.7km to the west of the subject site.

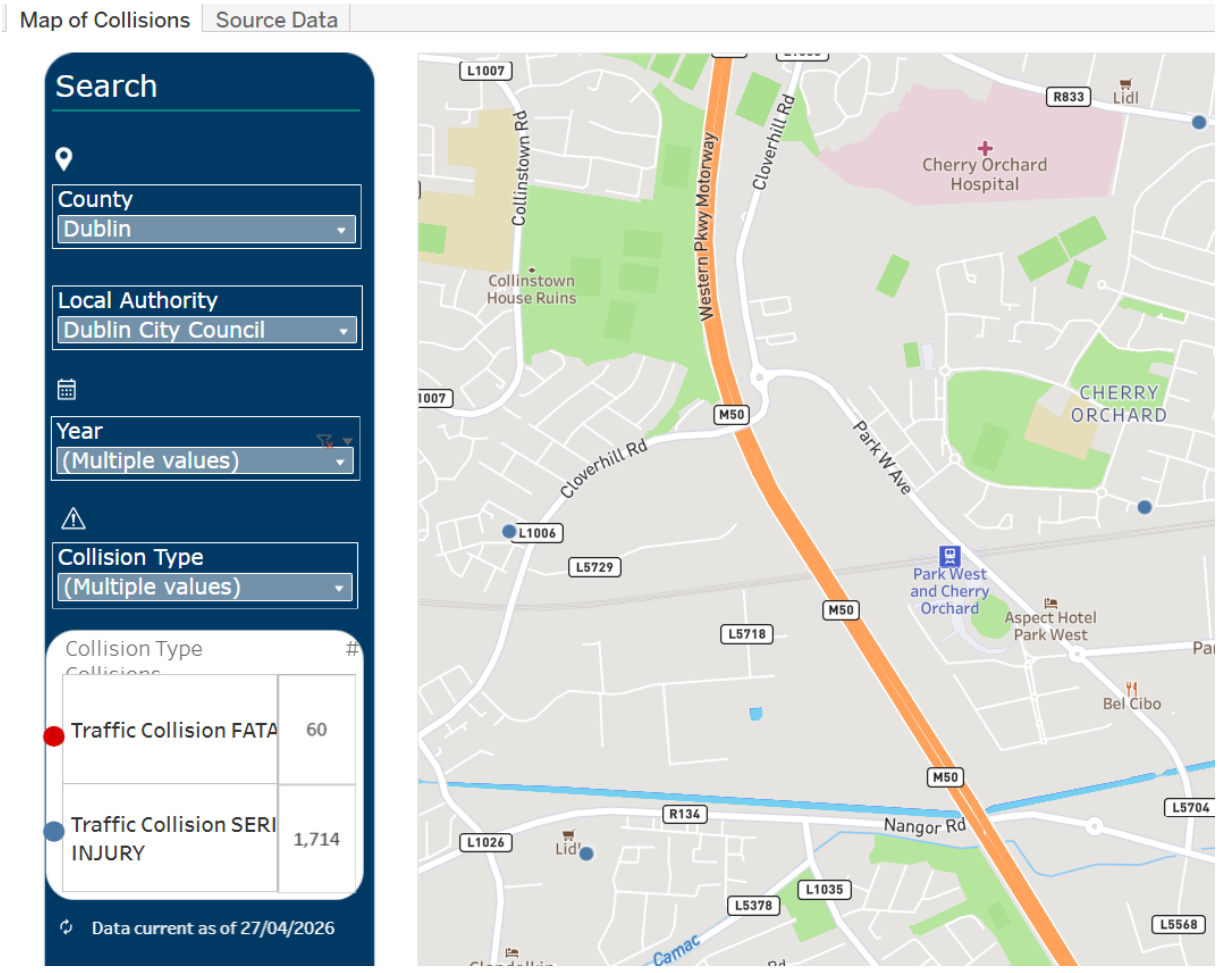


Figure 14-6 RSA Collision Map

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14.4 Planned Future Receiving Environment

14.4.1 BusConnects

Service improvements arising from the network redesign by Bus Connects in the Ballyfermot / Clondalkin area had only been partly implemented at the time of writing in June 2026.

Services G1 and 60 illustrated on Figure 14.7 are currently operational. In the near future, both are expected to be operated by the electric buses.

Also in the near future, services D1 and D3 on Spine Route D are expected to replace Dublin Bus Route 151 along the Nangor Road.

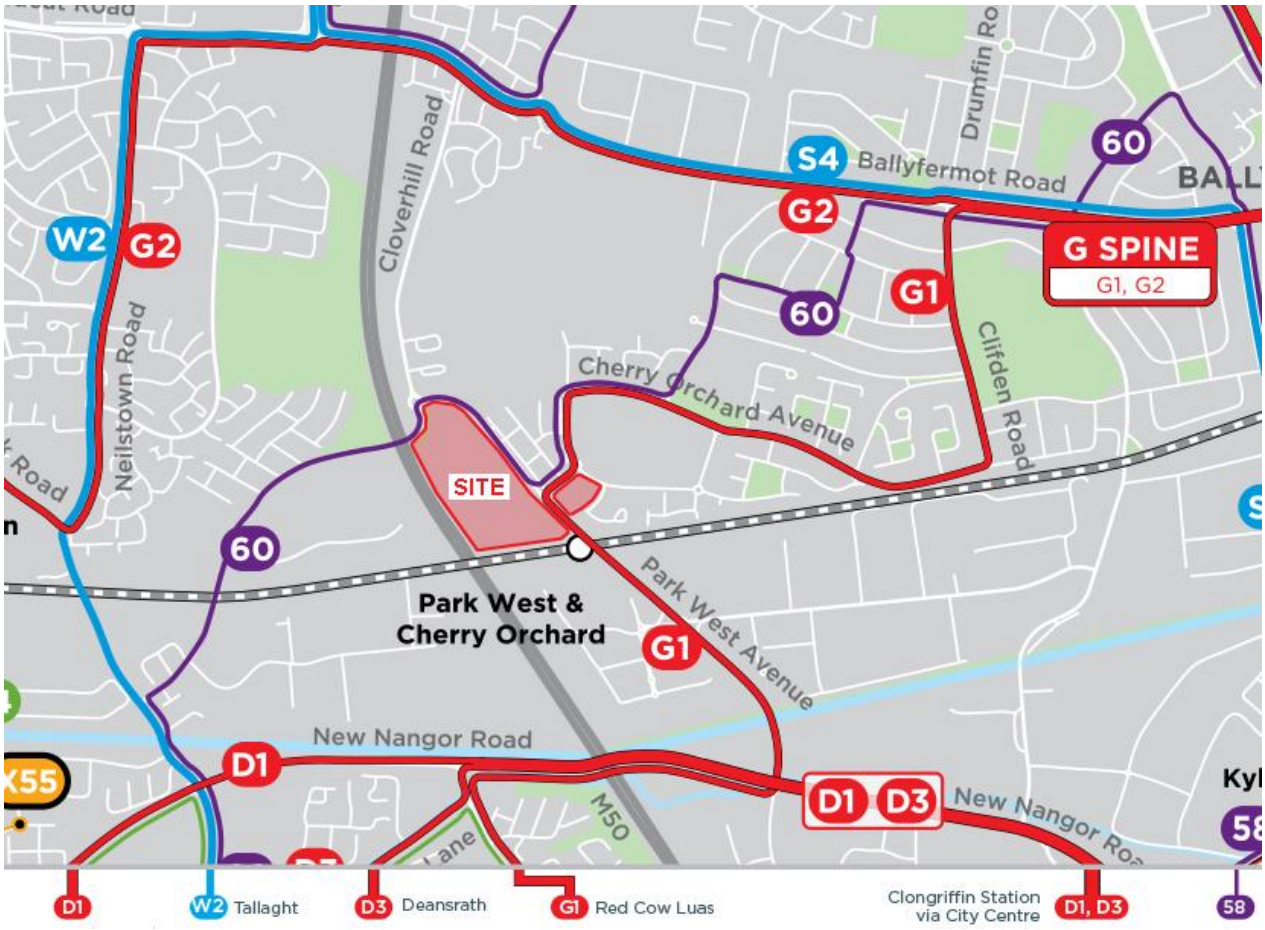


Figure 14-7 Extract from Bus Connects Map for the Ballyfermot/Clondalkin Area

14.4.2 Pedestrian and Cycling Facilities

There are a number of new pedestrian or cycling facilities proposed in the area of the subject site including: -

- New / improved off road pedestrian and cycle facilities along Ballyfermot Road as part of the Bus Connects Liffey Valley to City Centre Core Bus Corridor works.
- The proposed Barnville Link will provide a critical pedestrian connection from the rail station and to and from Cherry Orchard Park and the surrounding residential areas in compliance with LAP.
- New / improved pedestrian and cycle facilities within the adjacent City Edge development area immediately to the east and south of the subject site

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- New cycle facilities as part of the Grand Canal Greenway.

New and improved pedestrian and cycle facilities within the curtilage of the subject site are described later in this chapter.

14.4.3 Rail Improvements

The DART Expansion Project proposed by Irish Rail will deliver new electrified rail services between the existing DART network in the City Centre City Centre and Hazelhatch. The service through Park West & Cherry Orchard will provide an increased service frequency and enhanced passenger capacity.

The DART + SouthWest project illustrated in Figure 14.8 will provide:

- An increase in train frequency from the current 12 trains per hour per direction to 23 trains per hour per direction on this corridor.
- A quadrupling of passenger capacity from 5,000 passengers per hour per direction to 20,000 per hour per direction.

An application for a Railway Order for the DART+ South West project was submitted to An Bord Pleanala in March 2023 and approved by An Bord Pleanala in November 2024 (ABP Ref: 316119).

The works approved under the Railway Order application include

- 20km of electrification and re-signalling of the Hazelhatch and Celbridge Line to Heuston and the south city via Phoenix Park Tunnel
- Construction of a new station at Heuston West to serve the community of Clancy Quay and Island Bridge
- Four-tracking of the rail line from Park West and Cherry Orchard Station to Heuston to enhance capacity
- Civil, bridge and ancillary works as necessary to accommodate the project
- Upgrading of the Phoenix Park Tunnel
- New electric DART carriages for the DART+ Programme will be deployed on Hazelhatch and Celbridge services.

Works at Park West and Cherry Orchard will include the erection of infrastructure to support the electrification of the commuter rail services through the station.

Land acquisition for the project is currently in progress.

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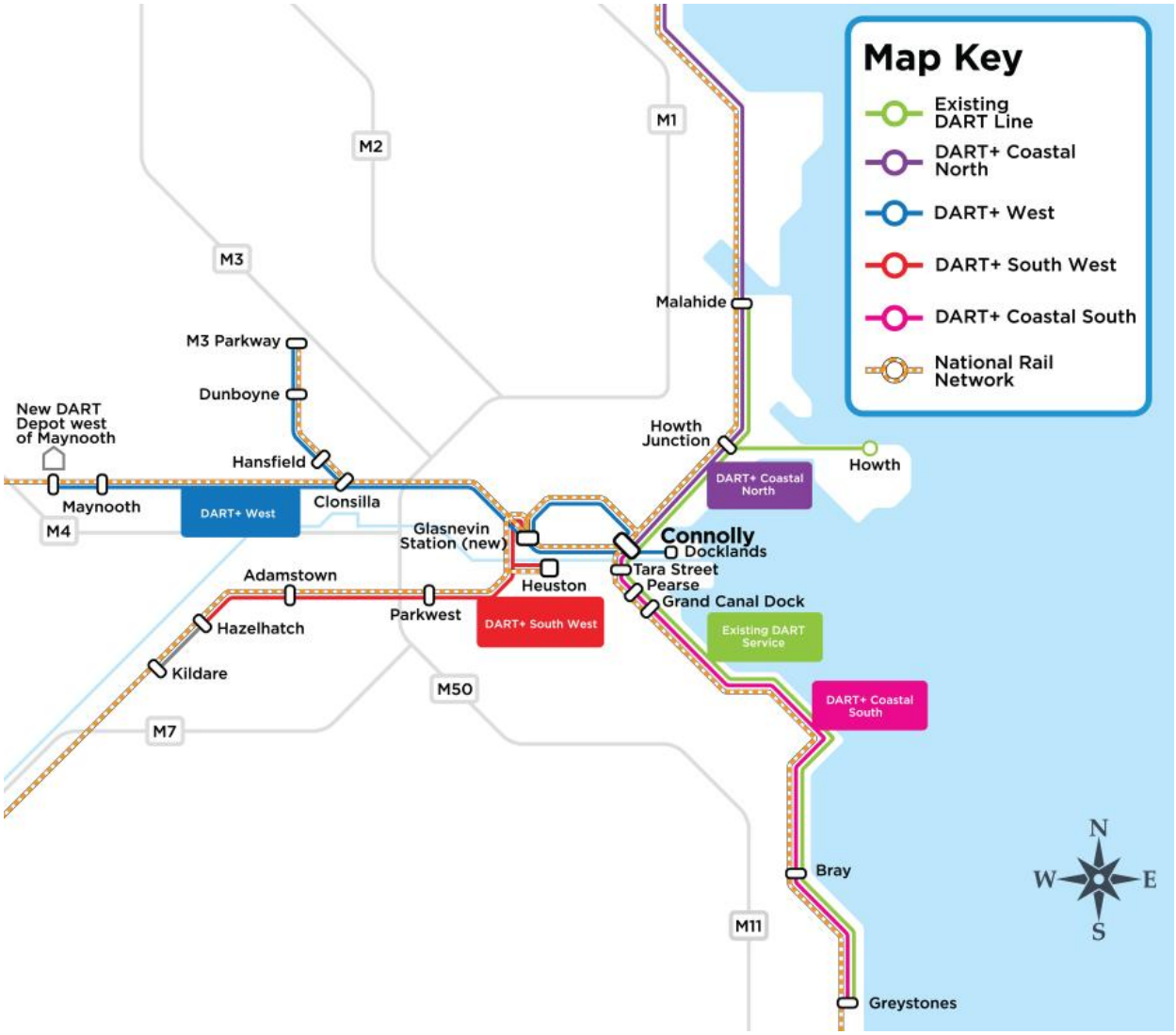


Figure 14-8 Extract from Irish Rail DART + Map

14.4.4 Car Sharing

A total of 14 new car sharing facilities are proposed in the area of the subject site as part of the adjacent Park West SHD in addition to the 11 new spaces approved for Phase 1 of the subject site and the 4 new spaces to be provided in Phase 3.

14.4.5 Bleeper Bike

As part of the development of Site 4, it is proposed that the operating zone for the Bleeper Bike service be extended to include Cherry Orchard Point.

14.4.6 Roads and Junctions

Proposals for new or improved roads in the area of the subject site comprise the Cherry Orchard Link Roads shown as a line of black dots on Map D of the Dublin City Development Plan 2022 – 2028. This proposal does not affect or impact on the subject site.

The applicants are not aware of any new other road or junction works proposed in the area of the subject site other than the improvements on the Clondalkin to Drimnagh Core Bus Corridor being promoted by Bus Connects along the Nangor Road. This Corridor was approved by An Bord Pleanala in November

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2024 (ABP 317070-23). It is located at a walking distance of some 16 minutes (1.3km) from the subject site.

14.5 Characteristics of Proposed Development

14.5.1 Approved Development – Phase 1

A planning application for Phase 1 of the proposed development on Site 4 at Cherry Orchard was approved by An Bord Pleanala in July 2024 (ABP-318607-23).

The application, which is illustrated in Figure 14.9, was for a residential led mixed use scheme comprising:-

- A total of 708 residential apartments in a number of blocks.
- A total of 4,790 sqm non-residential development comprising
    - Supermarket (2,523 sqm).
    - Retail Units (373 sqm)
    - Creche with accommodation for 25 staff and 104 children (672 sqm)
    - Community Facilities (1,222 sqm)
- A total of 444 car parking spaces including 222 spaces equipped with fully functional EV Charging Point(s) and the remaining 222 spaces designed to facilitate the relevant infrastructure to accommodate future EV charging.
- Motorcycle parking (22 spaces).
- A total of 1,618 bicycle parking spaces

The permitted development includes vehicular access from four junctions on Park West Avenue.

The planning permission for the proposed development granted by An Bord Pleanala on 9th July 2024 included 24 conditions.

Condition 18(a) requires that the residential car parking spaces shall be permanently allocated to residential use.

Condition 18(d) requires that '*The bicycle parking quantity shall be provided as per the cycle parking standards of the Dublin City Development Plan 2022 – 208 and shall comply with the specific planning policy requirement (SPPR) 4 of the Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024). Resident cycle parking spaces shall be secure, conveniently located , sheltered, and well lit.'*

Construction of Phase 1 commenced in August 2025 for occupation in 2028.

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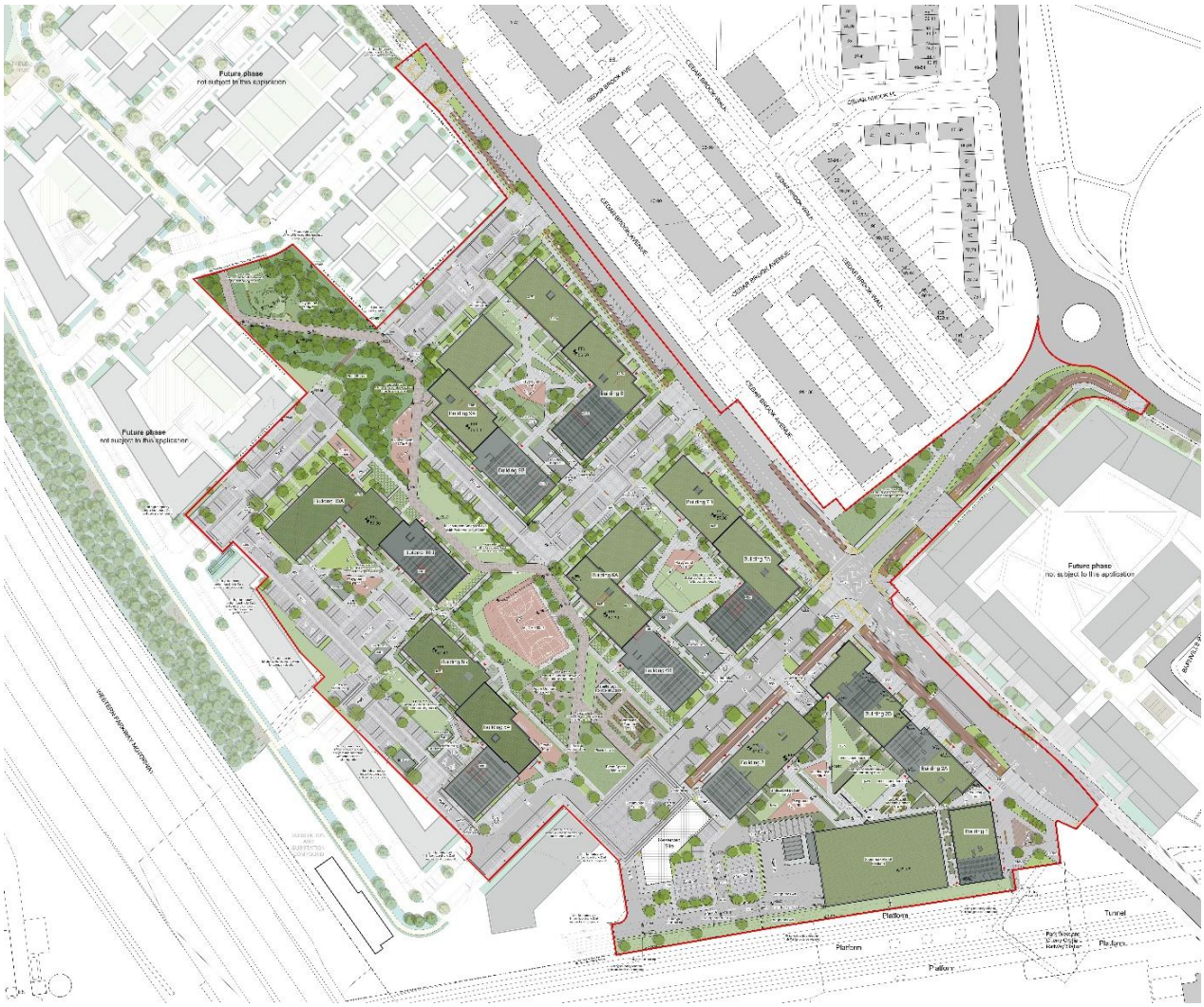


Figure 14-9 Approved Site Layout – Phase 1

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14.5.2 Approved Development – Phase 2

A planning application for Phase 2 of the proposed development on Site 4 at Cherry Orchard was approved by An Coimisiun Pleanala in September 2025 subject to 20 conditions (ACP-321931-25).

Condition 13(a) requires that the *'Residential car parking spaces shall be in accordance with the details set out in the document 'Mobility Management and Travel Plan January 2025''.*

Condition 13(b) requires that *' A minimum of 10% of all car parking spaces shall be provided with functioning electric vehicle charging stations or points and ducting shall be provided for the remaining stations'.*

Condition 13 (c) requires that *'Prior to the occupation of the development, a Parking Management Plan shall be prepared for the development which shall be placed on the file and retained as part of the public record'.*

Condition 18(d) requires that '*The bicycle parking quantity shall be provided as per the bicycle parking standards of the Dublin City Development Plan 2022 – 208 and shall comply with the Specific Planning Policy Requirement 4 of the Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024). Resident cycle parking spaces shall be secure, conveniently located , sheltered, and well lit. Key fob access shall be requited to resident cycle parking compounds. All cycle parking design including visitor parking shall allow both wheel and frame to be locked. Electric bike charging facilities within the resident cycle parking areas shall be provided. All cycle parking shall be in situ prior to the occupation of the development.*

The proposed development of Phase 2 will comprise:

- 137 residential units comprising
  - 13 x 2 bed houses
  - 88 x 23 bed houses
  - 18 x 2-bed apartments
  - 18 x 3-bed duplex
- A total of 141 car parking spaces comprising
  - 27 on-curtilage spaces for the houses.
  - 107 on-street spaces for the houses, apartments and duplex.
  - 3 on-street accessible spaces for the houses, apartments and duplex.
  - 4 on-street accessible spaces
- A total of 306 cycle parking spaces
  - 194 on-curtilage spaces for the houses.
  - 90 spaces for the apartments and duplex.
  - 4 cargo spaces for the apartments and duplex.
  - 18 spaces for visitors

The layout of the proposed development (Phase 2 of the overall development) is illustrated on Figure 14.10.

Construction of Phase 2 commenced in August 2025 for occupation in 2028.

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Figure 14-10 Approved Site Layout – Phase 2

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14.5.3 Proposed Development – Phase 3

The proposed development will consist of the construction of a residential led mixed-use scheme containing 312no. residential apartments comprising 244no. cost rental and 68no. social units, 8no. local retail and commercial units, landscaped public and communal open space. The proposed development includes a new principal access via Barnville Park to the south, providing entry to an internal undercroft parking court, upgraded pedestrian and cycle footpaths, Barnville Link connecting the Park West Avenue and Cherry Orchard railway station and all associated site and development works. The proposed development represents Phase 3 of the overall planned development at Cherry Orchard Point scheme for Development Sites 4 and 5 of the LAP lands. Phase 1 of the overall planned development was granted permission in July 2024 (ACP Case Ref: 318607-23) and Phase 2 was granted in September 2025 (ACP Case Ref: 321931-25). The proposed development comprises the works to be undertaken on Site 5: Barnville, which forms the subject of this planning application.

The proposed development (Total GFA of c. 28,413 sq.m) involves construction of 312no. residential apartments (c. 24,556 sq.m), across 7 core blocks consisting of 4 to 10 floors, comprising 16no. studio units, 146no. one-bed units, 139no. two-bed units (15no. two-bed three-person and 124no. two-bed four person), 9 no. 3-bed units (9no. three-bed five-person) and 2no. 4-bed units (2no. four-bed seven-person) together with 8no. Local Retail and Commercial units (c. 1,441 sq.m GFA), and all ancillary and sundry accommodation (c. 2,416sq.m total GFA). The proposed development also includes the provision of landscaped public open spaces of c.1,691 sq.m. and Communal open space of c. 2,390 sq.m. The communal open space has been designed to provide a high-quality amenity area, incorporating a community garden with seating, play and fitness facilities, and associated landscaping. The scheme also provides private open space for all residential units.

The proposed development will involve the provision of car parking (including accessible and EV car parking spaces), car sharing spaces, bicycle parking spaces, motorbike spaces and loading bays. The scheme includes a Barnville Link to the south of the site connecting Barnville Park with Park West Avenue and providing direct pedestrian access to the railway station, along with overall 4no. pedestrian crossing points connecting Park West Avenue, Barnville Park and New Cherry Orchard Park.

The development will also provide for all associated ancillary site development infrastructure including site clearance, boundary treatment, associated public lighting, internal roads and pathways, substations, switch room, water tank rooms, storage room, meter room, sprinkler tank room, bin storage, bicycle stores, hard and soft landscaping, play equipment, boundary walls, attenuation area, green and blue roof systems, photovoltaic panels and all associated works and infrastructure to facilitate the development including connection to foul and surface water drainage and water supply (v5.3).

Refer to the enclosed statutory notices for a full description of development as part of this planning application.

14.5.4 Future Development – Phase 4

The future development of Phase 4 on Site 4 at Cherry Orchard Point is expected to comprise: -

- Commercial units in 4 blocks (16,310 sqm).
- A total of 82 number car parking spaces.
- A total of 300 cycle parking spaces with 218 spaces for staff and 82 spaces for visitors.

14.5.5 Overall Development

The overall development of Phases 1, 2, 3 and 4 on Sites 4 and 5 at Cherry Orchard Point is set out in Table 14.1. The overall site layout can be seen in Figure 14.11 and on the drawings included with the planning application.

The overall development is expected to comprise 1,157 residential units, a supermarket, local retail and commercial, a creche, community facilities together with car and cycle parking.

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The T & TA for Phase 3 assesses the traffic impact of Cherry Orchard Point on the basis of a single development notwithstanding the fact that the site is being developed in a number of phases.

Table 14-1 Overall Development

Description	Phase 1	Phase 2	Phase 3	Phase 4	Total
Studio	28	-	-	-	28
Apartments	680	18	312	-	1,010
Duplex	-	18	-	-	18
Houses	-	101	-	-	101
Total Residential	708	137	312	-	1,157
Supermarket	2,523 sqm	-	-	-	2,523 sqm
Local Retail and Commercial	373 sqm	-	1,441 sqm		1,814 sqm
Creche	672 sqm	-	-	-	672 sqm
Commercial	-	-	-	16,310 sqm	16,310 sqm
Community	1,221 sqm	-	-	-	1,221 sqm
Car Parking	444	141	156	82	823 spaces
Cycle Parking	1,618	306	658	300	2,882 spaces

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Figure 14-11 Overall Site Layout

14.5.6 Design Population

The overall resident population at Cherry Orchard Point is expected to be 3,816 persons in 1,157 residential units.

The permitted Phase 1 development comprises a total of 708 apartments with 1,174 bedrooms and a design population of 2,247 persons.

The proposed Phase 2 development will comprise a total of 137 residential units (101 x houses, 18 x apartments and 18 x duplex) with a total of 380 bedrooms and a design population of 645 persons.

The proposed Phase 3 development will comprise a total of 312 apartments with a total of 475 bedrooms and a design population of 924 persons.

14.5.7 Access Points

Access to the proposed development on Sites 4 and 5 is proposed from four junctions on Park West Avenue as shown on Figure 14.11.

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Three of the four junctions on Park West Avenue will be at-grade with priority control. Sightlines at these junctions will comply with the requirements of DMURS.

The fourth junction will from an at-grade signalised crossroads with Barnville Park. The signals at this junction will incorporate cycle and pedestrian phases.

Access to Site 5 will be from an at-grade priority junction to be located on Barnville Park.

Access to the cycle parking provided is shown on the architectural and engineering drawings included in the planning application.

14.5.8 Internal Layout

The proposed internal layout of Phase 3 on Site 5 including roads, cycle facilities and pedestrian facilities.is shown in Figure 14.12.

The pedestrian and cycle access to the proposed development have been integrated with the surrounding road network.

The overall development provides for upgraded footpaths and cycle tracks on the Park West Avenue together with pedestrian and cycle phases in the signalised junction at Barnville Walk.



Figure 14-12 Proposed Site Layout – Phase 3

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14.5.9 Proposed Car Parking

In relation to a relaxation of the maximum car parking standard, the TTA demonstrates that the subject site is a location where a relaxation of the maximum residential car parking standards may be appropriate having regard, inter alia, to the availability of excellent public transport.

The overall car parking provision proposed for Phase 3 is 156 spaces comprising 150 spaces for residents and 6 publicly accessible spaces for Local Retail, Commercial and Car Sharing.

The locations of these car parking spaces are shown on Figures 14.12 and 14.13 as follows:-

- 131 spaces for residents at Level 0 (including 4 accessible).
- 25 spaces at street Level 1 (including 4 accessible).

The proposed car parking ratio for the residential development in Phase 3 is 0.48 space per unit for the 312 units proposed (150 spaces comprising 142 standard spaces and 8 accessible spaces).

The designation and locations of the 156 car parking spaces will be:

- 127 standard spaces for apartments at Level 0.
- 15 standard spaces for apartments at Level 1.
- 4 x designated accessible spaces at Level 0.
- 4 x designated accessible spaces at Level 1.
- 2 spaces for Local Retail and Commercial at Level 1.
- 4 spaces for car sharing (GoCar) at Level 1.



Figure 14-13 Proposed Car Parking at Level 0 and Level 1– Phase 3

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14.5.10 Car Park Management

Permits for access by residents to the 130 residential spaces at Level 1 will be issued by the Management Company with not more than one permit per unit.

For residents who require occasional car use without the need to own a vehicle, Phase 3 includes 4 spaces permanently allocated for car sharing with vehicles supplied by GoCar or similar company.

14.5.11 Proposed Cycle Parking

In compliance with Section 3.0 of Appendix 5 of the Dublin City Development Plan 2022 – 2028, Phase 3 will include a total of 658 cycle parking spaces with 481 long stay spaces for residents at Level 0 and 177 short stay spaces for visitors at Level 1. The locations of the long stay cycle parking are shown on Figure 14.14 and the locations of the short stay cycle parking spaces are shown on Figure 4.15.

The details of the cycle parking are shown on the architectural and engineering drawings included with the planning application. Provision has been included for cargo bikes. Shower / changing facilities for staff will be provided in accordance with Section 3.2 of Appendix 5 of the City Development Plan.

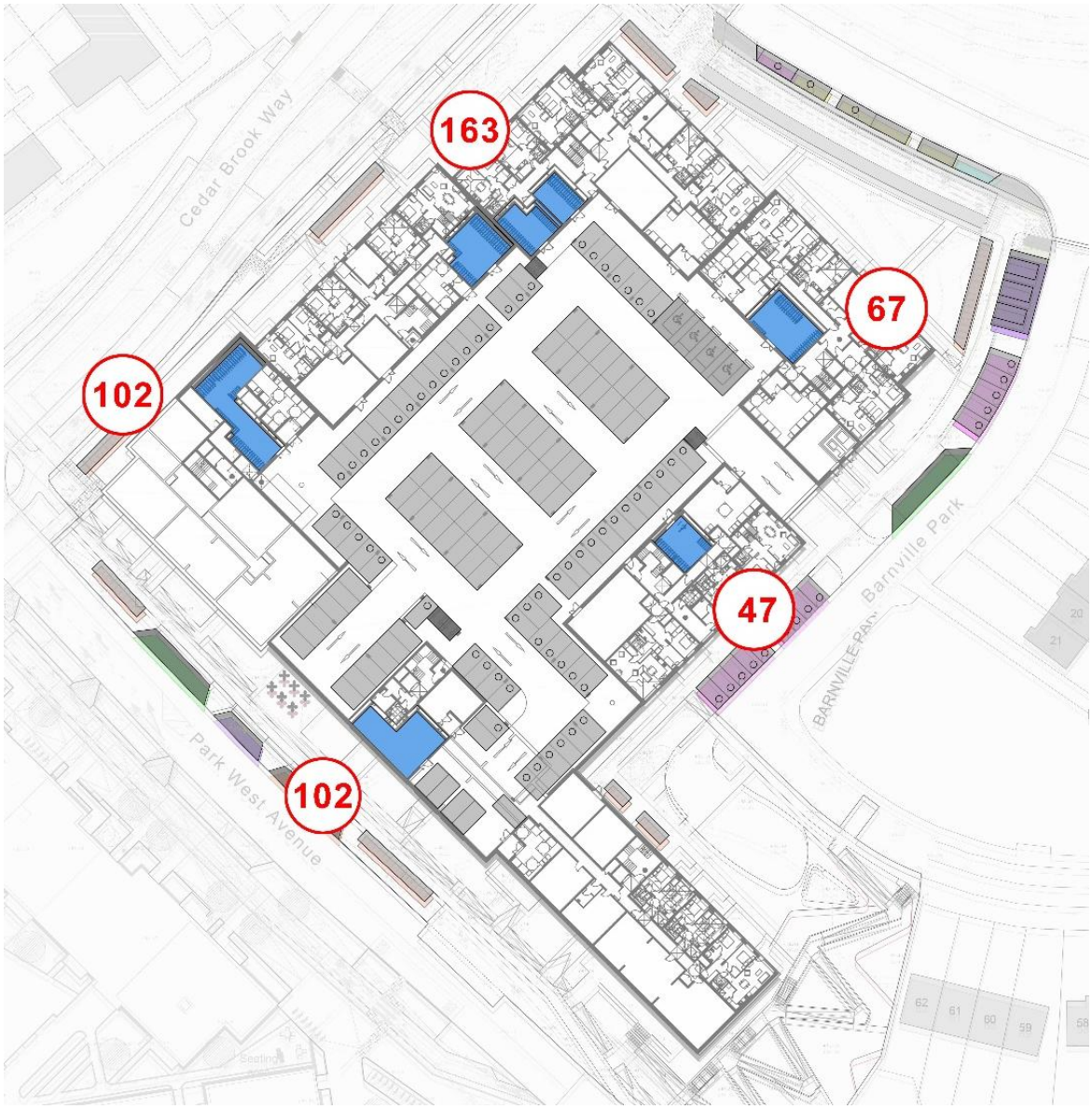


Figure 14-14 Proposed Long Stay Cycle Parking at Level 0 – Phase 3 (481 spaces)

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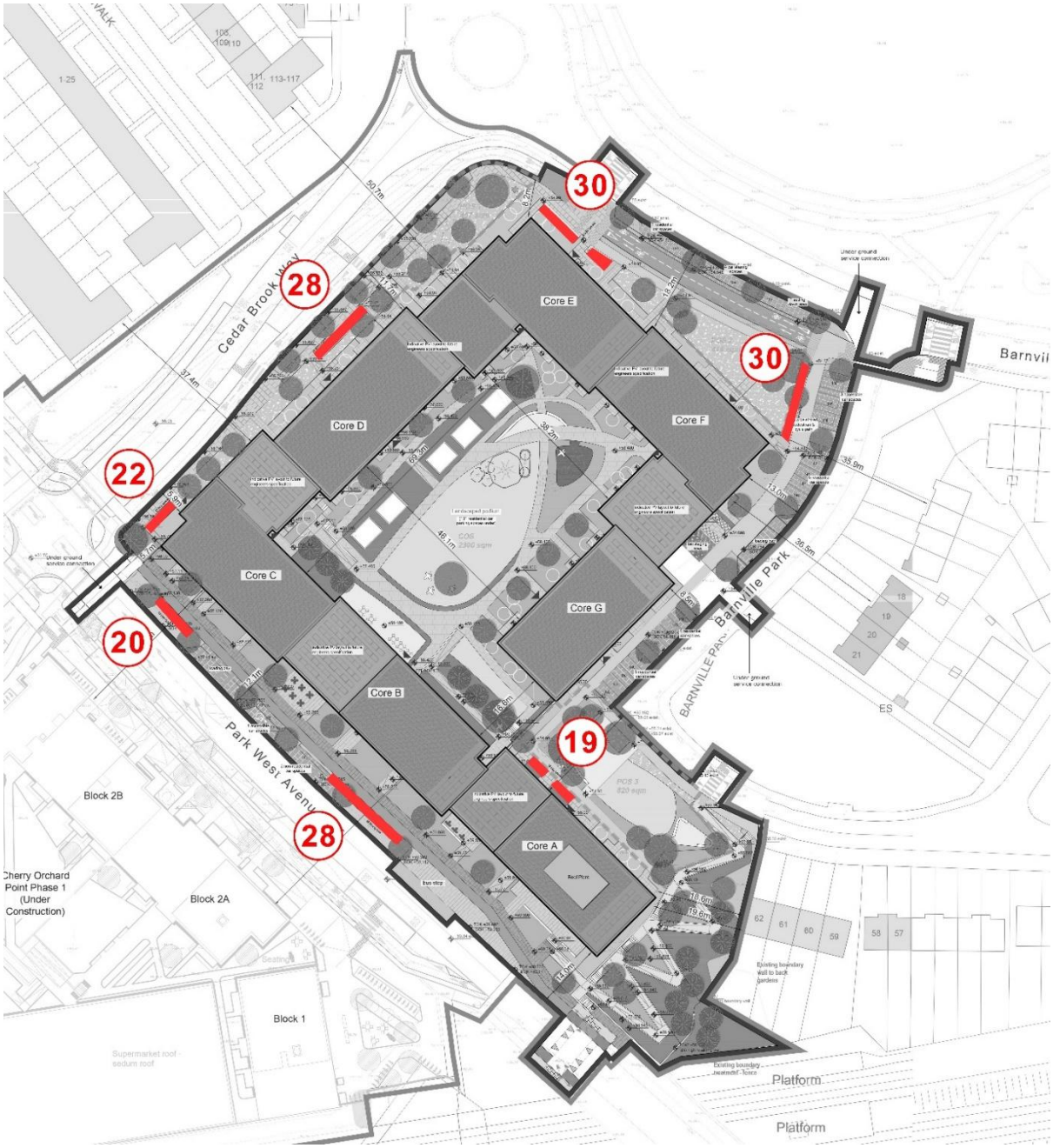


Figure 14-15 Proposed Short Stay Cycle Parking at Level 1 – Phase 3 (177 spaces)

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14.6 Predicted Impacts

14.6.1 Predicted Traffic Impact - Construction Stage

14.6.1.1 Construction Traffic Access Routes

Construction traffic routes to the proposed development are facilitated by the high standard of the existing road network in the surrounding area.

The primary construction access route is expected to be from the R134 Nangor Road via Park West Avenue. The secondary construction access would be from Ballyfermot Road / Coldcut Road via Cloverhill Road and Park West Avenue. See Figure 14.16.

At the time of writing in June 2026, both of the proposed construction access routes are fully operational and open to traffic including road markings and traffic signals.

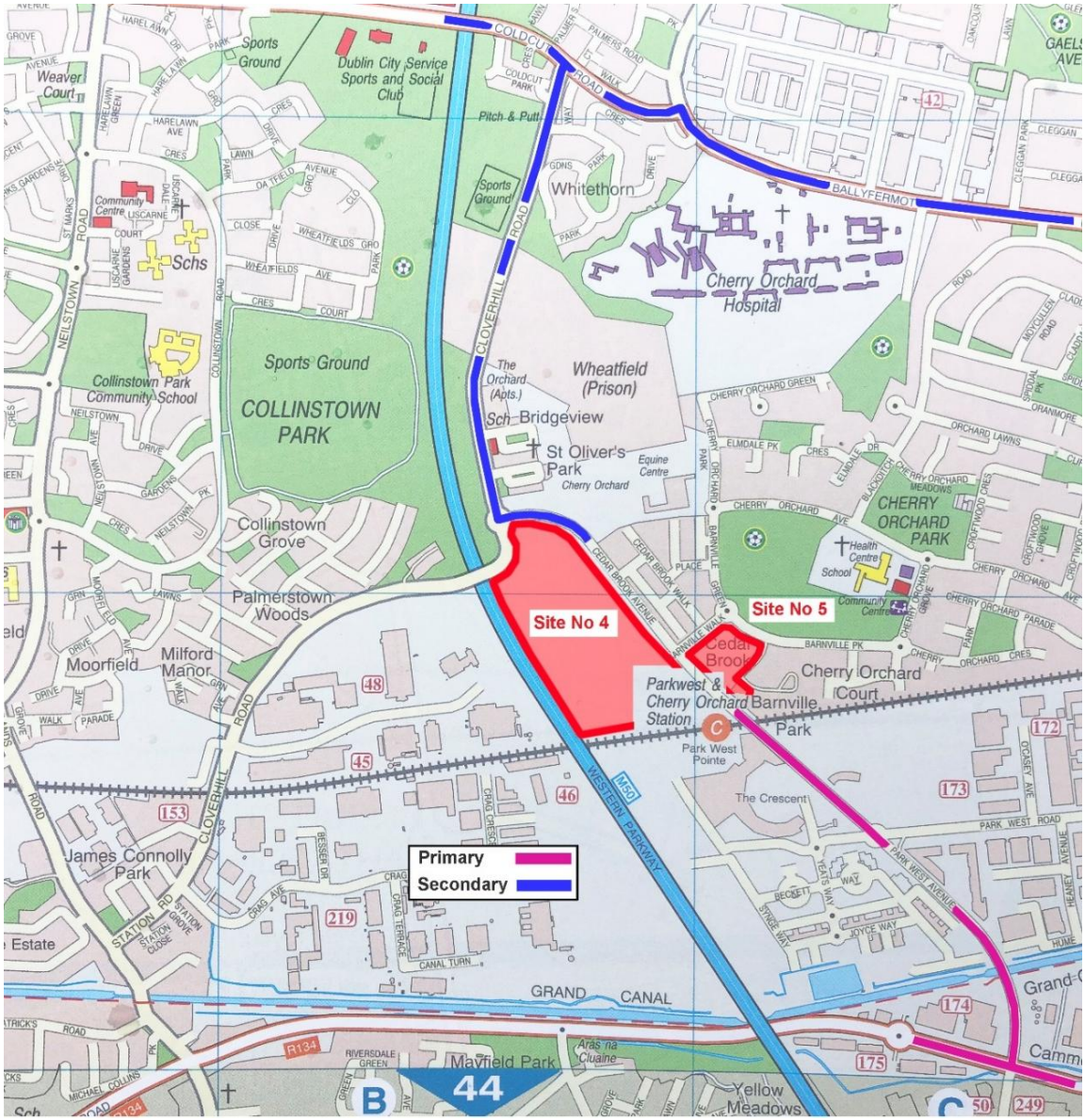


Figure 14-16 Construction Traffic Access Routes

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14.6.1.2 Construction Traffic Volumes

During the construction stage of the proposed development, some construction traffic movements will be undertaken by heavy goods vehicles, though there will also be vehicle movements associated with the appointed contractors and their staff.

An estimate of the day-to-day traffic movements associated with the construction activities, based on experience of similar sites, considered that the number of construction related heavy goods vehicle movements to and from the application site will be no more than an average of 3 arrivals/departures per hour, with the majority of the trips undertaken outside the network AM and PM peak hours. In addition, traffic movements generated during the earthworks phase of the development are predicted to generate an average of 24 arrivals and 24 departures per working day equivalent to 3 arrivals and 3 departures per hour.

Allowing for other concurrent on-site activities during the same period particularly completion and fit-out, the construction related truck movements are expected to peak at 5 arrivals and 5 departures per hour during a 10-hour day between 08.00 and 18.00.

The general workforce is likely to be c. 100 in number, reaching up to 150 persons at peak times. It is estimated that c. 80% of the workforce will travel to/from the site by a vehicle and will carpool on average 2 workers per vehicle. As a result, the site is expected to attract/generate 40-60 number of cars / vans per day, with up to 50% the trips being undertaken outside the AM and PM peak hours.

Based on the above, it is estimated that the daily construction traffic movements during the AM Peak Hour 08.00 – 09.00 is predicted to be:

- Car / Van 20 arrivals and 3 departures per hour
- HGV: 6 arrivals and 6 departures per hour
- Total 35 movements per hour.

The number of construction vehicle movements is low compared to the number of vehicular trips expected to be generated by the proposed development during the operational phase and most of the trips will occur outside of the traditional peak hours.

14.6.1.3 Parking During Construction

Off-street parking for construction staff will be provided on site where a construction carpark will be created at the start of works by the laying of a temporary surface for vehicles. Parking will not be provided for construction staff on public roads. Construction staff will be encouraged by their employer to reduce the use of the car for the journey to work by car sharing and / or travelling by public transport. Workers will be encouraged to keep themselves informed about the public transport options and active mode facilities provided in the surrounding area.

14.6.1.4 Predicted Traffic Impact - Construction Stage

The traffic movements predicted to be generated during the construction stage represent some 3.1% of the surveyed traffic flow of 1,103 vehicles per hour on Park West Avenue during the AM Peak. This increase is less than the 10% threshold set out in the *Traffic and Transport Assessment Guidelines* published by TII in May 2014 and as a result, no further transportation assessment is required.

The number of construction vehicle movements is low compared to the number of vehicular trips expected to be generated by the proposed development during the operational phase. It should be noted that most of such trips will occur between 10am and 5pm outside of the traditional peak hours, and it is not considered that this level of construction traffic would result in any operational problems.

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14.6.1.5 Summary of Traffic Impacts – Construction Stage

Having regard to the predicted impacts described above, it can be concluded that no significant impact on roads and traffic will arise from the Construction Stage of the proposed development at Cherry Orchard Point.

14.6.2 Predicted Traffic Impact – Operational Stage – Roads and Junctions

The traffic impact of the Cherry Orchard Point on the surrounding road network was assessed by modelling the projected traffic movements in future years on the surrounding road network including the junctions.

In the absence of an identifiable cause(s) for the recorded decreases in the surveyed traffic movements between 2022 and 2026, the results of the 2022 traffic survey have been used in the generation of the traffic predictions for the future operational stage in the TTA.

14.6.2.1 Future Base Traffic Flows

The methodology adopted for the determination of base flows for future years is described below.

Firstly, the AM and PM peak traffic hours were extracted from the traffic survey carried out by IDASO in November 2022.

Secondly and in line with the '*Transport Assessment Guidelines (May 2014)*', the years to be assessed were selected to be:

- 2022 Base Year:
- 2027 Opening Year:
- 2032 Design Year (Opening Year + 5)
- 2042 Future Year (Opening Year + 15)

Thirdly, the base traffic flows for the selected future years were obtained by factoring up the 2022 baseline traffic flows using factors from the TII Publication – *Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections* (October 2021).

The Central Growth Rate factors extracted from Table 6.1 of that publication are set out below.

- 2022 – 2027: 1.084
- 2022 – 2032: 1.149
- 2022 - 2042: 1.201

To quantify the levels of traffic in the area of the subject site, a classified traffic survey on the roads in the area of the proposed development was carried out by IDASO on Tuesday 8th November 2022 over a period of 24 hours. Natural changes in traffic flow are addressed by the application of factors from the TII Publication – Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections (October 2021).

For the purpose of cumulative impact, the base flows for the seven selected junctions for 2027, 2032 and 2042 included traffic forecast to be generated by the contiguous Park West development 3.

14.6.2.2 Trip Generation

Trip generation for Site 4 and Site 5 has been estimated based on the trip rates obtained for each proposed land use category from the Trip Rate Information Computer System (TRICS) modelling software database. TRICS is the national standard of trip generation and analysis in Ireland and UK.

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For the purpose of the TTA, trip generation for the commercial units proposed for Phase 4 has been calculated based on the 82 car parking spaces proposed to serve them.

Based on a total of 845 residential units, 16,310 sqm commercial and supporting development, the total number of peak hour trips generated by the development of Phases 1, 2 and 4 on Site 4 is expected to be 422 per hour in the AM Peak and 464 in the PM Peak.

Based on a total of 312 residential units and supporting development, the total number of peak hour trips generated by the development of Phase 3 on Site 5 is expected to be 117 per hour in the AM and 161 per hour in the PM Peak.

14.6.2.3 Trip Distribution

For the purpose of the Phase 3 TTA, it was assumed, on the basis of the characteristics of the receiving environment and experience of similar developments, that the future trip distribution for the overall development will be the same for both the AM and PM trips.

The trip distribution assumed for Site 4 in the AM and PM Peaks was based on the assumption that: -

- 35% would travel in a northerly direction travel north to/from the proposed development.
- 25% would travel in an easterly direction to/from the proposed development.
- 40% will travel in a southerly direction to/from the proposed development.

The trip distribution assumed for Site 5 in the AM and PM Peaks was based on the assumption that: -

- 25% would travel in a northerly direction travel north to/from the proposed development.
- 240% would travel in an easterly direction to/from the proposed development.
- 35% will travel in a southerly direction to/from the proposed development.
-

14.6.2.4 Development Generated Traffic

The predicted number of trips from Phases 1, 2 and 4 on Site 4 in the AM Peak Hour has been calculated to be 198 inbound and 224 outbound.

Similarly, the predicted number of trips in the PM Peak Hour is 219 inbound and 245 outbound.

The predicted number of trips the predicted number of trips from Phase 3 on Site 5 in the AM Peak Hour has been calculated to be 44 inbound and 73 outbound.

Similarly, the predicted number of trips in the PM Peak Hour has been calculated to be 90 inbound and 71 outbound.

14.6.2.5 Post Development Traffic Flows

The post development traffic flows for 2027, 2032 and 2042 were obtained by adding the distributed trips generated by the proposed development to the Base Flows, These post development traffic flows were then used in the assessment of the surrounding junctions.

14.6.2.6 Modelling Software

There are various modelling software packages available to assess every type of junction. Waterman Moylan uses ARCADY, TRANSYT and PICADY to analyse roundabouts, signalised and priority junctions, respectively.

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ARCADY is a software for modelling roundabouts. This programme utilises roundabouts geometry and traffic flows input by the user to determine Ratio of Flow to Capacity (RFC) and queue length for each link on the roundabout.

TRANSYT (Traffic Network Study Tool) software is a widely accepted software for modelling signalled controlled junctions. This programme utilises the phases input by the user and optimises their timings over a cycle time. The outputs of a TRANSYT assessment include a Degree of Saturation percentage (DOS%) figure and queue length for each link on the road network.

PICADY is a software for modelling priority-controlled junctions. This programme utilises junction's geometry and traffic flows input by the user to determine Ratio of Flow to Capacity (RFC) and queue length for each link on the junction.

14.6.2.7 Future Traffic

The future traffic used in the assessment of the surrounding road network during the Operational Stage has been based on the trips generated by the following developments: -

(a) The permitted development of Phase 1 on Site 4.

(b) The proposed development of Phase 2 on Site 4.

(c) The future development Phase 3 on Site 5.

(d) The future development Phase 4 on Site 4.

(e) The contiguous development at Park West SHD on Site 6.

The traffic from these development was not included in the traffic survey as they were all still at the pre-construction stage.

14.6.2.8 Percentage Traffic Impact

The extent of the traffic impact from the proposed development was determined by initially checking where generated traffic would exceed 10% of the 2022 baseline traffic flow on the adjoining road or 5% on the road where congestion exists, or the location is sensitive. This is in line with the *Traffic and Transport Assessment Guidelines* published by TII in May 2014.

The predicted increase in traffic increase at all of the assessed junctions was found to be greater than 10%. Therefore, further assessment was required.

The existing and proposed / upgraded junctions were assessed by modelling for the DO-NOTHING and DO-SOMETHING scenarios for the Baseline, Opening Year 2027, Design Year 2032 and Future Year 2042.

14.6.2.9 Junctions Assessed

The following junctions on the surrounding road network were assessed for the Operational Stage:

- Junction 1: Cloverhill Road / Park West Avenue / Station Road.

  Junction 1 is an existing Three-arm Roundabout.
- Junction 2: Park West Avenue / Cedar Brook.

  Junction 2 is an existing Priority T-junction proposed to be upgraded to a Signalised Crossroads.
- Junction 3: Park West Avenue / Cedar Brook Walk.

  Junction 3 is an existing Priority T-junction proposed to be upgraded to a Priority Staggered Junction.
- Junction 4: Park West Avenue / Cedar Brook Way.

  Junction 4 is an existing Signalised T-junction proposed to be upgraded to a Signalised Crossroads.

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- Junction 5: Unnamed Road / Cedar Brook Way.
  Junction 5 is an existing Three-arm Roundabout.
- Junction 6: Barnville Park / Unnamed Road.
  Junction 6 is an existing Priority T-junction.
- Junction 7: Park West Avenue / Park West Road.
  Junction 7 is an existing Four-arm Roundabout.
- Junction 8: Park West Avenue / Site Access.
  Junction 8 is a proposed Priority T-junction.

14.6.2.10 Locations of Junctions

The locations of the assessed junctions are shown in Figure 14.17.

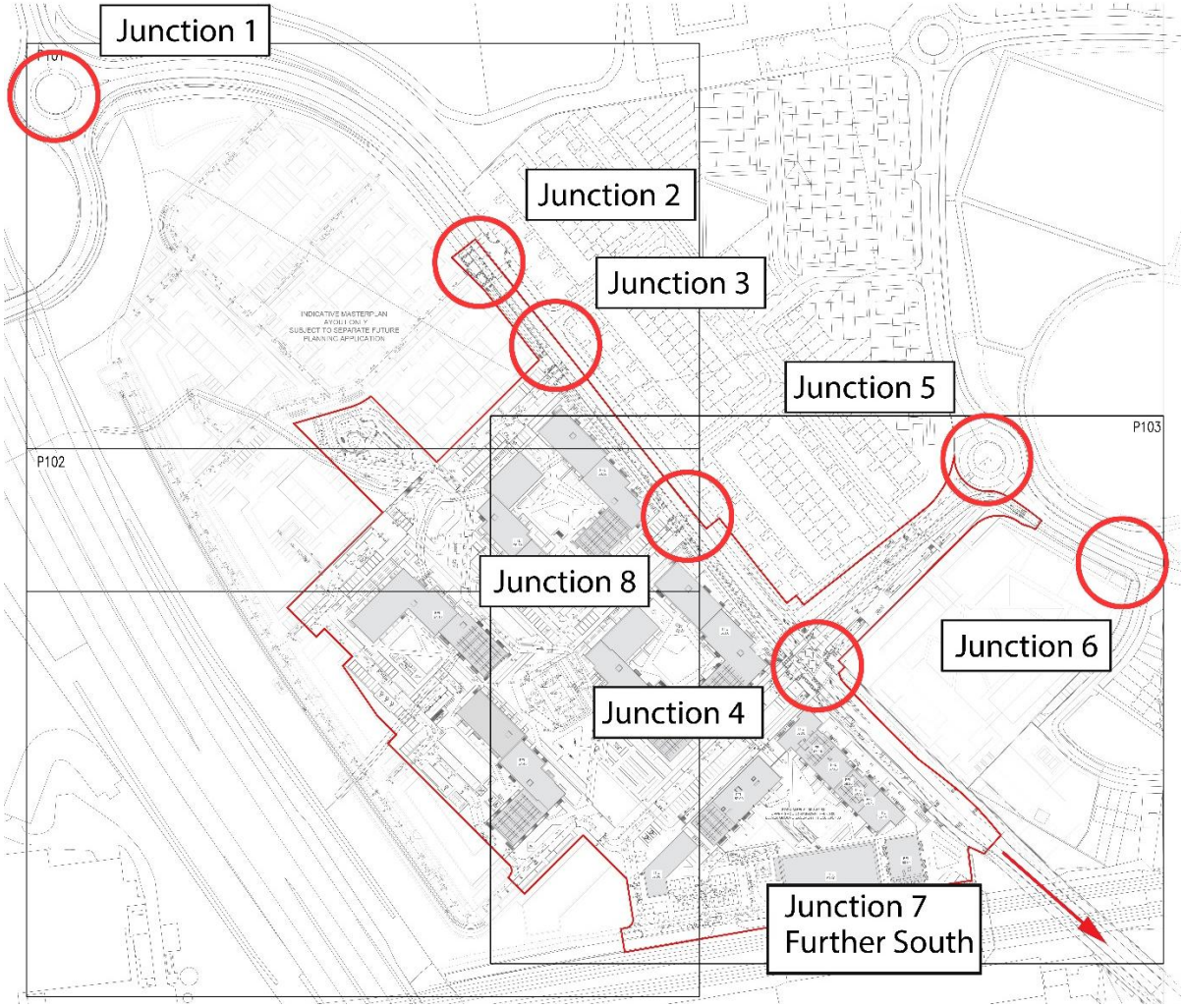


Figure 14-17 Locations of Junctions Assessed.

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14.6.2.11 Results of Junction Modelling

Notwithstanding that the traffic impact from the proposed development is predicted to be 10% or greater at all of the seven road junctions included in the traffic modelling undertaken for this project, the results of the traffic modelling predict that all of assessed junctions, except Junctions 4 and 7, will operate within capacity in the AM and PM peaks hours with the proposed development in place in the Opening Year 2027 through the Design Year in 2032 to the Future Year 2042.

For the DO-NOTHING scenario, Junction 4 is predicted to operate within capacity and will continue to do so during 2027, 2032 and 2042, should the proposed development not take place.

For the DO-SOMETHING scenarios, Junction 4 is predicted to operate above capacity during 2027, 2032 and 2042 in both peak hours with the inclusion of the proposed development trips.

Junction 4 has been designed in compliance with current national and local policies which prioritise cycle and pedestrian movements over road traffic. The restricted capacity proposed at Junction 4 is largely due to the application of these policies when an alternative design for traffic movements albeit with longer crossing times for pedestrian and cyclists could bring the junction within capacity for 2027, 2032 and 2042.

It is not possible to provide additional capacity at Junction 4 without a derogation from the national requirement to use DMURS for junctions in urban areas.

For the DO-NOTHING scenario 2027, Junction 7 is indicated to reach capacity in the PM Peak Hour even without the inclusion of the proposed development trips. This finding is consistent with Section 4.5.2 of the LAP which notes that the road network serving Park West – Cherry Orchard experiences traffic congestion in peak hours in areas such as Park West Avenue. The Park West – Cherry Orchard LAP also include provision for capacity enhancements, key new connections and enhanced public transport.

For the DO-SOMETHING scenario and with the inclusion of the proposed development trips, the results of the assessment predict that Junction 7 will continue to operate within capacity up to and including 2042 during the AM Peak Hour. During the PM Peak Hour, RFC is predicted to exceed capacity with queues and delays on Park West Road (W) during the PM Peak Hour departures.

In summary and as part of the ongoing implementation of the Park West – Cherry Orchard LAP, the results of the assessment predict that Junction 7 is likely to require upgrading by Dublin City Council, most likely to a signalised crossroads, about 2027 with or without development at Cherry Orchard Point.

Junctions 4 and 7 were included in the planning application for Phase 1 for which permission was granted by ABP in July 2024 (ABP-318607-23) and in the application for Phase 2 for which planning permission was granted in September 2025 (321931-25)

14.6.2.12 Summary of Predicted Impacts – Operational Stage – Roads and Junctions

Having regard to the predicted impacts described above, it can be concluded that no significant impact on roads and traffic will arise from the Operational Stage of the proposed development at Cherry Orchard Point notwithstanding the predicted future impact of delays at Junctions 4 and 7.

Junction 4 is a new junction approved under Phase 1 and under construction at the time of writing in June 2026. It was designed to the requirements of the Design Manual for Urban Roads and Streets (DMURS). An alternative design could reduce delays but at the cost of longer delays for cyclists and pedestrians. However, DMURS is a mandatory national standard for roads in urban areas and the applicants had no option but to incorporate its requirements in the new junction.

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Junction 7 is a pre-existing issue at an existing junction located approx. 0.6km to the south of Phase 3 on the other side of the railway line. Future delays are predicted to occur at this junction irrespective of whether the proposed development is implemented or not. In these circumstances, no significant impact is predicted to arise from the proposed development.

14.6.3 Predicted Traffic Impact – Operational Stage - Rail Services

The traffic impact of the Cherry Orchard Point on the surrounding public transport network and services was assessed by modelling the projected traffic movements in future years on the surrounding road network including the junctions and by reviewing the future passenger loadings in relation to capacity for public transport, both rail and bus.

14.6.3.1 Passenger Demand

Based on a design population of 3,816 persons and a modal spilt for rail of 20 – 30%, the peak demand from the proposed development for travel by rail is expected to be 763 – 1,145 passengers per day.

Based on the location of Park West, it is expected that 75% of these passengers can be expected to travel eastbound towards the City Centre with 50% travelling during the AM Peak Hour giving a projected demand of 285 - 429 passengers per hour eastbound during the AM Peak Hour.

14.6.3.2 Train Capacity

Commuter services in both directions at Park West & Cherry Orchard are provided by four / eight car 29000 class railcar sets each with capacity of 640 / 1,280 passengers per set or a 6-car High Capacity Inter City railcar (ICR) set with a capacity of 406 passengers. See Table 14.2.

Table 14-2 Train Capacity

Designation	Size	Capacity Passengers	Passengers 08.00 – 09.00
29000 Railcar	8 car set	1,280	6,400
do	4 car set	640	3,200
ICR Railcar	6-car set	406	2,436

There are five existing rail services departing Park West & Cherry Orchard during the AM Peak Hour 08.00 – 09.00.

If all five services were formed by 29000 sets with 8 cars, the passenger capacity would be 6,400 seats per hour.

If however, 29000 sets with four cars were used, the capacity would halve to 3,200 seats per hour.

Finally, if ICR sets with six cars were used, the capacity would further reduce to 2,436 seats per hour.

In practise, the service is operated by a mix of sets with a capacity of 3,000 - 4,000 seats per hour.

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14.6.3.3 Train Loadings

Table 23 of the National Rail Census 2024, the most recently available at the time of writing in June 2026, shows the most heavily loaded train in the morning period at Park West and Cherry Orchar to be the 07.19 Newbridge - Grand Canal Dock with 529 passengers.

From Table 24, the corresponding most heavily loaded train in the evening period is the 17.29 Grand Canal Dock to Newbridge with 409 passengers.

Each of the other trains operating in both the AM and PM peak hours carry lesser loadings with adequate spare capacity to cater for passengers from Park West and Cherry Orchard.

14.6.3.4 Demand v Capacity

The demand of 285 – 429 passengers per hour during the AM Peak Hour is well below the capacity of 3 – 4,000 persons per hour provided by a mix of railcars between 08.00 and 09.00 towards the City Centre.

The conclusion of this assessment is that the future capacity of the rail service at Park West and Cherry Orchard, the last inbound stop before the City Centre, will be more than sufficient to cater for future passenger demand from Cherry Orchard Point even without the additional capacity that can readily be provided by the rostering of 29000 class railcar sets in lieu of the ICR class railcar sets prior to commissioning of the high capacity DART+ South West services.

14.6.3.5 Summary of Predicted Impact – Operational Stage – Rail Services

Having regard to the predicted impacts described above, it can be concluded that no significant impact on rail based public transport services will arise from the Operational Stage of the proposed development at Cherry Orchard Point.

14.6.4 Predicted Traffic Impact – Operational Stage – Bus Services

14.6.4.1 Existing Services

Bus services serving Park West Avenue comprise Dublin Bus Routes G1 and 60.

Route G1 is a 24-hour service which is part of the G spine. It links the site for the proposed development to New Wapping Street in the City Centre via Inchicore and to the Luas Red Line at the Red Cow. Services operate at 15-minute intervals in both directions Monday – Saturday reducing to 20-minute intervals on Sundays. A reduced frequency operates during the early morning and at night.

Route 60 links the site to Sir John Rogerson's Quay in the City Centre via Heuston Station and to the Luas Red Line at the Red Cow via Clondalkin. Services operate at 60-minute intervals in both directions.

Other contiguous services continue to be provided by Dublin Bus Route 151 along Nangor Road at a walking time of 16 minutes (1.3km) from the proposed development. Services operate at 20-minute intervals in both directions Monday – Saturday

14.6.4.2 Passenger Demand

Based on a design population of up to 3,816 persons and a modal spilt for bus of 15 – 25%, the peak demand from the proposed development for travel by bus is expected to be 572 - 954 passengers per day.

Based on the location of Park West, it is expected that 50% of these passengers, 143 – 239 passengers per hour, can be expected to travel towards the City Centre with 50% travelling during the AM Peak Hour

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14.6.4.3 Bus Capacity

Based on a review of the fleet of double deck buses operated by Dublin Bus in the area of the proposed development, the average capacity of each bus including standing passengers was found to be 87 passengers per bus.

Current timetables for Routes G1 and 60 provide for 5 buses per hour in each direction with a total capacity of 435 passengers per hour in each direction.

14.6.4.4 Demand v Capacity

The existing usage and the predicted demand from the proposed development of 143 – 239 passengers per hour during the AM Peak Hour is well within the existing capacity of 435 passengers per hour provided by the current timetable.

The capacity of the bus services used in this review is the existing startup schedule on the new Bus Connects routes. These schedules are expected to be increased by Dublin Bus through timetable changes as demand increases.

The capacity used in the TTA is for buses passing Park West & Cherry Orchard Station only and does not include contiguous services on Nangor Road or Ballyfermot Road a relatively short walk from the proposed development.

The conclusion of this assessment is that the future capacity of the bus service at Park West and Cherry Orchard will be more than sufficient to cater for existing demand together with future passenger demand from Cherry Orchard Point even without the benefit of the additional services which can be provided by increased frequency as passenger demand builds up.

14.6.4.5 Summary of Predicted Impact – Operational Stage – Bus Services

Having regard to the predicted impacts described above, it can be concluded that no significant impact on bus based public transport services will arise from the Operational Stage of the proposed development at Cherry Orchard Point.

14.6.4.6 Summary of Predicted Traffic Impact – Operational Stage

The conclusion of the Traffic and Transport assessment for the proposed development was that during the operational stage, the proposed residential parking capacity will be more than adequate to cater for the number of residents who will drive to work or education each day.

Post development, six of the eight road junctions assessed will continue to operate satisfactorily up to 2042. The existing roundabout at the junction of Park West Avenue and Park West Road is likely to reach capacity in 2027 in the PM Peak Hour with or without the proposed development. As a result and in conjunction with ongoing implementation of capacity upgrades and improved public transport as part of the Park West - Cherry Orchard LAP, Junction 7 is likely to be converted to a signalised crossroads by Dublin City Council about that time.

The proposed signalised crossroads at the junction of Park West Avenue and the Site 4 Access is predicted to operate over capacity for short periods during the AM and PM Peaks from 2027 as a consequence of compliance with the design requirement of DMURS. The adoption of an alternative design for traffic movements albeit with longer crossing times for pedestrians and cyclists could bring the junction within capacity for 2027, 2032 and 2042.

Post development, existing and future the public transport services, both rail and bus, will have more than adequate capacity to accommodate future passenger demand from Cherry Orchard Point.

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Overall, it is considered that the transportation impact of the proposed development at Cherry Orchard Point on the surrounding transportation network will not be significant.

14.6.5 Do Nothing Scenario

14.6.5.1 Sites 4 and 5

As set out in Section 13 of the Dublin City Development plan 2022 – 2028, Dublin City Council have zoned the subject site Z14 *Strategic Development and Regeneration Area* (SDRA).

SDRA 4 Park West / Cherry Orchard guided the preparation of a new Local Area Plan (LAP) for Park West / Cherry Orchard, which came into effect in November 2019. The objective of the LAP is to deliver private, council and affordable housing, schools, sports and recreational facilities, retail facilities and employment opportunities in consultation with local community and youth services.

Phase 1 on Site 4 is under construction at the time of writing in June 2026.

Planning permission for Phase 2 also on Site 4 was granted in September 2025.

Should the proposed development of Phase 3 not take place, Site 5 will continue to comprise undeveloped unoccupied greenfield lands with no traffic movements in or out and a key objective of the Development Plan will not be achieved. Background traffic will however continue to increase in line with the TII Travel Demand Predictions for the Dublin area.

Given the location and zoning of Sites 4 and 5, it is reasonable to assume that a similar development, with a potentially more intensive requirement for vehicular trips ,is likely to be established on this site at some stage in the future.

The benefits from the proposed development at Cherry Orchard Point including junction upgrade works, pedestrian routes, cycle paths, etc. would improve the current setting. The Do-Nothing scenario would result in no improvement measures or provision of residential accommodation.

14.6.5.2 General Traffic

Should the proposed development not take place, background traffic on the road network in the surrounding area will continue to increase in line with the TII Travel Demand Predictions for the Dublin area.

14.6.5.3 Junction 7

Junction 7 is an existing four-arm roundabout located at the junction of Park West Avenue and Park West Road south of the railway bridge. There are no current proposals to upgrade this junction.

For the DO-NOTHING scenario, even without the inclusion of the proposed development trips, the results of the junction assessment predicted that Junction 7 is predicted to operate within capacity in the AM Peak Hour up to 2042 but not so in the PM Peak Hour. During the PM Peak Hour, Junction 7 is predicted to reach capacity in 2027 and exceed capacity in 2042 on Park West Road (W) during the PM Peak Hour departures.

In summary, Junction 7 is likely to require upgrading by Dublin City Council as part of the ongoing implementation of the Park West – Cherry Orchard LAP, most likely to a signalised crossroads, about 2027 with or without development at Cherry Orchard Point.

No proposals to upgrade Junction 7 are included with the subject application other than an assessment of its operation into the future. A similar assessment of Junction 7 was included in the planning application for Phase 1 for which permission was granted by ABP in July 2024 (ABP-318607-23) and in the application for Phase 2 for which planning permission was granted by An Coimisiun Pleanala in September 2025 (AP-321931-25).

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Junction 7 is a pre-existing issue at an existing junction located approx. 0.6km to the south of Phase 3 on the other side of the railway line. Future delays are predicted to occur at this junction irrespective of whether the proposed development is implemented or not.

14.7 Potential Cumulative Impacts

For the purpose of cumulative impact, the Traffic and Transport Assessment Guidelines, issued by TII in May 2014 require that *'Traffic and Transport Assessment should consider all committed developments within the vicinity of the site. This includes sites which have previously been granted planning permission but which are yet to become operational as well as any planning applications that have been submitted but have yet to be determined.'*

Cumulative traffic impacts may arise where there are a number of existing or proposed developments, which may affect the traffic at this development and the traffic flows in the surrounding area.

14.7.1 Scoping for TTA

The Scoping for TTA prepared by Waterman Moylan in September 2022 identified that, in addition to the trips that will be generated by the future development of Sites 4 and 5, the trips that would be generated by the approved Park West SHD development on Site 6 should be included in the traffic assessments for Cherry Orchard Point.

14.7.2 Approved Development on Site 6

Planning permission for a residential development of 750 units and 552 car parking spaces (Including 14 spaces for car sharing) on a 9.4 ha site at Park West, Dublin 12 was granted by An Bord Pleanala to Greenseed Ltd in June 2022 subject to 29 conditions (ABP Reg Ref 312290-21). The site included the Aspect Hotel which is located some 5 minutes' walk from Site 4 (400m).

14.7.3 Other Projects

No other significant construction projects have been identified in the area of the subject site which would result in a significant cumulative impact on Traffic and Transport either during the construction or operational stages.

However, measures currently being considered by NTA, TII and Dublin City Council for the intensification of public transport services and cycle facilities in the surrounding area are likely to have a cumulative long term significant impact.

14.7.4 Future Increase in Traffic Flow

The traffic growth factors described in Section 14.6.2 above are derived by the Transport Infrastructure Ireland (TII) II and make an allowance for traffic growth due to future This is in line with industry standards and best practice. The traffic modelling undertaken for the subject development includes the growth factors from the TII publication – *Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections* and therefore the potential cumulative impacts have been considered as part of this proposal.

14.7.5 Other Future Developments – Park West and Cherry Orchard LAP

Any future development in the area around Cherry Orchard Point is likely to increase the traffic volumes on the surrounding road and therefore a full Traffic and Transport Assessment will be prepared and appropriate mitigation measures implemented for any such future developments.

14.7.6 Conclusion

Cumulative effects occur when the environmental effects of the proposed development combine with those associated with other developments in the surrounding area which could act together to cause a significant environmental effect.

The assessment found that the potential for cumulative effects in combination with other projects is limited to construction and traffic movements. Here the effects of the proposed development itself are

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already assessed as not significant and this conclusion is not changed by the cumulative effects assessment.

14.8 Mitigation Measures

14.8.1 Construction Stage

The primary mitigation and monitoring measures during the Construction Stage will be the implementation by the selected Contractor of the *Construction Management Plan* and the *Construction Traffic Management Plan*.

The assessment of predicted impacts concluded that the construction stage of the proposed development is not anticipated to impact on the operational performance of the local road network. However, good practice requires the preparation of a Construction Management Plan (CMP) and a Construction Traffic Management Plan (CTMP), both of which set out measures to manage construction traffic.

Parking will not be provided for construction staff on public roads. Construction staff will be encouraged by their employer to reduce the use of the car for the journey to work by car sharing and / or travelling by public transport. Workers will be encouraged to keep themselves informed about the public transport options and active mode facilities provided in the surrounding area.

The main Contractor as part of their site set up arrangements, will appoint a Coordinator responsible for the implementation of the Construction Stage Mobility Management and Travel Plan and shall carry out the following tasks as part of their role:

- Provide an extensive information service for public transport options and routes at a public location(s) within the development for construction workers.
- Update the public transport information adjacent to the development on an ongoing basis; and
- Advise company staff of tax incentives for public transport and bicycles.

For those wishing to cycle to and from the development, dedicated cycle parking will be provided for the duration of the works within the site. Shower facilities and lockers will also be provided.

Adequate signposting will be located on-site to ensure the safety of all road users and construction workers.

Dedicated construction haul routes will be identified and agreed upon with Dublin City Council before the commencement of construction activities on site.

A dedicated “construction site”’ access/egress system will be implemented during the construction phases. Hoarding will be set up around the perimeter to prevent pedestrian access.

A material storage zone will also be provided in the construction compound area. This storage zone will include material recycling areas and facilities.

A detailed Construction and Traffic Management Plan (CTMP) will be prepared by the contractor and agreed with Dublin City Council before commencing works on site.

The contractor will be obliged to ensure that any sub-contractors engaged on the site are made fully aware of the required mitigation measures and that they are properly implemented as part of any works that they undertake.

14.8.2 Operational Stage

The primary mitigation and monitoring measure during the Operational Stage will be the implementation of the *Mobility Management and Travel Plan.*

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To reduce traffic impact, mitigate against possible overspill car parking and to promote more sustainable modes of transport, a Mobility Management and Travel Plan has been prepared for the development and will be updated on an ongoing basis.

A single Plan has been prepared for the overall development notwithstanding the fact that the development is being implemented in stages.

The proposed development will include car parking for residents at less than the maximum rate set out in the Dublin City Development plan 2022 – 2028. The level of car parking proposed has been informed by national standards for transport strategy and car parking for new apartments. The implementation of the measures set out in the Mobility Management and Travel Plan are designed inter alia to promote non-car modes of travel thereby discouraging high levels of car ownership and demand for car parking from residents.

A management company will be appointed by the developer to manage the overall development. A senior member of staff from the management company who supports the philosophy of the Plan will be appointed as the Coordinator. The Coordinator will be responsible for:

- Implementation and maintenance of the Plan.
- Monitoring progress of the Plan
- Liaison with public transport operators and officers of the Planning and Roads Authority.
- Production of information reports for the developer, the occupier(s) and the Planning and Road Authorities; and
- Ongoing assessment of the objectives of the Plan.

Up to date, local bus and rail timetables will be maintained within the resident amenity areas and other fixed points within the buildings on the site. Residents will be advised of their location. In addition, internet access to travel information will be provided. The developer will provide all new residents with a travel pack showing alternative modes of travel to the development. Where possible, the developer will advise visitors to the site of alternative modes of travel to that of the car.

Adequate and secure bicycle parking facilities with a total provision of 2,877 spaces will be provided within the development for residents, visitors, Creche users and staff. Local cycle route information will also be provided in the resident amenity areas and at other fixed points within the development. Residents will be advised of these locations.

The Mobility Management and Travel Plan Co-ordinator will be responsible for the management of inappropriate parking within the development. This parking management will ensure that spaces are reserved for those who have been allocated the space and will be accessible only to those users.

14.9 Residual Impacts

14.9.1 Construction Stage

Development traffic during the construction stage is predicted to have a low-level impact on surrounding road network in comparison to the existing baseline traffic flows. The preparation and implementation of a detailed Construction Traffic Management Plan (CTMP) to manage construction traffic will further mitigate any residual impacts.

In line with their experience working on projects of this scale in similar locations, the developer will build a construction car park on the site at the start of works by laying a temporary surface for vehicles. Staff are likely to arrive to site before 8am, before the morning peak hour of 8am - 9am. However staff are likely to leave during the peak PM hour of 5-6pm. As the number of construction staff on site will be less than the number of people on site post development, the number of additional vehicles can be accommodated.

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Care will be taken to ensure existing pedestrian and cycling routes are suitably maintained or appropriately diverted as necessary during the construction period, which will be addressed by the Contractor as part of the Construction Traffic Management Plan (CTMP) and which will be approved by Dublin City Council (DCC). On this basis, construction will likely have a negligible impact on pedestrian and cyclists.

Due to the proposed mitigation measures outlined above, the residual impact of the proposed development will be temporary, slight, negative and short term for the duration of the construction stage of Cherry Orchard Point.

14.9.2 Operational Stage

During the Operational Stage, there will be an increase in the use of the surrounding road network by private vehicles. However, the Mobility Management and Travel Plan will promote more sustainable forms of transport to help reduce the use of private cars by the residents of the proposed development.

There is likely to be an increase in the number of pedestrians and cyclists in the surroundings of the development particularly on the approaches to the railway station. However, the existing footpaths and cycle paths, both internally and externally along the site frontage, will be upgraded as part of development, thus, the impact should be minimal.

The traffic modelling undertaken includes growth in background traffic flows which accounts for other developments in the area.

The increase in traffic volumes as a result of the proposed development will impact the adjacent existing developments as the traffic flows through access and egress from the site will increase. The transport assessment carried out indicates that six of the eight assessed junctions, operating with the improved junction layouts proposed as part of the subject development, would operate within the capacity of the junctions and the impact arising from the proposed development at these junctions would be considered negligible.

The existing roundabout at the intersection of Park West Avenue and Park West Road to the south of the railway (Junction 7) is likely to reach capacity about 2027 and exceed capacity by 2042 with or without the proposed development. It is expected that this junction which is remote from the subject site is likely to be upgraded, probably to a signalised crossroads before 2042 by Dublin City Council as part of the ongoing implementation of the Park West – Cherry Orchard LAP.

Due to the proposed mitigation measures outlined above, the residual impact of the proposed development during the operational stage will be slight to moderate, negative and long term for the duration of the operation of Cherry Orchard Point.

14.10 Monitoring

14.10.1 Construction Stage

Traffic management and deliveries will be carefully monitored by the project team and the selected contractor during the Construction Stage as part of the Construction Management Plan (CMP) and Construction Traffic management Plan (CTMP).

Monitoring will include construction traffic routes and measures to minimise nuisance.

The appointed contractor will monitor their mobility management plan to ensure that is operating effectively. Staff will be encouraged to car share or use public transport.

14.10.2 Operational Stage

During the Operational Stage, the Mobility Management and Travel Plan (MMTP) will be monitored by the Travel Plan Co-ordinator. The travel survey will establish the initial modal split of travel by residents.

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The Co-ordinator, in consultation with the management company, the occupiers, and Dublin City Council, will agree on annual targets, following completion and analysis of the travel survey, for increasing the percentage of residents travelling by non-car modes.

The Travel Plan Co-ordinator will:

- Meet with officers of Dublin City Council within 6 months following the occupation of the building(s) and thereafter every 12 months to assess and review the progress of the Plan and agree on objectives for the next 12 months, and
- Prepare and submit an Annual Monitoring Report to senior management of the developer, the occupier(s) and Dublin City Council.

The management team will monitor the operation of the Mobility Management and Travel Plan including public transport demand. Any issues arising will be advised to Dublin City Council and the public transport operators.

The management team will also monitor the operation of the access from Park West Avenue and advise Dublin City Council in relation to any operational or safety issues noted.

14.11 Difficulties Encountered

No particular difficulties were encountered during the preparation of this chapter of this Environmental Report.

14.12 Interactions

The main high-level interactions between Material Assets – Traffic & Transport and other environmental factors include Noise & Vibration, Air & Climate and Population & Human Health. Please refer to Chapter 16 Interactions for further information on interactions.

14.13 References

The following documents were reviewed by Waterman Moylan during the preparation of this chapter of the Environmental Report: -

- Park West – Cherry Orchard Local Area Plan (LAP), Dublin City Council, November 2019
- Dublin City Development Plan 2022 – 2028.
- Park and Ride Report, NTA, August 2015.
- National Rail Census Report 2024, NTA, April 2025.
- Park and Ride Strategy for the Greater Dublin Area, NTA, May 2022.
- Preliminary Car Parking Review, Waterman Moylan, May 2022.
- SHD Planning Applications, An Bord Pleanala, 2019 – 2022.
- Greater Dublin Area Transport Strategy 2022 – 2042, NTA.
- Technical Note on Park and Ride, Waterman Moylan, June 2022.
- Design Manual for Urban Roads and Streets (DMURS).
- Traffic and Transport Assessment Guidelines, TII, May 2014

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- Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections, TII, October 2021.
- Traffic and Transport Assessment (TTA), Park West SHD, CS Consulting Group, November 2021.
- Traffic and Transport Assessment (TTA), Cherry Orchard Point – Proposed development at Sites 4 and 5, Park West Avenue, Dublin 10, Waterman Moylan, February 2026.
- Mobility Management and Travel Plan, Cherry Orchard Point – Proposed development at Sites 4 and 5, Park West Avenue, Dublin 10, Waterman Moylan, February 2026.

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15 Material Assets – Waste Management

15.1 Introduction

This chapter evaluates the impacts, if any, which the Proposed Development may have on Material Assets - Waste as defined in the EIA Directive (Directive 2011/92/EU as amended by Directive 2014/52/EU) and the EPA 2022 Guidelines on the information to be contained in Environmental Impact Assessment Reports during the construction and operational phases of the Proposed Development, as described in the Project Description Chapter of this EIAR.

A site-specific Resource and Waste Management Plan (RWMP) has been prepared by AWN Consulting to guide and manage the waste generated during the construction phase of the Proposed Development. The RWMP is included as an Appendix 15.1 in Volume III of this EIAR. The RWMP has been prepared in accordance with the Environmental Protection Agency's (EPA) document *Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects* (2021).

The RWMP should be viewed as a live document and is regularly being revisited throughout the project's lifecycle so that opportunities to maximise waste reduction / efficiencies are exploited throughout, and that data is collected on an ongoing basis so that it is as accurate as possible.

A separate Operational Waste Management Plan (OWMP) has been prepared by AWN Consulting for the operational phase of the Proposed Development. The OWMP is included as an Appendix 15.2 in Volume III of this EIAR.

This Chapter has been prepared by Chonaill Bradley (BSc, PG Dip, MCIWM) of AWN Consulting. Chonaill is an Associate in the Environment Team at AWN. He holds a BSc in Environmental Science from Griffith University, Australia and a Postgraduate Diploma in Circular Economy Leadership for the Built Environment from the Atlantic Technological University, Galway. He is a Chartered Member of the Institute of Waste Management (MCIWM). Chonaill has over twelve years' experience in the environmental consultancy sector and and specialises in environmental construction compliance, sustainability, resource and waste management.

This chapter has been prepared in accordance with European Commissions Guidelines, Guidance on the preparation of the Environmental Impact Assessment Report (2017), the EPA Guidelines on the Information to be contained in EIAR (2022). It should be read in conjunction with Chapter 2 (Background to the Scheme), Chapter 12 (Land, Soils and Geology), and the Interactions sections of the foregoing chapters of this EIAR, as well as the site-specific RWMP (Appendix 15.1) and OWMP (Appendix 15.2) that accompany this EIAR.

These documents will ensure the management of wastes arising at the development site in accordance with legislative requirements and best practice standards.

15.2 Methodology

The assessment of the impacts of the Proposed Development, arising from the consumption of resources and the generation of waste materials, was carried out, taking into account the methodology specified in relevant guidance documents, along with an extensive document review to assist in identifying current and future requirements for waste management; including national and regional waste policy, waste strategies, management plans, legislative requirements and relevant reports.

This chapter was undertaken in accordance with the Environmental Protection Agency (EPA) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022). The methodology applied is consistent with the overarching EIA framework described in Chapter 2 of this EIAR.

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The assessment addresses the construction and operational phases of the Proposed Development and, where relevant, considers the potential for direct, indirect and residual effects on the receiving environment.

Study Area

The assessment of waste has utilised two geographically different study areas to examine the use of materials and the generation and management of waste:

- The first study area comprises the site boundary and any areas required for temporary access, site compounds and other enabling activities. Where materials will be consumed, and materials/waste will be generated; and
- The second study area extends to the availability of appropriate waste management infrastructure suitable (permitted for waste volume and type) to accept arisings and/or waste generated by the Proposed Development. This includes the Eastern Midlands Region (EMR) (regional) and Ireland (national) as a whole where applicable in order to capture potential impacts of recovering, recycling or disposal of the waste generated from the Proposed Development at waste facilities located throughout the country.

The impact assessment methodology applied within this chapter comprises the following stages:

This chapter is based on the Proposed Development, as described in Chapter 2 (Background to the Scheme) and considers the following aspects:

- Legislative context;
- Construction phase (including site clearance, excavation and site preparation); and
- Operational phase.

15.2.1 Baseline Assessment

Desk study sources

A desktop study has be carried out which included the following:

- Review of applicable policy and legislation which creates the legal framework for resource and waste management in Ireland;
- Description of the typical waste materials that will be generated during the construction and operational phases; and
- Identification of mitigation measures to prevent waste generation and promote management of waste in accordance with the waste hierarchy.

Estimates of waste generation during the construction and operational phases of the Proposed Development have been calculated. The waste types and estimated quantities will be based on published data by the EPA in the National Waste Reports and National Waste Statistics, data recorded from similar previous developments, Irish and US EPA waste generation research as well as other available research sources.

Surveys undertaken / proposed

Prior to any material being removed from the Proposed Development site offsite, will be subject to environmental soil testing.

A site invasive species survey was undertaken by Altemar (April 9th 2026). This included a site walkover survey of the entire site, and around part of the outside perimeter to search for any invasive species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended). No invasive species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 were located onsite.

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Further detail on the invasive species survey and detailed mitigation measures will be presented in the Biodiversity Chapter (Chapter 8) included in the EIAR.

The assessment of the impacts of project will be carried out taking into account the methodology specified in relevant guidance documents, along with an extensive document review to assist in identifying current and future requirements for waste management; including national and regional waste policy, waste strategies, management plans, legislative requirements and relevant reports.

Impact Assessment Methodology

The assessment of the impacts of the Proposed Development, arising from the consumption of resources and the generation of waste materials, was carried out taking into account the methodology specified in relevant guidance documents, along with an extensive document review to assist in identifying current and future requirements for waste management; including national and regional waste policy, waste strategies, management plans, legislative requirements and relevant reports.

This chapter will be undertaken in accordance with the EPA *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (2022). The methodology applied is consistent with the overarching EIA framework described in Chapter 1 of this EIAR.

The assessment addresses the construction and operational phases of the Proposed Development and, where relevant, considers the potential for direct, indirect and residual effects on the receiving environment.

Mitigation measures are proposed to minimise the effect of the Proposed Development on the environment during the construction and operational phases, to promote efficient waste segregation and to reduce the quantity of waste requiring disposal. This information is presented in Section 15.7.

A detailed review of the existing ground conditions on a regional, local and site-specific scale is presented in the Land and Soils Chapter of this EIAR. The Land and Soils Chapter also discusses the environmental quality of any soils which will have to be excavated to facilitate construction of the Proposed Development.

15.2.2 Relevant Legislation and Guidance

Waste management in Ireland is subject to EU, national and regional waste legislation and control, which defines how waste materials must be managed, transported and treated. The overarching EU legislation is the Waste Framework Directive (2008/98/EC) which is transposed into national legislation in Ireland. The cornerstone of Irish waste legislation is the Waste Management Act 1996 (as amended). European and national waste management policy is based on the concept of 'waste hierarchy', which sets out an order of preference for managing waste (prevention > preparing for reuse > recycling > recovery > disposal) (Figure 15.1).

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Figure 15.15-1 Waste Hierarchy (Source: European Commission).

EU and Irish National waste policy also aims to contribute to the circular economy by extracting high-quality resources from waste as much as possible. Circular Economy (CE) is a sustainable alternative to the traditional linear (take-make-dispose) economic model, reducing waste to a minimum by reusing, repairing, refurbishing and recycling existing materials and products. (Figure 15.2).

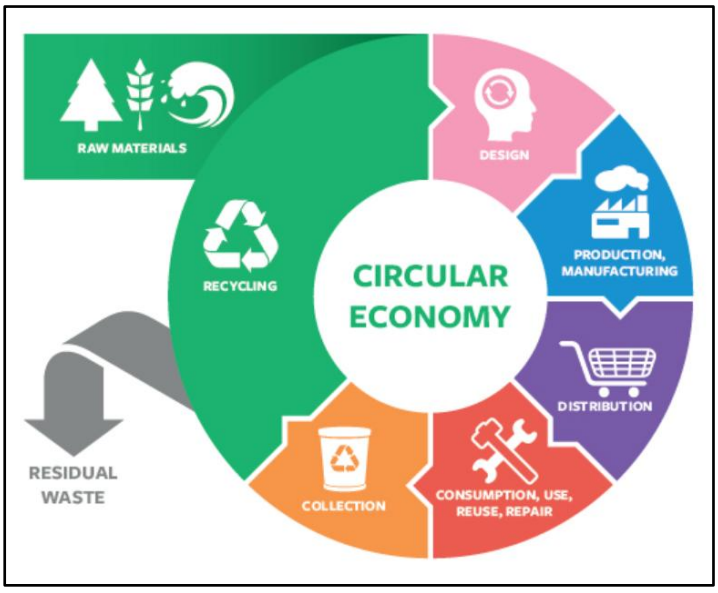


Figure 15.15-2 Circular Economy (Source: Repak).

The Irish government issues policy documents which outline measures to improve waste management practices in Ireland and help the country to achieve EU targets in respect of recycling and disposal of waste. The most recent policy document, *Waste Action Plan for a Circular Economy (WAPCE) – Waste Management Policy in Ireland*, was published in 2020 and shifts focus away from waste disposal and moves it back up the production chain. The move away from targeting national waste targets is due to the Irish and international waste context changing in the years since the launch of the previous waste management plan, A Resource Opportunity, in 2012.

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One of the first actions to be taken from the WAPCE was the development of the *Whole of Government Circular Economy Strategy 2022-2023 'Living More, using Less' (2021)* to set a course for Ireland to transition across all sectors and at all levels of Government toward circularity and was issued in December 2021. However, this has since been updated as of 2026 by *Whole of Government Circular Economy Strategy 2026-2028: 'Accelerating Action' (2026).* The core objective of the updated strategy document is to *increase the circular material use rate of Ireland to 12% by 2030* while supporting economic growth, improving resource productivity, and reducing reliance on virgin raw materials. At the same time, it seeks to boost competitiveness and innovation, ensure social equity, empower sustainable choices, support local circular initiatives, and leverage digitalisation as a key enabler of the circular economy.

The *Circular Economy and Miscellaneous Provisions Act 2022* was signed into law in July 2022. The Act underpins Ireland's shift from a "take-make-waste" linear model to a more sustainable pattern of production and consumption, that retains the value of resources in our economy for as long as possible and that will significantly reduce our greenhouse gas emissions. The Act defines Circular Economy for the first time in Irish law, incentivises the use of recycled and reusable alternatives to wasteful, single-use disposable packaging, introduces a mandatory segregation and incentivised charging regime for commercial waste and streamlines the national processes for End-of-Waste and By-Products decisions.

The Regional Waste Management Planning Offices published the *National Waste Management Plan for Circular Economy 2024-2030* (2024) (*NWMPCE*). The ambition of this Plan is 0% total waste growth per person over the life of the Plan with an emphasis on non-household wastes including waste from commercial activities and the construction and demolition sector. This Plan provides a waste management planning framework for the waste sector to maintain and strengthen existing services and identifies key interventions to accelerate the transition to a circular economy.

This Plan recognises Climate Change as a key driver for both behavioural change and improved waste management practices. The ambition of this Plan is 0% total waste growth per person over the life of the Plan with an emphasis on non-household wastes including waste from commercial activities and the construction and demolition sector. This ambition is underpinned with a comprehensive series of targets, policies, actions and a suite of key deliverables.

The strategy for the management of waste from the construction phase is in line with the requirements of the EPA's *Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects* (2021). The guidance documents, Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects (2006) and Construction and Demolition Waste Management: A Handbook for Contractors and Site Managers (FÁS and Construction Industry Federation, 2002), were also consulted in the preparation of this assessment.

There are currently no Irish guidelines on the assessment of operational waste generation, and guidance is taken from industry guidelines, plans and reports including:

- *Waste Management Act 1996*;
- The *National Waste Management Plan for a Circular Economy 2024 – 2030* (*NWMPCE*) (2024);
- *BS 5906:2005 Waste Management in Buildings – Code of Practice*;
- Dublin City Council (DCC) *Dublin City Council (Storage, Presentation and Segregation of Household and Commercial Waste) Bye-Laws* (2018)
- DCC, *Dublin City Development Plan 2022-2028* (2022);
- EPA National Waste Database Reports 1998 – 2020; and
- The Circular Economy and National Waste Database Report 2021-2023 (2025) and the EPA National Waste Statistics Web Resource (2025).

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Dublin City Council Waste Bye-Laws

The waste bye-laws for the Dublin City Council local area require mandatory waste segregation (recycling and food waste), prohibit illegal dumping and backyard burning, and necessitate proof of proper waste disposal to ensure compliance

15.2.3 Terminology

Note that the terminology used herein is generally consistent with the definitions set out in Article 3 of the Waste Framework Directive. Key terms are defined as follows:

Waste - Any substance or object which the holder discards or intends or is required to discard.

Prevention - Measures taken before a substance, material or product has become waste, that reduce:

a) the quantity of waste, including through the re-use of products or the extension of the life span of products;
b) the adverse impacts of the generated waste on the environment and human health; or
c) the content of harmful substances in materials and products.

Reuse - Any operation by which products or components that are not waste are used again for the same purpose for which they were conceived.

Preparing for Reuse - Checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing.

Treatment - Recovery or disposal operations, including preparation prior to recovery or disposal.

Recovery - Any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy. Annex II of the Waste Framework Directive sets out a non-exhaustive list of recovery operations.

Recycling - Any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

Disposal - Any operation which is not recovery even where the operation has as a secondary consequence the reclamation of substances or energy. Annex I sets out a non-exhaustive list of disposal operations.

15.3 Baseline Environment

In terms of waste management, the receiving environment is largely defined by DCC as the local authority responsible for setting and administering waste management activities in the area. This is governed by the requirements set out in the *NWMPCE 2024 – 2030* and the *WAPCE*.

The waste management plans set out the following targets for waste management in the region:

- Achieve a recycling rate of 55% of managed municipal waste by 2025; and
- Reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill (from 2016 onwards) in favour of higher value pre-treatment processes and indigenous recovery practices.

The Regional Waste Management Planning Offices have issued a National Waste Management Plan for a Circular Economy 2024 - 2030 (NWMPCE) in March 2024, which supersedes the Eastern Midlands Regional (EMR) Waste Management Plan and the two other regional waste management plans. The NWMPCE does not however dissolve the three regional waste areas. The NWCPCE sets the ambition of the plan to have a 0% total waste growth per person over the life of the Plan with an emphasis on

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non-household wastes including waste from commercial activities and the construction and demolition sector.

The *Dublin City Development Plan 2022-2028* (2022) sets out a number of policies and objectives for the Dublin city region in line with the objectives of the national waste management plan, Appendix 15.1 and 15.2.

In terms of physical waste infrastructure, DCC no longer operates any municipal waste landfill in the area. There are a number of waste permitted and licensed facilities located in the Dublin Area, Eastern Midlands region and across Ireland and Northern Ireland for management of waste from the construction industry as well as municipal sources. These include soil recovery facilities, inert Construction and Demolition (C&D) waste facilities, municipal waste landfills, material recovery facilities and waste transfer stations.

However, these sites may not be available for use when required or may be limited by the waste contractor selected to service the development in the appropriate phase. In addition, there is potential for more suitably placed waste facilities or recovery facilities to become operational in the future which will be more beneficial from an environmental perspective.

The ultimate selection of waste contractors and waste facilities would be subject to appropriate selection criteria proximity, competency, capacity and serviceability.

A full description of the Proposed Development can be found in Chapter 2 (Background to the Scheme). The characteristics of the Proposed Development that are relevant in terms of waste management are summarised below.

15.3.1 Site Location and Context

The Proposed Development is located on lands at Cherry Orchard, Dublin 10 (known as Development Site 5: Barnville Site in the Park-West Cherry Orchard Local Area Plan 2019)

15.3.2 Existing Land Use and Waste Generation

At present, the site is undeveloped and does not accommodate permanent buildings or infrastructure. There are no know activities being undertaken on this site currently. As such, there is no current waste generation on-site.

No evidence of significant waste storage, waste handling infrastructure, or waste disposal activities is known to occur on the site.

15.3.3 Waste Management Practices

There is no formalised waste storage area or collection regime associated with the site at present.

15.3.4 Environmental Sensitivity (Waste)

Given the nature of the site and the absence of historical industrial or commercial activities, the risk of legacy waste issues (e.g. contamination from historic dumping or waste disposal) is considered low. There are no known authorised or unauthorised waste facilities within the site boundary.

The surrounding residential context increases the sensitivity of the receiving environment to potential waste-related impacts (e.g. odour, litter, vermin) should waste management not be appropriately controlled during future development phases.

15.3.5 Aspects Relevant to this Chapter

The aspects of the development that will be considered as part of this chapter are the existing site conditions, existing site use and the waste that will be generated as part of the construction and operation of the project. These aspects are considered together with the Proposed Development use. This section should be read in conjunction with the design drawings and reports which accompany this planning application.

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There will be soil and stones excavated to facilitate construction of new foundations, underground services, and the installation of internal roads. Based on a preliminary cut and fill assessment carried out by the Project Engineers (Waterman Moylan Consulting Engineers), the total volume of material to be excavated is estimated to be approximately 27,749 m^3.

It is currently envisaged that none of this excavated material will be reused on site due to the limited opportunities for reuse on site. Consequently, the full volume will require removal offsite for appropriate offsite reuse, recovery, recycling and / or disposal in accordance with relevant environmental and waste management regulations.

15.4 Characteristics Of The Proposed Development

A full description of the Proposed Development can be found in Chapter 2 (Background to the Scheme). The characteristics of the Proposed Development that are relevant in terms of waste management are summarised below.

15.4.1 Demolition Phase

There will be no demolition associated with this application.

15.4.2 Construction Phase

During the construction phase, waste will be produced from surplus materials such as broken or off-cuts of timber, plasterboard, concrete, tiles, bricks, etc. Waste from packaging (cardboard, plastic, timber) and oversupply of materials may also be generated. The appointed Main Contractor will be required to ensure that oversupply of materials is kept to a minimum and opportunities for reuse of suitable materials is maximised.

There will be soil and stones excavated to facilitate construction of new foundations, underground services, and the installation of internal roads. Based on a preliminary cut and fill assessment carried out by the Project Engineers (Waterman Moylan Consulting Engineers), the total volume of material to be excavated is estimated to be approximately 27,749 m^3.

It is currently envisaged that none of this excavated material will be reused on site due to the limited opportunities for reuse on site. Consequently, the full volume will require removal offsite for appropriate offsite reuse, recovery, recycling and / or disposal in accordance with relevant environmental and waste management regulations.

Waste will also be generated from construction phase workers e.g. organic / food waste, dry mixed recyclables (DMR) (wastepaper, newspaper, plastic bottles, packaging, aluminium cans, tins and Tetra Pak cartons), mixed non-recyclables (MNR) and, potentially, sewage sludge from temporary welfare facilities provided on-site during the construction phase. Waste printer / toner cartridges, waste electrical and electronic equipment (WEEE) and waste batteries may also be generated in small volumes from site offices.

Further detail on the waste materials likely to be generated during the excavation and construction works are presented in the project-specific RWMP (which is an Appendix to this Chapter). The RWMP provides an estimate of the main waste types likely to be generated during the Construction phase of the Proposed Development. These are summarised in Table 15.1.

Foul water generated during construction is addressed under the Material Assets – Utilities Chapter of this EIAR.

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Table 15-1 Predicted on and Off-site Reuse, Recycle and Disposal Rates for Construction Waste

Waste Type	Total Waste	Reuse		Recycle/Recovery		Disposal	
	Tonnes	%	Tonnes	%	Tonnes	%	Tonnes
Mixed C&D	577.4	10	57.7	80	461.9	10	57.7
Timber	489.9	40	196.0	55	269.5	5	24.5
Plasterboard	175.0	30	52.5	60	105.0	10	17.5
Metals	140.0	5	7.0	90	126.0	5	7.0
Concrete	52.5	30	15.7	65	34.1	5	2.6
Other	262.5	20	52.5	60	157.5	20	52.5
Total	**1697.3**		**381.4**		**1154.0**		**161.9**

15.4.3 Operational Phase

All waste materials will be segregated into appropriate categories and will be stored in appropriate bins or other suitable receptacles in a designated, easily accessible areas of the site. It is envisaged that waste types will be generated from the residential units (residential), enterprise units and community/ arts/culture units (commercial).

The total estimated waste generation for the Proposed Development for the main waste types, based on the AWN waste generation model (WGM) incorporating EPA National Waste reports data, EPA National Waste Statistics Web Resource and floor use per m^2 of the Proposed Development, is presented in Table 15.2, below, and is based on the uses and areas as advised by the project architect.

Further break down of the estimated waste generation during the operational phase for each of the residential apartment blocks and commercial units can be found in the OWMP (Appendix 15.2).

Table 15-2 Estimated Waste Generation for the Proposed Development for the Operational Phase

Waste Type	Waste Volume (m^3/week)	
	Residential Waste (Combined)	Commercial Waste (Combined)
Organic	4.46	0.39
DMR	31.62	7.66
MNR	16.63	3.19
Glass	0.86	0.21
Total	**53.57**	**11.45**

The residents and commercial unit tenants will be required to provide and maintain appropriate waste receptacles within their units to facilitate segregation at source of these waste types. As required, the residents and commercial tenants will need to bring these segregated wastes from their units to their respective Waste Storage Areas (WSAs). Th residents will have designated shared WSAs allocated close to their cores. The commercial units will have their own shared WSAs, which will be separate from the residential units. All residential WSAs and the commercial WSAs can be viewed on the plans submitted with the application and in the OWMP (Appendix 15.2).

The OWMP seeks to ensure the development contributes to the targets outlined in the *NWMPCE* and the DCC Waste Bye-Laws.

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15.5 Predicted Impacts

15.5.1 Construction Phase

If waste materials are not managed and stored correctly, it is likely to lead to litter, odour or pollution issues at the Proposed Development site and in adjacent areas. The indirect effect of litter issues also cause the presence of vermin/flies in areas affected. In the absence of mitigation, the effect on the local and regional environment is likely to be ***short-term***, ***significant*** and ***negative***.

The use of non-permitted waste contractors or unauthorised waste facilities could give rise to inappropriate management of waste, resulting in indirect negative environmental impacts, including pollution. It is essential that all waste materials are dealt with in accordance with regional and national legislation, as outlined previously, and that time and resources are dedicated to ensuring efficient waste management practices. In the absence of mitigation, the effect on the local and regional environment is likely to be ***long-term, significant*** and ***negative***.

C&D wastes arising will need to be taken to suitably registered / permitted / licenced waste facilities for processing and segregation, reuse, recycling, recovery, and / or disposal, as appropriate. There are numerous licensed waste facilities in the EMR, Ireland and Northern Ireland which can accept hazardous and non-hazardous waste materials, and acceptance of waste from the Proposed Development site would be in line with daily activities at these facilities. At present, there is sufficient capacity for the acceptance of the likely C&D waste arisings at facilities in the region. The majority of construction materials are either recyclable or recoverable and can be taken for recycling or recovery when managed correctly. However, in the absence of mitigation, the effect on the local and regional environment is likely to be ***short-term, significant*** and ***negative.***

There is a quantity of material that will need to be excavated to facilitate the Proposed Development. A detailed review of the existing ground conditions on a regional, local and site-specific scale are presented in the Land and Soils chapter. Excavated material that cannot be reused onsite will need to be removed off-site. Correct classification in accordance with the European Waste Catalogue (EWC) and segregation of the excavated material is required to ensure that any potentially contaminated materials are identified and handled in a way that will not impact negatively on workers as well as on water and soil environments, both on and off-site. However, in the absence of mitigation, the effect on the local and regional environment is likely to be ***short-term***, ***significant*** and ***negative***.

15.5.2 Operational Phase

The potential impacts on the environment of improper, or a lack of, waste management during the operational phase would be a diversion from the priorities of the waste hierarchy, which would lead to small volumes of waste being sent unnecessarily to landfill and diverted from reuse or recycling. In the absence of mitigation, the effect on the local and regional environment is likely to be ***long-term, significant*** and ***negative.***

The nature of the Proposed Development means the generation of waste materials during the operational phase is unavoidable. Networks of waste collection, treatment, recovery and disposal infrastructure are in place in the region to manage waste effectively from this type of development. Waste unsuitable for recycling is typically sent for energy recovery. There are also facilities in the region for segregation of municipal recyclables, which is typically exported as a raw material for the production of recycled products (e.g. paper mills and glass recycling).

If waste material is not managed and stored correctly, it is likely to lead to litter or pollution issues at the development site and in adjacent areas. The knock-on effect of litter issues is the presence of vermin in affected areas. In the absence of mitigation, the effect on the local and regional environment is likely to be ***long-term***, ***significant*** and ***negative***.

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Waste contractors will be required to service the Proposed Development on a regular basis to remove waste. The use of non-permitted waste contractors or unauthorised facilities could give rise to inappropriate management of waste and result in negative environmental impacts or pollution. It is essential that all waste materials are dealt with in accordance with regional and national legislation, as outlined previously, and that time and resources are dedicated to ensuring efficient waste management practices. In the absence of mitigation, the effect on the local and regional environment is likely to be ***indirect, long-term***, ***significant*** and ***negative***.

15.5.3 The 'Do Nothing' Scenario

In the event that the Proposed Development does not proceed (i.e. the 'Do-Nothing' scenario), the subject site at Cherry Orchard, Dublin 10 would remain in its current state not generating waste materials. No site clearance, excavation, construction, or operational activities would occur.

Under this scenario, waste generation would remain non-existent and stay the same as the existing baseline condition.

There would be:

- No construction phase waste, including soils, construction and demolition (C&D) waste, or packaging waste associated with building activities;
- No operational waste generation associated with residential units or commercial units; and
- No requirement for permanent waste storage areas, collection infrastructure, or waste management systems.

Accordingly, the 'Do-Nothing' scenario would result in a **neutral** effect in terms of waste, as there would be no change from the established baseline environment. While this avoids any potential adverse impacts associated with increased waste generation, it also precludes the opportunity to implement modern, compliant waste management infrastructure and practices that would arise as part of the Proposed Development.

Overall, the site would remain characterised by low-intensity land use and negligible waste generation, with no significant environmental effects arising in relation to waste.

However, the demand for housing and associated infrastructure generated by the existing and projected population would persist. In the absence of development at this centrally located, serviced, and zoned site, this demand may be displaced to less sustainable, peripheral, or unserviced locations. This could result in greater environmental impacts due to increased land take, car dependency, and pressure on less serviced or less accessible infrastructure.

Given that the site is zoned for development under the *Dublin City Council Development Plan 2022-2028*, it is likely that a development of a similar nature would come forward in the future in line with national policy and development plan objectives. As such, the construction and operational phase effects outlined in this chapter would likely be deferred rather than avoided entirely under the 'Do-Nothing' scenario.

15.6 Cumulative Impacts

There are existing residential and commercial developments within the local area, along with the planning permissions remaining in place in the area. Multiple developments in the area could potentially be developed concurrently or overlap in the construction phase.

Developments that potentially could overlap during the construction phase are set out in Chapter 2 of the EIAR.

Adequate waste management facilities are available within the region and nation to accommodate all concurrent developments.

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Other developments in the area will be required to manage waste in compliance with national and local legislation, policies and plans which will mitigate against any potential cumulative effects associated with waste generation and waste management. As such the effect will be **short-term – long-term, not significant** and **neutral.**

15.6.1 Summary

Table 16-3 summarises the identified likely significant effects during the construction phase of the Proposed Development before mitigation measures are applied.

15.6.2 Construction Phase

Table 15-3 Summary of Construction Phase Likely Significant Effects in the Absence of Mitigation

Likely Significant Effect	Quality	Significance	Extent	Probability	Duration	Type
Litter Pollution	Negative	Significant	Local	Likely	Short-Term	Indirect & Direct
Unlicensed Waste Collection (Illegal Dumping)	Negative	Significant	Local & Regional	Likely	Long-Term	Direct
Insufficient Waste Facilities	Negative	Significant	Local & Regional	Unlikely	Short-Term	Direct
Lack of waste Classification	Negative	Significant	Local & Regional	Likely	Short-Term	Direct

15.6.3 Operational Phase

Table 15-4 summarises the identified likely significant effects during the operational phase of the Proposed Development before mitigation measures are applied.

Table 15-4 Summary of Operational Phase Likely Significant Effects in the Absence of Mitigation

Likely Significant Effect	Quality	Significance	Extent	Probability	Duration	Type
Unlicensed Waste Collection (Illegal Dumping)	Negative	Significant	Local & Regional	Likely	Long-Term	Direct
Poor Waste Segregation	Negative	Significant	Local & Regional	Likely	Long-Term	Direct
Litter Pollution	Negative	Significant	Local & Regional	Likely	Short-Term	Direct

15.7 Mitigation Measures

This section outlines the measures that will be implemented to reduce waste generation, manage waste responsibly and minimise environmental effects. All mitigation measures are guided by the principles of the 'Waste Hierarchy' and 'Circular Economy'. The waste hierarchy sets out waste management options in order of preference, from most to least preferred, based on environmental impact and compliance with EU and national policy: prevention and minimisation of waste, followed by preparing for reuse and recycling / recovery, energy recovery (i.e. incineration) and, as a last resort, disposal. The

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circular economy principle aims to keep materials, components, and products in-use for as long as possible, designing systems that create and retain value. These principles will be applied across the construction and operational phases of the Proposed Development.

The waste management objectives for the Proposed Development are as follows. These measures will facilitate material reuse and recycling, where possible, and seek to divert waste from landfill:

- Prevention (Construction Phase): The Main Contractor will prevent and minimise waste generation where possible by ensuring large surpluses of construction materials are not delivered to the site through coordination with the suppliers, operating a 'just-in-time' delivery scheme and ensuring sub-contractors conform to the Main Contractor(s) RWMP. The RWMP submitted with this application outlines the overarching principles, and a more detailed, site-specific version will be prepared by the Main Contractor prior to the commencement of the works. Prevention measures will also include careful planning of excavations to maximise feasible reuse of suitable soil materials on-site and minimise surplus volumes requiring off-site management;
- Reuse (Construction and Operational Phases): Reuse of waste and surplus materials including the reuse of suitable excavated soil and stone as fill material. Surplus construction materials will be repurposed on-site where feasible. During the operational phase, reuse will be encouraged through appropriate segregation of waste streams to support recovery and minimise disposal;
- Recycle (Construction and Operational Phases): Recycling will be implemented during construction with segregated skips or containers provided for recyclable C&D waste streams such as metals, timber, plastic and cardboard. During operation, dedicated recycling facilities will be provided to support waste segregation in line with DCC requirements and national waste policy; and
- Disposal (Construction and Operational Phases): Where waste disposal is unavoidable, it will be carried out in accordance with the Waste Management Act 1996 (as amended) and relevant guidance. This applies to both construction waste and operational waste streams. Only licensed / permitted waste contractors will be used, and waste will be sent to authorised facilities. Disposal will remain a last resort in line with waste hierarchy principles.

15.7.1 Construction Phase

The mitigation measures to be implemented during the construction phase of the development are as follows:

WM_1:

As previously stated, a project specific RWMP has been prepared in line with the requirements of the requirements of the EPA *Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects* (2021) and is included as Appendix 15.1 to this EIAR. The mitigation measures outlined in the RWMP will be implemented in full and form part of the mitigation strategy for the site. The mitigation measures presented in this RWMP will ensure effective waste management and minimisation, reuse, recycling, recovery and disposal of waste material generated during the excavation and construction phases of the Proposed Development.

- Prior to commencement, the appointed Main Contractor(s) will be required to refine / update the RWMP (Appendix 15.1) in agreement with DCC and in compliance with any planning conditions, or submit an addendum to the RWMP to DCC, detailing specific measures to minimise waste generation and resource consumption, and provide details of the proposed waste contractors and destinations of each waste stream; and

- The Main Contractor will implement the RWMP throughout the duration of the proposed excavation and construction phases.

WM_2:

A quantity of topsoil and sub soil will need to be excavated to facilitate the Proposed Development. The quantity surveyors have estimated that all excavated material will need to be removed off-site. Correct

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classification and segregation of the excavated material is required to ensure that any potentially contaminated materials are identified and handled in a way that will not impact negatively on workers as well as on water and soil environments, both on and off-site. Material will be subject to visual inspection for potential contamination as well as environmental soil testing (typical soil classification suite of analysis, hydrocarbons, metals etc.).

WM_3:

Building materials will be chosen to 'design out waste'.

WM_4:

On-site segregation of waste materials will be carried out to increase opportunities for off-site reuse, recycling and recovery. The following waste types, at a minimum, will be segregated:

- Clean Soil;
- Contaminated soil (if located onsite);
- Metal;
- Concrete rubble (including ceramics, tiles and bricks);
- Plasterboard;
- Metals;
- Glass; and
- Timber.

WM_5:

Left over materials (e.g. timber off-cuts, broken concrete blocks / bricks) and any suitable construction materials shall be re-used on-site, where possible; (alternatively, the waste will be sorted for recycling, recovery or disposal);

WM_6:

All waste materials will be stored in skips or other suitable receptacles in designated areas of the site;

WM_7:

Any hazardous wastes generated (such as chemicals, solvents, glues, fuels, oils) will also be segregated and will be stored in appropriate receptacles (in suitably bunded areas, where required);

WM_8:

A Resource Manager (RM) will be appointed by the Main Contractor(s) to ensure effective management of waste during the excavation and construction works;

WM_9:

All construction staff will be provided with training regarding the waste management procedure;

WM_10:

All waste leaving site will be reused, recycled or recovered, where possible, to avoid material designated for disposal;

WM_11:

All waste leaving the site will be transported by suitably permitted contractors and taken to suitably registered, permitted or licenced facilities; and

WM_12:

All waste leaving the site will be recorded and copies of relevant documentation maintained.

These mitigation measures will ensure that the waste arising from the construction phase of the Proposed Development is dealt with in compliance with the provisions of the Waste Management Act 1996, as amended, associated Regulations and the *Litter Pollution Act 1997*, as amended and the

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NWMPCE. It will also ensure optimum levels of waste reduction, reuse, recycling and recovery are achieved and will promote more sustainable consumption of resources.

15.7.2 Operational Phase

The mitigation measures to be implemented during the operational phase of the development are as follows:

WM_13:

All waste materials will be segregated into appropriate categories and will be temporarily stored in appropriate bins or other suitable receptacles in designated, easily accessible areas of the site.

WM_14:

As previously stated, a project specific OWMP has been prepared and is included as Appendix 15.2**.** The mitigation measures outlined in the OWMP will be implemented in full and form part of the mitigation strategy for the site. Implementation of this OWMP will ensure a high level of recycling, reuse and recovery at the development. All recyclable materials will be segregated at source to reduce waste contractor costs and ensure maximum diversion of materials from landfill, thus achieving the targets set out in the *NWMPCE*, the *WAPCE* and the DCC Waste Bye-Laws.

Residents, tenants and facilities management of the site during the operational phase will be responsible for ensuring – allocating personnel and resources, as needed – the ongoing implementation of the OWMP, ensuring a high level of recycling, reuse and recovery at the site of the Proposed Development.

WM_15:

In addition, the following mitigation measures will be implemented:

- On-site segregation of all waste materials into appropriate categories including (but not limited to):
  - Organic waste;
  - Dry Mixed Recyclables;
  - Mixed Non-Recyclable Waste;
  - Glass;
  - Plastic bottles and metal cans
  - Waste electrical and electronic equipment (WEEE);
  - Batteries (non-hazardous and hazardous);
  - Cooking oil;
  - Light bulbs;
  - Cleaning chemicals (pesticides, paints, adhesives, resins, detergents, etc.);
  - Furniture (and from time-to-time other bulky waste); and
  - Abandoned bicycles.

WM_16:

- Residents, tenants and facilities management will ensure that all waste materials will be stored in colour coded bins or other suitable receptacles in designated, easily accessible locations. Bins will be clearly identified with the approved waste type to ensure there is no cross contamination of waste materials.

WM_17:

- Residents, tenants and facilities management will ensure that all waste collected from the site of the Proposed Development will be reused, recycled, or recovered, where possible, with the exception of those waste streams where appropriate facilities are currently not available.

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WM_18:

- Residents, tenants and facilities management will ensure that all waste leaving the site will be transported by suitably permitted contractors and taken to suitably registered, permitted, or licensed facilities.

These mitigation measures will ensure the waste arising from the development is dealt with in compliance with the provisions of the *Waste Management Act 1996*, as amended, associated Regulations, the *Litter Pollution Act 1997*, as amended, the *NWMPCE* and the DCC Waste Bye-Laws. It will also ensure optimum levels of waste reduction, reuse, recycling and recovery are achieved.

15.8 Residual Impacts

The implementation of the mitigation measures outlined in Section 15.7 will ensure that targeted rates of reuse, recovery and recycling are achieved at the site of the Proposed Development during the construction and operational phases. It will also ensure that European, National and Regional legislative waste requirements with regard to waste are met and that associated targets for the management of waste are achieved.

15.8.1 Construction Phase

A carefully planned approach to waste management as set out in Section 15.7 and adherence to the RWMP (which includes mitigation) (Appendix 15.2) during the construction phase will promote resource efficiency and waste minimisation. When the mitigation measures are implemented and a high rate of prevention reuse, recycling and recovery is achieved, the predicted impact of the construction phase on the environment will be **short-term, imperceptible and neutral.**

15.8.2 Operational Phase

During the operational phase, a structured approach to waste management as set out in Section 15.7 and adherence to the OWMP (which includes mitigation) (Appendix 15.2) will promote resource efficiency and waste minimisation. With effective ongoing management and continued mitigation measures, and when a high rate of reuse, recycling and recovery is achieved, the predicted impact of the operational phase on the environment will be ***long-term, imperceptible*** and ***neutral***.

15.8.3 Summary of Post-mitigation Effects

The following table summarises the identified likely significant residual effects during the construction phase of the Proposed Development following the application of mitigation measures.

Table 15-5 Summary of Construction Phase Effects Post Mitigation

Likely Significant Effect	Quality	Significance	Extent	Probability	Duration	Type
Litter Pollution	Negative	Not Significant	Local	Unlikely	Short-Term	Indirect & Direct
Unlicensed Waste Collection (Illegal Dumping)	Negative	Significant	Local & Regional	Unlikely	Long-Term	Direct
Insufficient Waste Facilities	Negative	Significant	Local & Regional	Unlikely	Short-Term	Direct
Lack of waste Classification	Negative	Significant	Local & Regional	Unlikely	Short-Term	Direct

The following table summarises the identified likely residual significant effects during the operational phase of the Proposed Development post mitigation.

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Table 15-6 Summary of Operational Phase Effects Post Mitigation

Likely Significant Effect	Quality	Significance	Extent	Probability	Duration	Type
Unlicensed Waste Collection (Illegal Dumping)	Negative	Significant	Local & Regional	Unlikely	Long-Term	Direct
Poor Waste Segregation	Negative	Not Significant	Local & Regional	Unlikely	Long-Term	Direct
Litter Pollution	Negative	Not Significant	Local & Regional	Unlikely	Short-Term	Direct

15.8.4 Cumulative Residual Effects

15.8.4.1 Construction Phase

The Proposed Development is located within an area of significant planned and permitted urban growth in the wider Dublin and western fringe of Dublin City. The receiving environment is characterised by multiple large-scale residential and mixed-use developments, many of which may be constructed concurrently and subsequently occupied within similar timeframes.

During the construction phase, cumulative effects could arise from the simultaneous generation of construction and demolition (C&D) waste across several sites. This has the potential to place increased short-term demand on regional waste collection services, authorised soil recovery facilities, and C&D processing infrastructure. However:

- Ireland, and the Greater Dublin Area in particular, has a well-established network of licensed and permitted waste facilities, including soil recovery sites, transfer stations, and recycling facilities;
- All developments will be required to prepare and implement RWMPS in accordance with current best practice and regulatory requirements; and
- Waste will be managed by authorised waste contractors and directed to appropriately permitted facilities, ensuring traceability and compliance.

15.8.4.2 Operational Phase

Each development will be obligated to comply with the *Waste Management Act 1996* (as amended), relevant Regional Waste Management Plans, and local authority bye-laws. These regulatory controls, combined with the availability of established waste infrastructure, will effectively mitigate potential cumulative impacts.

During the operational phase, cumulative effects may arise from the combined municipal waste arisings associated with multiple new residential developments in the area. This will result in an overall increase in household waste generation at a local scale. Notwithstanding this:

- Household waste collection in Dublin is provided through a competitive, permit-based private collection system, with sufficient capacity to service expanding residential areas;
- Source segregation, recycling, and organic waste diversion will be required in accordance with national legislation and Dublin City Council waste bye-laws, reducing reliance on landfill; and
- The provision of appropriately designed waste storage areas and collection systems within each development will ensure efficient and controlled waste management.

Given the availability of appropriate waste facilities, along with the waste legislation and guidance that all sites are required to abide by, then the cumulative residual effect in terms of waste is predicted to be and **long-term, not significant and neutral** during operation, assuming full implementation of standard mitigation measures and adherence to regulatory requirements.

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15.9 Difficulties Encountered

Until final materials and detailed construction methodologies have been confirmed, it is difficult to predict with a high level of accuracy the construction waste that will be generated from the proposed works as the exact materials and quantities may be subject to some degree of change and variation during the construction process.

Further soil sampling and testing will be carried out during the excavation process that will provide soil quality data. The true condition of all excavated materials cannot be ascertained with certainty until this is undertaken. However, as the primary use of the lands has been for agricultural purposes with no historic development on the site, it is unlikely that contaminated material will be encountered.

There is a number of licensed, permitted and registered waste facilities in the DCC region, in the surrounding counties, EMR regions and in Ireland and Northern Ireland. However, these sites may not be available for use when required or may be limited by the waste contractor selected to service the development in the appropriate phase. In addition, there is potential for more suitably placed waste facilities or recovery facilities to become operational in the future which may be more beneficial from an environmental perspective.

Licensed waste facilities have annual limitations on material that they can import as part of their license agreements. Because of this it would not make it possible to commit to a singular specific receiving facility as it is not available throughout the excavation phase. It would not be viable to cease a development and wait until a receiving facilities annual receiving quotas are reset. In a normal development waste facilities would switch between facilities with available capacity.

As discussed, there are large number of available waste facilities for this project to utilise. The materials used during the construction of this project will be standard construction materials and it is envisaged that there will be capacity to receive any waste materials generated by the development during the construction phase. A list of potential waste facilities has been included in Appendix 15.1 of this EIAR.

The ultimate selection of waste contractors and waste facilities would be subject to appropriate selection criteria proximity, competency, capacity, serviceability, and cost.

15.10 Interactions

15.10.1 Climatic Factors

15.10.1.1 Construction Phase

Waste management contributes to greenhouse gas (GHG) emissions, particularly through landfill disposal and transport. The RWMP prioritises reuse, recycling, and recovery of materials, which will reduce the volume of waste sent to landfill and associated emissions. Adherence to the mitigation measures in Chapter 6 (Climatic Factors), this chapter, and the requirements of the RWMP, will ensure the effect is ***short-term, imperceptible*** and ***neutral***.

15.10.1.2 Operational Phase

Similarly, the OWMP will promote recycling and minimise residual waste during operation, reducing indirect emissions from waste transport and disposal. The direct and indirect effects of the Proposed Development on climate, such as GHG are addressed in Chapter 6, and following implementation of mitigation measures, are expected to be ***long-term, imperceptible*** and ***neutral***.

15.10.2 Biodiversity

15.10.2.1 Construction Phase

The potential impacts on biodiversity in relation to the generation of waste during the construction phase are that the incorrect management of waste could result in littering, pollution issues, spread of invasive species and/or vermin in areas affected. If invasive alien species (IAS) are identified during construction, an Invasive Species Management Plan (ISMP) will be implemented. Adherence to the mitigation

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measures set out in this chapter, and in Chapter 8 (Biodiversity) will ensure the associated effect is ***neutral, imperceptible*** and ***short-term***.

15.10.2.2 Operational Phase

The potential impacts on biodiversity in relation to the generation of waste during the operational phase are that the incorrect management of waste could result in littering, pollution issues or vermin in areas affected. Adherence to the mitigation measures set out in this chapter, and in Chapter 8 (Biodiversity) will ensure the associated effect is ***neutral, imperceptible*** and ***long-term***.

15.10.3 Land, Soils and Geology

15.10.3.1 Construction Phase

There will be soil and stones excavated to facilitate construction of new foundations, underground services, and the installation of internal roads. Based on a preliminary cut and fill assessment carried out by the Project Engineers (Waterman Moylan Consulting Engineers), the total volume of material to be excavated is estimated to be approximately 27,749 m^3.

It is currently envisaged that none of this excavated material will be reused on site due to the limited opportunities for reuse on site. Consequently, the full volume will require removal offsite for appropriate offsite reuse, recovery, recycling and / or disposal in accordance with relevant environmental and waste management regulations.

The management of contaminated soil, if encountered, will be undertaken in accordance with the Land, Soils and Geology Chapter and the RWMP. Proper classification and handling of soil waste will prevent degradation of land quality and avoid cross-contamination with clean materials. Potential effects on land and soils are addressed in Chapter 11. Adherence to the mitigation measures in Chapter 1 (Land, Soils and Geology, this chapter, and the requirements of the RWMP (Appendix 15.1), will ensure the effect is ***short-term, imperceptible*** and ***neutral***.

15.10.3.2 Operational Phase

No interactions between waste and land and soils are predicted during the operational phase.

15.10.4 Water

15.10.4.1 Construction Phase

Improper storage or disposal of waste, particularly hazardous substances, has the potential to impact surface water and groundwater quality during the construction phase. The RWMP includes provisions for bunded storage of hazardous materials and protocols for managing contaminated soil. These measures will mitigate the risk of leachate or runoff entering watercourses and protect the water and hydrological environment. Potential effects on hydrology are addressed in Chapter 12 Water and, following the implementation of mitigation measures, are expected to be ***short-term, imperceptible*** and ***neutral***.

15.10.4.2 Operational Phase

During the operational phase, the OWMP will ensure that liquid and cleaning chemicals are stored and disposed of in compliance with best practice to avoid water contamination. Potential effects on hydrology are addressed in Chapter 12 and, following the implementation of mitigation measures, are expected to be ***long-term, imperceptible*** and ***neutral***.

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15.10.5 Population and Human Health

15.10.5.1 Construction Phase

During the construction phase, improper handling, storage or removal of construction waste has the potential to give rise to litter, interaction of vermin and short-term odour or contamination risks, all of which could adversely affect workers on site and the local population if unmanaged.

These risks will be minimised through strict adherence to the project specific RWMP and the mitigation measures outlined in Chapter 13 (Population and Human Health). Waste will be segregated at source, stored in covered containers and collected by permitted waste collectors in accordance with the Waste Management Acts. No waste will be stockpiled in public areas and no on site burning or uncontrolled disposal will occur.

With these measures in place, the potential for human exposure to waste, litter or vermin is very low. Following mitigation, the construction phase effects on population and human health will be ***short-term, imperceptible*** and ***neutral***.

15.10.5.2 Operational Phase

If unmanaged, operational waste has the potential to affect human health through exposure to improperly stored or handled waste, particularly organic and hazardous materials. However, the implementation of the OWMP will ensure that waste is segregated, stored in appropriate receptacles and collected regularly by authorised contractors. These measures will minimise risks associated with odours, pests and contamination, thereby protecting the health and wellbeing of future residents, workers and the surrounding community. Potential effects on Population and Human Health are addressed in Chapter 13. Following mitigation, the effects are expected to be ***long-term, imperceptible*** and ***neutral***.

15.10.6 Material Assets - Traffic and Transportation

15.10.6.1 Construction Phase

During the construction phase, the generation, handling and removal of waste will result in additional vehicle movements, primarily associated with the transport of excavated materials, construction waste and deliveries / collections of skips. These vehicle movements will occur alongside other construction related traffic and therefore will contribute to the overall short-term increase in traffic volumes in the vicinity of the works.

However, waste related traffic will be short-term and intermittent, confined to the active construction period and managed through the measures outlined in in Chapter 14 (Material Assets - Traffic & Transportation). Waste will only be removed by permitted collectors, and vehicle routing will follow agreed routes.

Provided the mitigation measures detailed in Chapter 14 and this chapter are adhered to, the predicted effects are ***short-term***, ***imperceptible*** and ***neutral***.

15.10.6.2 Operational Phase

During operation, waste arising from the Proposed Development will be managed through scheduled collections by licensed waste contractors. The OWMP will ensure efficient segregation, minimisation of residual waste and appropriately timed collections.

Provided the mitigation measures detailed in Chapter 14 and this chapter are adhered to, the predicted effects are ***long-term***, ***imperceptible*** and ***neutral***.

15.11 Monitoring

The management of waste during the construction phase will be monitored by the Contactor's appointed Resource Manager (RM) to ensure compliance with the above-listed mitigation measures, and relevant waste management legislation and local authority requirements, including maintenance of waste documentation. Monitoring proposals for the construction phase are summarised in Table 15.7.

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The management of waste during the operational phase will be monitored by the facilities management team to ensure effective implementation of the OWMP internally and by the nominated waste contractor(s). Monitoring proposals for the operational phase are summarised in Table 15.8.

15.11.1 Construction Phase

The objective of setting targets for waste management is only achieved if the actual waste generation volumes are calculated and compared. This is particularly important during construction works, where there is a potential for waste management objectives to become secondary to other objectives, i.e. progress and meeting schedule targets. The RWMP specifies the need for a RM to be appointed, who will have responsibility for monitoring the actual waste volumes being generated and ensuring that contractors and sub-contractors are segregating waste as required. Where targets are not being met, the RM will identify the reasons for this and work to resolve any issues. Recording of waste generation during the construction phase of the Proposed Development will enable better management of waste contractor requirements and identify trends. The data should be maintained to advise on future developments.

15.11.2 Operational Phase

During the operational phase, waste generation volumes should be monitored by the Facilities Management Company There may be opportunities to reduce the number of bins and equipment required in the Waste Storage Area (WSAs), where estimates have been too conservative. Reductions in bin and equipment requirements will improve efficiency and reduce waste contractor costs. Alternatively with any additional space becoming available, further types of waste may be able to be segregated and collected on site.

15.11.3 Summary of Mitigation and Monitoring

The following table summarises the construction phase mitigation and monitoring measures.

Table 15-7 Summary of Construction Phase Mitigation and Monitoring

Likely Significant Effect	Mitigation	Monitoring
Litter Pollution	The Contractor will be required to fully implement the RWMP throughout the duration of the proposed construction phase.	The Contractor will review and maintain waste records and site audits
Unlicensed Waste Collection (Illegal Dumping)	All waste leaving the site will be recorded and copies of relevant documentation maintained.	A register will be maintained and reviewed. A copy of all waste collection permits will be maintained.
Insufficient Waste Facilities	All waste leaving the site will be recorded and copies of relevant documentation maintained.	A register will be maintained and reviewed. A copy of all waste collection permits will be maintained.
Lack of waste Classification	All waste material leaving site will be correctly classified and segregation prior to removal where possible.	An appointed Waste Manager will monitor all onsite waste segregation and classification

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The following table summarises the operational phase mitigation and monitoring measures.

Table 15-8 Summary of Operational Phase Mitigation and Monitoring

Likely Significant Effect	Mitigation	Monitoring
Unlicensed Waste Collection (Illegal Dumping)	The Facilities Management Company will ensure that all waste leaving the Site will be transported by suitable permitted contractors and taken to suitably registered, permitted or licensed facilities.	The Facilities Management Company will maintain waste receipts onsite for a period of 7 years and make available to DCC as requested.
Poor Waste Segregation	The Facilities Management Company will ensure that all waste materials will be stored in colour coded bins or other suitable receptacles in designated, easily accessible locations. Bins will be clearly identified with the approved waste type to ensure there is no cross contamination of waste materials.	Waste generation volumes will be monitored by the Facilities Management Company.
Litter Pollution	The Facilities Management Company will ensure that all waste collected from the Site of the Proposed Development will be reused, recycled or recovered, where possible, with the exception of those waste streams where appropriate facilities are currently not available	Shared and creche waste storage areas will be monitored by the Facilities Management Company.

15.12 References

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- GI(1997) Litter Pollution Act 1997 (as amended).
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- GI (2000) Planning and Development Act 2000 (as amended).
- GI (2007) Waste Management (Facility Permit and Registration) Regulations 2007 (S.I. No. 821 of 2007), as amended.
- EPA (2019) Waste Classification – List of Waste and Determining if Waste is Hazardous or Non-hazardous.
- EPA(2002) European Waste Catalogue and Hazardous Waste List.
- BSI (2005) BS 5906:2005 Waste Management in Buildings – Code of Practice.
- GI (2014a) European Union (Batteries and Accumulators) Regulations 2014 (S.I. No. 283 of 2014), as amended.
- GI (2014b) European Union (Waste Electrical and Electronic Equipment) Regulations 2014 (S.I. No. 149 of 2014), as amended.

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16 Material Assets – Utilities

16.1 Introduction

16.1.1 Expertise and Qualifications

This chapter was undertaken by Penelope Ingle with Waterman Moylan Consulting Engineers who has 10 years' experience as a Civil Engineer (BEng) and Ian Worrell with Waterman Moylan Consulting Engineers who has 30+ years' experience as a Civil Engineer (BscEng, DipEng, CEng, MIEI, DipPhysPlg).

This chapter of the Environmental Impact Assessment Report (EIAR) has been prepared by Waterman Moylan on behalf of the Land Development Agency (LDA) in partnership with Dublin City Council and examines the material assets serving the Proposed Phase 3 development at Cherry Orchard Point, Park West Avenue, Dublin 10.

The assessment addresses the existing and proposed built utility infrastructure associated with water supply, foul wastewater, surface water drainage, electricity, gas and telecommunications. It considers the potential for the Proposed Phase 3 development to affect the availability, capacity, continuity and operation of existing utility services during construction and operation.

The detailed assessment of effects on the water environment is provided in Chapter 12 – Water. The two chapters are intended to be read together, with Chapter 16 focusing on utilities as material assets and Chapter 12 focusing on the hydrological and hydrogeological receiving environment.

The Proposed Phase 3 development comprises 312 residential apartments, local retail/commercial and associated ancillary uses, together with internal roads, pedestrian and cycle infrastructure, landscaping, public and communal open space, substations, service connections, switch rooms, water tank rooms, meter rooms, PV panels and associated site development infrastructure.

16.1.2 Assessment Methodology

The assessment follows the EPA Environmental Impact Assessment guidance and considers the existing utility environment, the proposed utility strategy, the construction and operational activities associated with the development, and the potential effects on existing and proposed utility infrastructure.

The assessment has been informed by a review of available utility records and correspondence, including Uisce Éireann utility plans and developer-services correspondence, ESB Networks utility information, Gas Networks Ireland service plans, Eir and Virgin network information, previous EIAR assessments for the Cherry Orchard Point masterplan, site inspection information and the proposed civil engineering design.

The assessment also considers relevant site investigation information, GPR and slit-trench information relating to the location of existing services, and the proposed utility layouts.

The predicted impacts in Section 16.4 are considered prior to implementation of the mitigation measures set out in Section 16.5. The residual effects remaining following implementation of mitigation are assessed separately in Section 16.6.

Effects are described using the following terminology, consistent with the approach adopted elsewhere in the EIAR:

Quality: Positive, Neutral or Negative.

Significance: Imperceptible, Slight, Moderate, Significant or Profound.

Duration: Temporary, Short-term, Medium-term, Long-term or Permanent.

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The assessment considers the importance and sensitivity of the relevant utility asset, the magnitude and extent of the potential effect, the likelihood of occurrence, and the duration of any disruption or change.

16.1.3 Consultation

Consultation and correspondence undertaken in relation to the proposed development and the wider Cherry Orchard Point masterplan have been considered as part of the assessment.

Particular regard has been given to consultation and correspondence with Uisce Éireann in relation to water supply and wastewater infrastructure, Dublin City Council in relation to surface water drainage, and the relevant electricity, gas and telecommunications providers in relation to existing and proposed utility infrastructure.

The most recent Uisce Éireann Confirmation of Feasibility, dated 05 August 2026 under reference CDS26004704, confirms that the proposed water and foul water demand associated with 312 residential units and associated commercial and non-commercial space can be accommodated, subject to completion of the planned public foul water network upgrades. No water network infrastructure upgrades are required to accommodate the proposed water demand. The current programme provided by Uisce Éireann indicates that the relevant public foul water network upgrade works are scheduled for completion in early 2027, subject to change.

16.1.4 Sources of Information

- The assessment has been informed by a review of available information relating to the proposed development, the Cherry Orchard Point masterplan and the existing and proposed utility infrastructure serving the subject site.
- The following sources of information have been considered:
- Uisce Éireann utility plans, developer-services correspondence and Confirmation of Feasibility documentation;
- Uisce Éireann correspondence dated 08 June 2026 regarding planned public wastewater network upgrade works;
- ESB Networks utility records and network information;
- Gas Networks Ireland utility records and network information;
- Eir and Virgin Media telecommunications network information;
- available topographical survey information and site investigation information;
- GPR and slit-trench information relating to existing underground services, where available;
- proposed development and civil engineering drawings;
- proposed water supply, foul drainage and surface water drainage design information;
- previous planning and environmental assessments undertaken for the Cherry Orchard Point development; and
- Chapter 12 – Water and the associated Flood Risk Assessment.

16.1.5 Relevant Legislation and Guidance

- The assessment of potential effects on material assets – utilities has been undertaken having regard to relevant European, national and local legislation, statutory guidance, utility-provider requirements and recognised best practice.
- The principal guidance and requirements considered include:

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- Environmental Protection Agency (EPA), Guidelines on the Information to be Contained in Environmental Impact Assessment Reports, 2022.
- Uisce Éireann Code of Practice for Water Infrastructure – Connections and Developer Services, CDS-5020-03, Revision 3, August 2025.
- Uisce Éireann Standard Details for Water Infrastructure, CDS-5020-01, Revision 5, August 2025.
- Uisce Éireann Code of Practice for Wastewater Infrastructure – Connections and Developer Services, CDS-5030-03, Revision 3, August 2025.
- Uisce Éireann Standard Details for Wastewater Infrastructure, CDS-5030-01, Revision 5, August 2025.
- Greater Dublin Regional Code of Practice for Drainage Works, Version 6.0.
- Dublin City Development Plan 2022–2028.
- Park West and Cherry Orchard Local Area Plan.
- Greater Dublin Strategic Drainage Study (GDSDS), as applicable to the surface water drainage strategy.
- Relevant requirements and service-provider standards issued by ESB Networks, Gas Networks Ireland, Eir and Virgin Media.

16.2 Subject Site Characteristics

16.2.1 Existing Water Supply Infrastructure

The subject site does not contain an existing internal public watermain network. Public water supply infrastructure is present within the surrounding road network. The existing infrastructure serving the wider masterplan includes watermains within Park West Avenue, Cedar Brook Way and Barnville Park.

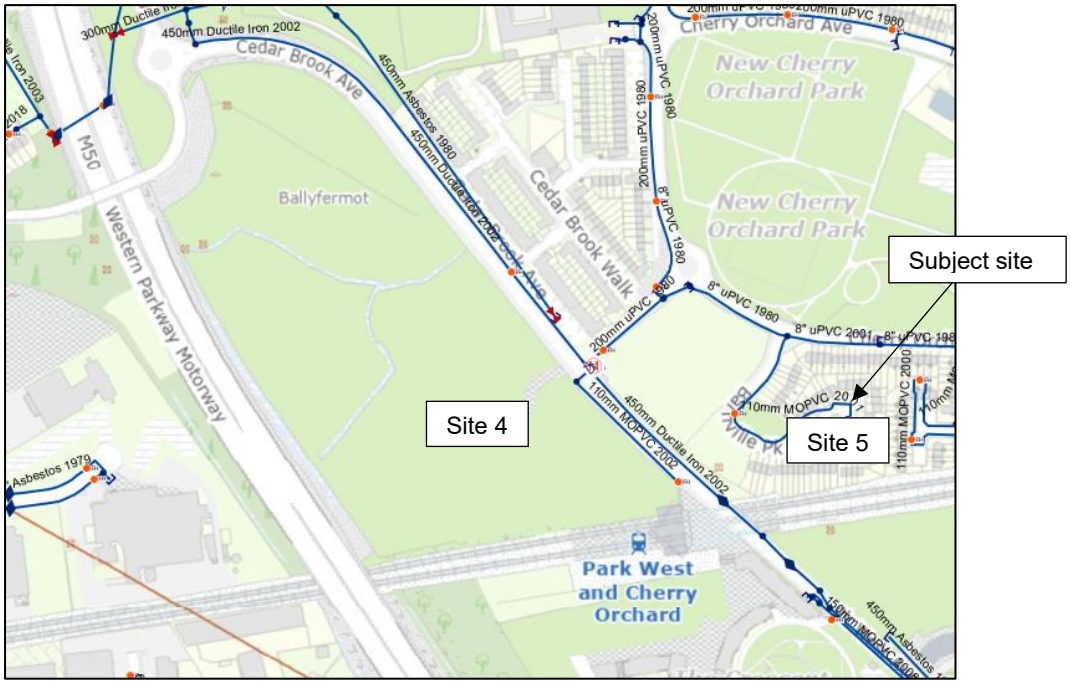


Figure 16-1: Existing Water Supply Infrastructure – Uisce Éireann

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The 2022 Confirmation of Feasibility for the masterplan, reference CDS22004824, advised that no water network upgrades were required to facilitate the masterplan water demand. A subsequent Phase 2 Confirmation of Feasibility also confirmed feasibility without upgrades.

For the Proposed Phase 3 development, a pre-connection enquiry was submitted to Uisce Éireann under reference CDS26004704. The current Confirmation of Feasibility dated 05 August 2026 confirms that the proposed water demand for 312 residential units and associated commercial and non-commercial space can be accommodated without water network infrastructure upgrades.

16.2.2 Existing Foul Wastewater Infrastructure

The subject site does not contain an existing internal foul wastewater drainage network. Foul infrastructure associated with the wider Cherry Orchard Point development is being constructed as part of Approved Phase 1. This includes a 300 mm diameter foul outfall sewer within Cedar Brook Way connecting to the existing public foul network at the intersection of Cedar Brook Way and Barnville Park.

The previous masterplan Confirmation of Feasibility identified the need for public wastewater network capacity upgrades to facilitate connections from Sites 4 and 5. Uisce Éireann subsequently confirmed in correspondence dated 08 June 2026 that the relevant upgrade works associated with Parcels 4 and 5 could be delivered independently and were anticipated to be ready for construction in late 2026.

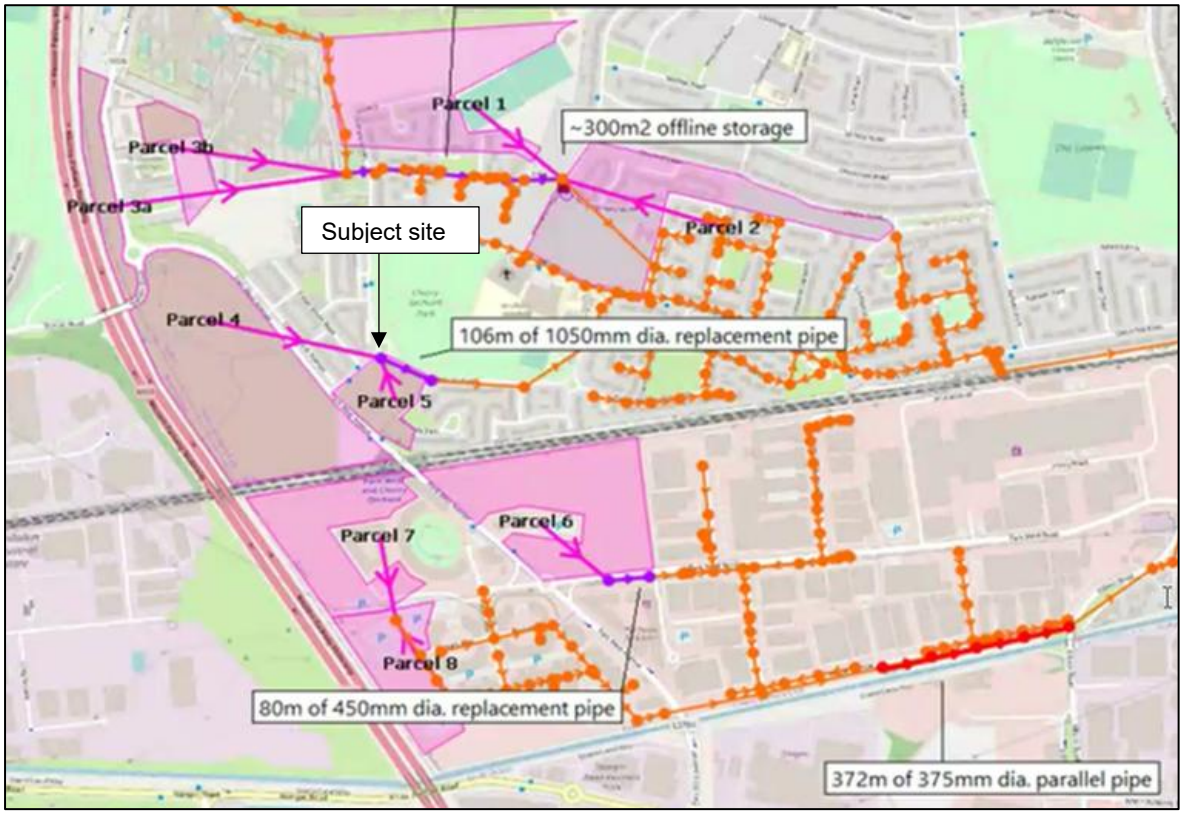


Figure 16-2: Uisce Éireann Upgrade Works

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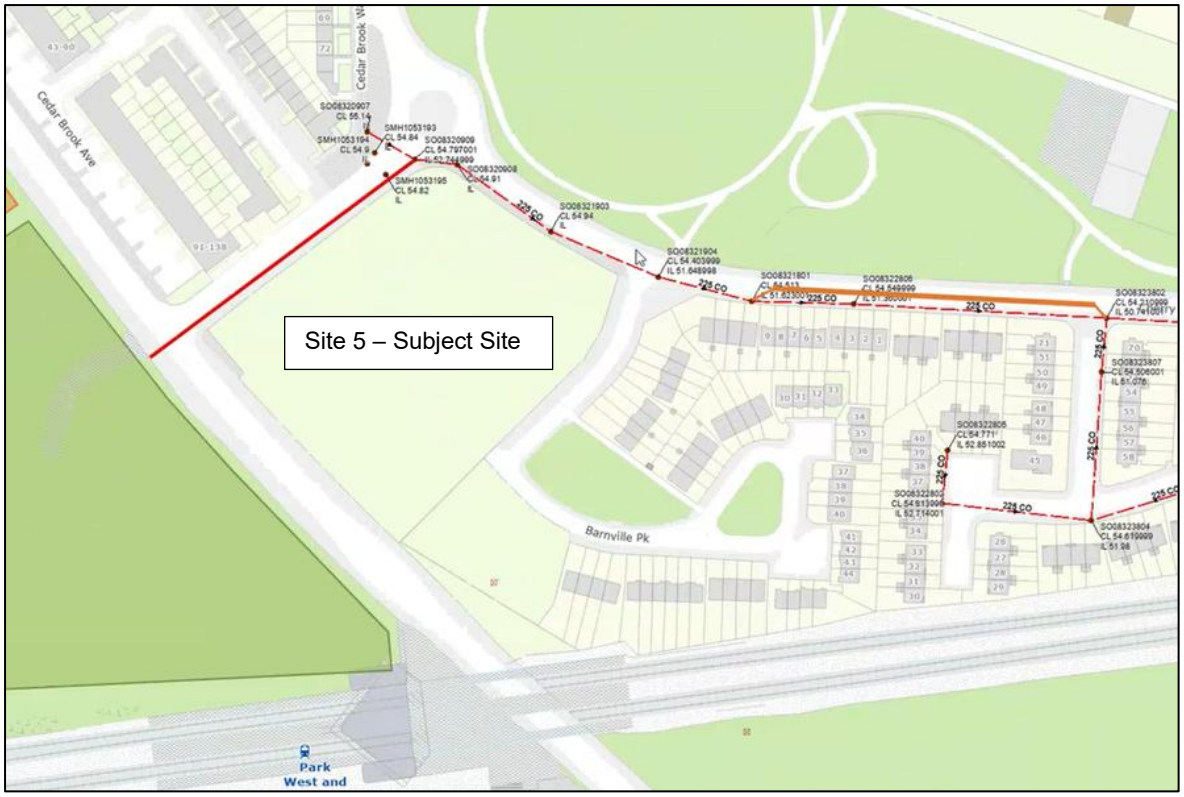


Figure 16-3: Existing Foul Water Infrastructure – Uisce Éireann

A Confirmation of Feasibility dated 05 August 2026, reference CDS26004704, confirms that the proposed foul water demand associated with the Proposed Phase 3 development can be accommodated subject to completion of the planned public foul water network upgrades. The current programme provided by Uisce Éireann indicates that the relevant public foul water network upgrade works are scheduled for completion in early 2027, subject to change.

16.2.3 Existing Surface Water Infrastructure

The subject site does not contain an existing constructed surface water drainage network. During heavy rainfall, surface water may flow overland towards the adjacent road drainage networks. The detailed hydrological and surface water assessment, including the relationship between the site, the local drainage network, Blackditch Stream and the downstream River Camac, is provided in Chapter 12 – Water.

The existing surface water infrastructure in the vicinity includes networks within Cedar Brook Way, Barnville Park and Park West Avenue. The Proposed Phase 3 surface water strategy is addressed in Chapter 12 and comprises attenuation, controlled discharge and Sustainable Drainage Systems (SuDS). The drainage system is designed for the 1-in-100-year rainfall event with a 30% climate change allowance and a maximum discharge rate of 2 l/s/ha, with approximately 1,700 m³ of attenuation storage.

The surface water network is included within this utilities chapter because it forms part of the built drainage infrastructure serving the development; however, the environmental effects of surface water drainage are assessed in detail in Chapter 12.

16.2.4 Existing Electricity Infrastructure

ESB Networks utility information confirms that electricity infrastructure exists on and in the immediate vicinity of the masterplan lands. Existing infrastructure includes both overhead and underground services. The detailed design of any required diversions, rerouting or undergrounding will be undertaken at the appropriate stage in consultation with ESB Networks.

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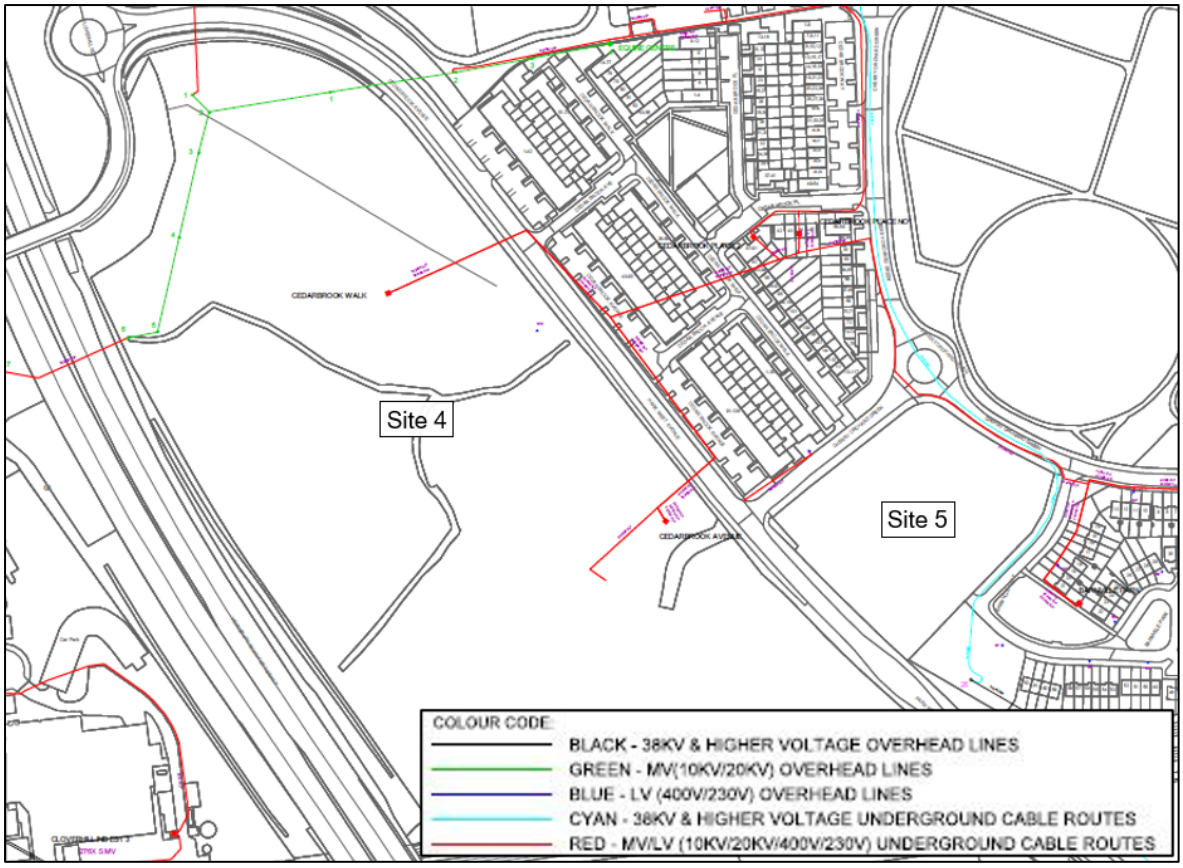


Figure 16-4: ESB Network Map

16.2.5 Existing Gas Infrastructure

Gas Networks Ireland service information confirms the presence of gas infrastructure adjacent to Site 5 on Barnville Park. A medium-pressure distribution main is also indicated within the northern part of Site 4. No development is proposed at the relevant location within Site 4. The contractor will liaise with Gas Networks Ireland regarding protection, diversion or connection requirements prior to works in the vicinity of existing gas infrastructure.

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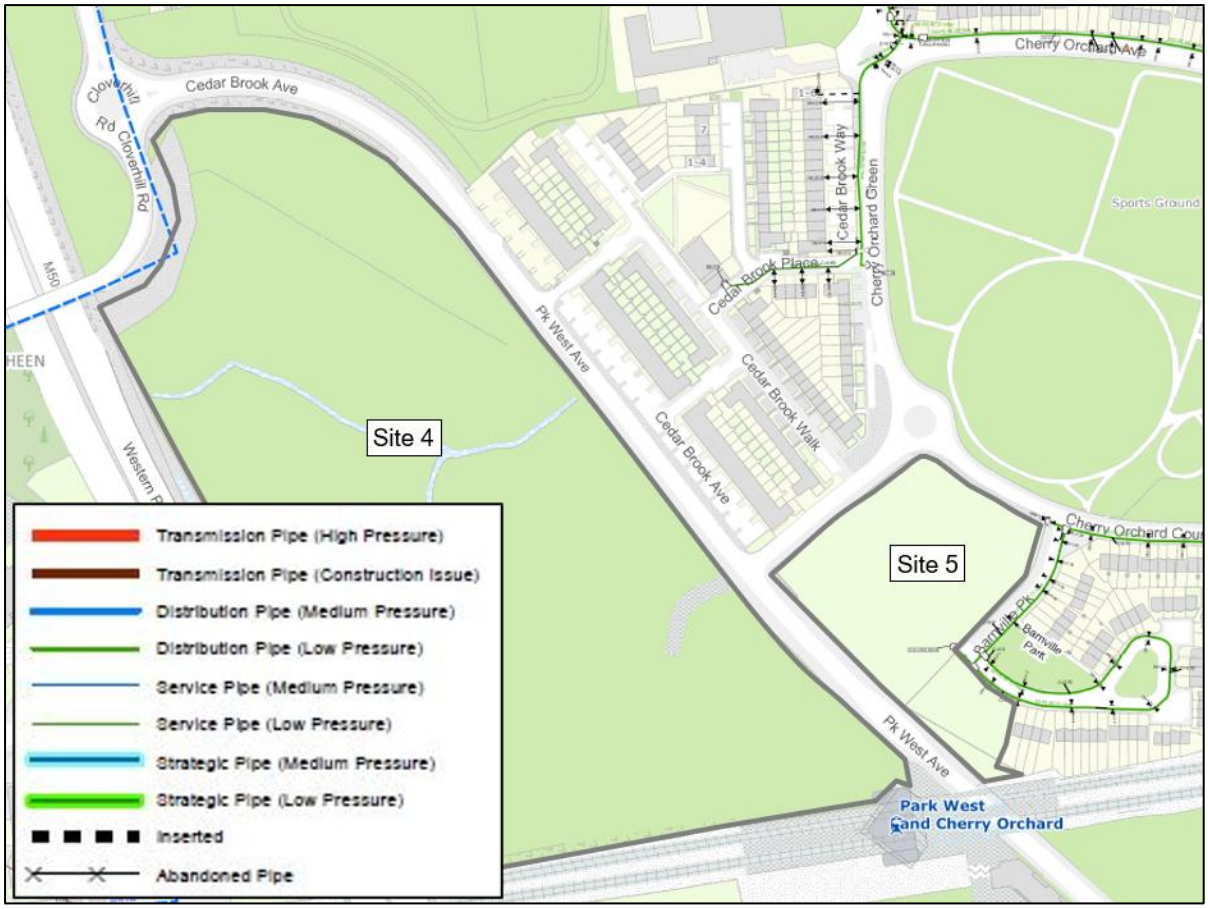


Figure 16-5: Gas Network Map

16.2.6 Existing Telecommunications Infrastructure

Eir and Virgin network information confirms telecommunications infrastructure in the vicinity of the masterplan lands. Existing services adjacent to the development will be protected and coordinated with the proposed telecommunications networks during construction.

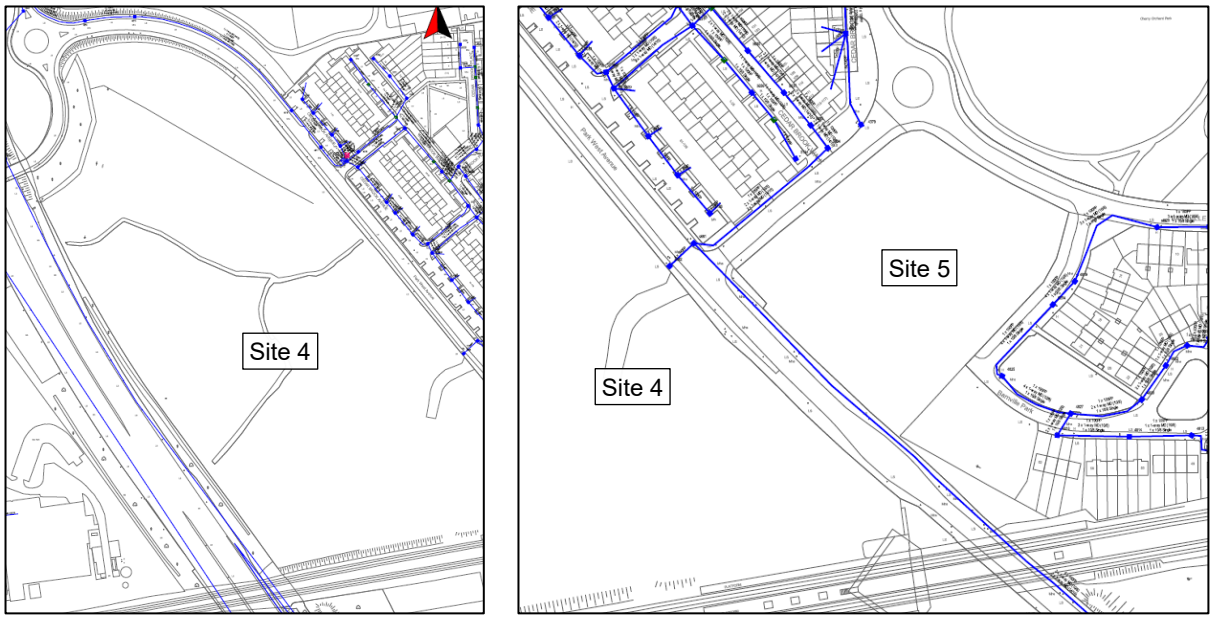


Figure 16-6: Eir Network Maps

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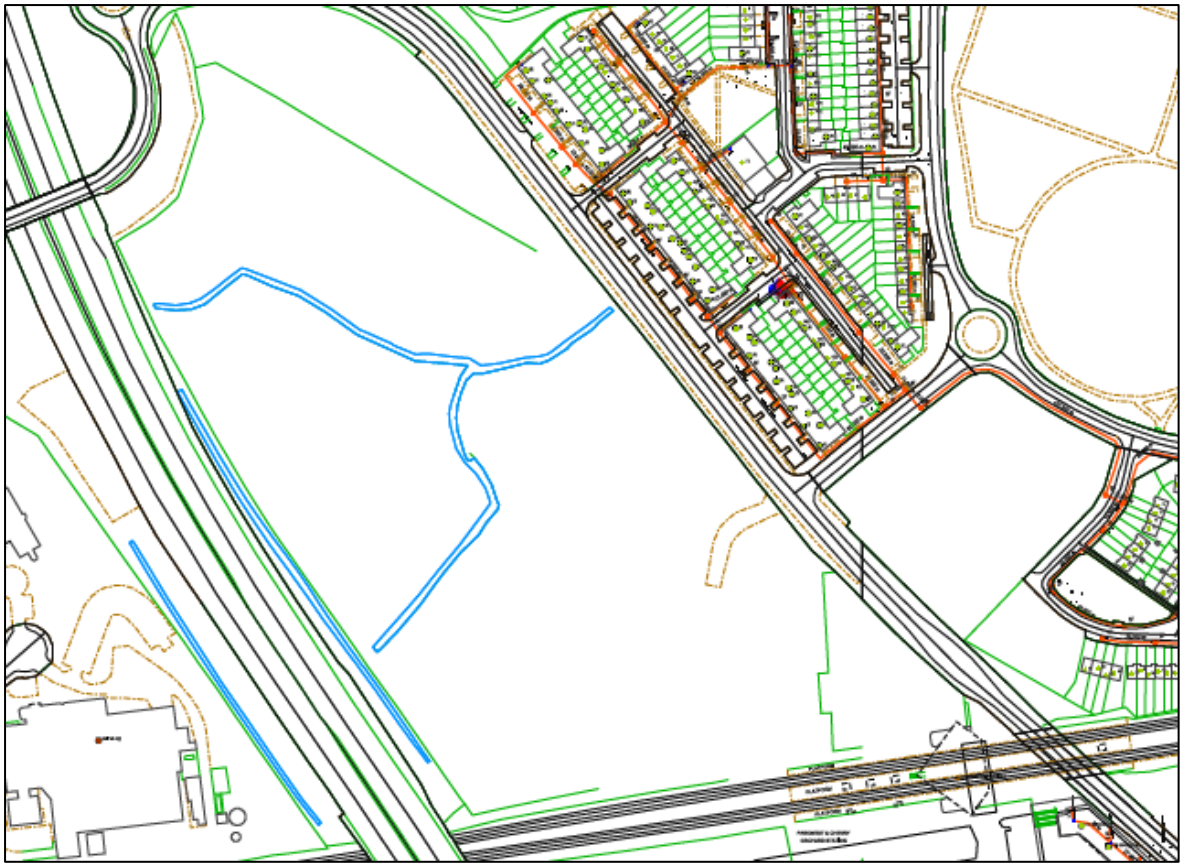


Figure 16-7: Virgin Network Map (Networks shown in orange/red)

16.3 Proposed Development

The Proposed Phase 3 development includes new internal utility infrastructure and connections to the existing public networks. The proposed services will be coordinated with the infrastructure serving the wider Cherry Orchard Point masterplan and will be designed and constructed in accordance with the requirements of the relevant utility providers and applicable standards.

16.3.1 Water Supply

Potable water will be provided through connection to the public water supply network operated by Uisce Éireann. The proposed internal water supply network will be designed and sized in accordance with the Uisce Éireann Code of Practice for Water Infrastructure and associated Standard Details.

The proposed water supply demand associated with 312 residential units and associated commercial and non-commercial space has been confirmed as feasible by Uisce Éireann. The Confirmation of Feasibility dated 05 August 2026, reference CDS26004704, confirms that no water network infrastructure upgrades are required to accommodate the proposed demand.

The proposed water supply network will include metering and connection arrangements in accordance with Uisce Éireann requirements. The final connection arrangements will be subject to Uisce Éireann approval and detailed design.

16.3.2 Foul Wastewater

Foul wastewater will be collected in a dedicated foul drainage network and conveyed to the public wastewater network. The proposed internal foul drainage network will be designed and sized in accordance with the Uisce Éireann Code of Practice for Wastewater Infrastructure and associated Standard Details.

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The Proposed Phase 3 foul network is intended to drain by gravity. The final connection point and connection arrangements will be subject to Uisce Éireann approval and the completion of the required public network upgrades.

The 05 August 2026 Confirmation of Feasibility, reference CDS26004704, confirms that the proposed foul water demand can be accommodated subject to completion of the planned public foul water network upgrades. Uisce Éireann's current programme indicates that the relevant upgrade works are scheduled for completion in early 2027, subject to change.

The foul drainage network will remain separate from the surface water drainage network. Appropriate testing, inspection and commissioning will be undertaken prior to operation.

16.3.3 Surface Water Drainage

The proposed surface water drainage system will attenuate and control runoff prior to discharge to the existing public surface water network. Four surface water sub-catchments are proposed, with controlled discharge from each catchment subject to final design and agreement with Dublin City Council.

The drainage strategy incorporates SuDS measures including blue and blue-green roofs, bio-retention tree pits and rain gardens, permeable paving and surfacing, and a shallow detention basin with below-ground stone void storage. Approximately 1,700 m³ of attenuation storage will be provided. The system is designed for the 1-in-100-year rainfall event with a 30% climate change allowance and a maximum discharge rate of 2 l/s/ha.

16.3.4 Electricity

The development will require new electricity infrastructure, including ducting, access chambers, connections and associated substations/switchgear. Existing services within or adjacent to the development will be identified and protected, diverted or rerouted as required in consultation with ESB Networks.

Connections to the existing ESB network will be undertaken by ESB Networks or specialist contractors acting on their behalf.

16.3.5 Gas

Where gas infrastructure is required, the proposed network will be coordinated with Gas Networks Ireland. Existing gas infrastructure adjacent to the site will be protected during construction and any required works to existing gas mains will be undertaken by Gas Networks Ireland or specialist contractors acting on their behalf.

16.3.6 Telecommunications

The development will include telecommunications ducting, chambers and connections to the existing provider networks. Connections to existing Eir and Virgin infrastructure will be undertaken by the relevant provider or specialist contractor acting on its behalf.

16.4 Predicted Impacts

The following sections assess the potential impacts of the Proposed Phase 3 development on existing and proposed utility infrastructure during construction and operation. The predicted impacts are assessed prior to implementation of the mitigation measures set out in Section 16.5. Residual effects following implementation of mitigation are assessed separately in Section 16.6.

16.4.1 Construction Phase

Construction activities will require excavation, trenching, duct and pipe installation, chamber construction, service connections, diversions and reinstatement. These works have the potential to interact with existing utility infrastructure in the surrounding road network.

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Water Supply

Construction activities will involve excavation, installation and connection of the proposed water supply infrastructure to the existing public water supply network. Prior to implementation of mitigation measures, there is potential for accidental damage to existing water supply infrastructure, contamination during connection works, or temporary interruption to the public water supply serving existing users. The potential impact would be localised to the immediate vicinity of the construction and connection works, with a low magnitude given the nature and scale of the proposed works. Any interruption to existing water supply would be expected to be temporary or short-term and limited to the duration of the relevant connection or repair works. The potential construction-phase effect on existing water supply infrastructure is therefore considered negative, slight and temporary prior to mitigation.

Foul Wastewater

Construction activities will involve excavation and installation of the proposed foul wastewater infrastructure and connection to the existing and planned public wastewater network. Prior to implementation of mitigation measures, there is potential for accidental damage to existing foul wastewater infrastructure, temporary disruption during connection works, or inappropriate discharge associated with construction activities. The potential impact would be localised to the immediate vicinity of the construction and connection works, with a low magnitude given the nature and scale of the proposed works. Any disruption to the existing foul wastewater network would be expected to be temporary or short-term and limited to the duration of the relevant works. The potential construction-phase effect on existing foul wastewater infrastructure is therefore considered negative, slight and temporary prior to mitigation.

Surface Water Drainage

Construction activities have the potential to affect existing surface water drainage infrastructure through excavation, temporary works, accidental damage to drainage infrastructure, or the mobilisation of sediment and other construction-related pollutants. The potential effect on the wider water environment, including the potential for changes to surface water runoff, water quality and downstream receptors, is assessed separately in Chapter 12 – Water. In relation to the utility infrastructure itself, the potential construction-phase impact would be localised to the immediate vicinity of the works and would be temporary in duration. The magnitude of the potential impact is considered low, given the nature of the proposed drainage works and the ability to control construction activities through standard construction management measures. The potential construction-phase effect on existing surface water drainage infrastructure is therefore considered negative, slight and temporary prior to mitigation.

Electricity

Construction activities will involve excavation and installation of underground electrical infrastructure and connection to the existing electricity network. Prior to implementation of mitigation measures, there is potential for accidental damage to existing ESB Networks infrastructure, resulting in temporary interruption to electricity supplies serving existing users. Any required diversion or relocation of existing services may also require temporary interruption during the works. The potential impact would be localised to the immediate vicinity of the construction works, with a low magnitude given that the potential effect is principally associated with accidental damage or planned connection/diversion works rather than a permanent change to the electricity network. Where an interruption occurs, it would be expected to be temporary or short-term, depending on the nature of the works required. The potential construction-phase effect on existing electricity infrastructure is therefore considered negative, slight and temporary prior to mitigation.

Gas

Construction activities will involve excavation and installation of underground gas infrastructure and connection to the existing gas network. Prior to implementation of mitigation measures, there is potential for accidental damage to existing gas infrastructure or temporary interruption to gas supplies serving existing users. The potential impact would be localised to the immediate vicinity of the construction works, with a low magnitude given that the potential effect arises principally from accidental damage or

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planned connection/diversion works. Any interruption to existing gas supplies would be expected to be temporary or short-term, depending on the nature and extent of the works required. The potential construction-phase effect on existing gas infrastructure is therefore considered negative, slight and temporary prior to mitigation.

Telecommunications

Construction activities will involve excavation and installation of underground telecommunications infrastructure and connection to the existing telecommunications networks. Prior to implementation of mitigation measures, there is potential for accidental damage to existing telecommunications infrastructure, resulting in temporary interruption to telecommunications services serving existing users. The potential impact would be localised to the immediate vicinity of the construction works, with a low magnitude given that the potential effect is associated principally with accidental damage or planned connection/diversion works. Any interruption to existing telecommunications services would be expected to be temporary or short-term, depending on the nature of the works required. The potential construction-phase effect on existing telecommunications infrastructure is therefore considered negative, slight and temporary prior to mitigation. Overall, the construction phase has the potential to result in temporary negative effects on existing utility services, principally through accidental damage, service interruption and connection/diversion works.

16.4.2 Operational Phase

Water Supply

Occupation of the Proposed Phase 3 development will result in an increase in demand on the public water supply network. In the absence of the proposed connection arrangements, utility-provider confirmation and appropriate network design controls, the additional demand could place additional loading on the existing public water supply network and could potentially affect available network capacity. The potential impact would extend beyond the immediate site to the public water supply network serving the development, with a low magnitude given the scale of the proposed development and the available network capacity identified by Uisce Éireann. The effect would be long-term for the duration of the operational phase. The potential operational effect on the public water supply network is therefore considered negative, slight and long-term prior to mitigation. The current Uisce Éireann Confirmation of Feasibility confirms that the proposed water demand can be accommodated without water network infrastructure upgrades

Foul Wastewater

Operation of the Proposed Phase 3 development will result in an increase in foul wastewater generation and loading on the public wastewater network. In the absence of the required public wastewater network upgrades and appropriate connection arrangements, the additional loading could place additional demand on the existing wastewater network and could potentially affect available network capacity. The potential impact would extend beyond the immediate site to the public wastewater network serving the development, with a low magnitude given the scale of the proposed development and the planned network upgrade works identified by Uisce Éireann. The effect would be long-term for the duration of the operational phase. The potential operational effect on the public wastewater network is therefore considered negative, slight and long-term prior to mitigation. Uisce Éireann has confirmed that the proposed foul water demand can be accommodated subject to completion of the planned public wastewater network upgrades, which are currently scheduled for completion in early 2027, subject to change.

Surface Water Drainage

The completed development will increase the area of impermeable surfaces and, in the absence of appropriate surface water drainage, attenuation and Sustainable Drainage Systems (SuDS) measures, has the potential to increase surface water runoff and place additional loading on the existing public surface water drainage network. The potential effect on the wider water environment, including surface water runoff, water quality and downstream receiving receptors, is assessed separately in Chapter 12 – Water. In relation to the surface water drainage infrastructure as a material asset, the potential impact

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would extend from the development site to the receiving public drainage network, with a low magnitude given the scale of the proposed development and the capacity provided through the proposed drainage strategy. The effect would be long-term for the duration of the operational phase. The potential operational effect on the public surface water drainage network is therefore considered negative, slight and long-term prior to mitigation. The proposed drainage system incorporates attenuation, controlled discharge and SuDS measures and is designed for the 1-in-100-year rainfall event with a 30% climate change allowance.

Electricity

Occupation of the Proposed Phase 3 development will result in an increase in electricity demand and therefore additional loading on the existing electricity network. In the absence of appropriate connection arrangements and confirmation of the required network capacity by ESB Networks, the additional demand could place increased loading on the existing network and could potentially affect available supply capacity. The potential impact would extend to the local electricity network serving the development, with a low magnitude given the scale of the proposed development and the ability to accommodate the additional demand through the appropriate connection process. The effect would be long-term for the duration of the operational phase. The potential operational effect on existing electricity infrastructure and consumers is therefore considered negative, slight and long-term prior to mitigation. The proposed connection will be designed and agreed with ESB Networks, with the required connection and network capacity confirmed as part of the connection process.

Gas

Where gas is provided to the Proposed Phase 3 development, occupation will result in an increase in demand on the gas distribution network. In the absence of appropriate connection arrangements and confirmation by Gas Networks Ireland of the requirements necessary to accommodate the additional demand, the increased loading could potentially affect available capacity within the local gas distribution network. The potential impact would extend to the local gas distribution network serving the development, with a low magnitude given the scale of the proposed development and the requirement for the connection to be assessed and approved by Gas Networks Ireland. The effect would be long-term for the duration of the operational phase. The potential operational effect on existing gas infrastructure and consumers is therefore considered negative, slight and long-term prior to mitigation. Subject to connection in accordance with Gas Networks Ireland requirements and confirmation of the available network capacity, the additional demand associated with the Proposed Phase 3 development is not anticipated to materially affect the supply capacity or service available to existing consumers.

Telecommunications

Occupation of the Proposed Phase 3 development will result in an increase in demand on telecommunications networks. In the absence of appropriate connection arrangements and network provision by the relevant telecommunications providers, the additional demand could place increased loading on the relevant telecommunications infrastructure and could potentially affect the availability or capacity of services. The potential impact would extend to the local telecommunications networks serving the development, with a low magnitude given the scale of the proposed development and the ability of the relevant providers to assess and accommodate additional connections. The effect would be long-term for the duration of the operational phase. The potential operational effect on existing telecommunications infrastructure and users is therefore considered negative, slight and long-term prior to mitigation. Subject to connection and network provision by the relevant telecommunications providers, no material effect on existing consumers is anticipated.

16.4.3 Do-Nothing Scenario

If the Proposed Phase 3 development does not proceed, the proposed changes to utility demand and the associated new utility infrastructure would not occur. Existing utility infrastructure would continue to operate in accordance with existing conditions and any separately approved development proposals.

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16.5 Mitigation Measures

The mitigation measures are intended to prevent accidental damage to existing services, minimise interruptions to existing utility users, ensure that new infrastructure is appropriately tested and commissioned, and ensure that utility-provider requirements are met before connection and operation.

16.5.1 General Utility Construction Measures

All existing services will be identified using available utility records, GPR surveys and slit trenches, as appropriate, before excavation works commence.

Service locations will be clearly marked on site and appropriate exclusion/protection zones will be established.

Construction works in the vicinity of existing utilities will be undertaken in accordance with the requirements of the relevant utility provider.

Where existing services require diversion, relocation or temporary interruption, the works will be agreed in advance with the relevant utility provider.

The contractor will coordinate utility works with the construction programme to minimise disruption to existing users.

All temporary connections required for construction welfare facilities will be arranged with the relevant utility provider.

New utility infrastructure will be inspected, tested and commissioned in accordance with the requirements of the relevant utility provider before being brought into service.

16.5.2 Water Supply

All existing water services will be identified and protected before excavation.

A method statement will be prepared for works in the vicinity of existing watermains and for road or service crossings of watermains.

All new watermains will be cleaned, sterilised and tested in accordance with Uisce Éireann requirements prior to connection.

Connections to the public watermain will be undertaken by or under the supervision of Uisce Éireann.

Temporary construction water supply arrangements will be agreed with Uisce Éireann through the appropriate Temporary Connection Application.

Water metering will be provided in accordance with Uisce Éireann requirements. Monitoring of water usage will assist in identifying abnormal consumption that may indicate leakage.

These measures are consistent with the water supply design and mitigation principles set out in Chapter 12 – Water.

16.5.3 Foul Wastewater

Temporary foul wastewater connections for site welfare facilities will be arranged with Uisce Éireann through the appropriate Temporary Connection Application.

Where permitted by Uisce Éireann, the permanent foul connection may be used temporarily during construction. Where this is not permitted, wastewater will be stored and removed for appropriate off-site treatment/disposal.

All new foul sewers will be tested in accordance with the Uisce Éireann Code of Practice and Standard Details.

Private drainage will be inspected and signed off by the Design Engineer in accordance with Building Regulations Part H and BCAR requirements.

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Foul sewers will be subject to CCTV inspection prior to connection to identify potential defects.

Connections to the public sewer will be undertaken by or under the supervision of Uisce Éireann and checked prior to commissioning.

The foul network will remain separate from the surface water network.

The Proposed Phase 3 connection will be subject to completion of the relevant public wastewater network upgrades and final Uisce Éireann approval.

The current Uisce Éireann CoF confirms that foul capacity is available subject to completion of the planned public network upgrades, currently programmed for early 2027, subject to change.

16.5.4 Surface Water Drainage

Detailed surface water mitigation is provided in Chapter 12 – Water. In summary, the proposed development will incorporate attenuation, controlled discharge and SuDS measures, including blue/blue-green roofs, bio-retention tree pits and rain gardens, permeable paving/surfacing and below-ground stone void storage. The system is designed for the 1-in-100-year rainfall event with a 30% climate change allowance and discharge restricted to 2 l/s/ha.

Temporary drainage and runoff management measures will be implemented during construction.

Existing surface water drainage infrastructure will be protected during utility works.

Surface water networks will be constructed and tested in accordance with Dublin City Council requirements for taking in charge.

The completed SuDS and drainage infrastructure will be subject to inspection and maintenance in accordance with the relevant operation and maintenance requirements.

16.5.5 Electricity

Existing ESB services will be located and verified before excavation.

Works in the vicinity of ESB infrastructure will be undertaken in accordance with ESB Networks requirements.

Connections to existing ESB infrastructure will be completed by ESB Networks or specialist contractors acting on their behalf.

Any temporary interruption to supply will be coordinated and managed by ESB Networks to minimise effects on neighbouring properties.

16.5.6 Gas

Existing gas services will be located and verified before excavation.

Works in the vicinity of existing gas mains will be undertaken in accordance with Gas Networks Ireland requirements.

Any works to existing gas infrastructure will be undertaken by Gas Networks Ireland or specialist contractors acting on its behalf.

Any temporary interruption to gas supply will be coordinated and managed by Gas Networks Ireland.

16.5.7 Telecommunications

Existing telecommunications services will be located and verified before excavation.

Works in the vicinity of existing Eir and Virgin infrastructure will be coordinated with the relevant provider.

Connections to existing telecommunications infrastructure will be undertaken by the relevant provider or specialist contractor acting on its behalf.

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Any temporary interruption to services will be coordinated to minimise effects on surrounding users.

16.6 Residual Effects

The residual effects are those that remain following implementation of the mitigation measures outlined in Section 16.5.

16.6.1 Construction Phase

Following implementation of the proposed service-location, protection, coordination, testing and utility-provider supervision measures, the potential for accidental damage to existing utility infrastructure and associated service interruptions will be substantially reduced.

The residual effect on existing water supply, foul wastewater, electricity, gas and telecommunications infrastructure during construction is expected to be temporary and negative, with no significant residual effect anticipated. Any planned interruption to existing services will be managed by the relevant utility provider.

The residual effect associated with the construction of the proposed surface water and foul drainage infrastructure is also expected to be temporary and negative, with no significant residual effect anticipated following implementation of the proposed construction controls and testing requirements.

16.6.2 Operational Phase

The proposed water supply and foul wastewater infrastructure will be designed, constructed, tested and commissioned in accordance with Uisce Éireann requirements. The 05 August 2026 Confirmation of Feasibility confirms that the proposed water demand can be accommodated without water network upgrades and that the proposed foul demand can be accommodated subject to completion of the planned public wastewater network upgrades.

The proposed surface water drainage infrastructure is addressed in detail in Chapter 12 – Water and incorporates attenuation, SuDS and restricted discharge. Following implementation and ongoing maintenance, no significant residual effect on the operation of the public surface water drainage network is anticipated.

The proposed electricity, gas and telecommunications infrastructure will be connected in accordance with the requirements of the relevant utility providers. Increased demand associated with the development is not anticipated to materially affect existing consumers or the operation of the surrounding networks.

Overall, the residual effect on material assets – utilities during operation is anticipated to be long-term, neutral and imperceptible overall, subject to completion of the required public foul water network upgrades and final approval by the relevant utility providers.

16.7 In-Combination and Cumulative Effects

16.7.1 In-Combination Effects

Potential in-combination effects with other EIAR topics have been considered during both the construction and operational phases of the Proposed Phase 3 development.

During construction, utility excavation, trenching, service connections and diversion works may interact with activities assessed under Land, Soils and Geology, Biodiversity, Water, and Traffic and Transport. Accidental damage to existing services, temporary service interruptions, or accidental leakage or pollution from utility works could also interact with the water environment. These potential interactions will be managed through the mitigation, construction management and utility-provider coordination measures set out in this chapter and the relevant measures identified in **Chapters 8 – Biodiversity**, **11 – Land, Soils and Geology**, and **12 – Water**.

During operation, increased demand for water supply, wastewater, electricity, gas and telecommunications services, together with the operation of the proposed surface water and foul

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drainage infrastructure, may interact with the relevant environmental topics, particularly Water and other material assets. These effects have been considered in conjunction with the assessments provided in the relevant EIAR chapters and will be managed through the proposed utility design, network capacity confirmation, operational requirements and ongoing inspection and maintenance measures.

Subject to implementation of the proposed mitigation, coordination, testing, commissioning and operational management measures, no significant in-combination effects on material assets – utilities are anticipated.

16.7.2 Cumulative Effects

Cumulative effects have been considered in the context of the wider Cherry Orchard Point masterplan, including Approved Phases 1 and 2, the Proposed Phase 3 development and future Phase 4 development.

The principal cumulative considerations relate to increased demand on water supply, wastewater, electricity, gas and telecommunications networks, together with coordination of utility construction works and connections. The Proposed Phase 3 development will be coordinated with the infrastructure and construction programmes associated with the wider masterplan.

For water supply, Uisce Éireann has confirmed that the proposed demand can be accommodated without water network infrastructure upgrades. For foul wastewater, the relevant public network upgrades are required and are currently programmed by Uisce Éireann for completion in early 2027, subject to change.

Subject to completion of the required public wastewater upgrades and implementation of the proposed utility-provider coordination and mitigation measures, no significant cumulative effects on material assets – utilities are anticipated.

No additional interactions which may cause cumulative impacts on the surrounding environs are anticipated for the proposed Phase 3 subject site beyond those outlined within the Parent EIAR.

16.8 Monitoring

Monitoring and inspection of utility infrastructure will be undertaken in accordance with the requirements of the relevant utility providers and the project Construction Environmental Management Plan.

Existing utility locations will be verified before excavation and monitored during works in their vicinity.

Construction works affecting existing utilities will be subject to appropriate inspection and utility-provider coordination.

New water and foul drainage infrastructure will be tested, inspected and commissioned prior to connection and operation.

Water usage will be monitored through the proposed metering arrangements, with abnormal consumption investigated as appropriate.

The operation and maintenance of surface water drainage and SuDS infrastructure will be undertaken in accordance with the relevant operation and maintenance requirements.

Electricity, gas and telecommunications infrastructure will be monitored and maintained by the relevant utility providers following connection and handover.

16.9 Difficulties Encountered

No particular difficulties were encountered in compiling this Material Assets – Utilities assessment. The assessment has been informed by available utility records, provider correspondence, previous EIAR information, site investigation information and the current proposed utility design.

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16.10 Reinstatement

No specific reinstatement measures are anticipated in relation to the utility infrastructure beyond the normal reinstatement of areas affected by utility construction works.

16.11 Conclusions

The Proposed Phase 3 development requires new connections to the public water supply and wastewater networks and new internal electricity, gas, telecommunications and surface water drainage infrastructure. Existing utility infrastructure is present within the surrounding road network and adjacent lands.

The principal construction-phase risks relate to accidental damage to existing services, temporary service interruption, and the installation and commissioning of new utility infrastructure. These risks will be managed through service location and protection, coordination with the relevant utility providers, appropriate method statements, testing, inspection and commissioning.

During operation, the development will increase demand on utility networks. Uisce Éireann has confirmed through its 05 August 2026 Confirmation of Feasibility, reference CDS26004704, that the proposed water and foul water demands associated with the development can be accommodated, subject to completion of the planned public foul water network upgrades. No water network infrastructure upgrades are required. The current Uisce Éireann programme indicates that the relevant public foul water network upgrade works are scheduled for completion in early 2027, subject to change.

The proposed utility infrastructure will be designed and constructed in accordance with the requirements of the relevant statutory and utility providers. Subject to completion of the required public wastewater upgrades and implementation of the mitigation, testing, commissioning, inspection and maintenance measures identified in this chapter, the Proposed Phase 3 development is not anticipated to result in significant residual effects on material assets – utilities.

16.12 References

- Environmental Protection Agency (EPA), Guidelines on the Information to be Contained in Environmental Impact Assessment Reports, 2022.
- Uisce Éireann, Code of Practice for Water Infrastructure – Connections and Developer Services, Design and Construction Requirements for Self-Lay Developments, CDS-5020-03, Revision 3, August 2025.
- Uisce Éireann, Standard Details for Water Infrastructure, CDS-5020-01, Revision 5, August 2025.
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- Uisce Éireann, Confirmation of Feasibility, reference CDS26004704, dated 05 August 2026.
- Uisce Éireann correspondence to the Land Development Agency dated 08 June 2026 regarding planned wastewater network upgrade works in the Cherry Orchard/Ballyfermot area.
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- Dublin City Council, Park West and Cherry Orchard Local Area Plan.
- Greater Dublin Strategic Drainage Study (GDSDS).
- CIRIA C753, The SuDS Manual, 2015.
- Ground Investigations Ireland, Cherry Orchard Site 4 and 5 Phase 2 Ground Investigation Report, August 2024.
- Ground Investigations Ireland, Cherry Orchard Site 4 and 5 Phase 2 Waste Classification Report, August 2024.
- Parent Environmental Impact Assessment Report for Cherry Orchard Point.
- An Bord Pleanála Board Order ABP-318607-23.
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17 Interactions

17.1 Introduction

This chapter deals with the likely interactions between effects predicted as a result of the proposed development. This chapter has been prepared in accordance with the requirements set out within the Planning and Development Regulations 2001 (as amended) and Directive 2011/92/EU (as amended by Directive 2014/52/EU) (the **"EIA Directive"**).

17.2 Definitions

Article 3(1) of the EIA Directive requires environmental impact assessments to include interactions of key effects assessed. The environmental impact assessment must identify, describe and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a project on the following factors:

a) Population and Human Health.
b) Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC.
c) Land, soil, water, air, and climate.
d) Material assets, cultural heritage, and the landscape.
e) The interaction between the factors referred to in points a to d.

Accordingly, this Environmental Addendum Report seeks has identified the potential impacts of the proposed development, and this chapter summarises all of the interactions identified in the assessment of impacts set out in Chapters 5 to 16.

Impact interactions and inter-relationships have been considered as part of the preparation of the individual, topic specific, chapters so that each assessment takes into account the broader picture of how the proposed scheme may affect the various environmental media. All environmental topics are interlinked to a degree such that interrelationships exist on numerous levels. As outlined in the *Guidelines on the information to be contained in Environmental Impact Assessment Reports (2022)* prepared by the EPA, it is standard practice to evaluate the interaction of effects as a matrix between effects and key factors addressed, accompanied by brief text describing the interactions identified.

Table 17-1 presents a matrix of the potential interactions across each of the various Chapters of the Environmental Addendum Report for both the construction and operational phases of the development.

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17.3 Interactions of Effects

Table 17-1 Interaction between key factors assessed.

Some interaction ✓ No Interaction x	Air Quality		Climate Factors		Noise and Vibration		Biodiversity		Landscape and Visual		Land, Soils and Geology		Water		Population and Human Health		Traffic and Transport		Waste Management		Utilities	
	Con	*Ope*	*Con*	*Ope*	*Con*	*Ope*	*Con*	*Ope*	*Con*	*Ope*	*Con*	*Ope*	*Con*	*Ope*	*Con*	*Ope*	*Con*	*Ope*	*Con*	*Ope*	*Con*	*Ope*
Air Quality			✓	✓	x	x	✓	x	x	x	✓	x	x	x	✓	✓	✓	✓	x	x	x	x
Climate Factors	✓	✓			x	x	x	x	x	x	x	x	✓	✓	x	x	✓	✓	✓	✓	x	x
Noise and Vibration	x	x	x	x			x	x	x	x	x	x	x	x	x	x	✓	x	x	x	x	x
Biodiversity	✓	x	x	x	✓	✓			x	✓	✓	✓	✓	✓	x	x	✓	x	x	x	x	x
Landscape and Visual	x	✓	x	✓	x	x	✓	✓			x	x	x	✓	x	✓	x	✓	x	x	x	✓
Land and Soils	✓	x	✓	x	x	X	✓	x	x	x			✓	x	✓	x	✓	x	x	x	x	x
Water	x	x	x	x	x	x	✓	✓	x	x	✓	x			**x**	✓	x	x	x	x	✓	x
Population and Human Health	✓	✓	✓	✓	✓	✓	x	x	✓	✓	✓	x	✓	✓			✓	✓	✓	x	x	x
Traffic and Transport	✓	✓	x	x	✓	x	x	x	x	x	✓	x	x	x	✓	✓			✓	✓	x	x
Waste Management	x	x	✓	✓	x	x	✓	✓	x	x	✓	x	✓	✓	✓	✓	✓	✓			x	x
Utilities	x	x	x	x	x	x	✓	x	x	x	✓	x	✓	✓	✓	x	✓	x	x	x		

'Con' = Construction Phase Interactions
'Ope' = Operations Phase Interactions

17.3.1 Air Quality

The main interactions with air quality and climate and other topics/media are set out below.

Air quality does not have a significant number of interactions with other topics. The most significant interactions are between population and human health, Traffic, Climate, Land and Soils and Biodiversity.

Population and Human Health

An adverse air quality impact during the construction phase can cause health and dust nuisance issues. There is a low risk of dust-related human health impacts during the construction phase of the proposed development. Best practice mitigation measures will be implemented during the construction phase to ensure that the impact of the proposed development complies with all ambient air quality legislative limits. Therefore, the predicted impact is ***direct***, ***short-term***, ***negative***, ***localised*** and ***not significant*** with respect to Population and Human Health during the construction phase, and be ***long-term, direct, localised, negative***, and ***not significant***. during the operational phase.

Climate

Air Quality and Climate have interactions as the emissions from the burning of fossil fuels during the construction and operational phases generate both air quality and climate impacts. There is no impact on climate due to air quality. However, the sources of impacts on air quality and climate are strongly linked.

Land and Soils

Construction phase activities such as land clearing, excavations, stockpiling of materials etc. have the potential for interactions between Air Quality and Land & Soils in the form of dust emissions. With the appropriate mitigation measures to prevent fugitive dust emissions, it is predicted that there will be no significant interactions between air quality and land and soils during the construction phase.

There are no potentially significant interactions identified between Air Quality, and Land & Soils during the operational phase.

Biodiversity

Dust generation can occur during extended dry weather periods due to construction traffic along haul routes and construction activities such as excavations and infilling works. Dust emissions can coat vegetation leading to a reduction in the photosynthesising ability as well as other effects. There are designated ecological sites within 250 m of the proposed development site area. Dust mitigation measures will be implemented on site as set out in Section 5.7.1. With the implementation of these mitigation measures dust emissions will be minimised and impacts will be ***direct, short-term, negative, localised*** and ***not significant*** with respect to biodiversity.

There are no potentially significant interactions identified between Air Quality, and Biodiversity during the operational phase.

Traffic & Transport

Interactions between Air Quality and Traffic can be significant. With increased traffic movements and reduced engine efficiency, i.e. due to congestion, the emissions of vehicles increase. The impacts of the proposed development on air quality are assessed by reviewing the change in annual average daily traffic on roads close to the site. In this assessment, the impact of the interactions between Traffic and Air Quality are linked but there is no potential for significant impacts from traffic on air quality. The effects

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are considered to be ***direct, short-term, neutral, localised*** and ***not significant*** during the construction phase.

The impact of the interactions between Traffic and Air Quality are considered to be ***long-term, direct, negative*** and ***not significant*** during the operational phase.

17.3.2 Climate Factors

Air Quality

Air quality and climate have interactions due to the emissions from the burning of fossil fuels, traffic and transport during the construction and operational phases generating both air quality and climate impacts. Air quality modelling outputs for traffic and transport are utilised within the Climate Chapter. There is no impact on climate due to air quality. However, the impacts on air quality and climate are strongly linked as they often come from the same sources and actions to reduce the impact of one often benefit the actions to reduce the impact of the other. Problems associated with climate change, such as hotter, drier summers, can often exasperate the problems associated with poor air quality. The effect of the interactions between climate and air quality are ***direct, long-term, neutral and imperceptible*** during the construction phase and ***direct, long-term, neutral and imperceptible*** during the operational phase, which is overall ***not significant*** in EIA terms.

Material Assets: Waste

Waste management measures will be put in place to minimise the amount of waste entering landfill, which has higher associated embodied carbon emissions than other waste management such as recycling. The effect of the interactions between waste and climate are considered to be **direct, short-term, negative and not significant** during the construction and operational phase which is overall **not significant** in EIA terms.

Traffic and Transportation

During the construction and operational phase, there is the potential for interactions between climate and traffic. Vehicles accessing the site will result in emissions of CO_2, a greenhouse gas. The effects of the proposed development on climate have been assessed and the effects of the interactions between traffic and climate are considered to be ***direct, short-term, negative and not significant*** during the construction phase and ***direct, long-term, negative and not significant*** during the operational phase, which is overall ***not significant*** in EIA terms.

Water

The impact of flood risk has been assessed, and the surface water drainage network will be designed and upgraded to cater for increased rainfall in future years as a result of climate change in accordance with the Greater Dublin Drainage Study requirements to cater for a 1-in-100 year storm event with 30% climate change allowance. The effect of the interactions between climate and land, soils, geology are ***direct, short-term, negative and imperceptible*** during the construction phase and direct, ***long-term, negative and imperceptible*** during the operational phase, which is overall ***not significant*** in EIA terms.

17.3.3 Noise and Vibration

This chapter has used information from Chapter 14 Material Assets – Traffic and Transport and the architectural drawings to inform the assessment of noise and vibration impacts. With increased traffic movements, the noise levels in the surrounding area have the potential to increase. The impacts of the proposed development on the noise environment are assessed by reviewing the change in traffic flows on roads close to the site. In this assessment, the impact of the interactions between traffic and noise are considered to be imperceptible to not significant on all junctions.

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While chapter 7 has not outlined the interactions with Population and Human Health, Chapter 13 has outlined the impacts during the construction stage of development in relation to noise and disturbance experienced by neighbouring residents.

Construction activities associated with the proposed development, including site clearance, excavation works, construction plant operation and loading lorries, have the potential to generate temporary noise and vibration impacts on nearby residential receptors. The closest receptors from the area of construction works are residential properties at R1 – Ceder Brooke Avenue and R2 - Barnville Park at distances of approximately 10m. There is the potential for noise levels to reach 80 dB during the worst periods of construction works. This would occur when works are at the closest boundaries to the COP Phase 1 buildings, however, it is noted that for the vast majority of the construction works will be further from the boundary and associated noise levels will be much lower. At distances greater than approximately 40m from construction works, impacts would be not significant. As such, the predicted impact on the population and human health in respect of noise is considered ***negative, moderate to significant and short-term.***

The overall impact is deemed to be ***not significant.***

17.3.4 Biodiversity

The biodiversity elements of this EIAR have involved consultation with a wide section of the Project Team particularly in relation to the Construction Management, design, drainage, lighting and landscape elements of the proposed Project. There are numerous inter-related environmental topics described in detail throughout this EIAR document which are of relevance to the biodiversity chapter. The biodiversity chapter of the EIAR involves interactions with the Landscape Land & Soils, Hydrogeology Water, Air Quality, Noise and Vibration, and Traffic and Transport. Following the implementation of mitigation measures outlined in the EIAR the following interactions are noted.

Landscape and Visual

During the operational phase, the landscaping mitigation measures will improve the degraded nature of the site with green infrastructure, green roofs, nature-based drainage and additions of wildflower meadow and native trees and scrubs. The landscape plan involves detailing in the architectural and landscape design to mitigate wind and shadow effects to create good microclimates. There will be a loss of some vegetation on site, however this will improve with the landscaping measures outlines in the LVIA. Following the implementation of mitigation measures outlined in Chapter 10 (Landscape and Visual), the predicted effects on biodiversity are ***short to long term, imperceptible, not significant*** and ***neutral.*** The biodiversity of the subject site is likely to improve following the completion of landscaping works.

Lands, Soils and Geology

During the construction phase, excavated soil, stone, clay and made ground will be generated from the excavations required to facilitate site levelling and construction of the new foundations. Where material has to be taken off-site, it will be taken for reuse or recovery, where practical, with disposal as a last resort. As such, there is the potential for impacts on local biodiversity via the proposed excavation and re-profiling works. There will be a loss of some vegetation on site, but this is not expected to impact significantly on surrounding areas. Following the implementation of mitigation measures outlined in Chapter 11 (Lands, Soils and Geology), the predicted effects on biodiversity are ***short to long term, imperceptible, not significant*** and ***neutral.*** The biodiversity of the subject site is likely to improve following the completion of landscaping works.

Water

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During the construction and operational phases of development, there is the potential for downstream impacts on the proximate watercourses, and designated conservation sites via contaminated surface water runoff. Following the implementation of mitigation measures outlined in Chapter 12 (Water), the predicted effects on biodiversity are ***short term, imperceptible, not significant*** and ***neutral.***

Air Quality

During the construction phase of development, given the nature and scale of the proposed works, there is the potential for dust and materials to enter the proximate watercourse during site clearance and re-profiling works with the potential for downstream impacts on biodiversity and designated conservation sites. Following the implementation of mitigation measures outlined in Chapter 5 (Air Quality), the predicted effects on biodiversity are ***short term, imperceptible, not significant*** and ***neutral.***

Noise and Vibration

During the construction and operational phases of the development, there will be an increase in disturbance including noise and vibration that could potentially impact on birds on site and mammals proximate to the site. Following the implementation of mitigation measures outlined in Chapter 7 (Noise) , the predicted effects are ***short term, not significant and minor adverse.***

Traffic and Transport

During the construction phase of development, heightened traffic within and immediately surrounding the subject site (resulting from the transport of construction materials and the commuting of workers to the site) has the potential to impact on local biodiversity through increased disturbance. Following the implementation of mitigation measures outlined in Chapter 14 (Traffic and Transport), the predicted effects on biodiversity are ***short and long term, imperceptible, not significant*** and ***neutral.***

17.3.5 Landscape and Visual

The landscape and visual aspects of the development invariably intertwine in relation to the social qualities of passive and active amenities and civic qualities in the public realm, transport, natural heritage particularly relating to enhancing biodiversity and creating resilience to climate change.

17.3.6 Land, Soil and Geology

There will be an interaction between this chapter and the following chapters:

Water

There is a direct interaction between Land, Soils and Geology and Chapter 12 – Water. Construction excavation, exposed soils and stockpiling may result in sediment mobilisation or accidental contamination of surface water and groundwater. Conversely, the poor infiltration characteristics of the site influence the surface water management strategy. The proposed drainage and pollution prevention measures are designed to manage these pathways.

Biodiversity

Potential interactions with Biodiversity (Chapter 8) arise principally through the potential mobilisation of sediment or contaminants from exposed soils during construction. The implementation of the CEMP and associated sediment and pollution control measures will minimise the potential for such effects.

Air Quality and Climate

Earthworks, stockpiling and movement of excavated soils may generate dust during construction. These potential effects are addressed through the dust control measures described in this chapter and the detailed assessment in the Air Quality (Chapter 5) and Climate (Chapter 6).

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Traffic and Transport

The removal of surplus excavated material from the site may generate construction traffic. The movement and management of excavated materials will be coordinated with the construction logistics and traffic management measures set out in the relevant Traffic and Transport and Material Assets chapters (Chapter 14).

Human Health

Potential human health interactions principally relate to the unlikely exposure of construction workers or other receptors to contaminated soil or construction materials. Previous environmental testing has not identified significant contamination in the samples tested. The proposed soil management, pollution prevention and construction safety measures will further minimise potential risks. The detailed assessment of human health is provided in the Population and Human Health chapter.

17.3.7 Water

During the **construction phase**, potential interactions are primarily associated with the mobilisation of silt, suspended solids and potentially polluting substances, which could result in effects on both the water environment and other receptors, particularly **Biodiversity (Chapter 8)** and **Land, Soils and Geology (Chapter 11)**.

Utility (Chapter 16) includes construction works related to Utilities that may interact with excavation and construction traffic, while accidental leakage or pollution from utility works may interact with the water environment.

During the **operational phase**, potential interactions are primarily associated with surface water runoff, drainage and water quality, including the potential for effects on downstream receiving waters and biodiversity. The proposed surface water drainage strategy, including SuDS, attenuation and restricted discharge, will manage surface water runoff and reduce the potential for adverse effects on the receiving environment.

The potential effects of the proposed development on biodiversity and land, soils and geology are assessed separately within **Biodiversity (Chapter 8)** and **Land, Soils and Geology (Chapter 11)**, respectively. Subject to implementation of the mitigation measures outlined in **Section 12.5**, no significant in-combination effects on the hydrological or hydrogeological environment are anticipated.

17.3.8 Population and Human Health

There are numerous inter-related environmental topics described in detail throughout this Environmental Report which are of relevance to population and human health. The main high-level interactions between Population and Human Health and other environmental factors include Air Quality and Climate Factors, Noise and Vibration, Landscape and Visual Impact, Water, Waste Management, and Traffic and Transportation.

Although these have been covered in detail in the respective Chapters of this Environmental Report, it was considered prudent to provide a robust description of the same within this section.

Air Quality and Climate Factors

An adverse impact due to air quality in either the construction or operational phase has the potential to cause health and dust nuisance issues. The mitigation measures that will be put in place at the proposed development will ensure that the impact of the proposed development complies with all ambient air quality legislative limits. Therefore, the predicted impact is ***direct***, ***short-term***, ***negative***, ***localised*** and ***not significant*** with respect to population and human health during construction, and ***long-term, direct, localised, negative***, and ***not significant*** during the operational phase.

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Noise and Vibration

The interaction with Noise and Vibration can have an impact on Population and Human Health, during the construction and operation phase. Chapter 7 on Noise and Vibration notes that increased traffic movements, the noise levels in the surrounding area have the potential to increase. The impacts of the proposed development on the noise environment are assessed by reviewing the change in traffic flows on roads close to the site. In this assessment, the impact of the interactions between traffic and noise are considered to be imperceptible to not significant on all junctions.

Overall, the residual construction and vibration impacts is predicted to be ***negative, not significant, and short term.***

All assessed junctions indicate that operational stage impacts will be ***neutral to negative, imperceptible to slight and long term.***

Following implementation of the sound insulation mitigation the residual inward noise impacts are predicted to be ***long-term, neutral and not significant.***

Noise emissions from operational plant and activities shall be designed in accordance with BS 4142 Methods for Rating and Assessing Industrial and Commercial Sound. The residual impacts are predicted to be ***long-term, negative and not significant.***

As a result, there is no significant impact perceived from the same on population and human health.

Landscape and Visual Impact

The landscape and visual aspects of the development invariably intertwine in relation to the social qualities of passive and active amenities and civic qualities in the public realm, transport, natural heritage particularly relating to enhancing biodiversity and creating resilience to climate change.

The proposed development will impact on the urban landscape to varying degrees in terms of its perceived nature and scale. These effects are tempered and conditioned by sensitivities associated with the receptor. The duration of such impacts is determined by the design life of the proposed development. In this case the building development has a design life of up to 60 years, giving a long-term duration. In that time, with the implementation of maintenance and management regimes, the built fabric will remain in good repair and the landscape, particularly tree planting, will mature.

In assessing the landscape character and visual impacts, there are three main inter-related aspects to be addressed in considering the development proposals, namely:

- The perceived character of the area, how it is affected by the proposal and how well it integrates, particularly in the context of a changing environment.
- Effects of the proposed development on social and cultural amenity
- The proposed views of the development, relative to the existing site and context and the associated impact on visual amenity.

Water

Potential effects on human health in relation to the water environment are primarily associated with the unlikely contamination of groundwater or potable water supplies. The proposed development will connect to the public water supply operated by Uisce Éireann, and the proposed water supply and foul drainage infrastructure will be designed, constructed, tested and maintained in accordance with the relevant requirements. Construction-stage pollution prevention measures will further minimise the potential for contamination. No significant residual effect on human health in relation to the water environment is anticipated.

Material Assets – Traffic and Transportation

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As per Chapter 14 on 'Material Assets – Traffic and Transport', during the construction stage, some of the construction traffic movements will be undertaken by heavy goods vehicles (HGVs), including vehicles movements associated with appointed contractors and staff. The Chapter notes that the expected increase in the day-to-day traffic movements associated with construction activities is less than the benchmark of 10% set out in the TTA Guidelines published by TII.

The Chapter concluded as such no significant impact on roads and traffic will arise from the construction and operational stage of the proposed development.

The existing roundabout at the intersection of Park West Avenue and Park West Road to the south of the railway (Junction 7) is likely to reach capacity about 2027 and exceed capacity by 2042 with or without the proposed development. It is expected that this junction which is remote from the subject site is likely to be upgraded, probably to a signalised crossroads before 2042 by Dublin City Council as part of the ongoing implementation of the Park West – Cherry Orchard LAP.

Due to the proposed mitigation measures outlined above, the residual impact of the proposed development during the operational stage will be slight to moderate, negative and long term for the duration of the operation of Cherry Orchard Point.

Material Assets – Waste Management

During the construction phase, improper handling, storage or removal of construction waste has the potential to give rise to litter, interaction of vermin and short-term odour or contamination risks, all of which could adversely affect workers on site and the local population if unmanaged.

Waste will be segregated at source, stored in covered containers and collected by permitted waste collectors in accordance with the Waste Management Acts. No waste will be stockpiled in public areas and no on site burning or uncontrolled disposal will occur.

With these measures in place, the potential for human exposure to waste, litter or vermin is very low. Following mitigation, the construction phase effects on population and human health will be ***short-term, imperceptible and neutral.***

If unmanaged, operational waste has the potential to affect human health through exposure to improperly stored or handled waste, particularly organic and hazardous materials. However, the implementation of the OWMP will ensure that waste is segregated, stored in appropriate receptacles and collected regularly by authorised contractors. These measures will minimise risks associated with odours, pests and contamination, thereby protecting the health and wellbeing of future residents, workers and the surrounding community. Following mitigation, the effects are expected to be ***long-term, imperceptible and neutral.***

The Chapter 15 Material Assets – Waste Management outlines that subject to implementation of all mitigation measures as set out in this chapter (section 15.6) and the attached RWMP (appendix 15.1) and the OWMP (appendix 15.2), the overall predicted impact of the proposed development is *long-term, imperceptible and neutral.*

As a result, it is considered that there is no subsequent significant impact on population and human health from the proposed development during the construction or operational phases.

17.3.9 Material Assets – Traffic and Transportation

The main high-level interactions between Material Assets – Traffic & Transport and other environmental factors include Noise & Vibration, Air & Climate and Population & Human Health. Please refer to Chapter 17 Interactions for further information on interactions.

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17.3.10 Material Assets – Waste Management

The Chapter 15 Material Assets – Waste Management outlines that subject to implementation of all mitigation measures as set out in this chapter (section 15.6) and the attached RWMP (appendix 15.1) and the OWMP (appendix 15.2), the overall predicted impact of the proposed development is ***long-term, imperceptible and neutral.***

This section discusses interactions between this Chapter and other specialist environmental topics considered in this Environmental Report.

Climate Factors

Waste management contributes to greenhouse gas (GHG) emissions, particularly through landfill disposal and transport. The RWMP prioritises reuse, recycling, and recovery of materials, which will reduce the volume of waste sent to landfill and associated emissions. Adherence to the mitigation measures in Chapter 6 (Climatic Factors), this chapter, and the requirements of the RWMP, will ensure the effect is ***short-term, imperceptible*** and ***neutral***.

Similarly, the OWMP will promote recycling and minimise residual waste during operation, reducing indirect emissions from waste transport and disposal. The direct and indirect effects of the Proposed Development on climate, such as GHG are addressed in Chapter 6, and following implementation of mitigation measures, are expected to be ***long-term, imperceptible*** and ***neutral***.

Biodiversity

The potential impacts on biodiversity in relation to the generation of waste during the construction phase are that the incorrect management of waste could result in littering, pollution issues, spread of invasive species and/or vermin in areas affected. If invasive alien species (IAS) are identified during construction, an Invasive Species Management Plan (ISMP) will be implemented. Adherence to the mitigation measures set out in this chapter, and in Chapter 8 (Biodiversity) will ensure the associated effect is ***neutral, imperceptible*** and ***short-term***.

The potential impacts on biodiversity in relation to the generation of waste during the operational phase are that the incorrect management of waste could result in littering, pollution issues or vermin in areas affected. Adherence to the mitigation measures set out in this chapter, and in Chapter 8 (Biodiversity) will ensure the associated effect is ***neutral, imperceptible*** and ***long-term***.

Land, Soils and Geology

There will be soil and stones excavated to facilitate construction of new foundations, underground services, and the installation of internal roads. Based on a preliminary cut and fill assessment carried out by the Project Engineers (Waterman Moylan Consulting Engineers), the total volume of material to be excavated is estimated to be approximately 27,749 m^3.

It is currently envisaged that none of this excavated material will be reused on site due to the limited opportunities for reuse on site. Consequently, the full volume will require removal offsite for appropriate offsite reuse, recovery, recycling and / or disposal in accordance with relevant environmental and waste management regulations.

The management of contaminated soil, if encountered, will be undertaken in accordance with the Land, Soils and Geology Chapter and the RWMP. Proper classification and handling of soil waste will prevent degradation of land quality and avoid cross-contamination with clean materials. Potential effects on land and soils are addressed in Chapter 11. Adherence to the mitigation measures in Chapter 1 (Land, Soils and Geology, this chapter, and the requirements of the RWMP (Appendix 15.1), will ensure the effect is ***short-term, imperceptible*** and ***neutral***.

No interactions between waste and land and soils are predicted during the operational phase.

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Water

Improper storage or disposal of waste, particularly hazardous substances, has the potential to impact surface water and groundwater quality during the construction phase. The RWMP includes provisions for bunded storage of hazardous materials and protocols for managing contaminated soil. These measures will mitigate the risk of leachate or runoff entering watercourses and protect the water and hydrological environment. Potential effects on hydrology are addressed in Chapter 12 Water and, following the implementation of mitigation measures, are expected to be ***short-term, imperceptible*** and ***neutral***.

During the operational phase, the OWMP will ensure that liquid and cleaning chemicals are stored and disposed of in compliance with best practice to avoid water contamination. Potential effects on hydrology are addressed in Chapter 12 and, following the implementation of mitigation measures, are expected to be ***long-term, imperceptible*** and ***neutral***.

Population and Human Health

During the construction phase, improper handling, storage or removal of construction waste has the potential to give rise to litter, interaction of vermin and short-term odour or contamination risks, all of which could adversely affect workers on site and the local population if unmanaged.

These risks will be minimised through strict adherence to the project specific RWMP and the mitigation measures outlined in Chapter 13 (Population and Human Health). Waste will be segregated at source, stored in covered containers and collected by permitted waste collectors in accordance with the Waste Management Acts. No waste will be stockpiled in public areas and no on site burning or uncontrolled disposal will occur.

With these measures in place, the potential for human exposure to waste, litter or vermin is very low. Following mitigation, the construction phase effects on population and human health will be ***short-term, imperceptible*** and ***neutral***.

If unmanaged, operational waste has the potential to affect human health through exposure to improperly stored or handled waste, particularly organic and hazardous materials. However, the implementation of the OWMP will ensure that waste is segregated, stored in appropriate receptacles and collected regularly by authorised contractors. These measures will minimise risks associated with odours, pests and contamination, thereby protecting the health and wellbeing of future residents, workers and the surrounding community. Potential effects on Population and Human Health are addressed in Chapter 13. Following mitigation, the effects are expected to be ***long-term, imperceptible*** and ***neutral***.

Traffic and Transport

During the construction phase, the generation, handling and removal of waste will result in additional vehicle movements, primarily associated with the transport of excavated materials, construction waste and deliveries / collections of skips. These vehicle movements will occur alongside other construction related traffic and therefore will contribute to the overall short-term increase in traffic volumes in the vicinity of the works. However, waste related traffic will be short-term and intermittent, confined to the active construction period and managed through the measures outlined in in Chapter 14 (Material Assets - Traffic & Transportation). Waste will only be removed by permitted collectors, and vehicle routing will follow agreed routes. Provided the mitigation measures detailed in Chapter 14 and this chapter are adhered to, the predicted effects are ***short-term***, ***imperceptible*** and ***neutral***.

During operation, waste arising from the Proposed Development will be managed through scheduled collections by licensed waste contractors. The OWMP will ensure efficient segregation, minimisation of residual waste and appropriately timed collections. Provided the mitigation measures detailed in

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Chapter 14 and this chapter are adhered to, the predicted effects are ***long-term***, ***imperceptible*** and ***neutral***.

17.3.11 Material Assets – Utilities

Potential in-combination effects with other EIAR topics have been considered during both the construction and operational phases of the Proposed Phase 3 development.

During construction, utility excavation, trenching, service connections and diversion works may interact with activities assessed under Land, Soils and Geology, Biodiversity, Water, and Traffic and Transport. Accidental damage to existing services, temporary service interruptions, or accidental leakage or pollution from utility works could also interact with the water environment. These potential interactions will be managed through the mitigation, construction management and utility-provider coordination measures set out in this chapter and the relevant measures identified in **Chapters 8 – Biodiversity**, **11 – Land, Soils and Geology**, and **12 – Water**.

During operation, increased demand for water supply, wastewater, electricity, gas and telecommunications services, together with the operation of the proposed surface water and foul drainage infrastructure, may interact with the relevant environmental topics, particularly Water and other material assets. These effects have been considered in conjunction with the assessments provided in the relevant EIAR chapters and will be managed through the proposed utility design, network capacity confirmation, operational requirements and ongoing inspection and maintenance measures.

Subject to implementation of the proposed mitigation, coordination, testing, commissioning and operational management measures, no significant in-combination effects on material assets – utilities are anticipated.

17.4 Other Effects

Schedule 6 Item 2(e) of the Planning and Development Regulations, 2001 as Amended requires that an EIAR contains a description of the likely significant effects (including direct, indirect, secondary, cumulative, transboundary, short, medium, and long-term, permanent, and temporary, positive, and negative) of the project on the environment resulting from the following:

- the Use of Natural Resources

As the proposed development will not require the use of natural resources that are in short supply no likely significant effects on the environment are expected to arise from the use of natural resources in the construction / operation of the project

- the emission of pollutants, the creation of nuisances and the disposal and recovery of waste.

No likely significant effects on the environment are expected to arise from the emission of pollutants, the creation of nuisances or the elimination of waste associated with this project, as the relevant assessments included in this Environmental Report set out.

- the risks to human health, cultural heritage, or the environment (for example due to accidents or disasters)

During the construction phase, the risk of accidents and/ or disasters caused by the project, arising from the potential for construction accidents, are addressed under Health and Safety Regulations and other codes. When directly relevant to the planning and EIA process, certain mitigation measures are identified in order to prevent and/ or mitigate any significant effects.

During the operational phase, the risk of fire related accidents is addressed through the Building Regulations (Fire Safety) and is also addressed through mitigation measures, where applicable. Specifically, residual risks of fire and road traffic accidents will be managed by emergency services.

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The likely significant effects of risks due to major accidents or disasters are described in the Assessment Chapters, where relevant.

- The technologies and the substances used.

This is an urban residential led mixed-use development and there are no technologies or substances associated with the project which would significantly or adversely affect the environment.

17.5 References

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (Environmental Protection Agency 2022)
- Guidelines on the Information to be contained in Environmental Impact Statements (EPA, 2002)
- Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (EPA, 2002)

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18 Summary of Mitigation Measures and Residual Impacts

18.1 Introduction

The preparation of the Parent EIAR and this Environmental Report for Phase 3 (subject planning application), was an iterative process, linking into the design development process. A similar approach was adopted in approved Phase 2.

The approach adopted in the impact assessment and preparation of the EIAR was based on the recommendations in the *Guidelines on information to be contained in Environmental Impact Assessment Reports (EPA, 2022).*

The proposed design was developed and the potential impacts of the proposed development on the receiving environment were identified.

18.2 Mitigation Measures

This Section of the Environmental Report provides a summary overview of the various mitigation measures proposed across the various environmental topics. The mitigation measures will be incorporated into the Preliminary Construction Environmental Management Plan (CEMP) prepared for the site. A Preliminary CEMP has been prepared and is included with this application.

The following chapters note some of the issues, actions, and mitigation measures to be undertaken by the Main Contractor as part of site preparation and during construction works.

A programme will be agreed between the Main Contractor, Project Ecologist and Project Arborist for undertaking the works specific to their expertise, and implementation of any mitigation measure and arranging of supervision is required before commencement of any works on site.

Arboricultural Impact Assessment

The Arboricultural Impact Assessment (AIA) prepared by Arbore-care in July 2024 for Sites 4 and 5 of the Masterplan lands, submitted as part of the Approved Phase 2 planning application, identified Site 4 as a large greenfield site subdivided by hedgerows and containing extensive areas of scrub willow and hawthorn. The assessment also confirmed that no trees were present within Site 5.

An updated Arboricultural Impact Assessment, prepared by Arbore-care in January 2026 for the Proposed Phase 3 development, confirms the findings of the 2024 survey and similarly concludes that no trees are present within the Site 5 subject lands.

Accordingly, mitigation measures relating to the establishment of arboricultural exclusion zones are not applicable to the Site 5 subject lands, as no trees were identified within the site during either arboricultural assessment.

Archaeological Environment

The project Archaeologists, Archer Heritage Planning Ltd., provided the Archaeological Testing Report for Site 4 and Site 5 submitted as part of the Approved Phase 1 planning application. As part of this, a geophysical survey was undertaken under licence number: 22R0221. Text excavations were performed in July 2022, comprising 14 No. trenches, all of which were located on Site 4. The project Archaeologists did not undertake test excavations on the Site 5 subject lands as the lands were not suitable for excavation due to large mounds of made ground. Further detail in relation to this can be found in the Cultural Heritage and Archaeology Chapter of the Environmental Report - Addendum to Permitted Phase 1 Parent EIAR, accompanying this application. 5.2.1 Site Clearance & Preparation Prior to construction work the site clearance groundworks will need to be undertaken. This will involve the removal of made ground and scraping and stockpiling of topsoil. The project archaeologist for the

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masterplan lands has recommended that the scraping of topsoil be supervised by a suitably qualified archaeologist. 5.2.2 Demolition Phase No demolition phase is expected for the subject development as no existing structures are present on site. 5.2.3 Topsoil The project archaeologist for the masterplan lands has recommended that the scraping of topsoil be supervised by a suitably qualified archaeologist.

Site Clearance & Preparation

Prior to construction work the site clearance groundworks will need to be undertaken. This will involve the removal of made ground and scraping and stockpiling of topsoil. The project archaeologist for the masterplan lands has recommended that the scraping of topsoil be supervised by a suitably qualified archaeologist.

Demolition Phase

No demolition phase is expected for the subject development as no existing structures are present on site.

In the case of topsoil careful planning and on-site storage can ensure that this resource is reused on-site as much as possible. Any surplus of soil not reused on site can be sold. However, topsoil is quite sensitive and can be rendered useless if not stored and cared for properly.

- Topsoil will be kept completely separate from all other construction waste as any cross contamination of the topsoil can render it useless for reuse.
- Topsoil will be protected from all kinds of vehicle damage and kept away from site-track, delivery vehicle turning areas, and site plant and vehicle storage areas.

Topsoil will be stored in stockpiles less than two metres in height as otherwise the soil matrix (internal structure) can be damaged beyond repair. It will also be kept as dry as possible and used as soon as possible to reduce any deterioration through lengthy storage and excess moving around the site. In the unlikely case of a topsoil surplus the Contractor will carry out appropriate environmental chemistry testing in order to determine the waste classification of the soils that are to be excavated and that will include Waste Acceptance Criteria testing. The test regime will be agreed with the receiving landfill operator, if not suitable for an Article 27 transfer, and the testing will be carried out by an accredited laboratory. Records of topsoil storage, movements and transfer from site will be kept by the C&D Waste Manager. It is projected that all the topsoil will be reused on-site for landscaping purposes in both private residential gardens and public green areas.

Cut and Fill Volumes

With the implementation of practical design measures, the requirement for fill material during the course of construction of the development has been reduced as far as practically possible. In order to optimise the impact of the generation of excavated material the following principles have been considered during the detail design and construction phase:-

- Surplus subsoil excavated from the site will be reviewed for possible reuse as engineering fill.
- Surplus unsuitable sub-soils generated by excavations on site will be reviewed for reuse as landscaping or non-engineering fills on site.
- Careful separation of builder’s rubble packaging and contaminated waste from re-usable material will result in the minimisation of the disposal of material to landfill.

Where feasible, excavated subsoil will be used as part of the construction works with suitable surplus subsoil being used in areas requiring fill where appropriate. Any unsuitable and / or surplus subsoil is required to be disposed of appropriately. McGahon's Surveyors have stated that based on the current earthworks assessment, approximately 27,749m³ of material will be generated from reduced level excavations. The available ground investigation and waste classification reports do not specifically confirm the suitability of excavated site-won material for reuse as engineered fill within the proposed development. The investigations identified Made Ground containing varying quantities of anthropogenic

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materials, while the underlying cohesive deposits generally comprise low to intermediate plasticity clay. Further assessment and material testing would therefore be required to confirm the suitability of any site-won material proposed for reuse as engineered fill, including assessment of its geotechnical properties and environmental quality.

The estimated cut and fill volumes for the masterplan lands corresponds with the original estimated bulk excavation volume (as per the Approved Phase 1 EIAR) of 65,300 m3 and the original estimated volume of material to be removed off-site, of 30,000 m3. The final excavation volumes should be confirmed by the Project Surveyor.

All excavated materials will be stored on site in the spoil heap/stockpile area of the construction compound as per the Proposed Construction Compound Layout Plan. The Landscaping Plan has been optimised to ensure that cut materials will be incorporated to the site as part of the final reinstatement and regrading works including future phases to minimise the requirement for offsite disposal. Please refer to the Landscape Architects reports and drawings in this regard.

The excavation of soil can lead to dust pollution. Methods and mitigation measures for this topic are discussed in Chapter 10 of this report. It is anticipated that there will be a demand for additional soil volumes to be imported for the project, such that an Article 27 notification to the EPA will be required. All vehicles entering the site will be inspected so as to ensure they are free from muck/dirt which may carry invasive species. No importation of soil type materials to the site is permitted without an Article 27 notification having been approved by the EPA.

Management of Watercourse

There is no direct hydrological connectivity from the subject site, Site 5, to natural watercourses or surface water networks. There is potential for an indirect hydrological connectivity to the local surface water drainage network, whereby during heavy rainfall events, surface water from the sites flows over the site boundary to the road gullies on the adjacent streets.

The most likely potential sources of contamination to the local surface water network are from silt and suspended particles, and from chemical compounds entering these networks as surface water runoff.

Silt and suspended particles may arise from surface runoff from stockpiled materials or from the pumping of water volumes in excavations.

Chemical contamination can result due to fuel/chemical leaks and spills. Spoil heap/stockpiles will not be located within 20m of the existing surface water networks. Spoil heaps/stockpiles will be considered for seeding if their storage is likely to be longer than a few seasons. Drainage diversion ditches will be constructed between the stockpile area and local surface water networks. This drainage ditch will flow to a sedimentation/settlement pond prior to out falling to the surface water network. A Discharge Licence will be obtained from the local Authority by the Main Contractor. If topography doesn't allow for a gravity outfall from the sedimentation/settlement pond, a commercially available modular settlement tank will be utilised for the project, or outfall volumes may instead be pumped. Untreated surface water will not be permitted to flow to any natural or piped surface water network.

Further details on method statements and mitigation measures against pollutant run-off is located in Chapter 12 of this report.

Invasive species

The project ecologist for the masterplan lands, Gerard Tobin, has identified Buddleja davidii onsite (on Site 4) as part of the Approved Phase 1 and Phase 2 development planning applications.

The 2024 assessment undertaken by the previous project ecologist, Gerard Tobin, for the Phase 2 Subject Site, advises that "there is currently only one non-native invasive species on site in Cherry

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Orchard. There is no necessity to eradicate this plant as the process of development will control its spread."

No flora or habitats of conservation importance were noted during the surveys by Altemar ecologist for Phase 3 within the subject development's Phase 3 boundary.

There is a potential requirement for the importation of soil. This importation is subject to an article 27 notification to the Environmental protection Agency (EPA). A part of the Article 27 notification will involve the review of the source site from where the import material is located to ensure there are no invasive species present prior to importation.

Plant and delivery vehicles entering the site will be clean and will be inspected prior to entry, so as to ensure no importation of invasive species to the site.

Nuisance dust emissions from construction activities are a common and well recognised problem. Fine particles from these sources are recognised as a potential significant cause of pollution. The main contractor will be required to demonstrate that both nuisance dust and fine particle emissions from the site are adequately controlled and are within acceptable limits. Dust and fine particle generation from construction and demolition activities on the site can be substantially reduced through carefully selected mitigation techniques and effective management. Once particles are airborne it is very difficult to prevent them from dispersing into the surrounding area. The most effective technique is to control dust at source and prevent it from becoming airborne, since suppression is virtually impossible once it has become airborne. The following are techniques and methods which are widely used currently throughout the construction industry, and which will be used in the development.

1. The roads around the site are all surfaced, and no dust is anticipated arising from unsealed surfaces.
2. A regime of 'wet' road sweeping will be set up to ensure the roads around the immediate site are as clean and free from dirt / dust arising from the site, as is reasonably practicable. This cleaning will be carried out by approved mechanical sweepers.
3. Footpaths immediately around the site will be cleaned by hand regularly, with damping, as necessary.
4. High level walkways and surfaces such as scaffolding will be cleaned regularly using safe 'wet' methods, as opposed to dry methods.
5. Vehicle waiting areas or hard standings will be regularly inspected and kept clean by brushing or vacuum sweeping and will be regularly sprayed to keep moist, if necessary.
6. Vehicle and wheel washing facilities will be provided at the site exit(s). If necessary, vehicles will be washed down before exiting the site.
7. Netting will be provided to enclose scaffolding in order to mitigate escape of airborne dust from the new buildings.
8. Vehicles and equipment will not emit black smoke from exhaust system, except during ignition at start up.
9. Engines and exhaust systems will be maintained so that exhaust emissions do not breach stationary emission limits set for the vehicle / equipment type and mode of operation.
10. Servicing of vehicles and plant will be carried out regularly, rather than just following breakdowns.
11. Internal combustion plant will not be left running unnecessarily.
12. Exhaust direction and heights will be such as not to disturb dust on the ground and to ensure adequate local dispersal of emissions.
13. Fixed plant such as generators will be located away from residential areas.
14. The number of handling operations for materials will be kept to a minimum in order to ensure that dusty material is not moved or handled unnecessarily.
15. The transport of dusty materials and aggregates will be carried out using covered / sheeted lorries.

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16. Material handling areas will be clean, tidy, and free from dust.
17. Vehicle loading will be dampened down and drop heights for material to be kept to a minimum.
18. Drop heights for chutes / skips will be kept to a minimum.
19. Dust dispersal over the site boundary will be minimised using static sprinklers or other watering methods, as necessary.
20. Stockpiles of materials will be kept to a minimum and if necessary, they will be kept away from sensitive receptors such as residential areas etc.
21. Stockpiles where necessary, will be sheeted or watered down.
22. Methods and equipment will be in place for immediate clean-up of spillages of dusty material.
23. No burning of materials will be permitted on site.
24. Earthworks excavations will be kept damp where necessary and where reasonably practicable.
25. Cutting on site will be avoided where possible by using pre-fabrication methods.
26. Equipment and techniques for cutting / grinding / drilling / sawing / sanding etc, which minimise dust emissions and which have the best available dust suppression measures, will be employed.
27. Where scabbling is to be employed, tools will be fitted with dust bags, residual dust will be vacuumed up rather than swept away, and areas to be scabbled will be screened off.
28. Wet processes will be used to clean building facades if possible. If dry grit blasting is unavoidable, then areas of work will be sealed off and dust extraction systems used.
29. Where possible pre-mixed plasters and masonry compounds will be used to minimise dust arising from on-site mixing.
30. Prior to commencement, the main contractor will identify the construction operations which are likely to generate dust and to draw up action plans to minimise emissions. Furthermore, the main contractor will prepare environmental risk assessments for all dust generating processes, which are envisaged.
31. The main contractor will allocate suitably qualified personnel to be responsible for ensuring the generation of dust is minimised and effectively controlled.
32. Vehicles using the adjacent public roads network will have their speed restricted, and this speed restriction must be enforced rigidly. On any un-surfaced road, the limit shall be 20 kph, and on surfaced roads as site management dictates.

Lighting During Construction (and Operational Phase)

- Construction phase lighting will be controlled to minimise light pollution as a matter of good practice. Controls will include implementations of lights out hours when construction is not active on site.
- Operational phase lighting at night will only be used when necessary and will be direction/cowled and at a low level where possible. Illumination of surrounding canopies will be avoided.

Noise/Vibration

The contractor will meet the requirements of the Air Quality Monitoring and Noise Control Unit's Good Practice Guide for Construction and Demolition, which has been produced with reference to the London Good Practice Guide: Noise and Vibration Control for Demolition and Construction produced by the London Authorities Noise Action Forum, July 2016. Environmental Noise Mitigation Measures:

General Considerations:

1. All site staff will be briefed on noise mitigation measures and the application of best practicable means to be employed to control noise.
2. Site hoarding will be erected to maximise the reduction in noise levels.
3. The contact details of the Main Contractor and site manager will be displayed to the public, together with the permitted operating hours, including any special permissions given for out of hours work.

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4. In the event that the Main Contractor gets a complaint about noise from a neighbour he or she will act immediately to remedy the situation.
5. The site entrance will be located to minimise disturbance to noise sensitive receptors.
6. Internal haul routes will be maintained, and steep gradients will be avoided.
7. Material and plant loading and unloading will only take place during normal working hours unless the requirement for extended hours is for traffic management (i.e. road closure) or health and safety reasons (advance notification, or possibly an application to the local council would be required if proposing to work outside non-typical hours).
8. Use rubber linings in chutes, dumpers, and hoppers to reduce impact noise.
9. Minimise opening and shutting of gates through good coordination of deliveries and vehicle movements.

Plant:

1. Ensure that each item of plant and equipment complies with the noise limits quoted in the relevant European Commission Directive 2000/14/EC.
2. Fit all plant and equipment with appropriate mufflers or silencers of the type recommended by the manufacturer.
3. Use all plant and equipment only for the tasks for which it has been designed.
4. Shut down all plant and equipment in intermittent use in the intervening periods between work or throttle down to a minimum.
5. Power all plant by mains electricity where possible rather than generators.
6. Maximise screening from existing features or structures and employ the use of partial or full enclosures for fixed plant.
7. Locate movable plant away from noise sensitive receptors where possible.
8. All plant operators will be qualified in their specific piece of plant. 9
9. Compressors and generators will be sited in areas least likely to give rise to nuisance where practicable.

Vehicle activity:

1. Ensure all vehicle movement (on site) occur within normal working hours. (Other than where extension of work requiring such movements has been granted in cases of required road closures or for health and safety reasons).
2. Plan deliveries and vehicle movements so that vehicles are not waiting or queuing on the public highway, if unavoidable engines should be turned off.
3. Plan the site layout to ensure that reversing is kept to a minimum.
4. Where reversing is required use broadband reverse sirens or where it is safe to do so disengage all sirens and use banks-men.
5. Rubber/neoprene or similar non-metal lining material matting to line the inside of material transportation vehicles to avoid first drop high noise levels.
6. Wheel washing of vehicles prior to exiting the site will take place to ensure that adjoining roads are kept clean of dirt and debris. Regular washing of adjoining streets will also take place as required by road sweepers.

Demolition Phase (not expected):

Demolition is not expected on the Phase 3 Subject Site, however, if any demolition works are to be carried out, it will be subject to the following measures:

1. Employ the use of acoustic screening; this can include planning the demolition sequence to utilise screening afforded by buildings to be demolished.

2. If working out of hours for Health and Safety reasons (following approval by council) limit demolition activities to low level noise activity (unless absolutely unavoidable).

3. Use low impact demolition methods such as non-percussive plant where practicable.

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4. Use rotary drills and 'bursters' activated by hydraulic or electrical power or chemically based expansion compounds to facilitate fragmentation and excavation of hard material.

5. Avoid the transfer of noise and vibration from demolition activities to adjoining occupied buildings through cutting any vibration transmission path or by structural separation of buildings.

6. Consider the removal of larger sections by lifting them out and breaking them down either in an area away from sensitive receptors or off site.

Ground Works and Piling Phase:

1. The following hierarchy of groundwork/piling methods will be used if ground conditions, design and safety allow;
   - Pressed in methods, e.g., hydraulic jacking
   - Auger/bored piling
   - Diaphragm walling
   - Vibratory piling or vibro-replacement
   - Driven Piling or dynamic consolidation
2. The location and layout of the piling plant will be designed to minimise potential noise impact of generators and motors.
3. Where impact piling is the only option, utilise a non-metallic dolly between the hammer and driving helmet or enclose the hammer and helmet with an acoustic shroud.
4. Consider concrete pour sizes and pump locations. Plan the start of concrete pours as early as possible to avoid overruns.
5. Where obstructions are encountered, work will be stopped, and a review undertaken to ensure that work methods that minimise noise are used.
6. When using an auger piling rig do not dislodge material from the auger by rotating it back and forth. Use alternate methods where safe to do so.
7. Prepare pile caps using methods which minimise the use of breakers, e.g., use hydraulic splitters to crack the top of the pile.

Monitoring:

1. Carry out regular on-site observation monitoring and checks/audits. Such checks will include;

   • Hours of work
   • Presence of mitigation measures
   • Number and type of plant
   • Construction methods
2. In the event that the Main Contractor gets a complaint about noise from a neighbour he or she will act immediately to remedy the situation.
3. A sound level digital meter will be employed as necessary to monitor noise, with results recorded to inform the contractor of noise level.
4. Site reviews must be recorded and made available for inspection.
5. Appraise and review working methods, processes, and procedures on a regular basis to ensure continuous development of BPM.

Communication and Liaison:

1. A Community Liaison Strategy will be developed by the developer in consultation with local residents/businesses and a single point of contact nominated to engage with Dublin City Council and the residents/businesses and to handle complaints and communication of site information.

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2. All site staff will be briefed on the complaints procedure and mitigation requirements and their responsibilities to register and escalate complaints received. Where appropriate, a resident monitoring committee will be established for the duration of the project in order to promote best construction management and considered construction practices to protect the amenities of adjacent properties as provided in Section 15.18.1 of the Development Plan.

Section 15.18.1.2 of the same documents advises that': "Considered Construction seeks to improve the image of the construction industry which requires registered contractors to commit to care about appearance, respect the community, protect the environment, secure everyone's safety and value their workforce. Dublin City Council will support the provision of considered construction in all planning applications. Commitment to the scheme should be identified as part of the Construction Management Plan submitted with planning applications."

Spills and Leaks

Spills and leaks may contaminate soil, groundwater, and surface water networks via surface run-off. Method statements and mitigation measures reduce the potential for leaks and spills and limit their impact should they occur. As any potential leaks and spills are likely to be from storage containers to the surface of the ground, the associated methods and measures are discussed in Chapter 10 of this report however, these measures nonetheless also provide protection to the soils and groundwater.

18.2.1 Air Quality

Construction Stage

The proactive control of fugitive dust will ensure the prevention of significant emissions, rather than an inefficient attempt to control them once they have been released. The main contractor will be responsible for the coordination, implementation, and ongoing monitoring of the Dust Management Plan. The mitigation measures for controlling dust are listed below and can also be found in the Dust Management Plan in Appendix 5.1 of the Parent EIAR. These measures will be incorporated into the Construction Environmental Management Plan (CEMP) prepared for the site. An Preliminary CEMP has been prepared and is enclosed separately.

The objective of dust control at the site is to ensure that no significant nuisance occurs at nearby sensitive receptors. In order to develop a workable and transparent dust control strategy, the following measures draw on best practice guidance from Ireland, the UK (IAQM (2024), BRE (2003), The Scottish Office (1996), UK ODPM (2002)) and the USA (USEPA, 1997).

Communications

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.
- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
- Display the head or regional office contact information.

Site Management

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- Make the complaints log available to the local authority when asked.
- Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the logbook.

Preparing and Maintaining the Site

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- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
- Fully enclose site or specific operations where there is a high potential for dust production and the site is actives for an extensive period.
- Avoid site runoff of water or mud.
- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.
- Cover, seed or fence stockpiles to prevent wind whipping.

Operating vehicle/machinery and sustainable travel

- Ensure all vehicles switch off engines when stationary – no idling vehicles.
- Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable.
- Impose and signpost a maximum-speed-limit of 25 kph on surfaced and 15 kph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, *cycling, walking, and car-sharing).*

Operations

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate
- Use enclosed chutes and conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

Waste management

- Bonfires and burning of waste materials are legally prohibited.

Measures Specific to Earthworks

- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable

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- Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as is practicable.
- Only remove the cover in small areas during work and not all at once.

Measures Specific to Construction

- Avoid scabbling (roughening of concrete surfaces) if possible.
- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.
- For smaller supplies of fine powder materials, ensure bags are sealed after use and stored appropriately to prevent dust.

Measures Specific to Trackout

- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.
- Avoid dry sweeping of large areas.
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
- Record all inspections of haul routes and any subsequent action in a site logbook.
- Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).
- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.
- Access gates to be located at least 10 m from receptors where possible.

Operational Stage

The effect of the operational traffic associated with proposed development on air quality is predicted to be not significant with respect to the operational phase in the long term. Therefore, no site-specific mitigation measures are required.

18.2.2 Climate Factors

Construction Stage

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Embodied carbon of materials and construction activities will be the primary source of climate impacts during the construction phase. As mentioned in the Preliminary Construction Environmental Management Plan (CEMP) prepared by Waterman Moylan, the following measures have been taken to reduce the impact:

- All plant powered by mains electricity where possible rather than generators.
- Surplus subsoil excavated from the site will be reviewed for possible reuse as engineering fill.
- Surplus unsuitable sub-soils generated by excavations on site will be reviewed for reuse as landscaping or non-engineering fills on site.
- Careful separation of builder's rubble packaging and contaminated waste from re-usable material will result in the minimisation of the disposal of material to landfill.
- Cutting on site will be avoided where possible by using pre-fabrication methods.
- Design optimisation incorporated by reducing the requirement for fill material during the course of construction of the development.

In addition to the above, during the construction phase the following best practice measures shall be implemented on site to prevent significant GHG emissions and reduce impacts to climate:

- Construction staff will be encouraged to reduce car use by car sharing and / or travelling by public transport.
- Workers will be encouraged by their employer to keep themselves informed about the public transport options and active mode facilities provided in the surrounding area.
- Shut down all plant and equipment in intermittent use in the intervening periods between work or throttle down to a minimum.
- Plan deliveries and vehicle movements so that vehicles are not waiting or queuing. If unavoidable, engines to be turned off.
- Prohibition of on-site burning of materials.
- Prevention of on-site or delivery vehicles from leaving engines idling, even over short periods.
- Engines and exhaust systems will be maintained so that exhaust emissions do not breach stationary emission limits set for the vehicle / equipment type and mode of operation.

Operational Stage

A number of mitigation measures have been incorporated into the design of the development to reduce the impact on climate wherever possible. These are taken from in the Climate Action Energy Statement written by Waterman Moylan in July 2026.

The development shall include several energy conservation measures to achieve a high energy rating:

- Space heating to be undertaken using air source heat pumps (ASHP). Total heat output roughly three to four times greater than the electrical input, (i.e. a coefficient of performance of 3 to 4 or efficiency of 300% to 400%) making the system highly energy-efficient.
- Achieve a BER Rating in line with the *Part L 2022 Dwellings* requirements. This requires reduction of 70% in energy consumption and 65% in carbon emissions.
- Strict on-site control of building techniques to significantly reduce infiltration losses, resulting in equivalent savings in energy consumption, emissions and running costs.

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- 20% of the total energy consumed within the dwelling must be provided from renewable thermal sources (solar thermal, biomass, heat pumps) or renewable electrical sources (Photovoltaic, Micro-wind).

A number of sustainable design features have been considered within the design to achieve the sustainability targets of the proposed development. These include:

- The proximity of the development to public transportation networks.
- The proximity of the proposed development to active travel networks.
- Installation of infrastructure for electric vehicle (EV) charging for representing 50% of the total parking spaces.

The proposed development also follows the Land Development Agency's (LDA) sustainable design philosophy that is as follows:

- **Be Lean**: Use less energy and manage demand during operation through building design efficiency, fabric and servicing improvements and the incorporation of flexibility measures
- **Be Clean:** Exploit local energy resources (such as secondary heat) and supply energy efficiently and cleanly by connecting to district heating networks
- **Be Green:** Maximise opportunities for renewable energy by producing, storing and using renewable energy on site
- **Be Seen:** Monitor, verify and report on energy performance

The above measures will assist in reducing emissions associated with additional transport as a result of the Proposed Development.

CCRA Adaptation Measures - Construction Stage

In terms of impact on the proposed development due to climate change, during construction the contractor will be required to update the CEMP and plan to adapt against the effects of extreme rainfall/flooding, extreme temperatures and wind and storms through site risk assessments, method statements and good site management practice. Measure such as storing pollutants in bunded areas, will be taken to reduce vulnerability to pollution incidents exacerbated by heavy rainfall, which is a key climate risk during construction. All materials used during construction will be accompanied by certified datasheets which will set out the limiting operating temperatures. Temperatures can affect the performance of some materials, and this will require consideration during construction.

CCRA Adaptation Measures – Operational Stage

Extreme heat and cold

Extreme temperatures, both hot and cold, can affect building materials and infrastructure; however, the project will use materials that comply with current standards and are designed to withstand projected climate extremes. Cold events are expected to decline, reducing the risk of cracking from freeze thawing of road surfaces and deterioration of auxiliary systems and infrastructure. However, cold events are still anticipated, and systems have been designed with this in mind, for example, the surface water pipes constructed in accordance with the GDSDS & DCC guidelines. The buried nature of the infrastructure limits the effects of freezing temperatures or extreme heat on network performance. While potential heat-related impacts such as road surface softening are possible during heatwaves, projected extremes are not expected to reach critical thresholds for infrastructure failures seen in other European countries. Nonetheless, the infrastructure's summer peak internal temperatures will be aligned with Part L / TM59.

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Further, tree planting and green infrastructure will provide shading and sequester carbon dioxide, reducing global warming. With expected climate change scenarios, the planting strategy focuses on creating biodiverse planted areas mimicking nature, to create resilient ecosystems. In general, the landscape planting strategy focuses on enhancing biodiversity and native species which require less watering and general maintenance. Specifically, drought tolerant species are proposed to the podium level courtyards in order to minimise the need for irrigation.

As a result of the above adaptation measures, the proposed development is at low risk from extreme temperatures.

Pluvial Flooding

Pluvial flooding is the result of rainfall-generated overland flows which arise before run-off can enter any watercourse or sewer. It is usually associated with high-intensity rainfall. The provision of a suitable surface water drainage system for any proposed development on the site will mitigate against this risk. The flood risk assessment was carried out by Waterman Moylan in accordance with the Planning System and Flood Risk Management Guidelines for Planning Authorities (2009), published by the Department of Environment, Heritage and Local Government in conjunction with the Office of Public Works (EHLG/OPW). The report mentions that the proposed development does not contain soils that provide adequate infiltration rates for surface water management features relying solely on infiltration. However, localised infiltration within Sustainable Urban Drainage Systems (SuDS) may be feasible where features such as engineered rain gardens, swales, or bioretention tree pits are designed with appropriate overflow mechanisms and positive drainage connections to the main surface water network.

The FRA determines that the pluvial flooding risk to the proposed development is low keeping in mind accommodating the 1-in-100-year rainfall events, including a 30% allowance for climate change. This aligns with predicted max 1-day rainfall (Table 6-7) which is to increase up to 26% in RCP 4.5 scenario and 29% in medium term RCP 8.5 scenario. With the appropriate SuDS and other measures in place, the risk of pluvial flooding in the long term RCP 8.5 scenario is also low. Provided the drainage network is adequately maintained, surcharging of the proposed on-site system is considered unlikely.

The following Sustainable Urban Drainage System (SuDS) features have been incorporated into the proposed development design:

- Green and Blue Roofs;
- Raingardens;
- Swales;
- Bioretention tree pits;
- Soft landscaping;
- Permeable surfaces;
- Tree Root Systems; and
- Attenuation Areas.

Provided that the above adaptation measures are in place and ensured, the proposed development is at low risk from pluvial flooding.

Extreme Wind

To mitigate against the effects of extreme winds, suppliers are expected to ensure brackets and fixings are fit for purpose. In terms of the buildings and structures, foundations are designed to transfer load from high winds experienced by buildings directly to ground in accordance with the relevant Eurocodes.

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The landscaped areas pose a risk from flying debris. To reduce this risk, the Landscape Architect has confirmed maintenance, and management plans will include:

- **Woodland windbreak planting:** Wind-tolerant native species are proposed along the site boundary, including a woodland belt to the M50 that functions as a windbreak while also filtering noise and air pollution.
- **Sheltered fruit tree planting:** Fruit trees are located within the more sheltered main park and communal courtyard areas to reduce exposure to prevailing winds.
- **Street tree mix:** A combination of wind-tolerant species and fruit trees are proposed along streets to balance resilience and amenity value.
- **Woonerf wind attenuation design:** Tree planting within east-west oriented woonerf streets (i.e. shared surface residential streets where pedestrians, cyclists and vehicles coexist at low speeds) is arranged across the street profile to reduce wind speeds, avoid wind tunnel effects, and introduce a chicane effect (i.e. a deliberately staggered and non-linear vehicle route created through planting and layout to slow traffic and discourage straight-line driving) to calm vehicular movement.
- **Low-level willow planting:** Willow is incorporated within Phase 3 shrub planting for biodiversity and replacement of existing scrub, limited to low-growing and understorey species to minimise wind exposure.
- **Tree stability design:** Adequate soil depth and volume are provided to support root development and ensure trees can withstand wind loading and storm events, consistent with good practice in EIAR landscape design.

In light of the above adaptation measures, the proposed development is at low risk from extreme wind events.

18.2.3 Noise and Vibration

Construction Noise

With regard to construction activities, best practice control measures for noise and vibration from construction sites are found within BS 5228 (2009 +A1 2014) Code of Practice for Noise and Vibration Control on Construction and Open Sites Parts 1 and 2. Predictions indicate that moderate construction noise impacts are expected to occur when work is ongoing at boundary locations adjacent to noise sensitive locations; such impacts would occur intermittently and for limited durations as construction progresses across the site. Hence, the contractor will ensure that all best practice noise and vibration control methods will be used. In this regard, various mitigation measures will be applied during the construction of the proposed development, such as:

- limiting the hours during which site activities likely to create high levels of noise or vibration are permitted;
- establishing channels of communication between the contractor/developer, Local Authority and residents;
- appointing a site representative responsible for matters relating to noise and vibration;
- monitoring typical levels of noise and vibration during critical periods and at sensitive locations;
- all site access roads will be kept even so as to mitigate the potential for vibration from lorries.

Furthermore, a variety of practicable noise and vibration control measures will be employed. These will include as standard:

- selection of plant with low inherent potential for generation of noise and/ or vibration;

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- erection of barriers as necessary around noisy processes and items such as generators heavy mechanical plant or high duty compressors;
- placing of noisy / vibratory plant as far away from sensitive properties as permitted by site constraints and the use of vibration isolated support structures where necessary.

Mechanical Plant and Services

At the detailed design stage, best practice measures relating to building services plant will be taken to ensure there is no significant noise impact on noise-sensitive locations within the development. Due to the relative proximity of the NSLs within the development, this will also prevent a negative impact on NSLs in the surrounding area. The over-riding requirement is that the criteria in Section 7.4.5 is adhered to through implementation of best practice measures at the design stage including the following:

- Where ventilation is required for plant rooms, consideration will be given to acoustic louvers or attenuated acoustic vents, where required, to reduce noise breakout;
- Ventilation plant serving plant rooms and car parks will be fitted with effective acoustic attenuators to reduce noise emissions to the external environment;
- The use of perimeter plant screens will be used, where required, for roof-top plant areas to screen noise sources;
- The use of attenuators or silencers will be installed on external air-handling plant;
- All mechanical plant items, e.g. fans, pumps etc., shall be regularly maintained to ensure that excessive noise generated by worn or rattling components is minimised;
- Any new or replacement mechanical plant items, including plant located inside new or existing buildings, shall be designed so that all noise emissions from site do not exceed the noise limits outlined in this document;
- Installed plant will have no tonal or impulsive characteristics when in operation.

Inward Noise Impact

As is the case in most buildings, the glazed elements and ventilation paths of the building envelope are typically the weakest element from a sound insulation perspective. In general, all wall constructions (i.e. block work or concrete and spandrel elements) offer a high degree of sound insulation, much greater than that offered by the glazing systems. Therefore, noise intrusion via the wall construction will be minimal.

For this development, the façades highlighted in Figure 7-9 will be provided with glazing that achieves the minimum sound insulation performance as set out in Table 18.1(Chapter 7 Table 7-11). Any passive ventilation units will have to be carefully selected at the design stage to ensure that the composite sound reduction index of the façade is not compromised.

Table 18-1 Sound Insulation Performance Requirements for Glazing, SRI (dB)

Façade Ref	Octave Band Centre Frequency (Hz)						Rw
	125	250	500	1k	2k	4k	
Red	28	23	32	38	42	44	35
Orange Green	22	20	26	36	39	31	31

The overall R_w outlined above is provided for information purposes only. The over-riding requirement is the Octave Band sound insulation performance values which may also be achieved using alternative glazing and ventilation configurations. Any selected system will be required to provide the same level of sound insulation performance set out in Table 7-11 or greater.

It is important to note that the acoustic performance specifications detailed herein are minimum requirements which apply to the overall glazing and ventilation systems. In the context of the acoustic performance specification the ‘glazing system’ is understood to include any and all of the component

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parts that form part of the glazing element of the façade, i.e. glass, frames, seals, openable elements etc.

The assessment has demonstrated that the recommended internal noise criteria can be achieved through consideration of the proposed façade elements at the design stage. The calculated glazing and specifications are preliminary and are intended to form the basis for noise mitigation at the detailed design stage. Consequently, these may be subject to change as the project progresses.

18.2.4 Biodiversity

Where significant effects on sensitive ecological receptors are identified, mitigation measures as defined in section 8.8 will be incorporated into the design and construction of the proposed development to avoid, reduce or offset potential adverse effects.

18.2.5 Landscape and Visual

Construction Stage

The building site including a site compound with site offices, site security fencing, scaffolding and temporary works will be visible during the Construction Phase, from a range of viewpoints around the site. The activities will generate disturbance in the local landscape, particularly related to noise, dust, lighting as well as visual effects. Such elements are generally viewed as temporary and unavoidable features of construction in any setting. The perimeter site hoarding will screen from view much of the construction activity and materials at ground level. Other mitigation measures proposed during this delivery stage of the development, revolve primarily around the implementation of appropriate site management procedures during the construction works – such as the control of lighting, storage of materials, placement of site offices and compounds, control of vehicular access, and effective dust and dirt control measures, etc. Such mitigation will be set out in the Construction Management Plan prepared for the scheme. This will be a working document which will be continually reviewed and amended through the Construction Phase to ensure effective mitigation throughout.

The Construction Management Plan to be prepared by the appointed contractor, and agreed with the Local Authority prior to the commencement of any construction works, will deal with all issues related to the construction, delivery and management of the scheme during the construction stage and will ultimately include details on the following:

Daily and weekly working hours;

- Agreed haul routes for incoming materials;
- Licensed hauliers to be used;
- Disposal sites;
- Travel arrangements for construction personnel;
- Appropriate on-site parking arrangements for construction personnel to prevent overspill parking on the local road network;
- Temporary construction entrances to be provided;
- Wheel wash facilities if required;
- Road cleaning and sweeping measures to be put in place if required;
- Temporary construction signage to be put in place and maintained.

The planning application includes an Outline Construction Management Plan, prepared by Waterman Moylan Consulting Engineers, which outlines a range of Construction Phase mitigation measures. Many of these measures are relevant to the reduction of the temporary impacts on the landscape and visual

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environment during the Construction Phase as they reduce or control noise, dust, lighting and regulate an orderly running of the site including the visual quality of orderly placement of parking, storage and cabins withink a defined and screened perimeter. This Outline Construction Management Plan forms the basis for the required measures to be included in the appointed Contractor's Construction Management Plan. As such it references Construction Phase mitigation measures which are relevant to the assessment of Landscape and Visual Impact.

Operational Stage

The design rationale and detail employed seeks to mitigate potential negative effects on the landscape character and visual amenity of the area by:

- Establishing an integrated relationship between the proposed development and surrounding buildings, infrastructure, green infrastructure and permeability, and the broader urban landscape beyond, incorporating aspects of current and emerging trends in built-form, scale, texturing, colour and materials;
- The insertion, positioning and detailed modelling of the buildings, in order to assist in the appropriate visual assimilation of their mass
- Appropriate architectural detailing to assist in the integration of the external building facades – including the modulation of openings and fenestration;
- Rationalisation of all services elements and any other potential visual clutter and its incorporation internally within building envelopes (as far as practically possible);
- Simplification and rationalisation of the proposed roof lines, including green roofs
- Use of appropriate materials in the architectural expression of the buildings. In this instance, brick is used in the facades across the scheme, with variation in colour, pattern, texture and tone occurring in the individual character areas or emphasising specific parts of facades. This approach reinforces the articulation of the massing of the blocks, as well as lending importance and interest to specific areas.
- The provision of community uses within the development, including public open space and associated amenities, in turn combining with internal cultural spaces.
- The provision of secure communal space.
- Sustainable approach to nature-based drainage and to enhance biodiversity
- Detailing in the architectural and landscape design to mitigate wind and shadow effects to create good microclimates.
- Comprehensive planting of vegetation, particularly trees to ground the scheme in the landscape and provide amenity, habitat, shelter and screening.
- Implementation of maintenance and management of buildings, infrastructure and vegetation.

18.2.6 Lands and Soils

Construction Stage

A site-specific Construction Environmental Management Plan (CEMP) will be prepared and implemented by the appointed contractor. The CEMP will incorporate the relevant measures identified in this chapter and the Water chapter for the protection of soils, groundwater and surface water.

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Topsoil will be stripped, segregated and stored separately from subsoil, made ground and construction waste where it is intended for reuse.

Topsoil stockpiles will be protected from contamination, compaction, erosion and unnecessary trafficking. Stockpile heights and storage arrangements will be managed to preserve the suitability of topsoil for reuse.

Excavated made ground and subsoil will be segregated according to material type and intended reuse, recovery or disposal route.

Excavated materials will be inspected during excavation. Where unexpected staining, odours, unusual materials or other indications of contamination are encountered, the material will be isolated and subject to appropriate testing and classification before reuse or removal.

All soil and stone intended for removal from site will be classified and managed in accordance with applicable waste legislation and the requirements of the receiving facility. Authorised waste contractors and appropriately permitted/licensed facilities will be used.

Where feasible and subject to engineering and environmental suitability, excavated soils will be reused within the development to reduce unnecessary import and export of material.

Soil stockpiles and exposed ground will be managed to minimise erosion and sediment mobilisation. Stockpiles will be located away from drainage infrastructure and protected as required.

Temporary surface water management and sediment control measures will be implemented during construction, consistent with Chapter 12 – Water.

Fuels, oils and chemicals will be stored in secure, appropriately bunded areas. Refuelling and maintenance of plant will be undertaken in designated areas where practicable.

Spill kits will be available throughout the site and emergency spill response procedures will be implemented immediately in the event of a spill.

Concrete and cementitious materials will be managed to prevent uncontrolled discharge to soil, groundwater or the drainage network. Concrete washout will be undertaken in designated areas and managed appropriately.

Wheel-washing/road-cleaning measures will be implemented as required to prevent soil and debris being transferred onto the public road network.

Dust suppression measures will be implemented during dry weather and earthworks, including appropriate damping down, covering of loads and management of stockpiles.

Excavations will be appropriately supported and managed in accordance with the detailed geotechnical design and construction safety requirements.

Operational Stage

Landscaped and open areas will be reinstated with suitable topsoil and planting following completion of the construction works.

The proposed surface water drainage and SuDS infrastructure will be inspected and maintained in accordance with the relevant design and maintenance requirements.

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Water supply and foul drainage infrastructure will be inspected, tested and maintained in accordance with Uisce Éireann requirements to minimise the potential for leakage or uncontrolled discharge.

Any localised soil contamination arising during operation will be managed in accordance with the relevant environmental and waste management requirements.

18.2.7 Water

Construction Stage

A site-specific Construction Environmental Management Plan (CEMP) will be prepared and implemented by the appointed contractor and maintained throughout the construction phase. The CEMP will incorporate measures for the protection of surface water and groundwater, including procedures for the management of surface water runoff, sediment control, chemical storage and accidental spillages.

The CEMP will also include appropriate emergency response procedures for dealing with accidental spillages or releases of potentially polluting substances and will identify the responsibilities of site personnel in responding to such incidents.

Surface Water Runoff

Temporary surface water management measures will be implemented during construction to collect, manage and appropriately treat runoff generated from active construction areas. Runoff will be managed to prevent uncontrolled discharge of sediment-laden water to the existing drainage network.

Temporary drainage measures will be maintained throughout the construction phase and will be adapted as construction progresses and areas of the site are progressively developed.

Weather conditions will be considered when planning earthworks and other activities with the potential to generate runoff. Soil stockpiles and exposed areas will be appropriately managed to minimise erosion and the mobilisation of sediment.

Chemical Pollution

Measures will be implemented to prevent pollution of surface water and groundwater from fuels, oils, chemicals, concrete and other potentially polluting substances used during construction.

Fuels, oils and chemicals will be stored in appropriately bunded and secure areas. Refuelling and maintenance of construction plant will be undertaken in designated areas located away from surface water drainage infrastructure where practicable.

Spill kits and appropriate spill response materials will be readily available on site. In the event of an accidental spill or release, the appropriate emergency response procedures will be implemented immediately to contain and prevent the migration of pollutants.

Concrete and cementitious materials will be managed to prevent uncontrolled discharge to the surface water drainage network or ground. Concrete washout will be undertaken only in designated areas with appropriate containment.

Silt and Suspended Solids

Measures will be implemented to minimise the mobilisation of silt and suspended solids from exposed soils, stockpiles, excavations and construction areas.

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Soil stockpiles will be appropriately located and managed to minimise the potential for erosion and will be kept away from drainage infrastructure where practicable. Exposed areas will be stabilised or reinstated as soon as practicable following completion of works.

Where required, silt fencing, settlement measures or other appropriate sediment control measures will be installed to intercept and treat runoff prior to discharge.

Changes to Runoff and Flow Pathways

Construction activities will be managed to minimise temporary changes to existing surface water runoff and flow pathways. Temporary drainage measures will be maintained as the development progresses to ensure that runoff is appropriately managed and that existing drainage pathways are not blocked or adversely affected.

Construction materials, plant and temporary works will be positioned to avoid obstructing surface water flow paths. Appropriate exceedance routes will be maintained where required to prevent a localised increase in flood risk during construction.

Operation Stage

The proposed development incorporates Sustainable Drainage Systems (SuDS), attenuation and restricted discharge measures to manage surface water runoff during the operational phase.

The proposed surface water drainage system will be designed to accommodate the 1-in-100-year rainfall event with a 30% allowance for climate change, with surface water discharge restricted to 2 l/s/ha.

The proposed SuDS measures will provide treatment of surface water runoff prior to discharge and will reduce the potential for pollutants to enter the downstream drainage network and receiving water environment.

The proposed attenuation and surface water drainage infrastructure will be subject to appropriate inspection and maintenance to ensure that the required storage capacity and discharge rates are maintained.

The proposed water supply and foul drainage infrastructure will be designed, constructed and maintained in accordance with the requirements of Uisce Éireann and the relevant Codes of Practice and Standard Details. The foul drainage network will remain separate from the surface water drainage network.

18.2.8 Population and Human Health

Construction Stage

A range of construction related remedial and mitigation measures are proposed throughout this Environmental Report with reference to the various environmental topics examined, and the inter-relationships between each topic. Through the provision of these remedial and mitigation measures, any negative impacts on Population and Human Health during the construction phase shall be appropriately mitigated. Chapter 18 '*Summary of Mitigation Measures and Residual Impacts'*, of this Environmental Report provides a summary of mitigation measures proposed.

Operation Stage

The Proposed Development has been designed to avoid negative impacts on population and human health through the design and provision of physical and social infrastructure as described in Chapter 2

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of this Environmental Report. Compliance with the proposed design and layout will be a condition of any permitted development. Monitoring will be undertaken by the Building Regulations certification process and by the requirements of specific conditions of a planning permission. Furthermore, measures outlined in the Chapters of this Environmental Report which address other environmental matters such as Water, Air Quality, Climate Factors, Landscape and Visual Impact and Noise sufficiently address monitoring requirements.

18.2.9 Material Assets – Traffic and Transportation

Construction Stage

The primary mitigation and monitoring measures during the Construction Stage will be the implementation by the selected Contractor of the *Construction Management Plan* and the *Construction Traffic Management Plan*.

The assessment of predicted impacts concluded that the construction stage of the proposed development is not anticipated to impact on the operational performance of the local road network. However, good practice requires the preparation of a Construction Management Plan (CMP) and a Construction Traffic Management Plan (CTMP), both of which set out measures to manage construction traffic.

Parking will not be provided for construction staff on public roads. Construction staff will be encouraged by their employer to reduce the use of the car for the journey to work by car sharing and / or travelling by public transport. Workers will be encouraged to keep themselves informed about the public transport options and active mode facilities provided in the surrounding area.

The main Contractor as part of their site set up arrangements, will appoint a Coordinator responsible for the implementation of the Construction Stage Mobility Management and Travel Plan and shall carry out the following tasks as part of their role:

- Provide an extensive information service for public transport options and routes at a public location(s) within the development for construction workers.
- Update the public transport information adjacent to the development on an ongoing basis; and
- Advise company staff of tax incentives for public transport and bicycles.

For those wishing to cycle to and from the development, dedicated cycle parking will be provided for the duration of the works within the site. Shower facilities and lockers will also be provided.

Adequate signposting will be located on-site to ensure the safety of all road users and construction workers.

Dedicated construction haul routes will be identified and agreed upon with Dublin City Council before the commencement of construction activities on site.

A dedicated “construction site”’ access/egress system will be implemented during the construction phases. Hoarding will be set up around the perimeter to prevent pedestrian access.

A material storage zone will also be provided in the construction compound area. This storage zone will include material recycling areas and facilities.

A detailed Construction and Traffic Management Plan (CTMP) will be prepared by the contractor and agreed with Dublin City Council before commencing works on site.

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The contractor will be obliged to ensure that any sub-contractors engaged on the site are made fully aware of the required mitigation measures and that they are properly implemented as part of any works that they undertake.

Operational Stage

The primary mitigation and monitoring measure during the Operational Stage will be the implementation of the *Mobility Management and Travel Plan.*

To reduce traffic impact, mitigate against possible overspill car parking and to promote more sustainable modes of transport, a Mobility Management and Travel Plan has been prepared for the development and will be updated on an ongoing basis.

A single Plan has been prepared for the overall development notwithstanding the fact that the development is being implemented in stages.

The proposed development will include car parking for residents at less than the maximum rate set out in the Dublin City Development plan 2022 – 2028. The level of car parking proposed has been informed by national standards for transport strategy and car parking for new apartments. The implementation of the measures set out in the Mobility Management and Travel Plan are designed inter alia to promote non-car modes of travel thereby discouraging high levels of car ownership and demand for car parking from residents.

A management company will be appointed by the developer to manage the overall development. A senior member of staff from the management company who supports the philosophy of the Plan will be appointed as the Coordinator. The Coordinator will be responsible for:

- Implementation and maintenance of the Plan.
- Monitoring progress of the Plan
- Liaison with public transport operators and officers of the Planning and Roads Authority.
- Production of information reports for the developer, the occupier(s) and the Planning and Road Authorities; and
- Ongoing assessment of the objectives of the Plan.

Up to date, local bus and rail timetables will be maintained within the resident amenity areas and other fixed points within the buildings on the site. Residents will be advised of their location. In addition, internet access to travel information will be provided. The developer will provide all new residents with a travel pack showing alternative modes of travel to the development. Where possible, the developer will advise visitors to the site of alternative modes of travel to that of the car.

Adequate and secure bicycle parking facilities with a total provision of 2,877 spaces will be provided within the development for residents, visitors, Creche users and staff. Local cycle route information will also be provided in the resident amenity areas and at other fixed points within the development. Residents will be advised of these locations.

The Mobility Management and Travel Plan Co-ordinator will be responsible for the management of inappropriate parking within the development. This parking management will ensure that spaces are reserved for those who have been allocated the space and will be accessible only to those users.

18.2.10 Material Assets – Waste

This section outlines the measures that will be implemented to reduce waste generation, manage waste responsibly and minimise environmental effects. All mitigation measures are guided by the principles of the ‘Waste Hierarchy’ and ‘Circular Economy’. The waste hierarchy sets out waste management options in order of preference, from most to least preferred, based on environmental impact and

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compliance with EU and national policy: prevention and minimisation of waste, followed by preparing for reuse and recycling / recovery, energy recovery (i.e. incineration) and, as a last resort, disposal. The circular economy principle aims to keep materials, components, and products in-use for as long as possible, designing systems that create and retain value. These principles will be applied across the construction and operational phases of the Proposed Development.

The waste management objectives for the Proposed Development are as follows. These measures will facilitate material reuse and recycling, where possible, and seek to divert waste from landfill:

- Prevention (Construction Phase): The Main Contractor will prevent and minimise waste generation where possible by ensuring large surpluses of construction materials are not delivered to the site through coordination with the suppliers, operating a 'just-in-time' delivery scheme and ensuring sub-contractors conform to the Main Contractor(s) RWMP. The RWMP submitted with this application outlines the overarching principles, and a more detailed, site-specific version will be prepared by the Main Contractor prior to the commencement of the works. Prevention measures will also include careful planning of excavations to maximise feasible reuse of suitable soil materials on-site and minimise surplus volumes requiring off-site management;
- Reuse (Construction and Operational Phases): Reuse of waste and surplus materials including the reuse of suitable excavated soil and stone as fill material. Surplus construction materials will be repurposed on-site where feasible. During the operational phase, reuse will be encouraged through appropriate segregation of waste streams to support recovery and minimise disposal;
- Recycle (Construction and Operational Phases): Recycling will be implemented during construction with segregated skips or containers provided for recyclable C&D waste streams such as metals, timber, plastic and cardboard. During operation, dedicated recycling facilities will be provided to support waste segregation in line with DCC requirements and national waste policy; and
- Disposal (Construction and Operational Phases): Where waste disposal is unavoidable, it will be carried out in accordance with the Waste Management Act 1996 (as amended) and relevant guidance. This applies to both construction waste and operational waste streams. Only licensed / permitted waste contractors will be used, and waste will be sent to authorised facilities. Disposal will remain a last resort in line with waste hierarchy principles.

Construction Stage

The mitigation measures to be implemented during the construction phase of the development are as follows:

WM_1:

As previously stated, a project specific RWMP has been prepared in line with the requirements of the requirements of the EPA *Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects* (2021) and is included as Appendix 15.1 to this EIAR. The mitigation measures outlined in the RWMP will be implemented in full and form part of the mitigation strategy for the site. The mitigation measures presented in this RWMP will ensure effective waste management and minimisation, reuse, recycling, recovery and disposal of waste material generated during the excavation and construction phases of the Proposed Development.

- Prior to commencement, the appointed Main Contractor(s) will be required to refine / update the RWMP (Appendix 15.1) in agreement with DCC and in compliance with any planning conditions, or submit an addendum to the RWMP to DCC, detailing specific measures to minimise waste generation and resource consumption, and provide details of the proposed waste contractors and destinations of each waste stream; and

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- The Main Contractor will implement the RWMP throughout the duration of the proposed excavation and construction phases.

WM_2:

A quantity of topsoil and sub soil will need to be excavated to facilitate the Proposed Development. The quantity surveyors have estimated that all excavated material will need to be removed off-site. Correct classification and segregation of the excavated material is required to ensure that any potentially contaminated materials are identified and handled in a way that will not impact negatively on workers as well as on water and soil environments, both on and off-site. Material will be subject to visual inspection for potential contamination as well as environmental soil testing (typical soil classification suite of analysis, hydrocarbons, metals etc.).

WM_3:

Building materials will be chosen to 'design out waste'.

WM_4:

On-site segregation of waste materials will be carried out to increase opportunities for off-site reuse, recycling and recovery. The following waste types, at a minimum, will be segregated:

- Clean Soil;
- Contaminated soil (if located onsite);
- Metal;
- Concrete rubble (including ceramics, tiles and bricks);
- Plasterboard;
- Metals;
- Glass; and
- Timber.

WM_5:

Left over materials (e.g. timber off-cuts, broken concrete blocks / bricks) and any suitable construction materials shall be re-used on-site, where possible; (alternatively, the waste will be sorted for recycling, recovery or disposal);

WM_6:

All waste materials will be stored in skips or other suitable receptacles in designated areas of the site;

WM_7:

Any hazardous wastes generated (such as chemicals, solvents, glues, fuels, oils) will also be segregated and will be stored in appropriate receptacles (in suitably bunded areas, where required);

WM_8:

A Resource Manager (RM) will be appointed by the Main Contractor(s) to ensure effective management of waste during the excavation and construction works;

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All construction staff will be provided with training regarding the waste management procedure;

WM_10:

All waste leaving site will be reused, recycled or recovered, where possible, to avoid material designated for disposal;

WM_11:

All waste leaving the site will be transported by suitably permitted contractors and taken to suitably registered, permitted or licenced facilities; and

WM_12:

All waste leaving the site will be recorded and copies of relevant documentation maintained.

These mitigation measures will ensure that the waste arising from the construction phase of the Proposed Development is dealt with in compliance with the provisions of the Waste Management Act 1996, as amended, associated Regulations and the *Litter Pollution Act 1997*, as amended and the *NWMPCE*. It will also ensure optimum levels of waste reduction, reuse, recycling and recovery are achieved and will promote more sustainable consumption of resources.

Operational Stage

The mitigation measures to be implemented during the operational phase of the development are as follows:

WM_13:

All waste materials will be segregated into appropriate categories and will be temporarily stored in appropriate bins or other suitable receptacles in designated, easily accessible areas of the site.

WM_14:

As previously stated, a project specific OWMP has been prepared and is included as Appendix 15.2**.** The mitigation measures outlined in the OWMP will be implemented in full and form part of the mitigation strategy for the site. Implementation of this OWMP will ensure a high level of recycling, reuse and recovery at the development. All recyclable materials will be segregated at source to reduce waste contractor costs and ensure maximum diversion of materials from landfill, thus achieving the targets set out in the *NWMPCE*, the *WAPCE* and the DCC Waste Bye-Laws.

Residents, tenants and facilities management of the site during the operational phase will be responsible for ensuring – allocating personnel and resources, as needed – the ongoing implementation of the OWMP, ensuring a high level of recycling, reuse and recovery at the site of the Proposed Development.

WM_15:
In addition, the following mitigation measures will be implemented:

- On-site segregation of all waste materials into appropriate categories including (but not limited to):
  - Organic waste;
  - Dry Mixed Recyclables;
  - Mixed Non-Recyclable Waste;
  - Glass;
  - Plastic bottles and metal cans
  - Waste electrical and electronic equipment (WEEE);
  - Batteries (non-hazardous and hazardous);
  - Cooking oil;

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- Light bulbs;
- Cleaning chemicals (pesticides, paints, adhesives, resins, detergents, etc.);
- Furniture (and from time-to-time other bulky waste); and
- Abandoned bicycles.

WM_16:

- Residents, tenants and facilities management will ensure that all waste materials will be stored in colour coded bins or other suitable receptacles in designated, easily accessible locations. Bins will be clearly identified with the approved waste type to ensure there is no cross contamination of waste materials.

WM_17:

- Residents, tenants and facilities management will ensure that all waste collected from the site of the Proposed Development will be reused, recycled, or recovered, where possible, with the exception of those waste streams where appropriate facilities are currently not available.

WM_18:

- Residents, tenants and facilities management will ensure that all waste leaving the site will be transported by suitably permitted contractors and taken to suitably registered, permitted, or licensed facilities.

These mitigation measures will ensure the waste arising from the development is dealt with in compliance with the provisions of the *Waste Management Act 1996*, as amended, associated Regulations, the *Litter Pollution Act 1997*, as amended, the *NWMPCE* and the DCC Waste Bye-Laws. It will also ensure optimum levels of waste reduction, reuse, recycling and recovery are achieved.

18.2.11 Material Assets – Utilities

The mitigation measures are intended to prevent accidental damage to existing services, minimise interruptions to existing utility users, ensure that new infrastructure is appropriately tested and commissioned, and ensure that utility-provider requirements are met before connection and operation.

General Utility Construction Measures

All existing services will be identified using available utility records, GPR surveys and slit trenches, as appropriate, before excavation works commence.

Service locations will be clearly marked on site and appropriate exclusion/protection zones will be established.

Construction works in the vicinity of existing utilities will be undertaken in accordance with the requirements of the relevant utility provider.

Where existing services require diversion, relocation or temporary interruption, the works will be agreed in advance with the relevant utility provider.

The contractor will coordinate utility works with the construction programme to minimise disruption to existing users.

All temporary connections required for construction welfare facilities will be arranged with the relevant utility provider.

New utility infrastructure will be inspected, tested and commissioned in accordance with the requirements of the relevant utility provider before being brought into service.

Water Supply

All existing water services will be identified and protected before excavation.

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A method statement will be prepared for works in the vicinity of existing watermains and for road or service crossings of watermains.

All new watermains will be cleaned, sterilised and tested in accordance with Uisce Éireann requirements prior to connection.

Connections to the public watermain will be undertaken by or under the supervision of Uisce Éireann.

Temporary construction water supply arrangements will be agreed with Uisce Éireann through the appropriate Temporary Connection Application.

Water metering will be provided in accordance with Uisce Éireann requirements. Monitoring of water usage will assist in identifying abnormal consumption that may indicate leakage.

These measures are consistent with the water supply design and mitigation principles set out in Chapter 12 – Water.

Foul Wastewater

Temporary foul wastewater connections for site welfare facilities will be arranged with Uisce Éireann through the appropriate Temporary Connection Application.

Where permitted by Uisce Éireann, the permanent foul connection may be used temporarily during construction. Where this is not permitted, wastewater will be stored and removed for appropriate off-site treatment/disposal.

All new foul sewers will be tested in accordance with the Uisce Éireann Code of Practice and Standard Details.

Private drainage will be inspected and signed off by the Design Engineer in accordance with Building Regulations Part H and BCAR requirements.

Foul sewers will be subject to CCTV inspection prior to connection to identify potential defects.

Connections to the public sewer will be undertaken by or under the supervision of Uisce Éireann and checked prior to commissioning.

The foul network will remain separate from the surface water network.

The Proposed Phase 3 connection will be subject to completion of the relevant public wastewater network upgrades and final Uisce Éireann approval.

The current Uisce Éireann CoF confirms that foul capacity is available subject to completion of the planned public network upgrades, currently programmed for early 2027, subject to change.

Surface Water Drainage

Detailed surface water mitigation is provided in Chapter 12 – Water. In summary, the proposed development will incorporate attenuation, controlled discharge and SuDS measures, including blue/blue-green roofs, bio-retention tree pits and rain gardens, permeable paving/surfacing and below-ground stone void storage. The system is designed for the 1-in-100-year rainfall event with a 30% climate change allowance and discharge restricted to 2 l/s/ha.

Temporary drainage and runoff management measures will be implemented during construction.

Existing surface water drainage infrastructure will be protected during utility works.

Surface water networks will be constructed and tested in accordance with Dublin City Council requirements for taking in charge.

The completed SuDS and drainage infrastructure will be subject to inspection and maintenance in accordance with the relevant operation and maintenance requirements.

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Electricity

Existing ESB services will be located and verified before excavation.

Works in the vicinity of ESB infrastructure will be undertaken in accordance with ESB Networks requirements.

Connections to existing ESB infrastructure will be completed by ESB Networks or specialist contractors acting on their behalf.

Any temporary interruption to supply will be coordinated and managed by ESB Networks to minimise effects on neighbouring properties.

Gas

Existing gas services will be located and verified before excavation.

Works in the vicinity of existing gas mains will be undertaken in accordance with Gas Networks Ireland requirements.

Any works to existing gas infrastructure will be undertaken by Gas Networks Ireland or specialist contractors acting on its behalf.

Any temporary interruption to gas supply will be coordinated and managed by Gas Networks Ireland.

Telecommunications

Existing telecommunications services will be located and verified before excavation.

Works in the vicinity of existing Eir and Virgin infrastructure will be coordinated with the relevant provider.

Connections to existing telecommunications infrastructure will be undertaken by the relevant provider or specialist contractor acting on its behalf.

Any temporary interruption to services will be coordinated to minimise effects on surrounding users.

18.3 Residual Impacts

18.3.1 Air Quality

Construction Stage

Once the dust mitigation measures outlined in Section 5.7.1 are implemented, the air quality effect of the proposed development in terms of dust soiling will be ***short-term, direct, localised, negative*** and ***not significant*** at nearby receptors.

Best practice mitigation measures associated with medium-risk are proposed for the construction phase of the proposed development which will focus on the pro-active control of dust and other air pollutants to minimise generation of emissions at source. The mitigation measures that will be put in place during construction of the proposed development will ensure that the impact of the development complies with all EU ambient air quality legislative limit values which are based on the protection of human health. Therefore, the air quality effect of construction of the proposed development will be ***short-term, direct, localised, negative*** and ***not significant*** with respect to human health.

Operational Phase

Air dispersion modelling of operational traffic emissions associated with the proposed development was carried out using the TII REM tool. The modelling assessment determined that the change in emissions of NO_2, PM_{10} and $PM_{2.5}$ at nearby sensitive receptors as a result of the proposed development will be

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'neutral' or 'slight adverse' in line with the TII assessment criteria (Table 5-3). Therefore, the operational phase air quality effect is ***long-term, direct, localised, negative,*** and ***not significant***.

Dispersion modelling of traffic emissions at sensitive receptors in proximity to impacted road links during the operational phase indicate pollutant emissions will be in compliance with the ambient air quality standards set out in Table 5-1 which are set for the protection of human health and the environment. Section 5.5.3.1 determined that the air quality effect as a result of increased traffic volumes during the operational phase of the proposed development will be ***long-term, direct, localised, negative*** and ***not significant*** for the opening year. However, Ireland will need to develop measures to ensure continuing improvements in air quality in future years in order to meet the objectives of the Clean Air Strategy for Ireland (Government of Ireland, 2023) and to ensure the ambient air quality limit values set out in Directive (EU) 2024/2881 are achieved.

18.3.2 Climate

GHGA Residual Effects

The TII guidance states that the following two factors should be considered when determining significance:

- The extent to which the trajectory of GHG emissions from the project aligns with Ireland's GHG trajectory to net zero by 2050; and
- The level of mitigation taking place.

TII reference the ISEP guidance (2022) which states that the crux of assessing significance is:

"not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050".

As set out in Section 6.3.4, the proposed development will negatively impede Ireland's trajectory to achieving net zero by 2050 as GHG emissions produced during the construction and operational phases will contribute a small fraction towards the national and sectoral budgets. However, the proposed development will minimise its impacts through design and management measures (see Section 6.7.1). The level of mitigation described in Section 6.7 has therefore been taken into account when determining the residual significance of the proposed project's GHG emissions.

Based on the above reasoning, according to the TII significance criteria, the residual significance of the GHG emissions during the construction and operational phase is **minor adverse**. The ISEP GHG guidance (ISEP, 2022) (which has been embraced by the updated TII Guidance (TII, 2022) in Section 6.7.2) describes minor adverse as follows:

"A minor adverse not significant impact is described with: A project that is compatible with the budgeted, science based 1.5°C trajectory (in terms of rate of emissions reduction) and which complies with up-to-date policy and 'good practice' reduction measures to achieve that has a minor adverse effect that is not significant. The project may have residual impacts but is doing enough to align with and contribute to the relevant transition scenario. A 'minor adverse' or 'negligible' non-significant effect conclusion does not necessarily refer to the magnitude of GHG emissions being carbon neutral (i.e. zero on balance) but refers to the likelihood of avoiding severe climate change and achieving net zero by 2050. A 'minor adverse' effect or better is a high bar and indicates exemplary performance where a project meets or exceeds measures to achieve net zero earlier than 2050."

In addition, the TII guidance (2022) describes minor adverse as:

- The project's GHG impacts are mitigated through 'good practice' measures.

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- The project has complied with existing and emerging policy requirements; and
- Fully in line to achieve Ireland's trajectory towards net zero.

Construction Stage

In accordance with the EPA Guidelines (EPA, 2022), the above criteria equates to an impact of GHG emissions during the construction phase of a ***direct*** impact due to its presence, that is ***long-term*** as a result of the atmospheric lifetime of GHG emissions, ***negative*** due to the emission of GHGs and ***slight*** based on the reduced contribution of GHG emissions to Ireland's national trajectory to net zero, due to the outlined mitigation measures. Overall, the impact on the climate is considered to be ***not significant*** in EIA terms.

Operational Stage

In accordance with the EPA Guidelines (EPA, 2022), the above criteria equates to an impact of GHG emissions during the operational phase of a ***direct*** impact due to its presence, that is ***long-term*** as a result of the estimated lifetime of the buildings and atmospheric lifetime of GHG emissions, ***negative*** due to the emission of GHGs and ***slight*** based on the reduced contribution of GHG emissions to Irelands national trajectory to net zero, due to the outlined mitigation measures. Overall, the impact on the climate is considered to be ***not significant*** in EIA terms.

CCRA Residual Effects

With design mitigation in place, no residual risk to the proposed development as a result of climate change is identified. Keeping the adaptation measures in view and in accordance with the EPA Guidelines (EPA, 2022), the significance of effect of the impacts to the proposed development as a result of climate change are ***direct*** as climate extremes have a direct physical effect on buildings and infrastructure, ***long-term*** due to the response times of the climate in relation to changes in anthropogenic emissions, ***negative*** as climate extremes have been shown to damage or adversely affect infrastructure, and ***not significant*** due to the low vulnerability of the proposed development to the effects of climate change once mitigation measures have been embedded, which is overall ***not significant*** in EIA terms.

18.3.3 Noise and Vibration

Construction Noise

Mitigation defined in Section 7.5.1 will provide a further reduction of approximately 5 dB to construction noise levels. Given the distance to local receptors and the mitigation applied the residual construction noise impacts are predicted to be negative, short-term and slight to moderate at receptors within approximately 40m of construction works. Overall, the impact is predicted to be negative, not significant, and short term.

Construction Vibration

Given the distance to local receptors the residual vibration impacts are predicted to be ***negative, not significant, and short-term.***

Operational Stage – Additional Traffic on Public Roads

All assessed junctions indicate that impacts will ***be neutral to negative, imperceptible to slight and long term.***

Operational Stage – Inward Noise Impact

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Following implementation of the sound insulation mitigation the residual impacts are predicted to be ***neutral, not significant, and long-term.***

Operational Stage – Mechanical Plant

Once noise emissions from operational plant and activities are designed in accordance with BS 4142 Methods for Rating and Assessing Industrial and Commercial Sound the residual impacts are predicted to be ***negative, not significant, and long-term.***

18.3.4 Biodiversity

Construction Stage

Based on the successful implementation of the construction phase controls and the works to be carried out in accordance with this EIAR, there will be no significant ecological impact arising from construction works proposed for the proposed project. Designated conservation sites (Natura 2000 sites, pNHA's, NHA's or RAMSAR listed in Table 8.2 & 8.3) will not be impacted by the proposed development during construction.

Mitigation measures will be in place to limit the potential effects outlined above. Following the implementation of these mitigation measures the proposed project will not result in significant impacts on biodiversity.

No significant environmental impacts are foreseen in relation to the construction of the proposed development.

Effects: Minor Adverse / local / Negative effect / Not significant /short term/unlikely.

Operational Stage

Based on the successful implementation of the operational phase controls and the works to be carried out in accordance with this EIAR, there will be no significant ecological impact arising from operation of the proposed project. Designated conservation sites (NHA's, pNHA's, RAMSAR and Natura 2000) will not be impacted by the proposed development.

The outlined mitigation measures are primarily to protect Camac River, Grand Canal and associated biodiversity, which are potentially the primary vector of impacts from the site,. Light spill will be introduced into the area, but these have been designed to have minimal impact on biodiversity. Biodiversity enhancement measures have been included in the landscape plan. It would be expected that there would be ***no significant long-term impact*** on biodiversity with the implementation of mitigation measures in relation to this species as outlined above.

18.3.5 Landscape and Visual

The proposed development will impact on the urban landscape to varying degrees in terms of its perceived nature and scale. These effects are tempered and conditioned by sensitivities associated with the receptor. The duration of such impacts is determined by the design life of the proposed development. In this case the building development has a design life of up to 60 years, giving a long-term duration. In that time, with the implementation of maintenance and management regimes, the built fabric will remain in good repair and the landscape, particularly tree planting, will mature.

In assessing the landscape character and visual impacts, there are three main inter-related aspects to be addressed in considering the development proposals, namely:

- The perceived character of the area, how it is affected by the proposal and how well it integrates, particularly in the context of a changing environment.
- Effects of the proposed development on social and cultural amenity

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- The proposed views of the development, relative to the existing site and context and the associated impact on visual amenity.

Table 18-2 Table of residual effects.

Receptor	Sensitivity	Magnitude of Change	Mitigation measures	Effect and quality
Landscape	Low	High	As detailed in mitigation measures above. Summarised as follows: • Masterplanning quality • Building design quality • Rationalisation of services, roof lines and visual clutter. • Materials quality • Landscape design quality • Maintenance and management quality In addition, the long term maturing of tree planting will be of benefit.	Moderate Neutral/Positive
Visual	Low	High	As detailed in mitigation measures above. Summarised as follows: • Masterplanning quality • Building design quality • Rationalisation of services, roof lines and visual clutter. • Materials quality • Landscape design quality • Maintenance and management quality In addition, the long term maturing of tree planting will be of benefit	Moderate Neutral/Positive

The assessment of the landscape and visual characteristics show a low sensitivity and proposed high magnitude of change. The implementation of the mitigation measures, summarised in tables 18.2 above, result in a moderate effect of ***neutral/positive quality.*** There are no significant effects.

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18.3.6 Lands and Soils

Construction Stage

Following implementation of the proposed avoidance, remedial and mitigation measures, the potential for construction activities to result in significant adverse effects on land, soils and geology will be minimised.

The residual effects associated with site clearance, soil stripping, excavation, construction traffic, temporary soil exposure and materials management are considered to be short-term, negative and slight in significance. The permanent loss of soil within the building and hardstanding footprints is localised and is ***not considered significant.***

Operational Stage

Following completion of the development and reinstatement of landscaped areas, no significant ongoing adverse effects on land, soils or geology are anticipated. The residual effect during the operational phase is considered to be ***long-term, neutral and imperceptible overall.***

18.3.7 Water

The residual effects are those which remain following implementation of the mitigation measures outlined in Section 12.5.

Construction Phase

Following implementation of the proposed construction-stage mitigation measures, including the management of surface water runoff, chemical pollution, silt and suspended solids, and changes to runoff and flow pathways, the potential for construction activities to adversely affect surface water and groundwater quality will be minimised.

The residual effects on surface water and groundwater quality, surface water runoff, drainage pathways and localised pluvial flood risk during the construction phase are considered to be ***short-term, negative and of slight significance.***

Operational Phase

Following implementation of the proposed surface water drainage strategy, including SuDS, attenuation and restricted discharge, the potential for adverse effects on the downstream hydrological environment and flood risk will be minimised.

The proposed SuDS measures will provide treatment of surface water runoff prior to discharge, while the proposed attenuation and restricted discharge arrangements will limit peak flows to the downstream drainage network.

The proposed water supply and foul drainage infrastructure will be designed, constructed, tested and maintained in accordance with the requirements of Uisce Éireann and the relevant Codes of Practice and Standard Details, thereby minimising the potential for leakage or failure to affect surface water or groundwater.

Following implementation of the proposed mitigation and ongoing inspection and maintenance measures, the residual effect during the operational phase is considered to be ***long-term, neutral and imperceptible*** overall.

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18.3.8 Population and Human Health

Residual impacts are those that remain following the implementation of the proposed mitigation measures. No significant adverse residual impacts have been identified. The proposed development will result in the transformation of the Site 5 Barnville Site from a vacant and underutilised greenfield site to a high-quality residential led mixed use development. While this represents a change in the existing character of the site, it accords with the Z14 zoning objective and the strategic development framework established by the Park West–Cherry Orchard Local Area Plan and the Dublin City Development Plan. The development will make efficient use of serviced lands in a sustainable urban location, delivering much-needed housing, supporting the creation of a critical population threshold to sustain local services and public transport, and contributing to the ongoing regeneration and consolidation of the wider Cherry Orchard area. These benefits outweigh the limited residual effects associated with the change in land use.

The proposed increase in population, together with the provision of supporting infrastructure, services, amenities and public open space, directly supports the planning objectives for Site 5 Barnville Site and the wider Cherry Orchard area. The development represents a plan-led approach to compact growth, facilitating the delivery of a sustainable and integrated residential community on strategically located lands identified for redevelopment within the statutory planning policy framework.

18.3.9 Material Assets – Traffic and Transportation

Construction Phase

Development traffic during the construction stage is predicted to have a low-level impact on surrounding road network in comparison to the existing baseline traffic flows. The preparation and implementation of a detailed Construction Traffic Management Plan (CTMP) to manage construction traffic will further mitigate any residual impacts.

In line with their experience working on projects of this scale in similar locations, the developer will build a construction car park on the site at the start of works by laying a temporary surface for vehicles. Staff are likely to arrive to site before 8am, before the morning peak hour of 8am - 9am. However staff are likely to leave during the peak PM hour of 5-6pm. As the number of construction staff on site will be less than the number of people on site post development, the number of additional vehicles can be accommodated.

Care will be taken to ensure existing pedestrian and cycling routes are suitably maintained or appropriately diverted as necessary during the construction period, which will be addressed by the Contractor as part of the Construction Traffic Management Plan (CTMP) and which will be approved by Dublin City Council (DCC). On this basis, construction will likely have a negligible impact on pedestrian and cyclists.

Due to the proposed mitigation measures outlined above, the residual impact of the proposed development will be ***temporary, slight, negative and short term*** for the duration of the construction stage of Cherry Orchard Point.

Operational Phase

During the Operational Stage, there will be an increase in the use of the surrounding road network by private vehicles. However, the Mobility Management and Travel Plan will promote more sustainable forms of transport to help reduce the use of private cars by the residents of the proposed development.

There is likely to be an increase in the number of pedestrians and cyclists in the surroundings of the development particularly on the approaches to the railway station. However, the existing footpaths and cycle paths, both internally and externally along the site frontage, will be upgraded as part of development, thus, the impact should be minimal.

The traffic modelling undertaken includes growth in background traffic flows which accounts for other developments in the area.

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The increase in traffic volumes as a result of the proposed development will impact the adjacent existing developments as the traffic flows through access and egress from the site will increase. The transport assessment carried out indicates that six of the eight assessed junctions, operating with the improved junction layouts proposed as part of the subject development, would operate within the capacity of the junctions and the impact arising from the proposed development at these junctions would be considered negligible.

The existing roundabout at the intersection of Park West Avenue and Park West Road to the south of the railway (Junction 7) is likely to reach capacity about 2027 and exceed capacity by 2042 with or without the proposed development. It is expected that this junction which is remote from the subject site is likely to be upgraded, probably to a signalised crossroads before 2042 by Dublin City Council as part of the ongoing implementation of the Park West – Cherry Orchard LAP.

Due to the proposed mitigation measures outlined above, the residual impact of the proposed development during the operational stage will be ***slight to moderate, negative and long term*** for the duration of the operation of Cherry Orchard Point.

18.3.10 Material Assets – Waste Management

The implementation of the mitigation measures outlined in Section 15.7 will ensure that targeted rates of reuse, recovery and recycling are achieved at the site of the Proposed Development during the construction and operational phases. It will also ensure that European, National and Regional legislative waste requirements with regard to waste are met and that associated targets for the management of waste are achieved.

Construction Stage

A carefully planned approach to waste management as set out in Section 15.7 and adherence to the RWMP (which includes mitigation) (Appendix 15.2) during the construction phase will promote resource efficiency and waste minimisation. When the mitigation measures are implemented and a high rate of prevention reuse, recycling and recovery is achieved, the predicted impact of the construction phase on the environment will be **short-term, imperceptible and neutral.**

Operational Stage

During the operational phase, a structured approach to waste management as set out in Section 15.7 and adherence to the OWMP (which includes mitigation) (Appendix 15.2) will promote resource efficiency and waste minimisation. With effective ongoing management and continued mitigation measures, and when a high rate of reuse, recycling and recovery is achieved, the predicted impact of the operational phase on the environment will be ***long-term, imperceptible*** and ***neutral***.

18.3.11 Material Assets – Utilities

Construction Stage

Construction activities will require excavation, trenching, duct and pipe installation, chamber construction, service connections, diversions and reinstatement. These works have the potential to interact with existing utility infrastructure in the surrounding road network.

Water Supply

Construction activities will involve excavation, installation and connection of the proposed water supply infrastructure to the existing public water supply network. Prior to implementation of mitigation measures, there is potential for accidental damage to existing water supply infrastructure, contamination during connection works, or temporary interruption to the public water supply serving existing users. The potential impact would be localised to the immediate vicinity of the construction and connection works, with a low magnitude given the nature and scale of the proposed works. Any interruption to existing water supply would be expected to be temporary or short-term and limited to the

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duration of the relevant connection or repair works. The potential construction-phase effect on existing water supply infrastructure is therefore considered negative, slight and temporary prior to mitigation.

Foul Wastewater

Construction activities will involve excavation and installation of the proposed foul wastewater infrastructure and connection to the existing and planned public wastewater network. Prior to implementation of mitigation measures, there is potential for accidental damage to existing foul wastewater infrastructure, temporary disruption during connection works, or inappropriate discharge associated with construction activities. The potential impact would be localised to the immediate vicinity of the construction and connection works, with a low magnitude given the nature and scale of the proposed works. Any disruption to the existing foul wastewater network would be expected to be temporary or short-term and limited to the duration of the relevant works. The potential construction-phase effect on existing foul wastewater infrastructure is therefore considered negative, slight and temporary prior to mitigation.

Surface Water Drainage

Construction activities have the potential to affect existing surface water drainage infrastructure through excavation, temporary works, accidental damage to drainage infrastructure, or the mobilisation of sediment and other construction-related pollutants. The potential effect on the wider water environment, including the potential for changes to surface water runoff, water quality and downstream receptors, is assessed separately in Chapter 12 – Water. In relation to the utility infrastructure itself, the potential construction-phase impact would be localised to the immediate vicinity of the works and would be temporary in duration. The magnitude of the potential impact is considered low, given the nature of the proposed drainage works and the ability to control construction activities through standard construction management measures. The potential construction-phase effect on existing surface water drainage infrastructure is therefore considered negative, slight and temporary prior to mitigation.

Electricity

Construction activities will involve excavation and installation of underground electrical infrastructure and connection to the existing electricity network. Prior to implementation of mitigation measures, there is potential for accidental damage to existing ESB Networks infrastructure, resulting in temporary interruption to electricity supplies serving existing users. Any required diversion or relocation of existing services may also require temporary interruption during the works. The potential impact would be localised to the immediate vicinity of the construction works, with a low magnitude given that the potential effect is principally associated with accidental damage or planned connection/diversion works rather than a permanent change to the electricity network. Where an interruption occurs, it would be expected to be temporary or short-term, depending on the nature of the works required. The potential construction-phase effect on existing electricity infrastructure is therefore considered negative, slight and temporary prior to mitigation.

Gas

Construction activities will involve excavation and installation of underground gas infrastructure and connection to the existing gas network. Prior to implementation of mitigation measures, there is potential for accidental damage to existing gas infrastructure or temporary interruption to gas supplies serving existing users. The potential impact would be localised to the immediate vicinity of the construction works, with a low magnitude given that the potential effect arises principally from accidental damage or planned connection/diversion works. Any interruption to existing gas supplies would be expected to be temporary or short-term, depending on the nature and extent of the works required. The potential construction-phase effect on existing gas infrastructure is therefore considered negative, slight and temporary prior to mitigation.

Telecommunications

Construction activities will involve excavation and installation of underground telecommunications infrastructure and connection to the existing telecommunications networks. Prior to implementation of

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mitigation measures, there is potential for accidental damage to existing telecommunications infrastructure, resulting in temporary interruption to telecommunications services serving existing users. The potential impact would be localised to the immediate vicinity of the construction works, with a low magnitude given that the potential effect is associated principally with accidental damage or planned connection/diversion works. Any interruption to existing telecommunications services would be expected to be temporary or short-term, depending on the nature of the works required. The potential construction-phase effect on existing telecommunications infrastructure is therefore considered negative, slight and temporary prior to mitigation. Overall, the construction phase has the potential to result in temporary negative effects on existing utility services, principally through accidental damage, service interruption and connection/diversion works.

Operational Stage

Water Supply

Occupation of the Proposed Phase 3 development will result in an increase in demand on the public water supply network. In the absence of the proposed connection arrangements, utility-provider confirmation and appropriate network design controls, the additional demand could place additional loading on the existing public water supply network and could potentially affect available network capacity. The potential impact would extend beyond the immediate site to the public water supply network serving the development, with a low magnitude given the scale of the proposed development and the available network capacity identified by Uisce Éireann. The effect would be long-term for the duration of the operational phase. The potential operational effect on the public water supply network is therefore considered negative, slight and long-term prior to mitigation. The current Uisce Éireann Confirmation of Feasibility confirms that the proposed water demand can be accommodated without water network infrastructure upgrades

Foul Wastewater

Operation of the Proposed Phase 3 development will result in an increase in foul wastewater generation and loading on the public wastewater network. In the absence of the required public wastewater network upgrades and appropriate connection arrangements, the additional loading could place additional demand on the existing wastewater network and could potentially affect available network capacity. The potential impact would extend beyond the immediate site to the public wastewater network serving the development, with a low magnitude given the scale of the proposed development and the planned network upgrade works identified by Uisce Éireann. The effect would be long-term for the duration of the operational phase. The potential operational effect on the public wastewater network is therefore considered negative, slight and long-term prior to mitigation. Uisce Éireann has confirmed that the proposed foul water demand can be accommodated subject to completion of the planned public wastewater network upgrades, which are currently scheduled for completion in early 2027, subject to change.

Surface Water Drainage

The completed development will increase the area of impermeable surfaces and, in the absence of appropriate surface water drainage, attenuation and Sustainable Drainage Systems (SuDS) measures, has the potential to increase surface water runoff and place additional loading on the existing public surface water drainage network. The potential effect on the wider water environment, including surface water runoff, water quality and downstream receiving receptors, is assessed separately in Chapter 12 – Water. In relation to the surface water drainage infrastructure as a material asset, the potential impact would extend from the development site to the receiving public drainage network, with a low magnitude given the scale of the proposed development and the capacity provided through the proposed drainage strategy. The effect would be long-term for the duration of the operational phase. The potential operational effect on the public surface water drainage network is therefore considered negative, slight and long-term prior to mitigation. The proposed drainage system incorporates attenuation, controlled discharge and SuDS measures and is designed for the 1-in-100-year rainfall event with a 30% climate change allowance.

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Electricity

Occupation of the Proposed Phase 3 development will result in an increase in electricity demand and therefore additional loading on the existing electricity network. In the absence of appropriate connection arrangements and confirmation of the required network capacity by ESB Networks, the additional demand could place increased loading on the existing network and could potentially affect available supply capacity. The potential impact would extend to the local electricity network serving the development, with a low magnitude given the scale of the proposed development and the ability to accommodate the additional demand through the appropriate connection process. The effect would be long-term for the duration of the operational phase. The potential operational effect on existing electricity infrastructure and consumers is therefore considered negative, slight and long-term prior to mitigation. The proposed connection will be designed and agreed with ESB Networks, with the required connection and network capacity confirmed as part of the connection process.

Gas

Where gas is provided to the Proposed Phase 3 development, occupation will result in an increase in demand on the gas distribution network. In the absence of appropriate connection arrangements and confirmation by Gas Networks Ireland of the requirements necessary to accommodate the additional demand, the increased loading could potentially affect available capacity within the local gas distribution network. The potential impact would extend to the local gas distribution network serving the development, with a low magnitude given the scale of the proposed development and the requirement for the connection to be assessed and approved by Gas Networks Ireland. The effect would be long-term for the duration of the operational phase. The potential operational effect on existing gas infrastructure and consumers is therefore considered negative, slight and long-term prior to mitigation. Subject to connection in accordance with Gas Networks Ireland requirements and confirmation of the available network capacity, the additional demand associated with the Proposed Phase 3 development is not anticipated to materially affect the supply capacity or service available to existing consumers.

Telecommunications

Occupation of the Proposed Phase 3 development will result in an increase in demand on telecommunications networks. In the absence of appropriate connection arrangements and network provision by the relevant telecommunications providers, the additional demand could place increased loading on the relevant telecommunications infrastructure and could potentially affect the availability or capacity of services. The potential impact would extend to the local telecommunications networks serving the development, with a low magnitude given the scale of the proposed development and the ability of the relevant providers to assess and accommodate additional connections. The effect would be long-term for the duration of the operational phase. The potential operational effect on existing telecommunications infrastructure and users is therefore considered negative, slight and long-term prior to mitigation. Subject to connection and network provision by the relevant telecommunications providers, no material effect on existing consumers is anticipated.

18.4 Cumulative Effects

As stated elsewhere, while the current planning application to which this Environmental Report addendum relates to is for Phase 3 of the Cherry Orchard Point development, the Parent EIAR itself has been based on assessment of the environmental impacts of the overall Cherry Orchard Point development. The cumulative effects of the proposed development alongside other proposed and permitted developments have been considered as appropriate within each relevant environmental factor.

18.4.1 Air Quality

Construction Phase

There is the potential for cumulative construction dust impacts to nearby sensitive receptors if the construction phase of the proposed development coincides with that of other large-scale developments within 500 m of the site.

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A review of the planned and permitted projects within the vicinity of the site was undertaken in order to identify developments with the potential for cumulative construction phase impacts. There are several sites identified which may have coinciding construction phases with that of the proposed development.

These include:

- SD19A/0185 (Planning App. Ref.): Alterations to approved plans (Grant of Permission ref PL06S.243151 and PA Reg Ref SD13A/0271 and SD18A/0068) to the previously granted planning permission for the construction of an ESB 110kV Gas Insulated Substation for the use by Crag Digital Limited.
- SD20A/0034 KN Group HQ, Cloverhill Industrial Estate Office accommodation extension to the rear of the existing office building.
- 3403/21: Planning permission for the proposed development will consist of modifications to the permitted residential development of 86 no. residential units over retail/restaurant uses (reg. ref. 3798/18, 3941/20, 2517/21).
- 321931 (Part 10)- LDA on behalf of DCC :Cherry Orchard Phase, the proposed development on a site of c. 3.185 hectares, located on lands at Cherry Orchard, Dublin 10 (known as Development Site 4 in the Park West Cherry Orchard Local Area Plan 2019). The development will consist of the construction of a residential scheme containing 137no. residential dwellings (comprising 31no. 2 bedroom units, and 106no. 3-bedroom units) through a mixture of houses, duplex units and own-door apartments.
- 316119: DART+ Southwest electrified heavy railway order. The 20 km of electrification and re-signalling of the Hazelhatch and Celbridge Line to Heuston and the south city via Phoenix Park Tunnel. Construction of a new station at Heuston West to serve the community of Clancy Quay and Island Bridge. Four-tracking of the rail line from Park West and Cherry Orchard Station to Heuston to enhance capacity. Civil, bridge and ancillary works as necessary to accommodate the project. Upgrading of the Phoenix Park Tunnel. New electric DART carriages for the DART+ Programme will be deployed on Hazelhatch and Celbridge services

There is a medium risk of dust impacts associated with the proposed development (see Table 5-14). The dust mitigation measures outlined in Section 5.7 applied during the construction phase will avoid significant cumulative impacts on air quality. With appropriate mitigation measures in place, the predicted cumulative air quality effects associated with the construction phase of the proposed development and the aforementioned developments are deemed ***short-term, direct, localised, negative*** and ***not significant***.

Operational Phase

There is the potential for cumulative impacts to air quality during the operational phase as a result of traffic associated with other existing and permitted developments within the area. The traffic data provided for the operational stage air quality assessment included specific cumulative developments within the area (see Traffic and Transport Assessment and Chapter 14 – Material Assets: Traffic and Transport for further details).

The cumulative operational phase effect is assessed within Section 5.5.3 and was found to be ***long-term, direct, localised, negative*** and ***not significant***.

18.4.2 Climate

In accordance with guidance from the ISEP (Institute of Sustainability & Environmental Professionals, 2022) and TII (Transport Infrastructure Ireland, 2022) the climate is not constrained by project, regional

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or national boundaries and therefore the GHG assessment has been presented in the context of the national and sectoral carbon budgets for the whole of Ireland and the ability of the proposed development to assist or impede the national relevant targets. Given the contribution of such targets to the global efforts to reduce the impact of society upon the climate the assessment is considered to be inherently cumulative.

In addition, the traffic data provided for the quantification of operational GHG emissions includes committed developments as far as they can be advised, and as such is considered to be cumulative.

In light of these statements, the residual cumulative impact of the proposed development in relation to GHG emissions is considered ***direct***, ***long-term***, ***negative*** and ***slight***, which is overall ***not significant*** in EIA terms.

18.4.3 Noise and Vibration

There are existing residential and commercial developments close by, along with the multiple permissions remaining in place in the area. In a worst-case scenario, multiple developments in the area could be developed concurrently or overlap in the construction phase, including the following:

Table 18-3 Development Planning permissions that can potentially overlap with the development

Reference	Location	Development Description	Status	Decision Date
4313/22 (Part 8 Application)	Cherry Orchard Green, Dublin 10	Proposed construction of a residential development comprising 172 no. dwellings (141 no. 3-bedroom two-storey terraced houses and 31 no. 2-bedroom two-storey terraced houses), 2 public open spaces approx. 0.83 ha /14% of site area, associated site infrastructure works/ supporting infrastructure, landscaping, public lighting, access roads/pavements, boundary treatments and provision for a link road/ pavements and cycleways to Ballyfermot	Granted	03.10.2022
3490/25 (Part 8 Application)	Cherry Orchard, Dublin 10	Construction of a mixed-use development of 171 residential units and neighbourhood centre on a site of c.3.64 ha bound by Cherry Orchard Meadow, Blackditch Road, Croftwood Crescent and Cherry Orchard Avenue, Cherry Orchard, Dublin 10. Includes a new 4 to 5 storey neighbourhood centre block with 4 retail units (599 sqm), 3 community, arts and cultural space units (615 sqm), and 107 older persons' apartments; 64 two-storey houses; a 0.76 ha central park with daylighted Blackditch Stream, play area, civic plaza, pedestrian bridge and walkways; 638 sqm communal open space; 91 car spaces, 4 motorcycle spaces, 1 loading bay and 228 bicycle spaces; three vehicular accesses; road and public realm improvements; site clearance, boundary treatments, public lighting, drainage, traffic calming, crossings, internal roads, landscaping, ESB substation and ancillary works.	Approved by City Council	13.04.2026
318607 (Part 10 Application)	Cherry Orchard Green, Dublin 10	The proposed development (GFA of c. 66,399sqm) involves the construction of a residential led mixed use scheme across 16 blocks contained within 9	Granted	01.07.2024

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Reference	Location	Development Description	Status	Decision Date
		buildings ranging in height from 4 to 15 storeys. The development includes the provision of 708no. residential apartments, 7no. retail / commercial units, community, arts and cultural spaces and associated external events space and community gardens (1,157sq.m) and a childcare facility (672sq.m GFA) with associated external playing space.		
321068 (Part 10 Application)	Cherry Orchard Green, Dublin 10	Proposed alterations to the previously granted ABP-318607-23, construction of a residential led mixed use scheme across 16 blocks within 9 buildings ranging in height from 4 to 15 storeys	Granted	11.03.2025
321931 (Part 10 Application)	Cherry Orchard Green, Dublin 10	The development will consist of the construction of a residential scheme containing 137no. residential dwellings (comprising 31no. 2-bedroom units, and 106no. 3-bedroom units) through a mixture of houses, duplex units and own-door apartments. The proposed development also includes the provision of 2,133sqm landscaped public open space, in addition to 2,050sq.m of public open space as approved under the Phase 1 permission	Granted	22.09.2025
312290	Park West Avenue and Park West Road, Park West, Dublin 12	750 no. apartments, creche and associated site works.	Granted	16.06.2022
3403/21	Site (1.26 ha) at Blocks 70 and 72 Park West Avenue and Park West Road, Park West, Dublin 12	Planning permission for the proposed development will consist of modifications to the permitted residential development of 86 no. residential units over retail/restaurant uses (reg. ref. 3798/18, 3941/20, 2517/21) within blocks 70 and 72.	Granted	06.12.2021
SD188/0006 (Part 8 Application)	New Nangor Road, Clondalkin, Dublin 22.	Social Housing Development comprising of two and three storey housing and apartment units (44 units in total) on a site located at New Nangor Road, bounded by Riversdale Estate & Mayfield Park, Clondalkin, Dublin 22. The proposed development shall consist of: 19no. 3-bed, two storey houses, 1no. two storey specially adapted unit and 24no. 2-bed apartments in 3 storey building.	Part 8 Approved by Council	08.10.2018
5311/22	Block 7, Parkwest Business Campus, Parkwest, Dublin 12	The development will consist of the change of use of the ground, first and second floors from class 3 office use to class 8 for use as a health centre / clinic along with all associated works.	Granted	05.04.2023
3999/21	Unit 55, Park West Road, Park West Industrial Park, Dublin 12, D12 X9F9	The development will consist of extension of the existing office space at second floor level resulting in an overall office floorspace increase of 125 sqm approximately, construction of a new mezzanine level in the warehouse area (circa 257 sqm) and a new stairwell. Creation of 2no.	Granted Permission and Retention Permission	04.02.2022

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Reference	Location	Development Description	Status	Decision Date
		openings to the south elevation and 1no. opening to the west elevation and associated site development works. The development will also include the retention of the existing office space at ground and first floor level of 250 sqm approximately.		
SD21A/0100	Unit 15, Cherry Orchard Industrial Estate, Ballyfermot Road, Dublin 10	Construction of a revised two storey mono-pitched Discount Foodstore (with ancillary off-licence use), with an increased total gross floor space of 2,415sq.m and an increased net retail sales area of 1,650sq.m (2,144sq.m and 1,400sq.m respectively permitted under SD19A/0286); Associated reconfiguration of site layout and all other associated and ancillary modifications to SD19A/0286 above and below ground level, including modifications to pedestrian access and a new electricity substation and switch room building.	Granted	07.06.2021
SD20A/0309 SD22A0093	3-4, Crag Avenue, Clondalkin Industrial Estate, Clondalkin, Dublin 22	Provision of 4 new information and communications technology (ICT) Facility buildings and associated development at the subject site, superseding elements of the extant planning permissions on site (Reg. Ref.: SD18A/0068 and Reg, Ref.: SD19A/0185). The proposed development will comprise the following: The construction of 4 ICT Facility buildings (ICT Facilities 1, 2, 3, and 4) with a combined total gross floor area {GFA) of c. 47,564.5 sq. m.	Granted	23.03.2021
SD19A/0185	3-4, Crag Avenue, Clondalkin Industrial Estate, Clondalkin, Dublin 22.	Alterations to approved plans (Grant of Permission ref PL06S.243151 and PA Reg Ref SD13A/0271 and SD18A/0068) to the previously granted planning permission for the construction of an ESB 110kV Gas Insulated Substation for the use by Crag Digital Limited in support of the development and to incorporate an ESB Network Substation to improve and upgrade power supply to Clondalkin and adjoining areas; the proposed ESB 110kV Gas Insulated Substation is a two storey building of gross floor area of 1,586sq.m and Client Control Room building of an area of 116sq.m	Granted	31.07.2019
SD20A/0034	KN Group HQ, Cloverhill Industrial Estate, Cloverhill Road, Raheen, Dublin 22	Office accommodation extension to the rear of the existing office building (455sq,m at ground floor, 33.2sq.m at first floor); covered bicycle parking area to the front of the existing building 25.2sq.m; all necessary associated ancillary ground and drainage works.	Granted	30.06.2020
SD22A0060	Cloverhill Industrial Estate, Cloverhill Road, Dublin 22	Change of use of 464sq.m of warehouse mezzanine storage, approved under planning reference SD18A/0031, to office use, as well as associated and ancillary internal works, elevational changes and	Granted	19.07.2022

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Reference	Location	Development Description	Status	Decision Date
		external ground works to facilitate this new use.		
SD19A/0100	Unit 1, Elmfield Court, Ninth Lock Road, Clondalkin, Dublin 22	Change of use for part of existing retail unit to Off-Licence sales area (Site area 0.025 ha)	Granted	01.07.2019
SD24A/0125W	Unit 10, Clondalkin Business Centre, Crag Cres, Clondalkin Industrial Estate, Dublin 22, Co. Dublin	Partial change of use as constructed under Reg. Ref. S99A/0146, from Warehouse to Office use (29sqm) to include for internal alterations and extension of current office floor areas on ground and first floor level.	Granted	04.07.2024
SD24A/0106*	Block 1, Units 10-13 Weatherwell Industrial Estate, Neilstown, Clondalkin Industrial estate, Dublin 22, Co.Dublin	The construction of new office space at first floor level including enclosing the existing access stairs (total area @ 87.915 sq./mts), all works proposed are ancillary to the use of the existing building and business.	Granted	12.09.2024
SD19A/0286	Unit 15, Cherry Orchard Industrial Estate, Ballyfermot Road, Dublin 10	Demolition of existing single storey discount food store (with ancillary off-licence use) measuring 1758sq.m gross floor space with a net retail sales area of 1286sq.m; two storey mono-pitch discount food store (with ancillary off-licence use) measuring 2144sq.m gross floor space with a net retail sales area of 1400sq.m	Granted	16.12.2019
316119	DART+ South West Electrified Heavy Railway Order - Hazelhatch & Celbridge Station to Heuston Station, and Hesuton Station to Glasnevin		Granted	13.11.2024

The majority of the sites are located at distances greater than 200m from the proposed development and consequently there is likely to be no significant cumulative impacts associated with these developments.

If phases of the overall masterplan for the proposed development proceed simultaneously then elevated construction noise emissions due to cumulative noise are likely to occur at receptor locations proximate to two or more construction sites as well as a potential increase in the length of time that the receptor will be exposed to construction noise. Hence, cumulative construction impacts will need to be considered and managed during the construction phase. It is recommended that liaison between construction sites is on-going throughout the duration of the construction phase. Contractors should schedule work in a co-operative effort to limit the duration and magnitude of potential cumulative impacts on nearby sensitive receptors. With mitigation in place the impact of phases being constructed simultaneously will be negative, slight to moderate and brief to short-term.

Operational Stage

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Traffic data already accounts for other projects within the area and also for the latter stages of the overall Cherry Orchard masterplan, hence, the cumulative assessment has already been accounted for.

18.4.4 Biodiversity

The proposed project is within a greenfield site, zoned for new residential and mixed-use development. Most of the applications outlined above relate to commercial projects with temporary/short term construction phases, and also relate to the alterations of existing structures, or minor public infrastructural improvements. The proposed development site is of low biodiversity importance and is within a built-up urban area, with no direct pathway to designated sites. It is considered that in combination effects with other existing and proposed developments in proximity to the application area would be unlikely, neutral, not significant and localised. It is concluded that no significant effects on Natura 2000 sites will be seen as a result of the proposed development alone or combination with other projects. No in combination effects are foreseen.

No projects in the vicinity of the proposed development would be seen to have a significant in combination effect on biodiversity in the zone of influence of the project.

18.4.5 Landscape and Visual

The cumulative effects are generated by schemes noted above and in the context of the Park West Cherry Orchard Local Area Plan. It is clear from the assessment that the gap sites are causing urban dereliction and antisocial behaviour, with a notable effect on the quality of the public realm. This results in an assessment of low sensitivity The granting of schemes and the completion of permitted development will further consolidate the ambitions of the LAP and SDRA4 of the Dublin City Development Plan. Such ambitions represent a high magnitude of change. As schemes are permitted following national, regional and local guidance, it is fair to assume that the quality of design will be required to adhere to those standards. In that regard, the generation of public realm with a good sense of place, innate wayfinding and definition in the streetscape is seen in a positive light. Increasing the population and amenity in proximity to public transport and connecting it through green infrastructure to the local area, should be a positive way to make new, integrated communities. The cumulative effects are therefore seen as **moderate** and **positive.**

There will be no significant effects.

18.4.6 Lands and Soils

Cumulative effects have been considered in relation to the wider Cherry Orchard Point development, including the approved Phase 1 and Phase 2 developments and the future Phase 4 development. The principal potential cumulative interactions for land, soils and geology relate to construction earthworks, the management and movement of excavated materials, soil stockpiling, dust, sediment mobilisation and the use of common authorised waste or recovery facilities.

The proposed development will implement appropriate soil management, materials tracking and pollution prevention measures and will coordinate construction activities with the wider masterplan. Subject to these measures, no significant cumulative effect on land, soils or geology is anticipated.

No additional interactions which may cause cumulative impacts on the surrounding environs are anticipated for the proposed Phase 3 subject site beyond those outlined within the Parent EIAR.

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18.4.7 Water

Cumulative effects have been considered in relation to existing, permitted and proposed developments within the surrounding area, including the Cherry Orchard Point masterplan development and associated infrastructure.

The principal potential for cumulative effects relates to surface water runoff, drainage infrastructure, flood risk and water quality. The proposed development will incorporate SuDS, attenuation and restricted discharge at 2 l/s/ha, with the proposed surface water drainage system designed to accommodate the 1-in-100-year rainfall event with a 30% allowance for climate change.

The proposed development will form part of the Cherry Orchard Point development, with the surface water drainage strategy designed to integrate with the drainage infrastructure and maintain the relevant discharge rates. Subject to implementation and maintenance of the proposed drainage and pollution prevention measures, the proposed development is not anticipated to result in a significant cumulative effect on surface water, groundwater, flood risk or the hydrological and hydrogeological environment.

No additional interactions which may cause cumulative impacts on the surrounding environs are anticipated for the proposed Phase 3 subject site beyond those outlined within the Parent EIAR.

18.4.8 Population and Human Health

This addendum Environmental Report has been prepared to reflect updates to the overall impact of the development on Cherry Orchard Point lands which have been identified as Key Development Site 4 and Site 5 in the Park West Cherry Orchard Local Plan 2019, as were assessed in the Parent EIAR.

However, the development site boundary of the current planning application only relates to Key Development Site 5: Barnville Site which is Phase 3 of the Cherry Orchard Point scheme. As such, cumulative impacts arising from development of the entire subject lands at Cherry Orchard Point, beyond the extents of the application site, have been considered throughout this addendum Environmental Report.

The site is strategically positioned bounded by the Cedar Brook Way to the north, Park West Avenue to the west, Barnville Park to the east and the Park West Cherry Orchard rail station to the south.The surrounding area of the site is mixed use in nature with two large industrial estates each to the southwest and southeast of the site, residential developments located further east, Cloverhill Prison to the north and a number of recreational and green spaces including Cherry Orchard Park.

The potential cumulative impact of the proposed development on population and human health has been considered in conjunction with recent relevant planning permissions set out in Section 13.

However, it should be considered that the proposed development, alongside the relevant residential and commercial planning applications, form part of a key growth area as identified in the Local Area Plan and Dublin City Development Plan. The cumulative impact of the development of adjacent lands within Study Area will be the resulting rise in population, in line with national, regional, and local planning policy for Park West and Cherry Orchard.

This impact will be long term and positive in the context of the development zoning objectives for the subject site, and wider local, regional, and national planning policy. This is further supported by the strategic location of lands within the Study Area and their proximity to high-quality public transport services, and social and community services. The cumulative impact of the full development of lands in line with the objectives of the Local Area Plan will enhance the social and economic viability of the area.

18.4.9 Material Assets – Traffic and Transportation

For the purpose of cumulative impact, the Traffic and Transport Assessment Guidelines, issued by TII in May 2014 require that *'Traffic and Transport Assessment should consider all committed*

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developments within the vicinity of the site. This includes sites which have previously been granted planning permission but which are yet to become operational as well as any planning applications that have been submitted but have yet to be determined.'

Cumulative traffic impacts may arise where there are a number of existing or proposed developments, which may affect the traffic at this development and the traffic flows in the surrounding area.

Cumulative effects occur when the environmental effects of the proposed development combine with those associated with other developments in the surrounding area which could act together to cause a significant environmental effect.

The assessment found that the potential for cumulative effects in combination with other projects is limited to construction and traffic movements. Here the effects of the proposed development itself are already assessed as ***not significant*** and this conclusion is not changed by the cumulative effects assessment.

18.4.10 Material Assets – Waste Management

Construction Stage

The Proposed Development is located within an area of significant planned and permitted urban growth in the wider Dublin and western fringe of Dublin City. The receiving environment is characterised by multiple large-scale residential and mixed-use developments, many of which may be constructed concurrently and subsequently occupied within similar timeframes.

During the construction phase, cumulative effects could arise from the simultaneous generation of construction and demolition (C&D) waste across several sites. This has the potential to place increased short-term demand on regional waste collection services, authorised soil recovery facilities, and C&D processing infrastructure. However:

- Ireland, and the Greater Dublin Area in particular, has a well-established network of licensed and permitted waste facilities, including soil recovery sites, transfer stations, and recycling facilities;
- All developments will be required to prepare and implement RWMPS in accordance with current best practice and regulatory requirements; and
- Waste will be managed by authorised waste contractors and directed to appropriately permitted facilities, ensuring traceability and compliance.

Operational Stage

Each development will be obligated to comply with the *Waste Management Act 1996* (as amended), relevant Regional Waste Management Plans, and local authority bye-laws. These regulatory controls, combined with the availability of established waste infrastructure, will effectively mitigate potential cumulative impacts.

During the operational phase, cumulative effects may arise from the combined municipal waste arisings associated with multiple new residential developments in the area. This will result in an overall increase in household waste generation at a local scale. Notwithstanding this:

- Household waste collection in Dublin is provided through a competitive, permit-based private collection system, with sufficient capacity to service expanding residential areas;
- Source segregation, recycling, and organic waste diversion will be required in accordance with national legislation and Dublin City Council waste bye-laws, reducing reliance on landfill; and
- The provision of appropriately designed waste storage areas and collection systems within each development will ensure efficient and controlled waste management.

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Given the availability of appropriate waste facilities, along with the waste legislation and guidance that all sites are required to abide by, then the cumulative residual effect in terms of waste is predicted to be and **long-term, not significant and neutral** during operation, assuming full implementation of standard mitigation measures and adherence to regulatory requirements.

18.4.11 Material Assets – Utilities

Potential in-combination effects with other EIAR topics have been considered during both the construction and operational phases of the Proposed Phase 3 development.

During construction, utility excavation, trenching, service connections and diversion works may interact with activities assessed under Land, Soils and Geology, Biodiversity, Water, and Traffic and Transport. Accidental damage to existing services, temporary service interruptions, or accidental leakage or pollution from utility works could also interact with the water environment. These potential interactions will be managed through the mitigation, construction management and utility-provider coordination measures set out in this chapter and the relevant measures identified in **Chapters 8 – Biodiversity**, **11 – Land, Soils and Geology**, and **12 – Water**.

During operation, increased demand for water supply, wastewater, electricity, gas and telecommunications services, together with the operation of the proposed surface water and foul drainage infrastructure, may interact with the relevant environmental topics, particularly Water and other material assets. These effects have been considered in conjunction with the assessments provided in the relevant EIAR chapters and will be managed through the proposed utility design, network capacity confirmation, operational requirements and ongoing inspection and maintenance measures.

Subject to implementation of the proposed mitigation, coordination, testing, commissioning and operational management measures, no significant in-combination effects on material assets – utilities are anticipated.

Cumulative effects have been considered in the context of the wider Cherry Orchard Point masterplan, including Approved Phases 1 and 2, the Proposed Phase 3 development and future Phase 4 development.

The principal cumulative considerations relate to increased demand on water supply, wastewater, electricity, gas and telecommunications networks, together with coordination of utility construction works and connections. The Proposed Phase 3 development will be coordinated with the infrastructure and construction programmes associated with the wider masterplan.

For water supply, Uisce Éireann has confirmed that the proposed demand can be accommodated without water network infrastructure upgrades. For foul wastewater, the relevant public network upgrades are required and are currently programmed by Uisce Éireann for completion in early 2027, subject to change.

Subject to completion of the required public wastewater upgrades and implementation of the proposed utility-provider coordination and mitigation measures, no significant cumulative effects on material assets – utilities are anticipated.

No additional interactions which may cause cumulative impacts on the surrounding environs are anticipated for the proposed Phase 3 subject site beyond those outlined within the Parent EIAR.

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