DBTR-SCR1 Fund, a Sub-Fund of the CWTC Multi Family ICAV

Proposed Strategic Housing Development on the Former Player Wills site and undeveloped land owned by Dublin City Council at South Circular Road, Dublin 8.

VOLUME I
NON-TECHNICAL SUMMARY

DECEMBER 2020

Document Control Sheet

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Table of Contents

Table of Figures

Table of Tables

1 Introduction

Article 5(1)(e) of the EIA Directive requires the project proponent to include a Non-Technical Summary (NTS) of the Environmental Impact Assessment Report (EIAR) and it is transposed into Irish law under article 94(c) of the Planning and Development Regulations 2001, as amended. The term 'non-technical' indicates that this summary should not include technical terms, detailed data and scientific discussion, that detail is presented in Volume II, the EIAR.

This Non-Technical Summary provides a concise, but comprehensive description of the Project, its existing environment, the effects of the project on the environment, the proposed mitigation measures, and the proposed monitoring arrangements, where relevant. The NTS highlights any significant uncertainties about the project. It explains the development consent process for the Project and the role of the EIA in that process.

It is important to highlight that the assessments that form part of the EIAR were undertaken as an iterative process rather than a one-off, post-design environmental appraisal. Findings from the individual assessments have been fed into the design process, resulting in a project which achieves a 'best fit' within the environment.

The development description is set out in Section 2.1.

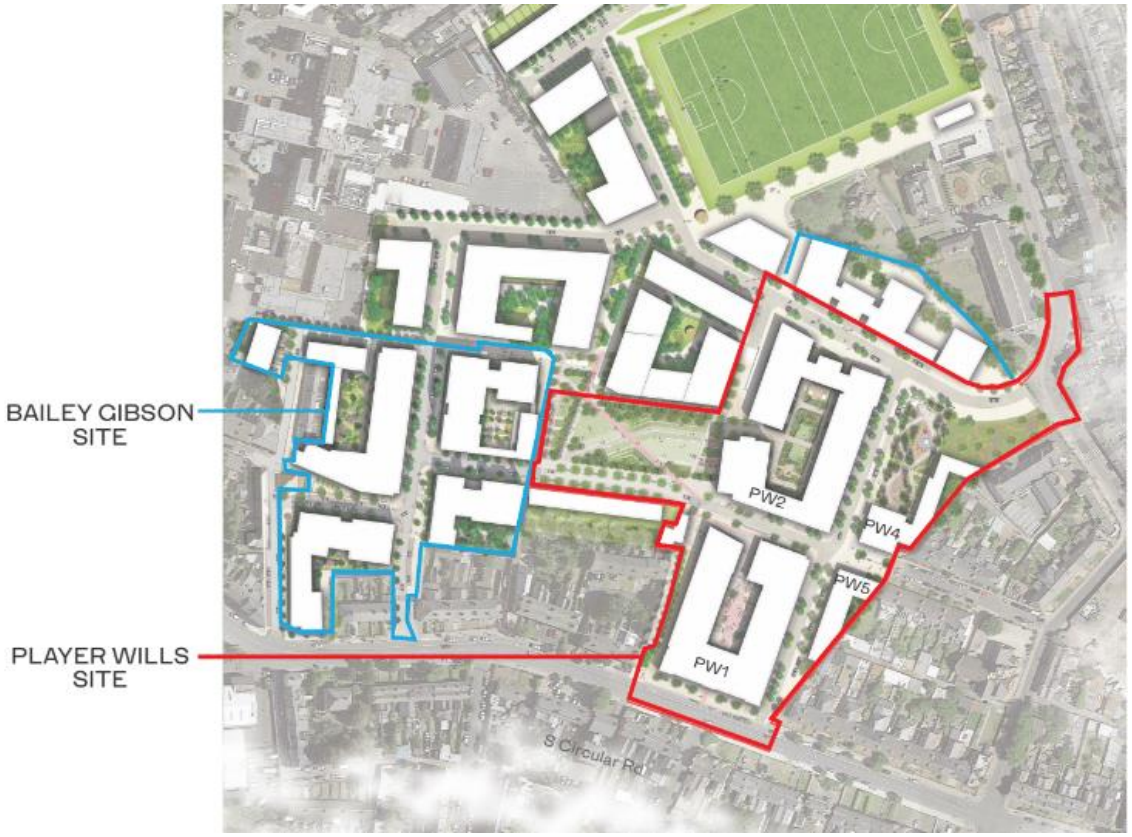


FIGURE 1 SITE LOCATION

1.1 Screening for Environmental Impact Assessment

Development which falls within one of the categories specified in Schedule 5 of the Planning and Development Regulations 2001, as amended, which equals or exceeds, a limit, quantity, or threshold prescribed for that class of development must be accompanied by an EIAR.

The subject development does not fall within development classes set out in Part 1 of Schedule 5. It does exceed the thresholds applied for the type of development proposed as set out under Part 2 of Schedule 5, namely;

10b) (i) Construction of more than 500 dwellings

10b) (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. (In this paragraph, "business district" means a district within a city or town in which the predominant land use is retail or commercial use.)

The proposed development includes 732 no. units on a site of 3.06 hectares in an inner-city location and accordingly exceeds the area threshold of 2 hectares established for mandatory EIAR.

1.2 Competency

It is a requirement that the EIAR must be prepared by competent experts. For the preparation of this EIAR, the Applicant engaged McCutcheon Halley Chartered Planning Consultants to direct and coordinate the preparation of the EIAR and a team of qualified specialists were engaged to prepare individual chapters, the consultant firms and lead authors are listed in the **Table 1**. Details of competency, qualifications and experience of the lead author of each discipline is outlined in the individual chapters.

Chapter	Aspect	Consultancy	Lead Consultant
1	Introduction	McCutcheon Halley Planning Consultants	Paula Galvin
2	Project Description	McCutcheon Halley Planning Consultants / Henry J. Lyons / Barrett Mahony Consulting Engineers	Kayleigh Sexton
3	Alternatives	McCutcheon Halley Planning Consultants / Henry J. Lyons	Paula Galvin
4	Population and Human Health	McCutcheon Halley Planning Consultants	Kayleigh Sexton
5	Landscape & Visual	Kennett Consulting Ltd.	Chris Kennett
6	Material Assets: Traffic & Transport	Systra	Andrew Archer Allanah Murphy
7	Material Assets: Built Services	Barrett Mahony Consulting Engineers & O'Connor Sutton Cronin	Ciaran O'Rafferty Mark Hopkins
8	Land & Soils	O'Callaghan Moran & Associates	Sean Moran
9	Water & Hydrology	O'Callaghan Moran & Associates	Sean Moran
10	Biodiversity	Brady Shipman Martin	Matt Hague
11	Noise & Vibration	AWN Consulting	Mike Simms
12	Air Quality & Climate	AWN Consulting	Ciara Nolan
13	Cultural Heritage - Archaeology	IAC Archaeology	Ross Waters
14	Cultural Heritage – Built Heritage	Slattery Conservation	Shóna O'Keeffe
15	Interactions of the Foregoing	McCutcheon Halley Planning Consultants	Kayleigh Sexton
16	Summary of Mitigation Measures	McCutcheon Halley Planning Consultants	Kayleigh Sexton

TABLE 1 CHAPTERS OF EIAR & CONTRIBUTORS

1.3 Methodology

In preparing the EIAR the following regulations and guidelines were considered:

- The requirements of applicable EU Directives and implementing Irish Regulations regarding Environmental Impact Assessment;
- 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 Assessment Reports – DRAFT (Environmental Protection Agency, August 2017).
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning and Local Government, 2018).

In addition, specialist disciplines have had regard to other relevant guidelines, and where relevant these are noted in individual chapters of the EIAR, see Volume II.

Each chapter of this EIAR assesses the direct, indirect, cumulative and residual impact of the proposed development for both the construction and operational stage of the proposed development.

The identified quality, significance and duration of effects for each aspect is largely based on the terminology set out in the EPAs *Draft Guidelines on the information to be contained in Environmental Impact Assessment Reports* (2017) as summarised below;

Quality of Effect	
Positive	A change which improves the quality of the environment (for example, by increasing species diversity; or the improving reproductive capacity of an ecosystem, or by removing nuisances or improving amenities
Neutral	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error
Negative/Adverse Effects	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)
Significance of 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 Effect	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate Effect	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Significant Effect	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
Very Significant Effect	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
Profound Effect	An effect which obliterates sensitive characteristics.
Duration of Effects	
Momentary	Seconds to minutes
Brief	Less than 1 day
Temporary	Less than 1 year
Short-term	1-7 years
Medium-term	7-15 years
Long-term	15-60 years
Permanent	Over 60 years

TABLE 2 IMPACT RATING TERMINOLOGY

Extent & Context of Effects	
Extent	Describe the size of the area, the number of sites, and the proportion of a population affected by an effect.
Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)
Probability of Effects	
Likely	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
Unlikely	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.
Type of Effects	
Indirect	Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
Cumulative	The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.
Do Nothing	The environment as it would be in the future should the subject project not be carried out.
Worst Case	The effects arising from a project in the case where mitigation measures substantially fail.
Indeterminable	When the full consequences of a change in the environment cannot be described.
Irreversible	When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
Residual	The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
Synergistic	Where the resultant effect is of greater significance than the sum of its constituents, (e.g. combination of SOx and NOx to produce smog).

TABLE 2 IMPACT RATING TERMINOLOGY, CONTD.

2 Project Description

2.1 Proposed Development

The design rationale is to create and deliver a high quality sustainable residential led mixed use strategic housing development within this strategic infill site which respects its setting and maximises the site's natural attributes while achieving maximum efficiency of existing infrastructure. The Proposed Site Layout is illustrated on **Drawing No. PL0003**.

DBTR-SCR1 Fund, a Sub-Fund of the CWTC Multi Family ICAV intend to apply to An Bord Pleanála for permission for a mixed-use Build to Rent Strategic Housing Development at the former 'Player Wills' site (2.39 hectares) and adjoining lands (0.67 hectares) under the control of Dublin City Council. A public park, public road and works to South Circular Road and to facilitate connections to municipal services at Donore Avenue are proposed on the Dublin City Council land. The former 'Player Wills' site incorporates Eircode's: D08 T6DC, D08 PW25, D08 X7F8 and D08 EK00 and has frontage onto South Circular Road, St. Catherine's Avenue and Donore Avenue, Dublin 8. The Dublin City Council undeveloped land adjoins the former 'Player Wills' site to the west and the former 'Bailey Gibson' site to the east. The total area of the proposed development site is 3.06 hectares.

The design rationale is to create and deliver a high quality, sustainable, residential led mixed use strategic housing development within this inner city brownfield site which respects its setting and maximises the site's natural attributes while achieving maximum efficiency of existing infrastructure. The Proposed Site Layout is illustrated on Drawing No. PL0003 contained within the architectural suite of drawings.

The development will consist of;

i. the demolition of all buildings (15,454 sq.m GFA), excluding the original fabric of the former Player Wills Factory, to provide for the development of a mixed use(residential, community, arts and culture, creche, food and beverage and retail) scheme comprising predominantly build to rent apartment dwellings (492 no.) together with a significantly lesser quantity of single occupancy shared accommodation private living areas (240 no.), with an average private living floor area of 24.6 sq.m (double the minimum private living space size required for single occupancy shared accommodation) and a arts/culture/community hub within the repurposed ground floor of the former factory building;

ii. change of use, refurbishment, modifications and alterations to the former Player Wills Factory building (PW1) to include the removal of 1 no. later addition storey (existing 4th storey) and the later addition rear (northern) extension, retention and modification of 3 no. existing storeys and addition of 2 no. storeys set back on the building's south, east and west elevations with an 8-storey projection (max. height 32.53m) on the north eastern corner, with a cumulative gross floor area of 17,630 sq.m including ancillary uses, comprising;

    a. at ground floor 852 sq.m of floor space dedicated to community, arts and cultural and exhibition space together with artist and photography studios (Class 1 and Class 10 Use), 503 sq.m of retail floor space (Class 1 Use), 994 sq.m of café/bar/restaurant floor space, 217 sq.m of co-working office floor space (Class 3 Use) and ancillary floor space for welfare facilities, waste management and storage;

    b. 240 no. single occupancy shared accommodation private living areas, distributed over levels 1-4, including 2 no. rooms of 30 sq.m, 49 no. rooms of 25 sq.m; 14 no. rooms of 23 sq.m, 58 no. rooms of 22.5 sq.m, 8 no. rooms of 20 sq.m, 104 no. rooms of 19 sq.m and 5 no. disabled access (Part M) rooms

(3 no. 32 sq.m and 2 no. 26 sq.m); 21 no. kitchen/dining areas, and, 835 sq.m of dedicated shared accommodation services, amenities and facilities distributed across levels 1-4, to accommodate uses including lounge areas, entertainment (games) area, 2 no. external terraces (Level 03 and 04), laundry facilities, welfare facilities and waste storage;

c. 47 no. build-to rent apartments distributed across levels 1-7 including 12 no. studio apartments; 23 no. 1 bed apartments, 8 no. 2 bed apartments: and, 4 no. 3-bed apartments;

d. 1,588 sq.m of shared (build to rent and shared accommodation) services, amenities and facilities including at ground floor reception/lobby area, parcel room, 2 no. lounges and administration facilities; at Level 01 entertainment area, TV rooms, entertainment (games room), library, meeting room, business centre; at Level 02 gym and storage and at Level 07, a lounge area.

e. Provision of communal amenity outdoor space as follows; PW1 - 450 sq.m in the form of roof terraces dedicated to shared accommodation and 285 sq.m roof terrace for the proposed apartments .

f. a basement (190 sq.m) underlying the proposed 8-storey projection to the northeast of PW1 to accommodate plant.

iii. the construction of 445 no. Build to Rent apartment units, with a cumulative gross floor area of 48,455 sq.m including ancillary uses distributed across 3 no. blocks (PW 2, 4 and 5) comprising;

a. PW2 (45,556 sq.m gross floor area including ancillary uses) - 415 no. apartments in a block ranging in height from 2-19 storeys (max. height 63.05m), incorporating 16 no. studio units; 268 no. 1 bed apartments, 93 no. 2 bed apartments and 38 no. 3-bed apartments. At ground floor, 2 no. retail units (combined 198 sq.m) (Class 1 use), and a café/restaurant (142 sq.m). Tenant services, amenities and facilities (combined 673 sq.m) distributed across ground floor (lobby, mail room, co-working and lounge area), Level 06 (terrace access) and Level 17 (lounge). Provision of communal amenity open space including a courtyard of 1,123 sq.m and roof terraces of 1,535 sq.m

b. Double basement to accommodate car parking, cycle parking, waste storage, general storage and plant.

c. PW4 (1,395 sq.m gross floor area including ancillary uses) - 9 no. apartments in a part 2-3 storey block (max. height 10.125m) comprising, 2 no. 2-bed duplex apartment units and 7 no. 3-bed triplex apartment units. Provision of communal amenity open space in the form of a courtyard 111 sq.m

d. PW5 (1,504 sq.m gross floor area including ancillary uses) - 21 no. apartments in a 4 storey block (max. height 13.30m) comprising 12 no. studio apartments, 1 no. 1-bed apartment, 5 no. 2-bed apartments, and 3 no. 3-bed apartments. Provision of communal amenity space in the form of a courtyard 167sq.m.

iv. the construction of a childcare facility (block PW4) with a gross floor area of 275 sq.m and associated external play area of 146 sq.m;

v. the provision of public open space with 2 no. permanent parks, ‘Players Park’ (3,960 sq.m) incorporating active and passive uses to the northwest of the former factory building on lands owned by Dublin City Council; ‘St. Catherine’s Park’ (1,350 sq.m)a playground, to the north east of the Player Wills site adjacent to St. Catherine’s National School. A temporary public park (1,158 sq.m) to the northeast of the site set aside for a future school extension. The existing courtyard (690 sq.m) in block PW1 (former factory building) to be retained and enhanced and a public plaza (320 sq.m) between proposed blocks PW and PW4.

vi. 903 no. long-stay bicycle parking spaces, with 861 no. spaces in the PW2 basement and 42 no. spaces at ground level in secure enclosures within blocks PW4 and PW5.

20 no. spaces reserved for non-residential uses and 110 no. short-stay visitor bicycle spaces provided at ground level.

vii. 4 no. dedicated pedestrian access points are proposed to maximise walking and cycling, 2 no. from South Circular Road, 1 no. from St. Catherine's Avenue and 1 no. from Donore Avenue.

viii. in the basement of PW2, 148 no. car parking spaces to serve the proposed build to rent apartments including 19 no. dedicated disabled parking spaces and 6 no. motorcycle spaces. 20 no. spaces for a car sharing club ('Go Car' or similar). 10% of parking spaces fitted with electric charging points.

ix. in the basement of PW2, use for 81 no. car parking spaces (1,293 sq.m net floor area) including 5 no. dedicated disabled parking spaces, 3 no. motorcycle spaces and 10% of parking spaces fitted with electric charging points to facilitate residential car parking associated with future development on neighbouring lands. The area will not be used for carparking without a separate grant of permission for that future development. In the alternative, use for additional storage (cage/container) for residents of the proposed development.

x. 37 no. surface level car parking spaces including 3 no. disabled access and 3 no. creche set down spaces and 10% fitted with electric charging points. 2 no. loading bays and 2 no. taxi set-down areas.

xi. development of internal street network including a link road (84m long x 4.8m wide) to the south of the proposed 'Players Park' on land owned by Dublin City Council that will provide connectivity between the former 'Bailey Gibson' site and the 'Player Wills' site.

xii. vehicular access will be provided via Donore Avenue with a one-way exit provided onto South Circular Road to the east of block PW1(the former factory building);

xiii. replacement and realignment of footpaths to provide for improved pedestrian conditions along sections of Donore Avenue and South Circular Road and realignment of centreline along sections of Donore Avenue with associated changes to road markings;

xiv. a contra-flow cycle lane is proposed at the one-way vehicular exit to the east of PW1 (former factory building) to allow 2-way cycle movements via this access point;

xv. decommissioning of existing 2 no. ESB substations and the construction of 2 no. ESB substations and associated switch rooms, 1 no. single ESB substation in PW 1 (43.5 sq.m) and 1 no. double ESB substation in PW2 (68 sq.m);

xvi. the construction of a waste and water storage building (combined 133 sq.m, height 4.35m) to the west of building PW1;

xvii. all ancillary site development works; drainage, rooftop solar photovoltaics (20 no. panels total), landscaping, boundary treatment and lighting.

FIGURE 2 PROPOSED SITE LAYOUT

The principle development statistics of the proposal are as shown below:

Development Statistics	
Site Area	3.06 ha (gross) 2.39 ha (nett)
No. Units	732 no. units in 4 no. blocks, including: • 492 no. apartments in 3 no. blocks (PW1, PW2, PW4 and PW5) • 240 no. Single occupancy Shared Accommodation Units (PW1)
Tenant Amenities and Facilities	• 835 sq.m in PW1 (dedicated shared accommodation) • 1,588 sq.m in PW1 (apartments & shared accommodation) • 673 sq.m in PW2 (apartments & shared accommodation)
Non Residential Uses	• PW1 Arts, Cultural & Community Hub, 852 sq.m - Class 1 & 10 • PW1 Retail 503 sq.m - Class 1 • PW1 Food & Beverage 994 sq.m • PW1 Co-working Office - Class 3 • PW2 – 2 no. Retail combined 198 sq.m – Class 1 • PW2 – Food & Beverage 142 sq.m • PW2 – 81 no. carparking spaces 1,293 sq.m • PW4 - Crèche (275 sq.m) – Class 8(b)
Density	239 uph (gross) (including all 732 units on 3.06ha area site) 321 uph (net) (excludes DCC lands and temporary park for school extension)

TABLE 3 DEVELOPMENT STATISTICS

Development Statistics	
Building Height	2 to 19 storeys
Unit Mix Summary	Excluding Shared Accommodation • 8% Studio • 59% 1-Bedroom • 22% 2-Bedroom • 11% 3-Bedroom
Car Parking	• 168 no. Spaces (148 no. dedicated to BtR apartments and 20 no. car share)
Bicycle Parking	• 903 no. long stay • 110 no. short stay
Dual Aspect Units	51%
Public Open Space	Players Park (3,960 sq.m) St. Catherine's Park (1,350 sq.m) Temporary Park – School Extension Site (1,158 sq.m) PW1 Courtyard (690 sq.m) Public Plaza (320 sq.m)
Communal Amenity Space	3,671 sq.m (combined) courtyards and roof terraces PW 1 450 sq.m roof terrace (dedicated shared accommodation) PW1 285 sq.m roof terrace (dedicated apartments) PW2 1,123 sq.m courtyard & 1,525 sq.m roof terraces PW4 111 sq.m courtyard PW5 167 sq.m courtyard
Plot Ratio	2.19
Site Coverage	31%

TABLE 3 DEVELOPMENT STATISTICS, CONTD.

2.1.1 Residential

The total number and mix of apartments are set out below.

Building Ref.	Shared Accommodation	Studio	1 Bed Apartment	2 Bed Apartment	3 Bed Apartment	2 Bed Duplex Apartments	3 Bed Triplex Apartments	Total
PW 1	240	12	23	8	4	-	-	**287**
PW 2	-	16	268	93	38	-	-	**415**
PW 4	-	-	-	-	-	2	7	**9**
PW 5	-	12	1	5	3	-	-	**21**
Total	**240**	**40**	**292**	**106**	**45**	**2**	**7**	**732**

TABLE 4 UNIT NUMBERS AND MIX

It is proposed to provide 49 no. units for Part V (of the Planning and Development Act 2000) purposes and these will be contained in PW2. The Part V mix is 20% (10 no.) studio's, 31% (15 no.) 1-bed units, 16% (8 no.) 2-bed units and 33% (16 no.) 3-bed units. A Part V Letter of Validation from Dublin City Council is included with this application.

As a Build to Rent scheme there is a specific planning policy requirement (SPPR 7) for resident support facilities, services and amenities contained within the Sustainable Urban Housing: Design Standards for New Apartments (2018);

"BTR development must be:

(b) Accompanied by detailed proposals for supporting communal and recreational amenities to be provided as part of the BTR development. These facilities to be categorised as:

i. Resident Support Facilities - comprising of facilities related to the operation of the development for residents such as laundry facilities, concierge and management facilities, maintenance/repair services, waste management facilities, etc.

ii. Resident Services and Amenities – comprising of facilities for communal recreational and other activities by residents including sports facilities, shared TV/lounge areas, work/study spaces, function rooms for use as private dining and kitchen facilities, etc."

In total 2,261 sq.m of residential support and amenities is proposed;

- PW1 - 1,588 sq.m
- PW2 – 673 sq.m

2.1.2 Height

A full description is contained in the **Architectural Design Statement** that accompanies this application under separate cover and it should be read in conjunction with this section.

A sensitive approach has been taken to building height, incorporating transitions to the surrounding low-rise neighbourhoods. Two to four-storey blocks (PW4 and PW5) are positioned at the perimeter adjoining existing residential areas, providing a degree of screening and a transition to taller blocks behind them. These smaller scale blocks enable the development to knit into the surrounding neighbourhood context.

The taller elements at 15-19 storeys are clustered toward the centre of the site where the carrying capacity is greatest and are positioned to terminate key vistas or to flank public spaces.

The height of the individual blocks is set out in the Table below and the distribution of height is illustrated on **Figure 3.**

Building Ref.	No. of Levels	Max Height
PW1	5-9	32.53m
PW2	2-19	63.05m
PW4	2-3	10.125m
PW5	4	13.3m

TABLE 5 BUILDING HEIGHT

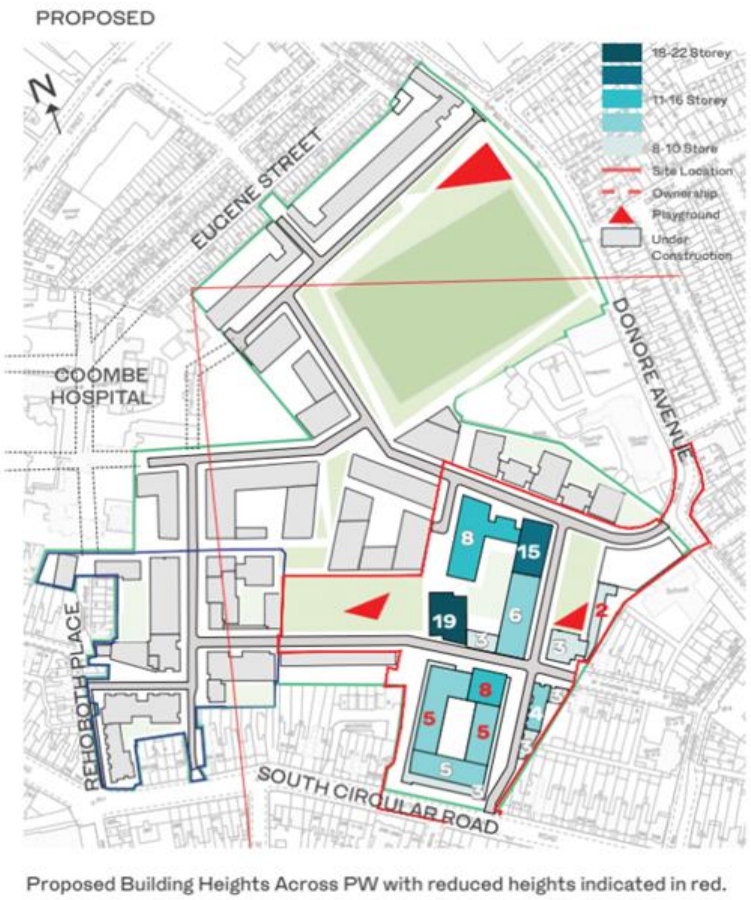


FIGURE 3 PROPOSED DISTRIBUTION OF HEIGHT

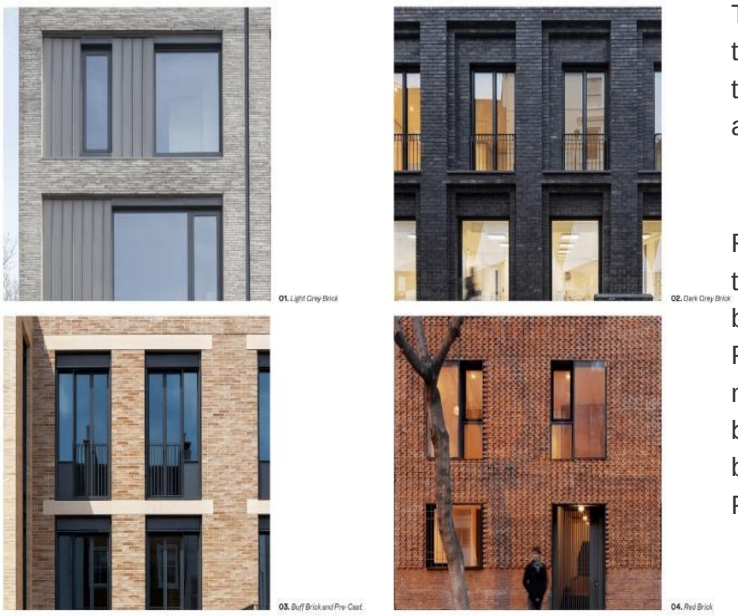
2.1.3 Materiality

A full description is contained in the **Architectural Design Statement** that accompanies this application under separate cover and it should be read in conjunction with this section.

Brick is the dominant material in the surrounding area and is used in both domestic and commercial buildings.

The key concepts for the facade expression include;

- Reflecting the domestic proportions of openings in the surrounding areas.
- Creating a material palette that is sympathetic to surrounding urban fabric.
- Adding texture to the facades to reflect the variation of brick in the surroundings.
- Using metal accents to reflect the sites industrial past.
- Establishing a datum to maintain the scale of the existing Player Wills factory building.
- Breaking the massing into smaller elements to create a sense of scale and proportion within volumes.
- Balconies where possible are semi-recessed to help with wind loading and to improve the daylighting within units.
- Creating a sense of depth within the facade to articulate the building volume.
- Allowing perimeter blocks to mediate the height of the development to knit into the existing residential context.



The proposed development utilises two styles of brick from the local area; the red brick of South Circular Road and the Dolphin's Barn-style brick.

Reflecting the material character of the surrounding neighbourhood red brick is proposed on the PW4 and PW5 buildings where the massing is much smaller, and the PW1 and PW2 buildings us the Dolphin's Barn-style brick which complements the original Player Wills factory building.

Red brick and Dolphin's Barn-style brick are both dominant in the area and allows the proposal to integrate into the neighbourhood and complements the original Player Wills factory building.

Textured brick is used to articulate the facade. The detail adds definition to the composition and breaks down the mass to a domestic scale. The scale of detailing makes reference to the residential context and the richness of brick detailing in the area.

It is proposed to introduce a grey brick to beak the volume of the proposed higher blocks. To add accent and to echo the site's industrial heritage dark aluminium with bronze hues is proposed.

PLATE 2-3 MATERIAL EXAMPLES

Metal accents are used to articulate the contemporary brick façade and reflect the sites industrial past. The detailing of the factory façade is reflected and adopted in a contemporary way throughout the development.

2.1.4 Open Space and Landscaping

The proposed development establishes a hierarchy of private, communal and public open space in a way that will ensure all open spaces are owned and taken care of. Landscape proposals were developed in conjunction with the proposed surface water drainage strategy and encompasses interception storage (green roofs and rainwater harvesting) together with attenuation storage (blue roofs and tree pits).

2.2.9.1 Public Open Space

Throughout the scheme a clear hierarchy of attractive and usable open spaces have been designed to respond to both the active and passive needs of the residents and wider area. These vary in size, scale and programme such as children's play, exercise, open flexible space for residents to gather in all underpinned by the need to promote biodiversity and sustainable practices.

3 no. public open spaces are proposed, 2 no. are permanent and the third is temporary;

1. Player Park, a multi-functional, biodiverse rich park is located to the north west of the former Player Wills factory and is approx. 0.4 hectares;
2. St. Catherine Park, designed as a playground, is adjacent to the existing national school, to the north east of the site, and it incorporates an area of approx. 0.12 hectares; and,
3. An area (approx. 0.12 hectares) adjacent to the school and reserved as part of SDRA 12 for the future expansion of the school will be developed as a temporary park until such time as the expansion secures planning permission under a separate application by the Department of Education.

FIGURE 4 PLAYERS PARK & ST. CATHERINE'S PARK - COMPUTER GENERATED IMAGES

The **Daylight, Sunlight & Overshadowing Study** submitted under separate cover demonstrates that the public parks will benefit from excellent sunlight. Players Park would receive 98% sunlight and St. Catherine's Park would receive 88%. These results significantly exceed the BRE threshold for 50% of an area to receive at least 2 hours of sunlight on the 21st March, for a space to appear adequately sunlit.

2.2.9.2 Communal Amenity Space

Communal amenity space in the form of courtyards and roof terraces is distributed throughout

the scheme as illustrated in the **Figure** below.

The distribution is as follows;

- PW1 – 735 sq.m of roof gardens
- PW2 – a 1,223sq.m courtyard and 1,535 sq.m roof gardens
- PW4 – a 111 sq.m courtyard
- PW5 - a 167 sq.m home zone plaza

In accordance with Appendix 1 of the Sustainable Urban Housing: Design Standards for New Apartments (2018), the minimum requirement is 2,839 sq.m and the proposed development incorporates 3,671 sq.m in the form of courtyards and roof terraces. Accordingly, the scheme is compliant with Appendix 1 and flexibility with regard to the application of the Guidelines is not sought.

The scale of the individual courtyards is varied and provides for play, active and passive recreation and will act as hubs where the new community can gather and interact.

FIGURE 5 OPEN SPACE

The individual courtyards and roof terraces integrate both hard and soft landscaping that provide variety both in form and use. An extensive tree planting schedule is proposed for enhanced biodiversity and to provide a sense of place. Formal and informal play areas together with seating, lawn areas and opportunities for community gardening are all features of the proposed design. Paving proposals for courtyards will have a rustic feel using a combination of paving flags and smaller setts and cobbles. Red carpet paving is also proposed which will draw occupants into the main open spaces within the development.

PLATE 2-4 CGIS OF COURTYARDS

2.2.9.3 Private Amenity Space

The **Housing Quality Audit** that accompanies this application demonstrates that the proposed private amenity space is compliant with Appendix 1 of the Apartment Guidelines. Notwithstanding the flexibility provided in the Design Standards for New Apartments, regarding the provision of private amenity space for Build to Rent proposals, the proposed design includes private amenity space for 98.7% of the proposed BtR units i.e. 486 of the total 492 units.

The primary type of private amenity are semi-recessed glass balconies. They maximise light penetration to individual units and enhance outward views. The semi-recessed design provides privacy and shelter such that the balconies can be used throughout the year.

The majority of ground floor apartments have an outdoor terrace which will be slightly raised above street level to assist with privacy. This design feature will also enhance passive surveillance of streets together with providing another layer of street activation.

2.2.9.4 Public Realm/Perimeter Treatment

The vision for the public realm is to provide a high quality, attractive and coherent new development, where streets are distinctive and contribute to sense of place; with a clear and legible streetscape where pedestrians are prioritised.

The proposed design responds to the detailed and 'human' scale of spaces, materials, lighting, seating, paving, and planting. The ground surfaces including the proposed 'red carpet' concept move people along; they are spaces they can spend time in; the provision and quality of seating; the comfort and adequacy of lighting; the ease of access and separation from vehicles; the use of colour and planting – all of these, together with the retail and other experiences on

offer, contribute to the quality and character of the proposed streets, and to the sense of place and ultimate enjoyment of that place.

A comprehensive schedule of street tree planting is proposed, and the species selected will enhance biodiversity while also creating a hierarchy of identifiable streets. Seating areas are integrated into the public realm. On-street car parking is minimised with 37 no. visitor car parking spaces proposed together with 2 no. loading bays and 2 no. set down taxi spaces to service the development.

It is proposed to bring warmth to the streets with buff coloured granite paving flags proposed in the pedestrian areas with a degree of variance through the grain of the stone. Materials for on-street car parking will be delineated in a contrasting concrete or natural stone paving unit and will be capable of supporting service vehicles.

All streets will be finished with asphalt with the exception of the shared surface to the centre of the development and crossing points - it is proposed that these finishes will be concrete or natural paving stone.

The perimeter landscape includes the retention of existing boundary walls where possible. It is proposed to plant a temporary evergreen hedgerow along the site's western boundary with Dublin City Council lands to allow for integration of the wider Masterplan area in due course. Existing party walls will be retained where feasible along all other interfaces.

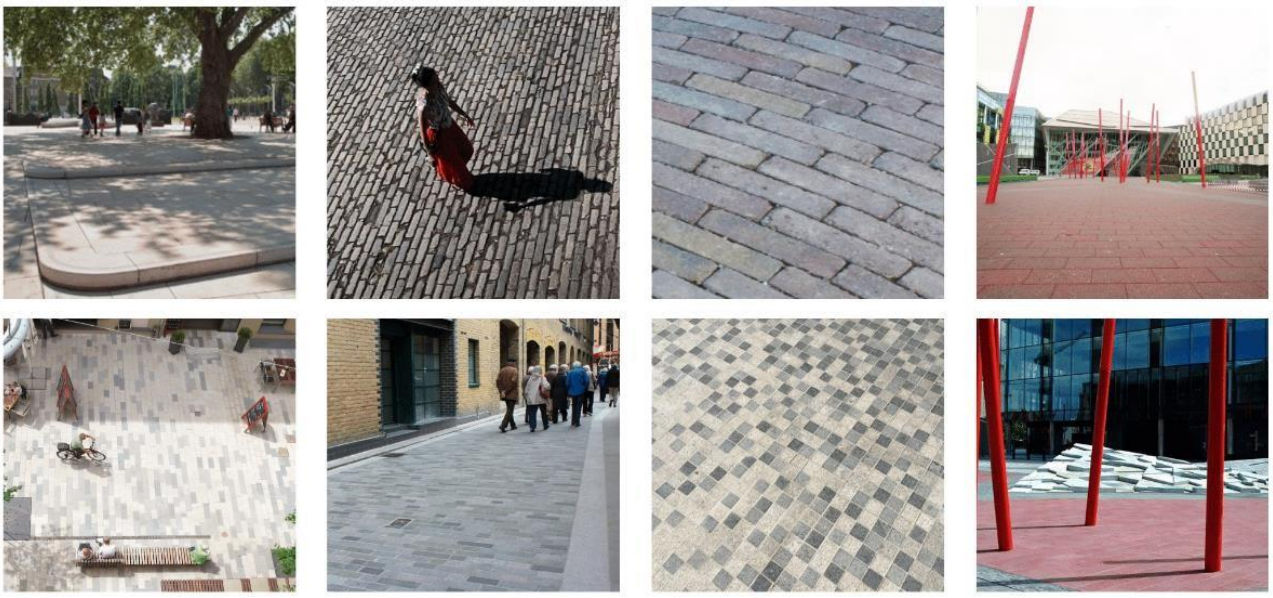


PLATE 2-5 PROPOSED HARD LANDSCAPE MATERIALS

2.1.5 Access and Layout

Vehicular access to the development will be via Donore Avenue, exit for vehicular traffic on to the South Circular Road will be via the existing access east of the Player Wills factory building. Replacement and realignment of footpaths to provide for improved pedestrian conditions along sections of Donore Avenue and South Circular Road and realignment of centreline along sections of Donore Avenue with associated changes to road markings will be provided.

Car Parking is proposed as follows:

- in the basement of PW2, 148 no. car parking spaces to serve the proposed build to rent apartments including 19 no. dedicated disabled parking spaces and 6 no. motorcycle spaces. 20 no. spaces for a car sharing club ('Go Car' or similar). 10% of parking spaces fitted with electric charging points.
- in the basement of PW2, use for 81 no. car parking spaces (1,293 sq.m net floor area) including 5 no. dedicated disabled parking spaces, 3 no. motorcycle spaces and 10% of parking spaces fitted with electric charging points to facilitate residential car parking associated with future development on neighbouring lands. The area will not be used for carparking without a separate grant of permission for that future development. In the alternative, use for additional storage (cage/container) for residents of the proposed development.

Additionally 37 no. surface level car parking spaces are proposed including 3 no. disabled access and 3 no. creche set down spaces and 10% fitted with electric charging points. 2 no. loading bays and 2 no. taxi set-down areas.

Access to the basement is proposed via a ramp access to the west of the PW2 building.

903 no. long-stay bicycle parking spaces are proposed, with 861 no. spaces in the PW2 basement and 42 no. spaces at ground level in secure enclosures within blocks PW4 and PW5. 20 no. spaces reserved for non-residential uses and 110 no. short-stay visitor bicycle spaces provided at ground level.

The public realm is conceived as a pedestrian priority environment and the internal road network has been designed to encourage lower speeds (30kph or less). Four dedicated pedestrian access points are proposed to promote the principle of permeability, 2 no. from South Circular Road, 1 no. from St. Catherine's Avenue and 1 no. from Donore Avenue. Within the site, footpaths are provided throughout with a shared pedestrian/cycle path around the perimeter. The proposed pedestrian/cycle infrastructure has been designed to allow it connect through to the wider Masterplan lands as they become developed. The road to the south of the 'Players Park' connects the adjoining Bailey Gibson Site to the proposed Player Wills site to which this application pertains.

The proposed vehicular access strategy, location of car and cycle parking is illustrated below.

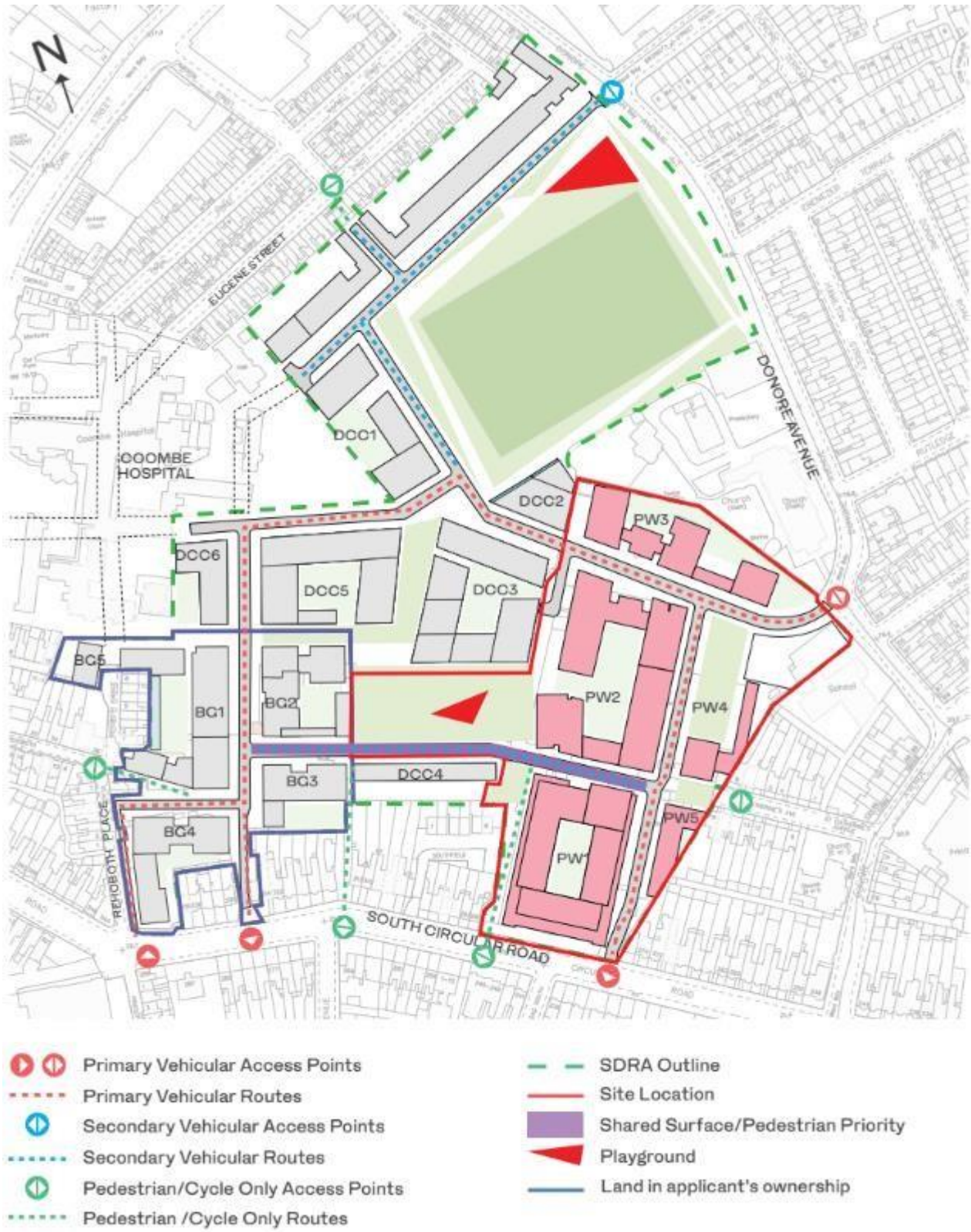


FIGURE 6 PROPOSED PEDESTRIAN, CYCLE & CAR ACCESS

The proposed access strategy for service vehicles (fire, waste and taxis) is illustrated in the Figure below:

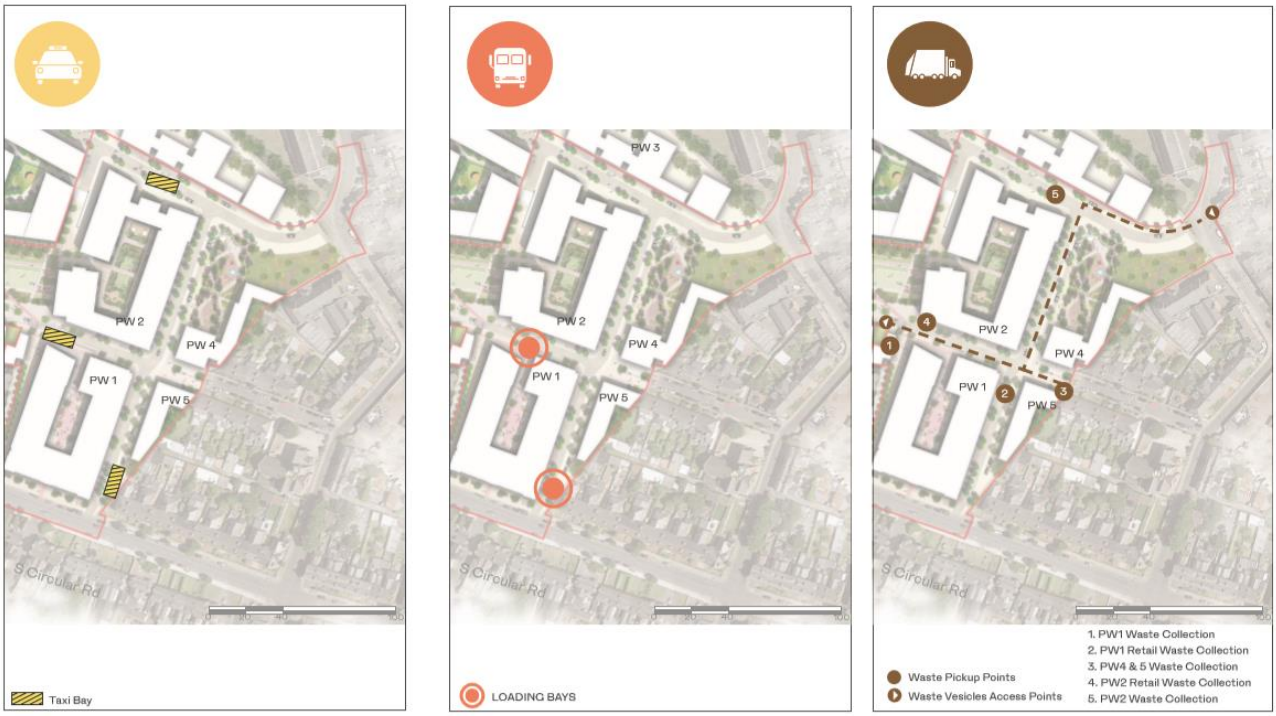


FIGURE 7 PROPOSED SERVICE VEHICLES ACCESS

2.1.6 Drainage Strategy

A full description is contained in the **Engineering Services Report** that accompanies this application under separate cover and it should be read in conjunction with this section.

2.1.6.1 Wastewater

The local area gradually falls from south-west to north-east. The Bailey Gibson development west of the subject site will include the construction of a foul sewer across both DCC's Land and the Player Wills site which will connect to the existing 300mm combined sewer located on Donore Avenue at the north-east corner of the subject site. This sewer will be constructed as part of the first phase of the development of the overall Masterplan lands, and has been designed with capacity to cater for the total projected flows from both the approved Bailey Gibson development and the Player Wills development to which this application pertains.

In order to achieve this outfall connection, Dublin City Council have provided consent for the construction of the foul sewer through their lands to the west of the Player Wills site. The foul sewer design has been carried out in accordance with the Irish Water Code of Practice for Wastewater. Foul wastewater discharge from the Player Wills SHD development will be; Average – 3.06l/s. Peak – 11.58l/s.

The final section of the drain, just prior to the discharge point to the combined sewer at Donore Avenue, has been sized to cater for the Player Wills foul flow and the future development of the wider Masterplan lands.

FIGURE 8 PROPOSED WASTEWATER DRAINAGE STRATEGY

2.1.6.2 Surface Water

DCC Drainage Planning Department policy requires that consideration be given to stormwater management over the full Masterplan area, which consists of the Player Wills site, DCC lands and the Bailey Gibson site. A Masterplan drainage strategy has been developed in consultation with DCC and this strategy plan is provided as part of the submitted civil engineering drawings. The three individual sites within the Masterplan will be developed in different stages and as a result, the stormwater management and drainage strategy includes provision to account for this staging.

To facilitate a gravity connection to the public stormwater network, the new stormwater drainage system for the development will connect to the stormwater culvert located at the north east corner of the Player Wills site, in Donore Avenue, see **Figure** below.

The stormwater outflow from the Player Wills site, including allowance for climate change, to the stormwater culvert in Donore Avenue will discharge at the rates shown in the **Table** below. These flow rates incorporate consideration of the effect of the SuDS measures which are proposed to be incorporated within the Player Wills development.

Storm Event	Flow (l/s)
1 Year ARI +20% for climate change	1.1
30 Year ARI +20% for climate change	10.8
100 Year ARI +20% for climate change	21.7

TABLE 6 STORMWATER PEAK OUTFLOW RATES

FIGURE 9 PROPOSED SURFACE WATER DRAINAGE STRATEGY

It is intended that the future development of DCC lands will include construction of new stormwater sewers within the new street network, which will discharge to the same stormwater culvert, further along Donore Avenue, to the north-east. Given that the majority of the green open space within the Masterplan Area is located within DCC lands, this area has the greatest ability to provide space for attenuation of stormwater.

A Masterplan Drainage Strategy has been developed with DCC Drainage Planning Department to provide an integrated approach to stormwater management across the three sites within the Masterplan. This planning application covers the Player Wills Development to the south-east and the Southern Park to the south, between the Bailey Gibson and Player Wills sites. In accordance with the Masterplan drainage strategy, stormwater from the Player Wills site will be managed within that site prior to discharge to the stormwater culvert in Donore Avenue close to the junction with Sandford Avenue. Once the Masterplan has been fully developed, stormwater from all other areas of the Masterplan(DDC Lands, including the Southern Park, and the Bailey Gibson site)shall discharge to the stormwater culvert in Donore Avenue close to the junction with Harman St., after passing through an attenuation tank located to the north of the proposed Municipal playing pitch. To facilitate phased construction of the Masterplan, which will include construction of The Bailey Gibson, Players Park and Player Wills sites prior to construction of the remainder of DCC's Land, an interim approach to stormwater management from Bailey Gibson and the Southern Park sites will be employed.

The peak outflow rates from the Bailey Gibson development will be combined with the outflow from the Player Wills site on an interim basis, have been incorporated into the Micro drainage calculations for the Player Wills drainage network to facilitate pipe sizing for the final outfall drain from the point of connection of the stormwater drainage from each separate development, to the discharge location at Donore Avenue. This drainage arrangement is illustrated in the **Masterplan** that accompanies this application.

2.1.6.3 Sustainable Urban Drainage Systems (SuDS)

SuDS measures are incorporated into the surface water management system. They include both intensive and extensive green roofs, blue roofs, interconnected tree pits, attenuation storage and petrol interceptors.

Intensive Green Roofs: All roof terraces and podium terraces over basements shall be provided with a proprietary cellular drainage mat under the hard and soft landscaping to give a minimum interception storage volume of 10l/m^2 as well as contributing to filtration and attenuation of surface water.

Extensive Green Roofs – All roofs accessed only for maintenance and repair will be provided with a sedum blanket over a proprietary cellular drainage mat to give a minimum interception storage volume of 10l/m^2, as well as contributing to filtration and attenuation of surface water.

Paved Areas: Roads and paved surfaces will be finished in impermeable surfacing, either flexible bituminous pavement, rigid bound paving, impermeable concrete paver or stone pavers. Typically, all streets are provided with trees and soft landscaping zones, with car parking on at least one side. The roads and footpaths will be drained by gullies that connect to tree pits which are interlinked with perforated distribution pipes to create infiltration trenches. The perforated pipes will allow discharge directly to the ground through the surrounding gravel bed. Due to the limited permeability which can be achieved through the sub-surface boulder clays, these pipes will also be connected to the surface water network via silt trap manholes. Notwithstanding the poor sub soil permeability, the gravel bed beneath the tree pits and surrounding the perforated pipes will provide good interception storage, which will retain, filter and attenuate run-off.

Ground Levels Courtyards and Landscaped Areas (outside basement footprints): Ground level courtyards shall discharge surface water directly to ground. Hard landscaping zones within paved areas shall be drained to adjacent infiltration trenches within soft landscaped areas.

Basement: All basements shall be constructed as waterproof structures to prevent drainage of ground water. Incidental run-off from the basement entry ramp and cars etc. shall be directed to a suitably sized petrol interceptor prior to discharge via a pumped system to the foul drainage network.

Blue Roof Attenuation: Certain roof areas, generally those areas adjacent higher green roofs, have been selected to provide blue roof attenuation storage beneath the interception storage mat. Once the cellular drainage mat has filled, the surface water will enter the open crate storage cells below and spread across the

area of the roof. Isolated flow control outlets will restrict flow to discharge at a rate of 2l/s/ha based on the blue roof catchment area.

FIGURE 10 PROPOSED SUDS STRATEGY

2.1.6.4 Water Supply

In accordance with Irish Water Code of Practice for Water Infrastructure (2017), a new 200mm diameter looped watermain is proposed to service the Player Wills development with a connection to the 18-inch cast iron watermain in the South Circular Road. Water demand for the proposed development is as follows; Average – 7.55/s. Peak – 18.895 l/s and this is confirmed as feasible by Irish Water.

Hydrants will be provided on the loop main in accordance with Part B of the Building Regulations and the Fire Safety Certificate's Requirements. Sluice valves will be provided at appropriate locations to facilitate isolation and purging of the system. Twenty-four-hour storage will be provided to cater for possible shutdowns in the system.

FIGURE 11 PROPOSED WATER SUPPLY

2.1.7 Energy Strategy

2.1.8 Sustainability

It is noted that this application is accompanied by an **Energy & Sustainability Report** and it should be referenced in conjunction with this section.

2.2 Construction Activities & Phasing

2.2.1.1 Building Research Establishment Environmental Assessment Method

BREEAM® (Building Research Establishment Environmental Assessment Method) is one of the global leading green building rating systems that is used to measure the environmental performance of new and existing buildings.

BREEAM® assessment uses recognised measures of performance to evaluate the building's specifications, design, construction and use. These measures are set against nine categories and benchmark criteria, including:

- Energy: building operational energy and CO_2 emissions
- Management: management policy, commissioning, site management and procurement
- Health and Wellbeing: indoor and external issues (noise, light, air, quality, etc.)
- Materials: environmental impacts of building materials

- Transport: transport-related CO_2 and location-related factors
- Water: building consumption and efficiency
- Waste: construction and operational waste management
- Pollution: water and air pollution
- Land Use & Ecology: site and building footprint and ecological value and conservation.

Each of the criteria is scored and then multiplied by a weighting. The resulting overall score is then translated into a rating on a scale of BREEAM® certification levels: pass, good, very good, excellent and outstanding. The Applicant is aiming to achieve a final Excellent certification.

2.2.1.2 Building Regulations

The Part L 2017, Nearly Zero Energy Buildings (NZEB) Building Regulations is the new standard for all non-residential buildings constructed after 1st January 2019. The Regulations set energy performance requirements to achieve Nearly Zero Energy Buildings performance as required by Article 4 (1) of the Directive for new buildings. The definition of Nearly Zero Energy Buildings is defined as:

> *"Nearly zero-energy building' means a building that has a very high energy performance, as defined in Annex 1. The nearly zero or very low amount of energy required should be covered to a significant extent by energy from renewable sources, including energy from renewable sources produced on- site or nearby".*

The residential units are designed in compliance with Regulations for the conservation of fuel and energy and will meet the requirements for Nearly Zero Energy Building (NZEB). Residential units will achieve a Building Energy Rating (BER) of A2-A3 and the non-residential elements will achieve an A3 BER.

To achieve these BER ratings it is necessary to incorporate renewable energy technologies. The proposed development incorporates roof mounted solar photovoltaic (PV) panels. They convert solar radiation into electricity, which can be connected to the mains supply of a dwelling unit. The panels are placed on the roof and are most efficient with an incline angle of 30°. Panels are typically arranged in arrays on building roofs, with the produced electricity fed either directly into the apartment or into the landlord's supply. The image below illustrates the layout of the proposed rooftop solar PV within the Player Wills site.

2.2.2 Construction Phase

2.2.2.1 Programme

The development will be constructed in 5 no. phases and the estimated timeframe is approximately 42 months and 2 weeks. The construction phase of the proposed Player Wills development will overlap with that of the Bailey Gibson development for a period of 22 months. The duration of the overlap is susceptible to change as it is dependent on the actual commencement and completion dates of both projects. It is envisaged that the peak construction of either site will not overlap as it has been calculated that they will be approximately 4 months apart. The commencement date is dependent on successfully securing planning permission together with the time taken for procurement.

The principal stages of the construction stage are;

i. Demolition of existing buildings
ii. Removal of existing services
iii. Site strip and basement bulk excavation
iv. Excavation of new foundations
v. Construction of the new reinforced concrete buildings
vi. Mechanical & electrical installation

vii. Cladding & building fit out

viii. Services installation and connections

ix. Landscaping, roads and footpaths.

The sequencing of works to each of the blocks is set out in the **Table** below together with anticipated durations for each phase.

Construction Phase	Description of Works	Approximate Duration	Estimated Completion Date
1	Structural Demolition	≈ 3 months	04 Aug 2021
	Site Setup	≈ 7 months	03 Dec 2021
	Lay Drainage for Initial Road N&E of PW1	≈ 1.5 months	24 Jun 2021
	Construct Road East of PW1 only	≈ 2 months	25 Aug 2021
	Lay Drainage in Players Park	≈ 1.5 months	21 Jul 2021
	Lay main Drainage Remainder	≈ 1.5 months	23 Aug 2021
	Construct Attenuation Tank	≈ 1.5 months	12 Aug 2021
2	PW2: Basement Works	≈ 36 months	18 Jul 2023
3	PW1: Ground + 8 Storeys + Roof	≈ 27 months	04 Mar 2024
4	PW2: Ground + 18 Storeys + Roof	≈ 30 months	12 Jul 2024
5	Players Park	≈ 9.5 months	12 Jul 2024
	PW4: Ground + 3 Storeys + Roof (Inclusive of Creche & St. Catherine's Park)	≈ 16.5 months	12 Nov 2024
	PW5: Ground + 3 Storeys + Roof	≈ 16 months	03 Dec 2024

TABLE 7 CONSTRUCTION WORKS PHASING AND DURATIONS

2.2.2.2 Construction Hours

The proposed construction hours are 07:00-18:00 on weekdays (Monday to Friday) and 08:00-14:00 on Saturdays with no work on Sundays or bank/public holidays in accordance with the Environmental Noise regulations 2006 and subject to final agreement with Dublin City Council (DCC).

In exceptional instances where works or deliveries (e.g. abnormal loads, or connections to public service systems or utilities) are required outside of these hours, bespoke agreement will be sought from DCC prior to any works taking place. It is respectfully requested that any condition of planning regarding construction hours include a degree of flexibility to accommodate exceptional circumstances.

To limit the impact of construction traffic during the AM (08:00-09:00) and PM (17:00-18:00) peak, deliveries to site will be limited.

2.2.3 Vehicular Access

The locations of vehicular and pedestrian access points are illustrated on **Figure 6**. There is 1 no. primary site entrance for HGVs are proposed, south west of the original Player Wills Factory building. Vehicles leaving the site will use an existing opening to the south west of the original Player Wills factory building.

Car and pedestrian/cyclist access to the site compounds and associated parking areas will be from an existing access off Donore Avenue to the north east of the subject site.

Access to the site will be controlled via gates and turnstiles and security personnel will be present.

Temporary signage will be erected at all openings to notify those accessing the site of the on-site traffic routing arrangements.

2.2.4 On Site Parking

Workers will be instructed to use public transport and to 'car share' where possible. Some 150 no. car parking spaces for workers and visitors will be provided within the site compound areas, 30 no. on DCC lands and 120 no. on the subject site. The provision of onsite parking will mitigate overspill of traffic onto the surrounding street network. 350 no. cycle parking spaces will be provided and appropriate changing and drying facilities will be available within the site compound to further encourage sustainable travel patterns.

2.2.5 Construction Personnel

During the peak construction phase, it is estimated that there will be 700 personnel on site.

2.2.6 Construction Traffic

A **Construction Traffic Management Plan** prepared by Systra accompanies this application under separate cover. The level of construction traffic movements will vary over the course of the project.

On average there will be 53 one-way Heavy Vehicle trips to the site during the course of construction. However, this figure will vary depending on the construction activity with a greater number (87 no.) of heavy vehicles expected during the basement excavation. Where feasible the contractor will seek to minimise deliveries during the peak hours (0700-0900 and 1700-1900).

It is likely that the majority of vehicles accessing the site will be 8 wheel large tippers (10.2 metres) 6 wheel grab lorries (8.1 metres), rigid delivery vehicles (7.8 metres), 6 wheel concrete pump lorries (8.4 metres) and delivery vans (5.6 metres).

The proposed routes of construction vehicles across the wider network is shown in **Figure 12.** These routes follow the DCC designated HGV routes. It is proposed the red route would be the main access route with the alternative routes provided along the purple or blue routes.

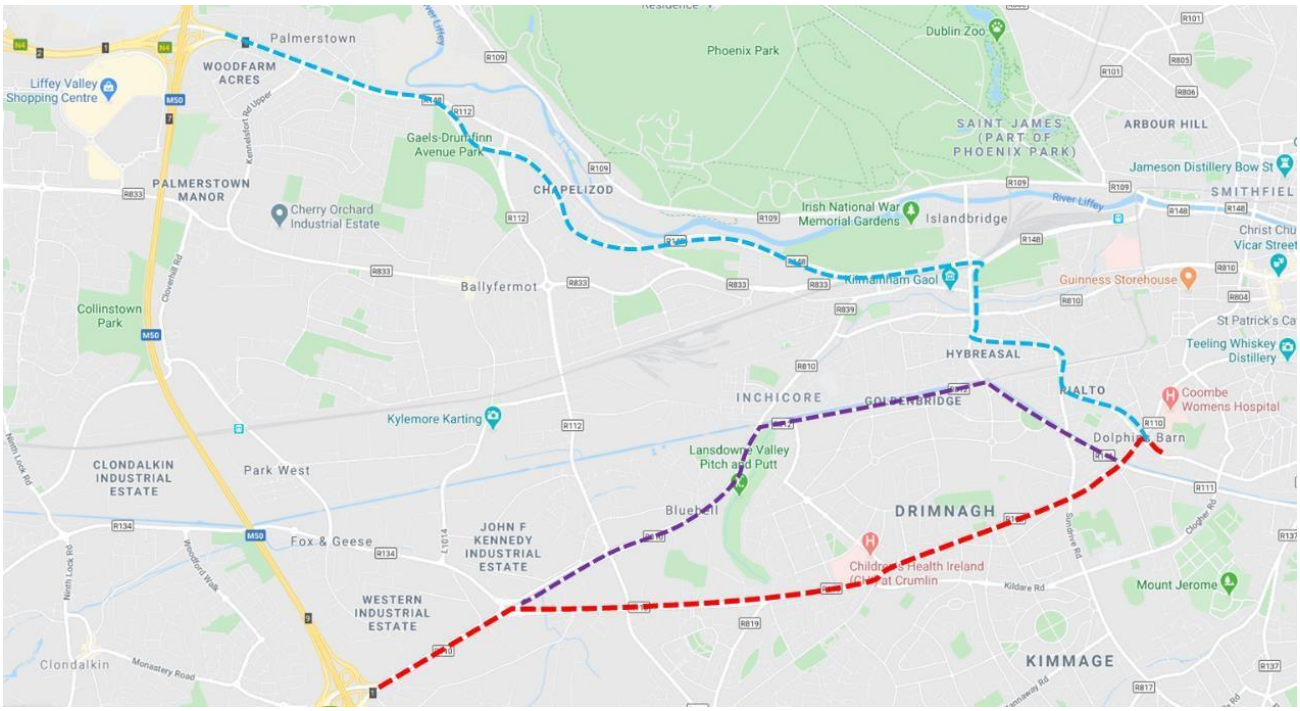


FIGURE 12 PROPOSED CONSTRUCTION TRAFFIC ROUTES

All vehicles will be met by a banksman before being directed into a dedicated unloading area. Vehicles will then load / unload before exiting along the routes outlined. All users associated with the site will be made aware of construction deliveries and appropriate safety measures will be put in place to ensure safety of staff, pedestrians and cyclists. The Site Manager will stagger the deliveries to minimise the impact on and off the site. A banksman will meet all deliveries on site prior to them undertaking any manoeuvres.

2.2.7 Construction Waste

2.2.7.1 Demolition

The demolition waste breakdown on a typical construction site, based on the BRE document is typically as follows;

	Waste Types	%	Player Wills Site (Tonnes)
1	Concrete, Bricks, Tiles, Ceramic *	46	1,150
2	Timber	13	325
3	Slate	8	200
4	Asphalt, Tar and Tar products	6	150
5	Plasterboard	4	100
6	Glass	3	75
7	Metals *	20	500
	Total Waste	**100%**	**2,500 Tonnes**

*Note: If the warehouse is concrete-framed instead of steel-framed then item 1 quantity will rise & item 7 will fall.

TABLE 8 DEMOLITION WASTE BREAKDOWN

Concrete and masonry waste will be source segregated and removed off-site to a reprocessing facility to facilitate its beneficial reuse as a product thereby diverting it from landfill. The closest reprocessing facility to the subject site is Panda in Ballymount, Dublin.

Timber, glass and metals will be stored separately at an approved recycling facility off-site.

Details on asbestos are contained in section 5.3.4 of the **Construction Environmental Management Plan** that accompanies this application. It establishes the presence of Asbestos Containing Materials (ACMs) within the Player Wills site. The material will be removed by a suitably qualified contractor (United Metals Recycling) in accordance with S.I. No. 386 of 2006 and S.I. No. 589 of 2010 Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006-2010. ACMs will be disposed of at an appropriately licenced facility, it is anticipated that this will be the Rilta Environmental Ltd., Rathcoole, Co. Dublin.

2.2.7.2 Surface Preparation

The majority of the site consists of tarmac surfacing. The estimated site strip volumes are set out below.

Item	Topsoil (m^3)	Surfacing and Fill Volume (m^3)	Made-Ground Excavation Volume (m^3)	Cohesive Deposits Volume (m^3)	Bedrock Volume (m^3)	Total (m^3)
***Site Strip**	2,169	2,449	9,797	0	0	**14,415**

TABLE 9 SITE STRIP QUANTITIES

** Assumed 500mm site strip of entire surface area, which is taken to be 80% surfacing and fill & 20% made-ground.*

An **Environmental Risk Assessment and Waste Characterisation Report** prepared by O'Callaghan Moran is included in Appendix 8.1 (Volume III) and establishes that the soils and subsoils are generally uncontaminated across most of the site. Soil containing arsenic was identified during the site investigations in 7 no. locations, the levels detected are below the Teagasc range for arsenic in clean Irish Soils. While the levels detected are not considered to be significant theses material will be excavated and removed from the site during the site preparatory works to establish formation levels on the site.

Aliphatic and aromatic hydrocarbon levels were exceeded in one sample location. PAHS exceeded the S4UL in six samples. While the exceeding values are marginal the material in these locations will be removed during the site preparatory works and will not therefore present a risk to future site users.

The balance of the 56,923m^3 of stripped material is confirmed as being suitable for an inert waste landfill. One such facility is the Huntstown Inert Waste Recovery Facility at Huntstown Quarry, Finglas, Dublin 11.

Excavated topsoil will be retained on site in a stockpile for re-use in landscaping.

2.2.7.3 Bulk Excavations (Basement)

The bulk earthworks for the proposed development are associated with the basement excavation for the PW1 and PW2 building. The quantity of material to be excavated is estimated to be 42,204m^3.

Based on the ground conditions established in the site investigation, toothed buckets on standard large excavation plant will be used up to depths of approximately 3 meters below natural ground level. Deeper excavations may require mechanical extraction by other means such as breaking or drilling. In areas where there is sufficient space, a battered excavation can be provided for the single level basement.

It is confirmed in the Environmental Risk Assessment and Waste Characterisation Report that the excavated material is suitable for removal to an inert waste landfill and/or a soil and stone recovery facility.

The basement excavations will encounter the water table, and temporary dewatering will be required to lower the water table in the immediate vicinity of the basement excavation footprint. Extracted ground water shall be pumped from the excavation to a treatment system to remove suspended solids and other contaminants, as required, to meet the water quality discharge limits of the temporary discharge licence agreement with Dublin City Council or Irish Water. Please refer to Chapter 9 of this EIAR and the Construction Environmental Waste Management Plan prepared by Garlands Consulting Engineers under separate cover for further information on dewatering.

The groundwater removed from the excavations will be treated on site to allow for settlement and or pH adjustment prior to discharge to the Irish Water storm sewer. Prior to commencement of the discharge a trade effluent discharge licence will be obtained from Irish Water to discharge to the sewer.

2.2.7.4 Foundations and Services

There will be excavation associated with the pouring of foundations and the establishment of trenches for site services. The quantity of material to be excavated is estimated to be 59,092m^3

It is confirmed in the **Environmental Risk Assessment and Waste Characterisation Report** that the excavated material is suitable for removal to an inert waste landfill and/or a soil and stone recovery facility.

2.2.8 Health & Safety

Construction Phase

Project supervisors for the construction phase will be appointed in accordance with the Health, Safety and Welfare at Work (Construction Regulations) 2013, and a Preliminary Health and Safety Plan will be formulated during the detailed design stage which will address health and safety issues from the design stages, through to the completion of the construction phases. This Health and Safety Plan will be developed further for the construction stage of the project.

Operational Phase

A COVID-19 site prevention strategy has been prepared for the proposed development in order to control the virus by suppressing transmission and preventing associated illness and death. It is understood that the virus is primarily spread through contact and respiratory droplets. Under some circumstances airborne transmission may occur (such as when aerosol generating procedures are conducted in health care settings or potentially, in indoor crowded poorly ventilated settings elsewhere).

To prevent transmission, WHO recommends a comprehensive set of measures including:

- Identify suspect cases as quickly as possible, test, and isolate all cases (infected people) in appropriate facilities;
- Identify and quarantine all close contacts of infected people and test those who develop symptoms so that they can be isolated if they are infected and require care;
- Use fabric masks in specific situations, for example, in public places where there is community transmission and where other prevention measures, such as physical distancing, are not possible;
- Use of contact and droplet precautions by health workers caring for suspected and confirmed COVID-19 patients, and use of airborne precautions when aerosol generating procedures are performed;

The design is cognisant of COVID-19 and is assessed as low risk. The risk assessment prepared determined that the risk of transmission between individuals within the proposed development is low. Given our current understanding of the transition and infection patterns of COVID-19, the main routes to infection include, a) large droplet transmission, b) surface contact and c) airborne transmission. It was determined that the layout of the proposed development will have the necessary control measures in place such as environmental controls pertinent to adequate ventilation, social distancing, spacing requirements, sewage and drainage etc. that allow for the risk to be qualified as low.

The Ventilation systems and Wastewater plumbing systems as proposed, have been designed as not to increase the spreading of the virus. All Design Team members have used accepted best

practice methods where possible to mitigate COVID-19 infection of tenants and end users. In addition, it should be noted that there is an abundance of public open space and communal amenity space proposed as part of the proposed development so should there be a lockdown, people will have somewhere to go locally and will not be stuck in their apartments. Please refer to the **Covid-19 Risk Mitigation Report** prepared by International SOS contained in Appendix 4.1 (Volume III).

2.3 Monitoring

2.3.1 Community Liaison

It is important that discussions with local residents, businesses and the general public continue well in advance of work commencing on site. Public open days were held in July 2019 and March 2020 where feedback was obtained from the members of the community to incorporate into the proposed development. The appointed Main Contractor will be required to follow best practice 'Code of Considerate Practice' guidelines. The Considerate Constructor experience in Ireland has been that early positive and proactive engagement with businesses and residents impacted by building works is the best approach.

A Community Liaison Officer (CLO) will be appointed by the Main Contractor to lead and manage all community related issues. The CLO will initially host and attend regular community meetings. Following the initial meetings, the CLO will compile a list of stakeholders in the area. These stakeholders will be kept informed of progress and planned works on the site through the publication and distribution of a Monthly Progress Newsletter.

2.3.2 Environmental

The monitoring proposed in Chapters 4 to 14 of this EIAR will be carried out during the demolition and construction phases. This monitoring is integrated to ensure that there will be no likely significant impact during development of the site.

A bespoke site Construction Environmental Management Plan (CEMP) will be prepared by the appointed contractor prior to work commencing on site. The main purpose of a CEMP is to provide a mechanism for implementation of the various mitigation and monitoring measures which are described in the EIAR. The CEMP demonstrates the applicant's commitment to implementing the proposed development in such a way as to avoid or minimise the potential environmental effects resulting from construction activities. All personnel will be required to understand and implement the requirements of the plan.

Aspects that will be addressed within the CEMP will include but are not limited to, waste and materials management; noise and vibration; dust and air quality; traffic and vehicle management; pollution incident control; and protection of vegetation and fauna. A summary of the mitigation measures to be incorporated into the CEMP is provided in Chapter 16 of the EIAR.

3 Alternatives Considered

The Planning and Development Regulations, 2001, as amended, require;

"A description of the reasonable alternatives studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment".

The requirement is elaborated at paragraph 2(b), which makes clear that reasonable alternatives may include project design proposals, location, size and scale, which are relevant to the proposed development and its specific characteristics. The Regulations require that an indication of the main reasons for selecting the preferred option, including a comparison of the environmental effects be presented in the EIAR.

The Environmental Protection Agency (2017) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports - Draft states:

"The objective is for the developer to present a representative range of the practicable alternatives considered. The alternatives should be described with 'an indication of the main reasons for selecting the chosen option'. It is generally sufficient to provide a broad description of each main alternative and the key issues associated with each, showing how environmental considerations were taken into account in deciding on the selected option. A detailed assessment (or 'mini-EIA') of each alternative is not required."

The Guidelines also state that the range of alternatives considered may include the 'do-nothing' alternative.

Accordingly, this chapter of the EIAR provides an outline of the main alternatives examined during the design phase. It sets out the main reasons for choosing the development as proposed, taking into account and providing a comparison on the environmental effects. The assessment of alternatives is considered under the following headings;

i. Do Nothing Alternative
ii. Alternative Use
iii. Alternative Locations
iv. Alternative Project Design (3 no. alternative scenarios)
v. Alternative Processes

3.1 Do-Nothing

Under a 'Do-nothing' scenario, the Player Wills site would remain in its current condition, impermeable, predominantly hardstanding with vacant industrial units. The site in its present condition adversely effects the visual amenity of the local area, contributes to urban blight and decay locally and encourages anti-social behaviour.

The buildings are in a poor state of structural repair. In the short-term (1-7 years) they would likely go into further decline and may pose a health and safety risk due to the presence of asbestos containing materials.

Further decline of the original former Player Wills factory building may compromise the ability to secure a sustainable future for a building with some industrial heritage merit and this could have a negative impact on the local historic built environment.

A do-nothing approach would fail to address the shortage of homes in the City and would not be consistent with the objective to regenerate this site and integrate it with the wider SDRA 12 lands as set out in the Dublin City Development Plan (DCDP) 2016-2022.

There would be no increase in traffic under the do-nothing scenario, however, the site would fail to achieve the National Planning Framework, National Strategic Outcomes for compact growth and sustainable mobility both of this have consequent climate and human health benefits.

Surface water would continue to discharge unattenuated and untreated to the combined sewer network. This scenario would fail to address water quality issues whereby storm surges result in overflows and deleterious water quality in Dublin Bay.

Should the site remain in its current condition, no significant improvement in biodiversity is anticipated. Scrub vegetation of value would be unlikely to take hold due to the large expanses of hardstanding existing on site.

The Table below summarises the effect of the 'Do Nothing' alternative described above. All of the predicted effects are determined to be likely to occur. It is noted that the duration of effects under this scenario are considered at least short-term (1-7 years), this reflects a reasonable timeframe for a further application for development to come forward on the site in the absence of this subject application.

Aspect	Quality of Effect	Significance	Context	Duration
Population & Human Health	Neutral - Negative	Significant	Local/City	Short-term
Landscape & Visual	Negative	Significant	Local	Short-term
Material Assets: Traffic & Transport	Neutral	Imperceptible	Local	Short-term
Material Assets: Utilities	Neutral	Imperceptible	Local/City	Short-term
Land & Soils	Negative – Neutral	Significant - Imperceptible	Local/City	Short-term
Water & Hydrology	Neutral	Significant	Local/City	Short-term
Biodiversity	Neutral	Imperceptible	Local	Short-term
Noise & Vibration	Neutral	Imperceptible	Local	Short-term
Air Quality & Climate	Neutral - Negative	Imperceptible	Local/National	Short-term
Cultural Heritage: Archaeology	Neutral	Local/City	Local	Short-term
Cultural Heritage: Built Heritage	Negative	Significant	Local	Short-term

TABLE 10 DO NOTHING DESCRIPTION OF EFFECTS

In conclusion, a 'Do-nothing' scenario is an inappropriate and unsustainable approach that would result in the inefficient use of a strategically located and serviced landbank of zoned residential lands. The 'do nothing' scenario would prevent the delivery of the strategic planning objectives for the area. With the mitigation measures proposed in this EIAR and having regard to the findings that no significant effects on the environment are expected with such measures in place, the comparative environmental effects are not considered sufficient to rule out the proposed development.

3.2 Alternative Locations

The Dublin City Development Plan 2016-2022 was the subject of a Strategic Environmental Assessment (SEA). Article 5 of the SEA Directive requires the environmental report to consider *"reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme"* and the significant effects of the alternatives selected. 3 no. strategic alternatives were considered;

1. Targeted growth around existing identified growth centres
2. Market led growth
3. Selected Concentration of growth targeted on existing Strategic Development & Regeneration Areas (SDRAs)/ Key Development Centres (KDCs) / Strategic Development Zones (SDZ): elements of a phased approach to the development of land

The three alternatives outlined were assessed against a set of Environmental Protection Objectives, see **Table 11**.

Environmental Receptor	Environmental Protection Objectives (EPOs)
Population & Human Health **(PH1)**	To create a sustainable compact city and a high quality safe environment in which to live, work and/ or visit.
Biodiversity / flora & fauna **(BFF1)**	To protect and where appropriate, enhance the diversity of habitats, species, ecosystems and geological features.
Climatic Factors and Air Quality **(CF1)**	Contribute to the mitigation of/and adaptation to climate change and implement requirements of Strategic Flood Risk assessment.
Climatic Factors and Air Quality **(AQ1)**	Minimise emissions of pollutants to air associated with development activities and maintain acoustic quality.
Water **(W1)**	To protect and where necessary improve the quality and management of watercourses and groundwater, in compliance with the requirements of all water and habitat based legislation including the River Basin Management Plan of the Eastern River Basin District.
Material Assets **(MA1)**	To make best use of Dublin city's infrastructure and material assets and to promote the sustainable development of new infrastructure to meet the needs of the City's population
Cultural Heritage **(CH1)**	To protect and where appropriate enhance the character, diversity and qualities of Dublin city's cultural, including architectural and archaeological, heritage
Landscape and Soils **(L1)**	To protect and where appropriate enhance the character, diversity and special qualities of Dublin City's landscapes and soils

TABLE 11 STRATEGIC ENVIRONMENTAL PROTECTION OBJECTIVES (SOURCE SEA DCDP 2016-2022)

Table 12 provides a summary overview of the assessment of each of the three Alternatives against the Environmental Protection Objectives. It was concluded that Alternative 1, was the preferred scenario and would contribute to sustainable development, and as such, would result in positive impacts when tested against the Environmental Protection Objectives.

Alternative 1 seeks to target and consolidate growth around the Z5 city-centre mixed use zoning area as well as existing identified growth centres such as the Key District Centres(KDCs), the SDRAs, the Strategic Development Zones and areas identified in Local Area Plans. Under this scenario, the Council favour the development of vacant lands within the canal area of the city and to incentivise owners to redevelop these lands.

Environmental Protection Objectives (EPOs)	Alternative 1- Targets Growth around existing identified growth centres		Alternative 2 – Market Led Growth		Alternative 3 – Selected Concentration of growth targeted on existing SDRA/ KDC/SDZ areas – elements of a phased approach to the development of land	
PH1	++		-		+	-
BFF1	+	-	-		+	-
CF1	+	0	+	-	+	0
AQ1	+		?	-	+	-
W1	+	-	-		+	-
MA1	+		-		+	-
CH1	+	-	-	?	-	?
L1	+	0	-		+	0

Positive	Very Positive	Insignificant/ No impact	Negative	Very Negative	Uncertain
+	++	0	-	--	?

TABLE 12 ASSESSMENT OF DEVELOPMENT ALTERNATIVES (SOURCE SEA DCDP 2016-2022)

The proposed development site is subject to 2 no. zoning designations in the DCDP and the proposed land uses are all permissible in principle.

The proposed development site is predominantly zoned Z14 Strategic Development and Regeneration Area and the objective is *"to seek the social, economic and physical development and/or rejuvenation of an area with mixed use, of which residential and 'Z6' would be the predominant uses. The purpose of the Z6 zoning is to provide for the creation and protection of enterprise and facilitate opportunities for employment creation."*

A small portion of the subject site to the north-east is zoned 'Z1' - Sustainable Residential Neighbourhoods with an objective "*to protect, provide and improve residential amenities."* This portion of the land has been set aside for the future expansion of St. Catherine's National School, and will be used as a temporary public park until developed.

An assessment of the land-use zoning policies was undertaken during the preparation of the SEA against a range of environmental parameters and the results are summarised below.

Aspect	Impact Rating
Population & Human Health	Significant Beneficial
Biodiversity, Flora & Fauna	Largely Insignificant
Climate	Largely Insignificant
Air (Air Quality & Noise)	Some policies and objectives were found to have significant beneficial impacts with some insignificant impacts on air quality and noise.
Water	Mostly Insignificant
Material Assets (Transport & Waste Management)	Significant Beneficial
Cultural Heritage	Mostly Insignificant
Landscape & Soils	Majority Insignificant

TABLE 13 SUMMARY OF IMPACTS OF LANDUSE ZONING (SOURCE SEA (CHP 8) DCDP 2016-2022)

The development of the site has been determined to be acceptable in principle with regard to the environmental matters considered in the SEA. The site and proposed development present an opportunity to deliver a substantial quantum of housing in the form of the sustainable urban expansion and consolidation of Dublin City and thereby contribute in a sustainable manner to meeting strategic planning objectives at a local and regional level.

The suitability of this site for the proposed development has been anticipated in the adopted DCDP which itself was subject to Strategic Environment Assessment (SEA) and the consideration of alternatives for this site and area. Accordingly, the consideration of alternative locations for the proposed development has been considered at the strategic level or framework for development consent level.

It is noted that prior to the acquisition, the site's ability to satisfy environmental criteria was considered by the Applicant and it was found to offer the following attributes;

- The application area offered the opportunity to bring a vacant brownfield industrial site in close proximity to Dublin City into productive use, thus promoting the principles of compact growth.
- The site's location within walking distance of public transport modes (Dublin Bus and LUAS, Fatima Stop) would promote a modal shift from the private car to more sustainable forms of transport. This in turn would assist with achieving overarching environmental objectives such as improved air quality (CO_2, NO_2 and particulate emissions).
- The site is not subject to any statutory nature conservation designation.
- The site is not located within an area identified as susceptible to flooding.
- None of the structures on site are listed on the Record of Protected Structures
- There are no listed views or vistas pertaining to the site.

It is one of only a handful of sites of scale identified in the Residential Land Availability Survey 2014 within the canal cordon. The site's designation as Strategic Development Regeneration Area (SDRA) 12 and its zoning (Z14 and Z4) in the Dublin City Development Plan 2016-2022 confirms the site's suitability for intensification and the delivery of a significant quantum of homes for the city together with non-residential uses, where increased height (up to 50m) is supported.

The Applicant recognised that redevelopment of the former Bailey Gibson site would achieve the principles of a compact city which is a sustainable urban form. It will allow people to live close to employment opportunities and thus contribute to reducing urban sprawl as well as enhancing quality of life. It will reduce the need for car based travel and in doing so contribute to a critical mass which is needed to realise the full potential of sustainable transport modes while reducing greenhouse gas emissions.

3.3 Alternative Uses

The design approach for the proposed development is presented in the **Architectural Design Statement** prepared by the project architects, Henry J. Lyons and KPF Architects, and submitted under separate cover. It should be read in conjunction with this chapter of the EIAR.

3.3.1 Dublin City Development Plan

The Dublin City Development Plan 2016-2022 establishes the overall guiding principles for development within SDRA 12 and these principles act as the framework for design development.

Of relevance to development within the Player Wills site are;

- Concentration of residential development on the Player Wills site;
- Incorporation of a community hub, providing a range of facilities accessible to the wider neighbourhood;
- Opportunities to highlight local heritage;
- Development of a network of streets and public spaces to ensure ; physical, social and economic integration of St Teresa's Gardens with the former Player Wills and Bailey Gibson sites.;
- Promotion of a mixed-use urban quarter with complementary strategies across adjoining sites in terms of urban design, inter-connections and land-use;
- Potential for one or two midrise buildings (up to 50 m);
- Reservation of site for expansion of St. Catherine's National School;
- That at least 20% of the SDRA 12 be retained for public open space, recreation & sporting facilities including an area to facilitate organised games; and,
- Strong permeability through the lands and activity east-to-west (connecting Dolphin's Barn Street and Cork Street with Donore Avenue) and north-to-south (connecting Cork Street and Donore Avenue with the South Circular Road and Grand Canal corridor); a high-quality public domain, provision of pedestrian and cyclist routes and provision of active streets.

Figure 13 is an extract from the DCDP and is an indicative illustration of the envisaged spread of development across the SDRA 12 lands and including the entirety of the Bailey Gibson site.

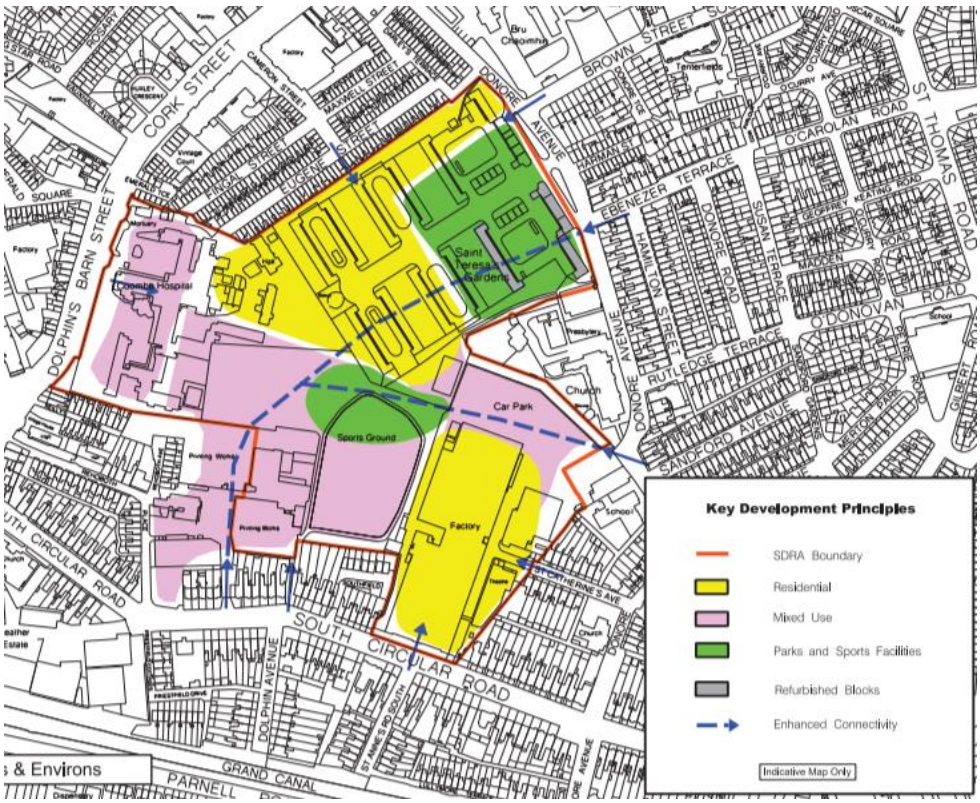


FIGURE 13 SDRA 12 KEY DEVELOPMENT PRINCIPLES

The primary key development principle for the proposed development site is residential and lands to the west, under the control of DCC, are identified as mixed-use.

This is an indicative land use map and the primary determinant of suitable uses is established in the site's zoning objectives. The majority of the land is zoned Z14 with a small area to the north west zoned Z1. The permissible uses and open to consideration uses attached to each of these zonings us set out below.

Zoning Objective Z1

Permissible Uses

Buildings for the health, safety and welfare of the public, childcare facility, community facility, cultural/ recreational building and uses, education, embassy residential, enterprise centre, halting site, home-based economic activity, medical and related consultants, open space, park-and-ride facility, place of public worship, public service installation, residential, shop (local), training centre.

Open for Consideration Uses

Bed and breakfast, betting office, car park, civic and amenity/recycling centre, garden centre, golf course and clubhouse, hostel, hotel, industry (light), live/ work units, media-associated uses, petrol station, pigeon lofts, public house, restaurant, veterinary surgery.

Zoning Objective Z14

Permissible Uses

Betting office, buildings for the health, safety and welfare of the public; childcare facility, community facility, conference centre, cultural/recreational building and uses, education, embassy office, embassy residential, enterprise centre, green/clean industries, halting site, home-based economic activity, hotel, industry (light), live-work units, media-associated uses, medical and related consultants, offices, open space, park and ride facility, part off-licence, place of public worship, public service installation, residential, restaurant, science and technology-based industry, shop (neighbourhood), training centre.

Open for Consideration Uses

Advertisement and advertising structures, bed and breakfast, car park, car trading, civic and amenity/ recycling centre, factory shop, financial institution, funeral home, garage (motor repair/service), garden centre, golf course and clubhouse, hostel, internet café, nightclub, off-licence, outdoor poster advertising, petrol station, pigeon lofts, public house, take-away, veterinary surgery, warehousing (retail/non-food)/retail park, warehousing.

FIGURE 14 PERMISSIBLE & OPEN FOR CONSIDERATION USES

Having regard to the site's uses, the reasonable alternative scenarios for development of the proposed development site are;

i. A commercial led development with a smaller quantum of residential; or,
ii. A residential led development with a smaller quantum of commercial

Having regard to overarching national and regional planning policy to deliver compact growth through densification, under either of these options the site would be developed as a high density development and to achieve this it is likely that a commercial design would also integrate tall buildings. The objective to achieve permeability with the wider SDRA 12 lands would be realised under either alternative.

It is noted that the anticipated environmental effects of the construction stage of either option would be similar as both would require extensive demolition of the existing buildings and a similar approach to the build stage. Thus, as determined in this EIAR, with the correct implementation of standard construction management measures, likely significant effects during the construction stage, including noise, dust and traffic, would be short-term in duration and not significant.

The primary difference between these 2 no. scenarios would be that the opportunity to deliver much needed homes closer to workplaces would not be realised under a commercial led scheme and this would have a significant negative effect on population and human health. While Covid-19 has had an impact on working patterns and this may continue post the pandemic, there are significant employment opportunities locally that require attendance at the workplace, including The Coombe and St. James's Hospital.

Under the commercial option, it is likely that people would need to travel to the site for employment and this would likely realise a higher car dependency and associated greenhouse gas emissions, with a consequent significant negative effect on air quality locally.

Positive effects would arise from the development of a commercial scheme at this location e.g. an increase in employment opportunities for people.

On balance, the environmental effects of delivering either of the 2 no. alternatives are largely similar and either scenario is justifiable.

3.4 Alternative Designs

Three alternative designs were considered;

1. Implementation of the Development Framework for St. Teresa's Gardens & Environs;
2. Implementation of the Masterplan that accompanies this application; and,
3. The proposed development (preferred alternative)

The multidisciplinary EIAR team reviewed the Framework layout against all environmental topics and proposed alternatives to achieve environmental improvements while remaining compliant with the Development Plan objectives for development of the site. This approach is consistent with the requirements of the EIA Directive.

The Development Framework for St. Teresa's Gardens and Environs (Scenario 1) is the baseline from which the preferred alternative design emerged.

This chapter demonstrates that the proposed preferred alternative performs better during the operational stage when compared with the Development Framework, in terms of the delivery of housing, whereby 732 no. units will be delivered rather than 315 no. This has the added benefit of

augmenting the supply of social and affordable homes from 31 no. units to 49 no. units on the layer Wills site.

The intensification of development under the preferred scenario ensures that maximum use is made of existing infrastructure including drainage and utilities when compared with the Development Framework.

The height strategy under all scenarios is to increase height above the existing surrounding context. This will change the local landscape and visual character and is consistent with the principles of compact growth. Increased height is appropriate considering the location of the site within the canal cordon. Both the proposed development and Masterplan layouts perform better than the Development Framework in terms of height along the site's boundaries as both layouts are lower toward the edge cognisant of existing heights.

The preferred scenario safeguards human health from the negative effects of substandard traffic measures and there is a significantly positive effect for air quality and climate arising from the preferred car parking strategy.

In terms of public open space, while the Development Framework performs well in terms of quantum and is a significant positive. The Masterplan approach of redistribution of public open space realises a significant positive effect in terms of usability and so the preferred alternative to minimise public open space on the Bailey Gibson site is deemed neutral.

The effect of the preferred alternative, the subject proposal, in terms of daylight and sunlight relative to the Framework Plan and Masterplan is determined to be significantly positive as the proposed development performs better than either of the other 2 no. scenarios.

To conclude, the Table below provides a high-level comparison of the quality of the effects of the operational phase of the proposed development (the preferred alternative) with Scenario 1, the Development Framework Plan and Scenario 2, the Masterplan.

Aspect	Scenario 1 Development Framework	Scenario 2 Masterplan	Scenario 3 Proposed Development
Population - Housing Delivery	Positive	Significantly Positive	Significantly Positive
Population - Social & Affordable Homes	Positive	Significantly Positive	Significantly Positive
Human Health – Daylight & Sunlight	Indeterminable	Positive	Significantly Positive
Human Health – Public Open Space	Significantly Positive	Significantly Positive	Significantly Positive
Human Health – Air Quality (CO_2 emissions)	Negative	Positive	Significantly Positive
Landscape Character – New Urban Neighbourhood	Significantly Positive	Significantly Positive	Significantly Positive
Visual – Height	Significant Positive in the long term as full lands developed and new urban neighbourhood emerges.	Significant Positive in the long term as full lands developed and new urban neighbourhood emerges.	Moderate Positive leading to Significant Positive as wider lands in the Masterplan are developed.
Material Assets – Efficient use of existing built services and utilities	Moderate Positive	Significant Positive	Significant Positive
Land – efficient use of zoned and serviced lands	Moderate Positive	Significant Positive	Significant Positive
Water & Hydrology	Significant Positive	Significant Positive	Significant Positive
Biodiversity – quantum of communal and public open space	Significant Positive	Significant Positive	Significant Positive
Noise & Vibration	Neutral	Neutral	Neutral
Air Quality & Climate – reduction in CO_2 emissions	Negative	Significant Positive	Significant Positive
Cultural Heritage - Archaeology	Neutral	Neutral	Neutral
Cultural Heritage - Built Heritage	Neutral-Negative	Significant Positive	Significant Positive

TABLE 14 HIGH-LEVEL COMPARISON OF ENVIRONMENTAL EFFECTS OF 3 NO. DEVELOPMENT ALTERNATIVES

3.5 Alternative Processes

Having regard to the nature of the proposed development, alternative processes is not considered relevant to this EIAR.

4 Assessment of Environmental Impacts

The EIA process essentially identifies, describes and assesses in an appropriate manner, the direct and indirect significant effects of a project on a series of specified environmental factors;

- Biodiversity, with particular attention to protected species and habitats
- Land, soil, water, air and climate
- Material assets, cultural heritage and the landscape
- Interaction between the above factors

4.1 Population & Human Heath

The assessment of Population & Human Health is contained within Chapter 4 of Volume II.

4.1.1 Existing Environment

The application area is c.3.06 hectares, it includes the Player Wills site (2.39 hectares) and adjoining lands of 0.67 hectares under the control of Dublin City Council to accommodate works to facilitate connections to municipal services and works proposed to public roads, see **Figure 2**. It forms part of a wider area subject to a non-statutory Masterplan that is included with this application under separate cover.

For the purpose of this chapter, the primary sensitive receptors identified are;

i. Residential dwellings in surrounding streets; South Circular Road, Donore Avenue and St. Catherine's Avenue.
ii. Occupants of the Coombe Hospital,
iii. St. Catherine's National School, and,
iv. Users of the public road network surrounding the site.

4.1.2 Impact Assessment

This section describes the environmental effects that are likely to arise during the construction and operation of the proposed development. **Section 4.9** sets out the mitigation measures required to alleviate identified effects.

Potential Impacts are considered under the following headings in line with the Guidelines set out in section 4.3:

- Land use
- Population
- Employment and Economics
- Health
- Residential Amenity
- Local Amenity Impacts

Specific effects with respect to matters such as air quality, noise, traffic, visual impact etc. are dealt with in the respective assessments in this EIAR.

4.1.2.1 Do Nothing

If the proposed development is not realised, it is anticipated that in the short to medium term the Player Wills site would remain a vacant brownfield site. Without developments such as this, the existing unsustainable urban sprawl and affordability issues will continue with associated negative effects on population and human health.

Vacant sites have adverse effects on the character of an area resulting in urban blight and decay. Anti-social behaviour is often associated with vacant sites and this would have a significant negative effect on the local population.

It is noted that the site is within a designated regenerated area in the Dublin City Development Plan and so it is a statutory objective to achieve its redevelopment, and as such will be developed in a similar manner to this proposal in the future. The effects of any other type of development are predicted to be consistent with those outlined in the impact section below.

4.1.2.2 Construction Phase

The potential impacts of the proposal during the construction phase of the development are outlined below.

Land Use

Demolition of the existing dilapidated vacant warehousing and replacement with architecturally designed high quality residential buildings together with open space and enhanced permeability will have a **likely significant permanent positive effect** on the **local** townscape and existing surrounding residents as the redevelopment would connect with local neighbourhoods with lively and useable spaces.

The proposed development complies with the statutory land use zoning. There will be no severance of land, loss of rights of way or amenities as a result of the proposed development.
Development of the subject site is aligned with the objective to achieve compact growth contained within the National Planning Framework and will realise the efficient use of currently-underutilised brownfield land with higher housing density that is well served by public transport. The impact is **likely** and will have a **permanent significant positive effect** that will achieve **local and wider** county, regional and national objectives.

Population

It is estimated that during peak construction there will be approximately 700 people employed. It is not anticipated that this will generate a temporary increase in population locally as employees will travel to the site from their existing place of residence. The likely impact on population is thus neutral.

Employment & Economics

A key characteristic of the proposed development in terms of its potential economic impact relates to its capital value, of which a significant portion will be for the purchase of Irish sourced goods and services. The construction phase will provide a boost for the local construction sector in terms of employment generation and capital spend on materials and construction labour costs. It is expected that during peak activities, approximately 700 people will be working directly on the construction site. The staff will comprise of managerial, technical, skilled and unskilled workers. As far as practicable local labour will be employed.

In addition to direct employment, there will be substantial off-site employment and economic activity associated with the supply of construction materials and provision of services such as professional firms supplying financial, architectural, engineering, legal and a range of other professional services to the project. The impact of the construction phase will at least extend to the eastern region in terms of the requirement for labour, goods and services. The effect is **likely** and will be **significantly positive** in the **short-term**.

The daytime increase in working population is likely to have a **slight-moderate positive effect** on local retail service providers in the **short-term**, as expenditure on convenience goods will increase.

Health

Construction sites pose potential risks to the health and safety of workers and the public. Unauthorised access would be considered trespassing on private property. In the absence of mitigation, the effect would be **likely, negative** with an effect that might range from **slight** to **profound** depending on the magnitude of the incident.

Asbestos containing materials (ACMs) have been identified on site. The ACM's are contained in large structural areas such as the roof, external cement panels, asbestos cement shutters casings, corrugated sheeting, cement flue pipes, insulation boards along with other building fabrics. Further details are contained in the **Section 5.5.4** of the Construction Environmental Management Plan that accompanies this application under separate cover. The risk associated with exposure to asbestos relates to the possibility that the fibres within the ACMs become released into the air and are then inhaled. Breathing in air containing asbestos fibres can lead to asbestos-related diseases. It is noted that as long as asbestos is in good condition and there is no disturbance or damage to the ACM, it will not pose a risk to health as fibres will not be released. In the absence of mitigation, the anticipated effect is **neutral** if undisturbed to **negative** with **significant effect** if not in good condition**.**

The wider potential for effects on health during the construction phase are dealt with in this EIAR under the more specific topics of the environmental media by which they might be caused including air, traffic and noise.

Residential Amenity

Construction works, and emergence of taller structures such as cranes will be seen in the context of existing views and development occurring in the wider area. Many of these are significant developments, which will have the effect of backgrounding and contextualising the proposed works. The anticipated effect is **local** and of **temporary** to **short-term** duration with a **neutral** and **slight** significance.

Works to the public road will require a road opening licence and temporary closures. The impact of these works is **neutral**, **not significant** and **temporary**.

Specific potential for effects on residential amenities during the construction phase are dealt with in this EIAR under the more specific topics of the environmental media by which they might be caused including air, traffic and noise.

4.1.2.3 Operational Phase

Land Use

The proposed development complies with the statutory land use zoning, all use classes proposed are permissible in principle.

The National Planning Framework (NPF) indicates that an increased housing output will be required between 2018 and 2040 to deal with a deficit that has built up since 2010. To meet projected population and economic growth as well as increased household formation, the NPF states that an annual housing output of 30,000 to 35,000 homes per annum in the years to 2027 will be needed. The long term target is for 25,000 homes to be constructed annually to 2040. Rebuilding Ireland, Action Plan for Housing and Homelessness targets the delivery of 47,000 social housing units to 2021. To achieve the objective of compact growth, 40% of future housing delivery is to be delivered within and close to the existing footprint of built-up areas. The subject development will deliver 732 no. residential units to the market of which 240 no. will be shared accommodation and 49 no. will be Part V on a brownfield site proximate to Dublin city centre and thus will contribute to the targets above. The anticipated effect of a high-density mixed-use development at this location for the city is **positive**, **significant** and of **permanent** duration as it would realise the objectives of urban consolidation through the efficient use of a zoned and serviced landbank to provide inter alia much needed housing together with high-quality amenities for future occupants.

The Social Infrastructure Audit undertaken to inform the non-residential land uses proposed identified a deficit in childcare and community scale health providers such as GPs and dental practices. Accordingly, a creche is included in the subject proposal. The childcare facility is capable of accommodating all the childcare needs (see **Childcare Demand Report** included with this application under separate cover) of future occupants together with the needs of the wider area. While the commercial floor area will accommodate small scale retail, food and beverage with the balance available for a range of use classes including *inter alia* Class 2 which provides for professional services and Class 8, health services. Locally, the non-residential land uses will have a **moderate positive** effect with a **permanent** duration.

Population

A breakdown of the proposed units is set out below, applying a future occupancy of 1 per shared accommodation private living area and studio, 2 per 1-bed and the national household average of 2.75 to all other units the anticipated future population is 1,304. This increase in population will contribute positively to the long-held regeneration objectives for SDRA 12, St. Teresa's Gardens and Environs.

Building Ref.	Studio	1 Bed Apartment	2 Bed Apartment	3 Bed Apartment	2 Bed Duplex Apartments	3 Bed Triplex Apartment	Shared Accommodation	Total
PW1	12	23	8	4	0	0	240	287
PW2	16	268	92	38	1	0	0	415
PW4	0	0	0	0	2	7		9
PW5	12	1	5	3	0	0	0	21
Total Units	**40**	**292**	**105**	**45**	**3**	**7**	**240**	**732**
Occupancy	1	2	2.75	2.75	2.75	2.75	1	1,344
Projected Population	40	584	289	124	8	19	240	1,304

TABLE 15 UNIT MIX & PROJECTED POPULATION

The **Childcare Demand Report** that accompanies this application estimates that the proposed development will generate a requirement for 16 no. childcare spaces and all will be accommodated on site.

As outlined above the proposed creche is oversized and will provide places for 49 no. children above the estimated generated demand and so there will be a **significantly positive** effect for the existing population as more childcare spaces are made available in the Dublin 8 area.

Based on 2016 Census data, the study area would generate 53 no. primary school children, if the Dublin City value is applied this could increase to 70 no. children. The regeneration of St. Teresa's Gardens and Environs is a long-held objective for City Council and the criteria used by the Department of Education and Skills in planning for the delivery of schools includes *inter alia* demographic demand. It is noted that there are 14 no. existing schools within the 1km catchment area and a site within the Applicant's control on the Player Wills site, east of the Bailey Gibson site, is reserved for the future expansion of St. Catherine's National School. Overall, the impact of the proposed development on primary schools is determined to be **locally neutral** with a significance that at worst would have a **moderate effect**.

Regarding post primary schools, there are 3 no. in the study area and the scheme would generate between 36 and 52 spaces. Similar to primary school provision, responsibility for the delivery of post primary school places is the responsibility of the Department of Education and Skills. The NPF and Eastern and Midlands Regional Spatial and Economic Strategy supports higher density development within the existing built environment and strategic infrastructure should be planned in parallel with this objective. The impact of the proposed development on post-primary schools is determined to be **locally neutral** with a significance that at worst would have a **moderate effect**.

There is a wealth of existing amenities in the wider area including sport and recreation. Within the wider Masterplan lands a full scale GAA playing pitch is planned. The increase in population will place additional demands on existing amenities but will also provide a critical mass to support the delivery of social infrastructure. The proposed development includes dedicated amenities and facilities to serve future occupants together with community, arts and cultural floor space that will be available for residents and the wider population. Additionally, 2 no. public parks are proposed that integrate a wide range of passive and active functions and children's play. The impact of the proposed development on amenities is determined to be **significantly locally positive** with a significance that at worst would have a **moderate effect**.

To support sustainable travel, it is necessary for future population growth to predominantly take place in sustainable compact urban areas, which discourage dispersed development and long commuting. Development of the Player Wills site would deliver a critical mass of growth in population that would ensure the long-term viability of public transport delivery in the City. The effect is thus determined to be **moderate-significant, positive**, and **permanent**.

Employment & Economy

The proposed development includes 852 sq.m of community, arts and culture floor space, 701 sq.m of retail and 1,136 sq.m of floorspace for cafe/bar/restaurant use. The estimated employment that will be generated from the non-residential uses is 191 jobs. This is based on a number of information sources including the Homes & Communities Agency, *Employment Density Guide* (2013) employment density per floor area and the adult:child ratio required in childcare settings. It is noted that a blended employment density of 1 job per 16 sq.m of gross internal floorspace is used with reference to corporate, professional services, financial/insurance and small business workspace.

The Childcare Regulations stipulate adult:child ratios that must be maintained in childcare settings. The proposed creche will generate 27 no. employment positions.

Age Group	No. of Children	Adult: Child Ratio	Employees
0-1 year	7	01:03	2
1-2 years	15	01:05	3
2-3 years	12	01:06	2
3-6 years	15	01:08	2
Total	**49**	**-**	**9**

TABLE 16 CHILDCARE EMPLOYMENT GENERATION

As this is a Build to Rent development it incorporates tenant amenities and facilities and will be operated by a Management Company, additional employment opportunities will be generated.

Additionally, part-time employment opportunities will be generated with respect to maintenance and professional services.

The overall effect on employment **locally** is **moderately positive** and **permanent**.

The new residential population will generate additional spending within the area which will likely have a **local permanent slight positive** impact on local economic activity generated through the multiplier effect.

The State will benefit from revenue generated in the form of rental income tax and this will realise a **positive** effect.

Health & Residential Amenity

This application is accompanied by a '**Covid-19 Risk Mitigation**' report prepared by International SOS (please see **Appendix 4.1 Vol III**) and should be referenced in conjunction with this chapter.

A COVID-19 site prevention strategy has been prepared for the proposed development in order to control the virus by suppressing transmission and preventing associated illness and death. It is understood that the virus is primarily spread through contact and respiratory droplets. Under some circumstances airborne transmission may occur (such as when aerosol generating procedures are conducted in health care settings or potentially, in indoor crowded poorly ventilated settings elsewhere).

To prevent transmission, WHO recommends a comprehensive set of measures including:

- Identify suspect cases as quickly as possible, test, and isolate all cases (infected people) in appropriate facilities;
- Identify and quarantine all close contacts of infected people and test those who develop symptoms so that they can be isolated if they are infected and require care;
- Use fabric masks in specific situations, for example, in public places where there is community transmission and where other prevention measures, such as physical distancing, are not possible;
- Use of contact and droplet precautions by health workers caring for suspected and confirmed COVID-19 patients, and use of airborne precautions when aerosol generating procedures are performed;

The design is cognisant of COVID-19 and is assessed as low risk. The risk assessment prepared determined that the risk of transmission between individuals within the proposed development is low. Given our current understanding of the transition and infection patterns of COVID-19, the main routes to infection include, a) large droplet transmission, b) surface contact and c) airborne transmission. It was determined that the layout of the proposed development will have the necessary control measures in place such as environmental controls pertinent to adequate ventilation, social distancing, spacing requirements, sewage and drainage etc. that allow for the risk to be qualified as low.

The Ventilation systems and Wastewater plumbing systems as proposed, have been designed as not to increase the spreading of the virus. All Design Team members have used accepted best practice methods where possible to mitigate COVID-19 infection of tenants and end users. In addition, it should be noted that there is an abundance of public open space and communal amenity space proposed as part of the proposed development so should there be a lockdown, people will have somewhere to go locally and will not be stuck in their apartments.

Given this, in the absence of mitigation, the effect would be **negative** and **moderate** to **not significant**. The predicted effect of these combined measures on the health and wellbeing of future occupants is **moderate** and **not significant.**

Insufficient physical activity has been identified by the World Health Organisation as the fourth leading risk factor for global mortality. Urban air pollution and traffic injuries are also responsible for a further 2.6 million deaths annually. The health benefits of active transport (walking and cycling combined with public transport) can prevent many of these deaths from physical inactivity. The proposed scheme minimises carparking and prioritises both pedestrian and cyclists. 903 no. long-stay secure cycle storage area are proposed and a gymnasium is included as part of the tenant amenities. The layout provides for the segregation of pedestrians and traffic and incorporates the principles of universal access and the requirements of Part M of the Building Regulations so that the development will be readily accessible to all, regardless of age, ability or disability. The predicted effect of these combined measures on the health and wellbeing of future occupants is **significantly positive**.

The scheme includes a comprehensive landscape plan encompassing 2 no. public parks, 'Players Park' and 'St. Catherine's Park' and communal open spaces distributed throughout the development in the form of

courtyards and roof terraces. All spaces benefit from good access to sunlight (see below) and the individual spaces provide for both active and passive amenity including formal and informal play areas. Accordingly, the effect is deemed **locally**, **permanent** and **positive**.

The integration of energy efficient measures into the design will provide for healthier living standards for future occupants and less dependence on fossil fuels for energy generation. This coupled with the low level of carparking (168 no. spaces) which will result in significant CO_2 savings will contribute to improved air quality and the impact is likely to be **locally significantly positive** and of **permanent duration**.

Adequate and appropriate exposure to light is critical for health and well-being. Light impacts human health and performance by enabling performance of visual tasks, controlling the body's sleeping and walking system and affecting mood and perception.

This application is accompanied by a '**Daylighting, Sunlight and Overshadowing Study**' prepared by IES and should be referenced in conjunction with this chapter. It concludes as follows;

- **Shadow Analysis** - The Shadow analysis shows different shadows being cast from the baseline, 2017 Development Framework for St Teresa's Gardens and Environs and proposed scheme at particular periods throughout the year. It is noted from the images that overall, the proposed development would cast minimal additional shading on neighbouring buildings. This is further quantified by the Daylight Analysis of Existing Buildings section of this report.
- **Daylight Analysis of Existing Buildings** - The Vertical Sky Component for 96% (281 of 294) of the points tested have a value greater than 27% or not less than 0.8 times their former value (that of the Existing Situation), exceeding the BRE recommendations. This increases to 99% when compared against the Framework plan. The majority of the values are just outside the recommendations achieving high values between 24% and 26% and therefore good levels of light would still be received within the spaces beyond.
- **Sunlight to Existing and Proposed Amenity Spaces** - For a space to appear adequately sunlit throughout the year, at least half of the garden or amenity area should receive at least 2 hours of sunlight on the 21st of March. On the 21st of March, all of the communal amenity areas provided for each block of the Player Wills site would receive at least 2 hours of sunlight exceeding the BRE recommendations. The results also highlight that the proposed 'Players Park' and 'St Catherine's Park' public parks exceed the BRE recommendations and will be high-quality spaces in terms of sunlight received.
- **Average Daylight Factors** - Based on the results of the rooms tested across the proposed development site, 92% of the spaces tested within the proposed scheme have an Average Daylight Factors (ADF) above the recommended values, exceeding the BRE guidelines. This total would be expected to increase beyond 92% if all of the upper and outer paces across the development were included in the results.

A **Pedestrian Comfort Computational Fluid Dynamics (CFD) Report** prepared by IES accompanies this application under separate cover. The model predicts the wind patterns around the subject site, under mean and peak wind conditions typically occurring in the area.

Steady state CFD simulations were performed to study the impact of wind movement on pedestrian comfort within the proposed development. For the analysis, 8 steady state CFD simulations were performed, one each for the 8 main wind directions – N, NE, E, SE, S, SW, W and NW. The wind speed was set to the annual average wind speed for Dublin. The wind was assumed to have the characteristics associated with wind flowing through a city centre. The results from these simulations were extrapolated along the annual weather data for Dublin to obtain the most probable local air speed for each hour of the year. Statistical analysis was performed on this dataset to check compliance against the Lawson's Pedestrian Comfort criterion.

- **Sitting Comfort Result -** The Lawson's Sitting comfort criteria stipulates that the local air speed at designated locations should not exceed 4m/s for more than 5% of the duration analysed. More than

95% of the balconies fully met the requirements of the Lawson's sitting comfort criterion for the full year.

The ground courtyard amenity spaces for the PW1 and PW2 blocks show good to fair compliance with the requirements of the sitting criterion. The ground amenity between PW1 and the PW2 block is susceptible to the prevailing westerly and south-westerly winds causing a wind tunnel effect between the buildings. The entrance of the PW2 block is also susceptible to the prevailing westerly and south-westerly winds.

- **Standing Comfort Result -** The Lawson's Standing comfort criteria stipulates that the local air speed at designated locations should not exceed 6m/s for more than 5% of the duration analysed. The site shows good compliance with the requirements of this criterion everywhere on the site. The balconies and ground amenities, all show air speed less than 6m/s for more than 95% of the year.
- **Walking Comfort Result -** The Lawson's Leisure Walking comfort criteria stipulates that the local air speed at designated locations should not exceed 8m/s for more than 5% of the duration analysed. The Lawson's Business Walking comfort criteria stipulates that the local air speed at designated locations should not exceed 10m/s for more than 5% of the duration analysed. The site shows excellent compliance with the requirements of these criteria everywhere on the site.
- **Safety Criteria Results -** The Lawson's Normal Pedestrian safety criteria stipulates that the local air speed at designated locations should not exceed 20m/s for more than 0.01% of the duration analysed. The Lawson's Sensitive Pedestrian safety criteria stipulates that the local air speed at designated locations should not exceed 15m/s for more than 0.01% of the duration analysed. Elderly people and children are usually classified as sensitive pedestrians. The results of the annual analysis for safety criteria show that the site generally shows excellent compliance with the requirements of the safety criteria.

4.1.2.4 Cumulative Impact

The proposed development forms part of a non-statutory **Masterplan** that is submitted under separate cover with this application. The wider development of the masterplan lands will be subject to individual planning applications and associated EIARs where required.

Development of the **Bailey Gibson** site, also under the control of the Applicant, is subject of a granted SHD application – ABP-307221-20. The development comprises the demolition of all structures, and the construction of 416 no. residential units, a childcare facility, capable of accommodating 54 no. pre-school children and commercial floor space to facilitate a restaurant/café/bar, shop, financial/professional services, health services and community/arts.

The additional population that will be generated by the proposed development coupled with the permitted Bailey Gibson development and the anticipated development in the wider Masterplan area will increase the demand on existing social infrastructure capacity.

The **Social Infrastructure Audit** submitted with this application was prepared in parallel with the preparation of the Masterplan to inform on the existing capacity of social infrastructure and to identify deficits.

Recognising the deficiency in childcare locally, both the Bailey Gibson and the proposed development include childcare facilities that are capable individually of meeting the demand of future occupants together with contributing toward the identified need locally. Cumulatively, the childcare provision on the Bailey Gibson and Player Wills site will have a **significant positive** effect **locally** with a **permanent** duration.

The traffic, noise, air quality, landscape and visual chapters and Built Heritage chapters of this EIAR consider the cumulative impacts of the development of the proposed development site in so far as is practical. They conclude that there are no residual likely significant environmental effects on population and human health.

Taken together the Player Wills and Bailey Gibson site will deliver 908 no. permanent homes of which 90 no. will be allocated social and affordable residential units. A further 240 no. private living spaces in the form of

shared accommodation will also be delivered. The cumulative effect on housing delivery is **significantly positive** for the City with a **permanent** duration. Allowing people to live in close proximity to centres of employment will contribute toward reducing dependence on car-based travel and this will be **positive** in the context of greenhouse gas emissions. These positive effects of housing delivery will be further strengthened by the delivery of further residential development on the remainder of the Player Wills site and on lands owned by City Council as envisaged in the Masterplan.

The Masterplan lands are largely inaccessible, and the proposed layout provides for permeability to adjacent lands and the existing street network, this will have a **significant positive** effect in terms of integrating the existing and proposed new community with a **permanent** duration.

Dublin 8 generally is undergoing significant change and there are several recently consented and under consideration developments, with a large concentration along Cork Street, Newmarket Square and Rialto. This is not an exhaustive list, as this review focused on mixed use developments within the study area and wider Dublin 8 area. The type of developments are generally mixed use i.e. commercial at ground floor level and residential overhead and student accommodation. Relevant developments include;

- PL29S.305324 permission for a strategic housing development at 'Brewery Rock' at 13/14 Ardee Street, Dublin 8 including 368 no. student accommodation bedspaces, a co-working shared space and café over 3 no. blocks ranging from 2-8 storeys;
- PL29S.305061, permission a strategic housing development at the former Rialto cinema, 355 South Circular Road, Dublin 8 including 317 no. student accommodation bedspaces and ancillary café in a building ranging in height from 3-7 storeys over basement;
- PL29S.303436, permission a strategic housing development at Mill Street, Dublin 8, including 235 no. student accommodation bedspaces, 37 no. build to let residential units, 1 no. commercial unit, 1 no. café, in blocks that range from 3-7 storeys.
- PL29S.300184, permission for a strategic housing development for 399 student accommodation bed spaces with associated ancillary services and a retail/cafe unit with frontage onto Cork Street and Brickfield Lane.
- Reg. Ref. 2475/18, St. Teresa's Gardens, Dublin 8, amendment to previously granted permission for 50 no. residential units, to allow for the construction of an additional 4 no. units and development of a temporary grass multisport pitch.
- Reg. Ref. 3197/18, permission for an increase in student bedspaces from 276 no. permitted under Reg. Ref. 3316/16 to 281 no. and relocation of gymnasium.
- Reg. Ref. 3086/17, permission for a mixed use 6-storey building over basement at 75-78 Cork Street, including commercial uses at groundfloor and 39 no. apartments.

Each of these developments requires a construction management plan to mitigate effects of the construction phases. Subject to adherence to measures contained in the individual plans, the cumulative effect is **likely**, **short term** and **not significant**.

These developments will generate additional population locally and the consequent effect will be increased demand for local services. However, the majority of permitted developments and those under consideration are for mixed-use development incorporating floor space for non-residential uses that together will augment the supply of social infrastructure locally in parallel with the growing population. The effect is **locally moderate** with a **permanent** effect.

The proposed development site includes an area reserved for the future expansion of St. Catherine's NS and this will contribute to the cumulative primary educational needs of the local area as the population of Dublin 8 grows. The effect is **locally positive** with a **permanent** duration.

4.1.3 Mitigation

4.1.3.1 Incorporated Design

The shared accommodation element of the proposed development is restricted to single occupancy and the average size of the private living spaces is double the minimum required standard. All units benefit from excellent ventilation which according to the World Health Organisation is an effective control strategy for preventing infection and ill health in the hierarchy of controls (a framework used in occupational health to prioritise the controls needed for protection of human health). 21 no. kitchen/dining areas are proposed to serve the shared accommodation residents and they are largely evenly distributed across floors.

A project supervisor for the design process (PSDP) is appointed by the Applicant and has overseen the coordination of the design work. The role of the PSDP is to ensure co-ordination of the work of designers throughout the project;

- Identify hazards arising from the design or from the technical, organisational, planning or time related aspects of the project;
- Where possible, eliminate the hazards or reduce the risks;
- Communicate necessary control measures, design assumptions or remaining risks to the PSCS so they can be dealt with in the safety and health plan; and,
- Ensure that the work of designers is coordinated to ensure safety.

The proposed development complies with the Building Regulations which provide for the safety and welfare of people in and about buildings. The Building Regulations cover matters such as structure, fire safety, sound, ventilation, conservation of fuel and energy, and access, all of which safeguard users of the buildings and the health of occupants.

4.1.3.2 Construction Phases

A **Construction Environmental Management Plan** (CEMP), and a **Construction and Demolition Waste Management Plan** (CDWMP) have been prepared and are submitted under separate cover. The CEMP and CDWMP will be further updated by the contractor and agreed with Dublin City Council prior to commencement of any construction (i.e. including demolition) works on site. The purpose of a CEMP is to provide a mechanism for implementation of the various mitigation measures which are described in this EIAR.

All construction personnel will be required to understand and implement the requirements of the CEMP and CDWMP and shall be required to comply with all legal requirements and best practice guidance for construction sites.

Project supervisors for the construction phase (PSCS) will be appointed in accordance with the Health, Safety and Welfare at Work (Construction Regulations) 2013, and a Preliminary Health and Safety Plan will be formulated during the detailed design stage which will address health and safety issues from the design stages, through to the completion of the construction phases.

Adherence to the construction phase mitigation measures presented in this EIAR will ensure that the construction of the proposed development will have an **imperceptible** and **neutral** impact in terms of health and safety during the **short-term** duration of the works.

4.1.3.3 Operational Phase

Access to common areas will be subject to strict Covid-19 protocols and public health guidance will be followed in this regard.

Ventilation systems will be inspected periodically and maintained in good working order.

Occupants will be advised of physical distancing protocols = until a vaccine or tests for immunity are available.

Universal facial protection that help prevent droplets from reaching surfaces or others will be a requirement in common areas.

Suspected or confirmed COVID-19 cases will be isolated and quarantined in their individual private living areas.

There will be regular cleaning of spaces frequented by residents, staff and the public throughout the development.

Facility managers will encourage good hygiene and physical distancing by posting reminders and making hand sanitising stations available.

With the above measures in place the risk of transmission of Covid-19 should not be significant.

4.1.4 Residual Impact Assessment

It is anticipated that the proposed development will realise **significant positive** overall economic and social benefits for the local community and the wider local area.

Strict adherence to the mitigation measures recommended in this EIAR will ensure that there will be no negative residual impacts or effects on Population and Human Health from the construction and operation of the proposed scheme. Indeed, the delivery of much needed housing will realise a likely **significant positive** effect for the local area.

4.1.5 Monitoring

Measures to avoid impacts on Population and Human Health are largely integrated into the design and layout of the proposed development. Compliance with the 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.

Monitoring of compliance with Health & Safety requirements will be undertaken by the Project Supervisor for the Construction Process and the Facilities Management company during the operational stage.

4.2 Landscape & Visual Character

The assessment of Landscape & Visual Character is contained within Chapter 5 of Volume II.

4.2.1 Existing Environment

The proposed development site has a distinctly industrial character defined by a series of single-storey industrial units, of brick/render finish and sheet roofing, and a yard area alongside the distinctive 3-4 storey main factory building fronting onto South Circular Road. The site is devoid of trees or other vegetation. The flanks of existing two-storey houses and gardens define the site's eastern boundary and part of the western boundary. St. Catherine National School and its grounds also define part of the eastern boundary, while St. Teresa's Church and its grounds define the northern boundary. The existing site has a very low landscape and visual sensitivity to the proposed development.

The proposed development site forms parts of the wider SDRA 12 Masterplan Area. This includes the former Bailey Gibson site, which shares a similar industrial character with the proposed development site. Development of the Bailey Gibson site has recently been permitted by An Bord Pleanála (ABP Ref. PL29S.307221). It will be a new residential neighbourhood with a similar character to the proposed development of the former Player Wills site. As such, it will have a low sensitivity to the proposed development of the former Player Wills site.

The Masterplan Area also includes the former St. Terresa's Gardens site, which is now largely demolished, vacant and mostly covered in rough grassland. The northern edge of this area, backing onto Eugene Street, is currently undergoing residential development by Dublin City Council. It has a very low landscape and visual sensitivity to the proposed development.

The Coombe Hospital adjoins the Masterplan Area to the northeast and is part of SDRA12. It comprises a cluster of varied mid- and late-20th century buildings, mostly 3-5 storeys high with some 1-2 storey elements, plus associated car parking. These buildings have no positive architectural merit and low landscape and visual sensitivity to the proposed development.

To the south and east of the Masterplan Area lie extensive residential areas comprising traditional two-storey Victorian terraced houses or modern semi-detached houses, laid out in a fairly regular street grid, much of which is a residential conservation area. To the east, the streets are relatively narrow and quiet with low traffic volumes and modest street trees along some of them, while South Circular Road to the south is broader and busier. The character of these residential areas is consistent and intact and landscape sensitivity to the proposed development is moderate. The former printing works and White Swan Business Park to the east is the principal exception to this, where new office development is imminent and sensitivity is low.

Beyond South Circular Road, south of the Masterplan Area, lies the Grand Canal, a Conservation Area where the canal, bankside green spaces and street trees provide a strong green east-west spine through the area. The northern bank comprises a green open space where the Conservation Area extends to encompass adjacent industrial units and houses/gardens that back/front onto the canal. Parnell Road runs immediately parallel to the canal overlooked by two-storey houses from mid-20th century. Landscape character along the canal itself is very consistent, though with variable character and quality along its northern boundary. Landscape and visual sensitivity to the proposed development is moderate to high.

Beyond the canal to the south lies more modern residential suburbs than those closer to the proposed development site and incorporating local schools. These comprises mostly terraced two-storey houses of mid-twentieth century age, with low sensitivity to the proposed development.

The commercial centre of Dolphins Barn lies to the west and includes shops, community facilities and apartments ranging from 4 to 12 storeys high. As an area of mixed uses and mixed-age buildings, it has a modern urban character that has low sensitivity to the proposed development.

The residential areas immediately neighbouring the site to the east and west comprise mostly two storey Victorian terraced houses, some of which front onto South Circular Road. The intimate human scale of the side streets combined with proximity to the proposed development site lend them a moderate to high landscape and visual sensitivity to the proposed development.

Beyond the Masterplan Area to the north lies a residential area comprising one- and two-storey Victorian terraced houses at Eugene Street / Cameron Street / Fingal Terrace and others. These streets have a strong consistent character and are potentially sensitive to the scale and character of the proposed development. However, this area is adjoined by contemporary apartments fronting onto Cork Street that already influence the character and outlook from these streets, while contemporary terraced housing is under construction immediately south of them. Landscape and visual sensitivity to the proposed development is considered low.

Visibility of the proposed development at close quarters will occur principally from South Circular Road and Donore Avenue, including adjoining streets, with more intermittent views from Dolphin Barn Street / Cork Street and from Parnell Road / the Grand Canal. Further afield, there is likely to be glimpsed views of the proposed development from South Circular Road both east and west of the Masterplan Area, also the Grand Canal both east and west, and from parts of the residential neighbourhoods east and south of the sites. Views from the south are also likely from Mount Jerome Cemetery. Further views from the west appear very limited but are likely from the Crumlin Road approach, while views from the north are likely to be obscured by intervening development along Cork Street and its surrounds.

A selection of these views are illustrated in the booklet of photomontages prepared by Modelworks and submitted as part of the SHD application.

4.2.2 Impact Assessment

4.2.2.1 Do Nothing

In the event that the proposed development does not go ahead, the existing site will retain its industrial landscape character in the short-term. The industrial buildings and yards areas lack maintenance while not in use and are likely to continue to decay and become overgrown, which would have a further negative impact upon local urban landscape character.

The site is, however, zoned for development and therefore future development remains likely. Furthermore, adjoining lands to the east and north are also part of the same development zoning, where future development is also likely to occur. In the event of doing nothing on this site, adjacent lands are likely to become redeveloped in the meantime, parts of which will have a poor outlook onto this site and may further increase pressure for its development.

Therefore, in the medium to long term, another development proposal for the site is likely to come forward and bring about significant change to the site's urban character and its visual impact upon the surrounding area.

4.2.2.2 Demolition Phase

Landscape and visual impacts arising during the demolition stage are likely to be very localised and temporary. There are no tall structures on the proposed development site to be demolished, therefore there will be no change to the wider landscape arising from the removal of buildings and structures from the landscape/skyline. Moderate adverse landscape and visual impacts will arise from perimeter hoardings and limited visibility of demolition activities.

4.2.2.3 Construction Phase

Temporary landscape and visual impacts will initially be slightly to moderately adverse, arising from perimeter hoardings, basement excavation/construction, contractors compounds and ground-level activities. Landscape and visual impacts will become moderately to highly adverse with the introduction of tower cranes and the emergence of new building structures, visible from a wider area above intervening existing buildings. However,

with the completion of building envelopes and the reduced visibility of remaining construction activities, adverse impacts will reduce and start to have a positive visual impact as the character of the new development begins to emerge. The final stages of completion, including landscaping and the removal of temporary structures and plant will further increase positive impacts upon landscape and visual amenity.

4.2.2.4 Operational Phase

The proposed development will take a former low-rise industrial site transform it into a medium- to high-density residential neighbourhood with its own character and identity. This will introduce a significant change of character to the proposed development site. New buildings will be of significantly increased scale and height, and will exhibit richer elevational detailing. New public streets and open spaces will replace closed-off concrete/tarmac yards.

The development will adopt a contemporary approach to housing in terms of scale, form and detailing, which has the potential to have either a positive or negative effect on the existing urban landscape, depending on how sensitively it is executed. The proposed development will have a character similar to the recently permitted development at the former Bailey Gibson site (ABP Ref. PL29S.307221), and that complements the existing mixed use development on Dolphin's Barn / Cork Street. This potentially has a moderately positive impact on landscape character by extending an established high quality modern city neighbourhood.

The proposed development incorporates buildings ranging from 3 to 19 storeys high. Lower buildings at the perimeter provide a transition of height and scale between neighbouring low-rise buildings and the proposed taller buildings. Lower new buildings will be easily screened from the wider area by intervening buildings, while taller buildings will be visible from a wider area, with the potential to intrude upon sensitive landscapes. This has the potential for moderately adverse visual effects.

The proposed development will include the remodelling and upward extension of the former factory building on South Circular Road. Works to the existing building will be sensitive to its character and heritage while new set-back upper floors will be contemporary in design. By retaining and upgrading this building, this will reinforce the existing character of the street, where impacts on landscape and visual amenity are potentially slightly to moderately positive.

The proposed development is of a scale that incorporates new streets as an extension to the local road network. These will replace the enclosed yards and industrial buildings, framed by new buildings of a larger scale and more contemporary character. By integrating new streets with the local residential street network and extending local residential neighbourhoods into the site, these are likely to make a moderately positive contribution to landscape character within the site.

New development of this scale will be visible from neighbouring residential areas surrounding the site, especially the taller blocks. The sensitivity of these areas to landscape and visual effects is generally low, increasing to moderate in the residential conservation areas to the south, mainly, and also to the east. There is scope for a major contrast of scale and architectural styles to give rise to low/moderate adverse visual impacts in the residential locations generally and moderate/major adverse landscape and visual effects in the residential conservation areas, particularly at close quarters.

The Grand Canal lies nearby to the south, with moderate to high sensitivity to the proposed development. The proposed development, where visible from Parnell Road and the bridges crossing the canal, will contrast with the tree-lined waterway and the mixture of modern and traditional low-rise buildings adjoining it. As a more intense urban form of development interrupting the skyline, there is likely to be slight to moderate adverse visual impacts upon views from the canal corridor.

The proposed development will potentially be visible from some of the main road approaches to the site. These include South Circular Road, from both east and west and the R110 approaching the city from the southwest, comprising the Crumlin Road and Dolphin's Barn Street. The traditional housing fronting South Circular Road makes these views slightly sensitive to the proposed development, while the busy urban route of the R110 has low sensitivity to the development. Therefore visual impacts are likely to be slight to moderate and neutral.

All operational impacts are likely to be permanent.

4.2.2.5 Cumulative Impact

The proposed development site is part of the Masterplan Area that includes SDRA12, where further phases of development are likely to occur on the former Bailey Gibson site to the east (recently permitted: ABP Ref. PL29S.307221) and on Dublin City Council land to the north and west. Those developments are likely to be of similar scale and complementary character to the proposed development and will integrate closely in terms of building relationships, street networks and open spaces.

On its own, the proposed development of four blocks is likely to appear as a modest contemporary urban intervention set in a relatively 'traditional' residential suburb, while as part of the wider Masterplan Area development, it will contribute to a new urban neighbourhood with its own character and identity. Resulting cumulative impacts on local landscape character and visual amenity are likely to be positive.

In the wider area, there is ongoing change to the surrounding urban landscape. Dolphin's Barn and Cork Street have undergone significant change in the last 15 years, supporting several contemporary buildings of 4-12 storeys high. Consented developments in this area propose buildings typically up to 6-7 storeys. The proposed development will build upon this emerging urban landscape by establishing a comprehensive cluster of contemporary development as a new urban neighbourhood that complements those changes already happening nearby. The impact of this upon landscape character and visual amenity is likely to be positive in the medium term as consented developments get built.

4.2.2.6 Mitigation

4.2.2.7 Demolition & Construction Phases

The construction phase will be completed quickly through careful construction planning and management prior to commencing on site and throughout the construction phase, removing negative visual impacts as quickly as possible.

Where practical, contractors' compounds, site offices and parking areas will be located where they will be least overlooked from nearby streets and dwellings. Perimeter hoardings at the proposed development site boundaries will be maintained in good condition and free of unsolicited graffiti and fly-posting.

Visual impacts will extend to a wider area with the installation of tower cranes across the proposed development site and the gradual emergence of the building structures. The tower cranes will be the tallest and most visible elements, but are temporary structures. These will be 'parked' in an orderly manner when not in use and removed from the proposed development site at the earliest opportunity.

Plant generally within the proposed development site, especially during demolition and the early stages of construction, are likely to be partially visible from neighbouring streets and open spaces. When not in use, these should be parked in compound areas and/or away from the proposed development site perimeter in order to minimise visibility outside of working hours. An off-site vehicle management strategy will also be implemented to minimise visual impacts and other impacts on neighbouring streets and residents.

4.2.2.8 Operational Phase

A sensitive approach has been taken to building height, incorporating transitions to the surrounding low-rise neighbourhoods. It is the same approach as taken for the permitted Bailey Gibson Development (ABP Ref. PL29S.307221), where An Bord Pleanála "considered that the proposed development would not have significant adverse landscape and visual impacts arising from either the number, form, bulk, scale or height of the proposed blocks and did not consider that the proposed development would have an overbearing impact on the surrounding area, including the Residential Conservation Areas."

Three- to four-storey blocks are positioned at the eastern site perimeter (blocks PW4 and PW5) adjoining existing residential areas, to provide screening and a transition to taller blocks behind them. The retained former Player Wills factory building (block PW1) maintains its three-storey Art Deco frontage to South Circular Road and the positive contribution this makes to the streetscape. The taller elements at 16 and 19 storeys are located towards the centre of the Masterplan area in Block PW2, well away from neighbouring residential conservation areas, diminishing their height and forming part of a cluster with other buildings in the Masterplan Area.

Varied building heights are used to create a dynamic built environment with rich character, variety and structure, where taller building provide focus for open spaces and vistas within the development and beyond, while lower buildings address the street scale and neighbouring residential areas. Vertical breaks and façade detailing emphasise slenderness and reduce perceived mass of taller blocks. The rhythm and proportions of windows echo those found in more traditional buildings, while the subdivision of façades into smaller/narrower elements add finer scale and proportion. Two-storey street façades below taller buildings emphasise the human/street scale. Semi-recessed balconies add depth and contrast within elevations.

Elevation makes extensive use of traditional red brick (as found along South Circular Road) and buff brick (as found in Dolphins Barn and the former Player Wills factory building) to complement the development's surroundings, but are used with a more contemporary expression of texture and arrangement. Metal detailing echoes the industrial nature of the existing site, while throughout the development, window openings and balconies provide contrasts in colour and texture.

The layout adopts a clear street hierarchy, many with slow speeds, some including shared surfaces and pedestrian priority or home zones. Active street frontages add visual richness, a human scale and encourage lively dynamic streets , while street trees, soft landscaping and rich/dynamic hard surfaces create high quality streets and reinforce the human scale.

A major formal open space comprises the Players Park, located at the western side of the Player Wills site at the heart of the wider Masterplan Area, overlooked by block PW2. A tree-lined boulevard and formal paths provide structure and focus within a broad multi-functional space accommodating both informal and programmed activities. It is a large space that complements the scale and character of taller buildings within the proposed development and wider Masterplan Area. St. Catherine's Park is a proposed play park between Blocks PW2 and PW4, its scale and organic flowing layout providing a visual contrast to the buildings and streets surrounding it. It is richly populated with play features and ornamental soft landscaping to provide an intimate and stimulating experience, along with a pleasing outlook from neighbouring buildings and streets.

Regular maintenance of the external building fabric and public/private open spaces will be undertaken to maintain the highest standards of building presentation and landscaping, ensuring the completed development continues to make a strong positive contribution to the urban fabric and character of the area.

This approach delivers some of the key objectives set out in section 3.2 of the Urban Development and Building Height Guidelines at the scale of the city/town at the district / neighbourhood / street level, particularly:

- Successful integration into and enhancement of the character of the area
- Having regard for the setting of landmarks and key views
- Delivering variety in scale and form, responding to adjoining developments, avoiding monolithic or slab-like buildings
- Avoiding and overbearing impact upon the character of neighbouring areas
- Creating high quality open spaces and visual interest in the streetscape.
- Increasing legibility in the wider urban area
- Contributing a wider mix of buildings and dwelling types in the local area.

A more detailed account of these design and mitigation measures are set out in the Design Statement by Henry J Lyons architects, included in the submission documents.

4.2.3 Residual Impact Assessment

4.2.3.1 Operational Impacts Upon Landscape Character

Within the context of the wider Masterplan Area, the proposed Player Wills development will make a moderate and positive contribution to this new urban landscape. Impacts upon the surrounding urban landscape will also be moderately positive, retaining and reusing the art deco former factory building while replacing an abandoned industrial premises with an attractive residential-led development that contrasts with and complements adjacent residential neighbourhoods.

The existing art deco former factory building will enjoy a stronger presence on the street and remain a local landmark by virtue of being brought back into use and enjoying greater visual and physical permeability.

The taller blocks in PW2 give structure and form to the development, helping to define its core and mark the gateway into the site from Donore Avenue. The recessed facades and the regular pattern/layout of window openings and balconies break down the building volumes and create a slender vertical emphasis at the same time. The scale and presence of block PW2 will be echoed by buildings of a similar scale in the permitted Bailey Gibson development, serving as focal features and 'book ends' to Players Park.

A human scale is reinforced at street level through active frontages, double-height where retail/community uses are in place; through height transitions upwards from modest heights adjoining existing streets and neighbouring dwellings; and through comprehensive high-quality detailing to the streetscape, including street trees and shrub planting, generous pavements, cycle parking and seating.

The proposed Players Park and St. Catherine's Park are major public open spaces delivered as part of the Player Wills development. In addition to providing high quality amenity space as an integral part of the proposed development, these spaces also provide green buffers to the adjacent school and houses. Players Park will be a multi-functional curated space with comprehensive hard and soft landscaping providing a distinctive civic character of its own, while St. Catherine's Park will provide a robust, attractive and active landscape setting to blocks PW2 and PW4, and enhance views into the site from the Donore Avenue approach.

Enclosed communal courtyards and gardens provide an outlook from some neighbouring residential areas as well as a spatial buffer between them and the proposed residential buildings. They have a more domestic character defined by their detailing and the simple approach to building materials/detailing.

Material detailing includes extensive use of red, grey and buff coloured brickwork throughout, echoing the character of neighbouring areas, while also incorporating the clean lines and fine detailing of glazed balustrades and coloured aluminium panels/detailing.

4.2.3.2 Operational Visual Impacts

Overall, the proposed development adds depth and diversity to the urban landscape where visible beyond intervening roofscapes. It signals the presence and character of a new urban quarter, particularly where seen as part of the wider development of the Masterplan Area, which provides a contrasting backdrop to the prevailing streetscapes in each view. Existing views have a low to moderate sensitivity to the proposed development, and visual impacts are mostly neutral or positive.

Donore Avenue & Eastern Residential Neighbourhood

This area has a low to moderate sensitivity to the proposed development as an established residential conservation area.

Approaching from the north along Donore Avenue overlooks the proposed major public space on the DCC lands, with partial glimpses of the proposed development appearing as a compact cluster of contemporary buildings exhibiting a dynamic roofscape, depth of volume and a vertical grain. It helps to frame the proposed park and has a slightly positive visual impact. It contributes positively to more extensive changes to view anticipated through development of the wider Masterplan Area.

Further south on Donore Avenue, partial views of the proposed development will be seen in the context of St. Teresa's Church, which is not significant in heritage terms but which is a local landmark. The proposed development will the scale and prominence of the church and has a slightly negative visual impact as a result.

The proposed development adds a small degree of depth and focus in vistas along streets to the east of Donore Avenue, where visual impacts are slight and neutral as a result. Development of the wider Masterplan Area is likely to reinforce this effect with a neutral or slightly positive visual impact.

South Circular Road and Dolphin's Barn

Vistas towards the proposed development site occur along South Circular Road from the east, a residential conservation area but also a busy thoroughfare. There will be intermittent glimpses of the upper floors of Blocks PW1 and PW2, but without significant change to the view, visual impacts will be low and neutral. The same is true of vistas approaching from the west along South Circular Road beyond Dolphin's Barn. Development of the wider Masterplan Area continues to result in minor change to these views, with low neutral visual impacts as a result.

In close proximity on South Circular Road, clearer views of the proposed development will be more significant with the upper floors of Blocks PW1 and PW2 featuring as a new contemporary backdrop beyond the intervening terraced houses. Slender volumes, proportions of window openings and arrangement of balconies all emphasise a vertical grain, while contrasting materials help to break down the building volumes. The form and details of the buildings add to the visual richness of the proposed development and make a distinct but complementary contrast with the foreground landscape. The magnitude of change is moderate to high and considered moderately positive. The additional change resulting from development of the wider Masterplan Area reinforces these positive visual impacts.

From Dolphin's Barn Road, intervening buildings mostly obscure views of the proposed development. Where glimpses occur between or beyond them, the proposed development appears as a low to moderate magnitude of change, introducing a small cluster of contemporary buildings as the beginnings of a new contemporary neighbourhood beyond the street. Visual impacts will be slight and positive. However, development of the wider Masterplan Area will introduce much more significant change in closer proximity to the view, with a moderately positive visual impact, but obscuring the proposed Player Wills development from view.

Cork Street residential environs

Low-rise houses afford partial views to the upper floors of the proposed development in some locations. These are not residential conservation areas and sensitivity to the proposed development is low.

In closer proximity, glimpsed views of the proposed development introduce a low to moderate magnitude of change, occasionally high, which establishes part of a new urban neighbourhood as a contemporary backdrop to the existing houses. The proposed development displays modulated building heights and elevations, with a contrasting range of fenestration and material finishes that help to break down the building volumes into more slender components with a strong vertical emphasis. Visual impacts will be moderately positive, and further emphasised by development of the wider Masterplan Area, particularly the intervening DCC lands.

Residential areas north and west of Cork Street will experience no more than minor glimpses of the proposed development, where vistas along streets are frequently screened by intervening trees and buildings and visual impacts are slight and neutral. Development of the wider Masterplan Area is likely to introduce a little more contemporary development into these views with slight to moderate positive visual impacts, but also obscuring views of the proposed Player Wills development in many cases.

Grand Canal and southern residential environs

The Grand Canal is a Conservation Area with moderate sensitivity to the proposed development, while the residential areas adjoining it are mostly ordinary residential suburbs with low sensitivity to the proposed development.

Visibility of the proposed development is frequently obscured by intervening trees and nearby buildings, with no visual impacts as a result. This is demonstrated by more distant approaches along the canal with vistas towards the proposed development site.

In closer proximity there occasional open views towards the proposed development from the Grand Canal, appearing as part of a new contemporary residential neighbourhood and forming a backdrop to the canal and the buildings that adjoin it. The cluster of new buildings provides a contrast to the foreground buildings, which are sometimes traditional terraced houses. It establishes a new sense of place and signals another neighbourhood beyond the canal. Built forms are clearly articulated with stepped roofscapes, inset façade elements and a contrasting range of material finishes. The towers of block PW2 enjoy a strong vertical emphasis as a result, maximising the perception of slender forms, while where block PW1 is visible, it exhibits a more grounded and horizontal character. These buildings can draw the viewers eye away from the canal but allow the canal and its immediate setting to remain dominant. The magnitude of change is moderate and visual impacts are moderate and neutral. Development of the wider Masterplan Area is likely to reinforce this effect.

Residential areas south of the Grand Canal afford vistas along some streets, but intervening trees along the streets or nearby canal frequently screen views of the proposed development, with no visual impact as a result. Where visible, the proposed development introduces minor magnitude of change to the view, signalling the presence of a new and contrasting neighbourhood nearby, but with only slight neutral visual impact as a result.

Longer views from the south

There are few obvious views from the wider urban area to the south of the proposed development. Vistas along the road network afford occasional glimpses to the upper floors of the proposed development, but with low sensitivity and a minor or imperceptible change to the built skyline, visual impacts are imperceptible to slight and neutral.

Mount Jerome, although private, is frequently accessed by members of the public and is slightly elevated above the surrounding urban area. It has no special landscape status but its role as a place of memorial and contemplation lends it a potentially moderate sensitivity to the proposed development. Distant views of the proposed development encapsulate the upper floors of block PW2, which interrupts the intervening ridgeline of nearby houses, which in isolation has a slightly negative visual impact. With the introduction of development across the wider Masterplan Area, the cumulative effect will be a more cohesive and distinctive urban backdrop with a slightly positive visual impact as a result.

4.2.4 Monitoring

Regular monitoring and maintenance of the building fabric and the hard/soft landscaping within the proposed development will ensure that these continue to make a positive contribution to the urban landscape and the amenity of those areas overlooking the proposed development.

4.3 Material Assets: Traffic & Transport

The assessment of Traffic & Transport is contained within Chapter 6 of Volume II.

This chapter of the EIAR assesses the potential impact of the proposed development in terms of traffic and transport. The chapter provides an overview of the existing receiving environment, a detailed and robust assessment of the potential impact of the proposed development on the operation of the local road network both during the short-term construction phase and long-term operational phase and outlines mitigation measures to ensure any significant effects are minimised or avoided.

Full details of the Traffic Impact Assessment undertaken by SYSTRA are provided in the Traffic & Transport Assessment and Mobility Management Plan report included under separate cover as part of the planning application for the Proposed Development.

4.3.1 Existing Environment

The site is located on the South Circular Road with connections to St. Catherine's Avenue and Donore Avenue to the North. The primary access points to the site is currently located along the South Circular Road and along Donore Avenue north of St. Catherine's National School. The surrounding land use is largely residential comprising of predominantly terrace housing. The site is currently disused but formerly housed the Player Wills factory.

4.3.2 Demolition & Construction Phase

The Demolition & Construction will be short-term in nature relative to the Operational Phase. In total, it will last approximately 42.5 months. The traffic generated on site both as a result of construction activity and staff required on site will vary during this time depending on the construction stage and activity though staff will generally be encouraged to travel to site by sustainable means.

In total, there will be up to 700 staff on site during the busiest construction period. To limit the impact of construction traffic on the local network, staff will be instructed to arrive to site by public transport, walking or cycling where possible. A total of 150 on-site parking spaces will be provided for visitor and staff combined. This will result in 150-200 potential car trips to site over the course of the construction period (allowing for potentially multiple visitor trips per day). The staff and visitor parking will be accessed via Donore Avenue. The working hours on site will be 07:00am-18:00pm meaning the majority of staff will be arrive before busiest morning peak and after evening peak.

Assuming the majority of these staff/visitor trips will travel southbound along Donore Avenue towards the South Circular Road where the estimated AADT is 9,000 vehicles per day, they will represent an increase of 4.4% of daily traffic.

Heavy Construction Vehicles (HGVs) will enter and exit the Site from the South Circular Road, a designated route for HGVs within the DCC HGV strategy. The number of heavy vehicles will be dependent on the construction activity taking place on site.

The maximum number of HGVs to the site will be during the basement excavation with 87 on-way trips, however this will be temporary lasting 8 months. The average number of HGVs to site over the entire construction phase will be closer to 41 one-way HGV trips (trips to and away from site).

4.3.2.1 Construction Traffic Contribution

On average this will increase the absolute number of HGVs along the South Circular Road by 12.7% & on the Dolphin's Barn Cross Canal Bridge by 5.4% though the percentage HGV will increase by less than 0.5%. The increase in overall total traffic as result of the additional HGVs along these links will be less than 0.5%. This will have an imperceptible effect and the overall impact is considered slight.

In summary, the combined additional light and heavy construction traffic is likely to have a negative but slight impact on the local network. It will be short-term in nature and the impacts outlined represent the 'worst case' effects.

4.3.3 Operational Phase

The impact of the proposed development on the local road network has been assessed by modelling the projected traffic flows with and without the proposed development in place.

The National Transport Authority's Regional Modelling System was used for trip generation for the residential element of the development and validated using data from the Trip Rate Information Computer System (TRICS). TRICS was used to estimate the likely vehicle trip generation for the proposed creche.

The retail/food and beverage element of the development, comprising 1404 sqm, is expected to predominantly be used by residents and local residents within the walking and cycling catchment of the site. There is no extra traffic expected to be generated by this element of the site, however, to ensure a robust assessment of the development impact, a small number of vehicle trips were assumed.

Peak hour mode shares for demand to and from the development were estimated based on proposed long-term parking provision for the development and multi-modal trip generation from the Eastern Regional Model (ERM). The car person trips above were converted to vehicle trips using a vehicle occupancy factor of 1.23 from Transport Infrastructure Ireland's Project Appraisal Guidelines (PAGs) Unit 6.11 'National Parameter Sheet'.

The combined trips generated by each element of the development, including the retail delivery and servicing vehicular trips was estimated to be 42 arrivals and 12 departures in the AM peak period, and 23 arrivals and 39 departures in the PM peak period.

4.3.3.1 Operational Traffic Contribution

The distribution of vehicular traffic from the development has been taken from the ERM. The contribution of development to overall traffic is low in both peaks with the highest contribution 7.5% along the Donore Avenue in the evening peak. The assessment found that the majority of links will experience an imperceptible or not significant impact with a slight impact on Donore Avenue in the evening peak.

The contribution of development traffic is less than 4.3% for any of the main junctions local to the site with the majority below 2.5%. It is therefore considered to have an imperceptible impact in the majority of junction with a not significant impact on the Donore Avenue/South Circular Road junction in the PM peak.

A full assessment of the local road network and junctions was undertaken for each forecast year using the VISSIM model. This is in line with Transport Infrastructure Ireland's guidelines which state that impact assessments are recommended where the number of residential units exceed 200 dwellings.

4.3.3.2 Modelling Results

The results from the modelling exercise indicated that the impact of the development, as a worst-case, will be slight and moderate negative pre-mitigation. Moderate impacts are predicted in terms of queuing along Cork Street Southbound and the delay at some junctions. Mitigation is proposed to address where moderate effects are predicted. Overall, the impacts will be long term but local in nature and not significant.

4.3.4 Cumulative Impact

The application area forms part of a wider non-statutory Masterplan (included under separate cover) for the proposed development site, Bailey Gibson site and lands under the control of Dublin City Council. In addition, there is potential for future development on lands adjacent to the church.

The traffic generated by the Bailey Gibson site & potential future development on lands adjacent to the church during both construction and operational phases has been considered in combination with the proposed development, commencing from 2024. The operational impact of the DCC lands, St Teresa's Gardens, has also been considered for the forecast years of 2029 & 2039. The construction impacts of the DCC lands and operational impacts in 2024 have not been considered here as these lands are unlikely to be constructed within the same timeframe as the Bailey Gibson, potential development lands adjacent to the church & Player Wills sites and therefore are unlikely to be operational within the opening year.

The operational phase trip generation for other sites has been undertaken in the same manner as the proposed development.

The combined additional light and heavy construction traffic is likely to have a negative but slight effect on the local network. It will be short-term in nature and the impacts outlined represent the 'worst case' effects.

The cumulative operational development traffic will, as expected, have a greater impact than the proposed development alone. On balance, the impact is moderate as the overall maximum network delay is 12.2% in 2039. The impact will be negative and long-term in nature and represent the 'worst case' effects.

As part of the delivery of the masterplan, there will be benefits to the connectivity and priority for pedestrians and cyclists between Donore Avenue & Dolphin's Barn Street and Cork Street & South Circular Road with dedicated walking and cycling routes through the centre of the development. This impact is likely, it will not be significant, but it will be a local, positive and long-term impact.

4.3.5 Mitigation

There are a number of measures which have been included from the outset in the design of the development to reduce any potential negative impacts on the local transport network arising from additional traffic generated by the development. The most significant measure is the parking ratio which has been applied with just 0.3 car parking spaces per residential unit and 1.3 bikes spaces provided per unit.

A preliminary Construction Traffic Management Plan (CTMP) and Construction Environmental Management Plan (CEMP) submitted under separate cover have been developed as part of the planning process. As part of this a number of mitigation measures have been identified for the construction stage to limit the potential significant impacts.

The main mitigation measure during the operational phase will be the implemented Mobility Management Plan (MMP) submitted under separate cover which is intended to reduce the need for car travel.

4.3.6 Residual Impact Assessment

The impact of the construction phase in terms of traffic and transport will be negative, not significant, local and short-term. The measures outlined in the CTMP, will help alleviate the impact of the additional traffic and limit the impact to outside the busier peak hours.

With the mitigation measures in place, the impact of the operational proposed development on traffic and transport will be not significant, negative, local and long-term. Cumulative

With the CTMP and CMP implemented on all sites, the cumulative impact of construction traffic should be reduced to slight and local and broadly limited to the South Circular Road. The impact will be short-term. With the MMP in place the car mode share should be reduced further, and the operational impact of the combined Masterplan lands will be negative, slight and long-term but confined to the local network.

4.4 Material Assets: Built Services

The assessment of Built Services is contained within Chapter 7 of Volume II.

4.4.1 Existing Environment

4.4.1.1 Water Supply

There is a total of three existing cast iron watermains located in the South Circular Road to the south of the site. These watermains are 4, 6, and 18-inch respectively. There is also a 9-inch cast iron watermain located in St Catherine's Avenue to the east of the site and a 6-inch cast iron watermain located in Donore Avenue to the north-east of the site. There are two existing connections from the development to the public watermains, one to the north-east and another to the south-west of the site

4.4.1.2 Waste Water Drainage

A 300mm diameter vitrified clay combined sewer is located within St. Catherine's Avenue to the east of the proposed development site. A 300mm diameter combined sewer which becomes a 910mm diameter combined sewer culvert further downstream to the east of St. Theresa's Church, is located within Donore Avenue to the north-east of the proposed development site. A 1040mm brick combined Irish Water sewer is located within the South Circular Road with a flow direction of west to east, parallel to the southern boundary of the site.

There are three existing connections from the development to the public combined sewers to the south and north-east of the site. The site has not been in use as a factory for some time so no foul flow generated from the use of the buildings has been considered for the baseline environment. Underground drainage surveying of the site has confirmed approximately 75% of the surface water from the site is also discharged to these two combined sewers. There are no flow control or other sustainable drainage initiatives currently in place on the site.

The three sewers which service the proposed development site and adjacent DCC lands and Bailey Gibson sites all join at the junction of The Coombe Road and New St. South. From here, the flow is generally northwards to the River Liffey, then eastwards to Ringsend Wastewater Treatment Plant (WwTP), where the sewage is treated before being discharged to the Irish Sea.

4.4.1.3 Surface Water Drainage

There is an existing 1050mm public surface water culvert located in Donore Avenue to the east of the proposed development site. This culvert enters Donore Avenue from the south at the junction with Merton Avenue and continues running northwards along Donore Avenue to the east of St. Catherine's Church where it changes to a 910mm culvert. There is a 300mm diameter vitrified clay combined sewer located within St. Catherine's Avenue to the east. There is also a 300mm vitrified clay combined sewer within Donore Avenue to the north-east of the site. Further north along Donore Avenue, to the east of the proposed site, this sewer changes to a 990mm brick combined sewer culvert. A 1050mm brick combined sewer culvert runs within the South Circular Road.

A significant proportion of all positively drained surface water from the proposed development site discharges to combined sewers located in Donore Avenue and the South Circular Road. There are no sustainable drainage systems or flow control devices in place at the site. As a result, in storm events, unattenuated and untreated surface water discharge can contribute significant flows to the combined sewers. The foul and combined sewer flows in this area discharge to the Wastewater Treatment Plant in Ringsend. Surface water discharge to the combined sewer system contributes to inundation of this system in storm events and recurring untreated discharge of combined sewer flows to open water bodies through combined sewer overflows as well as increased flows being sent to the Ringsend WwTP.

4.4.1.4 Gas Supply

There is an existing 180mm 25mBar gas pipe located in the South Circular Road to the south of the site.

4.4.1.5 Telecommunications

Eir and Virgin have both confirmed that they have existing infrastructure routing in the South Circular Road. There is one connection from the eir network that serves the existing site.

4.4.2 Impact Assessment

4.4.2.1 Do Nothing

Water Supply

If the proposed development was not to proceed, there would be no increase in the demand on the existing water supply network. Any existing leaks would remain undiscovered and as a result any current loss from the public system would remain undetected.

Wastewater Drainage

If the proposed development was not to proceed, there would be no increase in the design foul flows to the combined sewer network. Unattenuated and untreated surface water discharge to the combined sewer in all rainfall events would also continue.

Surface Water Drainage

If the proposed development was not to proceed, unattenuated and untreated surface water discharge to the combined sewers in all rainfall events would continue.

Electricity/Gas and Telecommunications

If the proposed development was not to proceed, there would be no increase in the demand on the existing networks. 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, with similar demand requirements, would be progressed on the site that accords with National policy for compact growth on brownfield sites.

4.4.2.2 Demolition & Construction Phase

Water Supply

Water supply during demolition and construction shall be via the existing connections to the site. The water demand during demolition and construction will be significantly less than that required for the development in operational phase. Given that Irish Water have confirmed the connection for the proposed development can be catered for without upgrades, the impact due to water supply during construction will be likely, imperceptible and short term.

Wastewater Drainage

Wastewater discharge during demolition and construction shall be via the two existing connections. Wastewater flows during demolition and construction will be significantly less than that required for the development in operational phase. Given that Irish Water have confirmed a connection for the proposed development can be catered for without upgrades, the impact due to wastewater discharge during construction will be likely, imperceptible and short term. Due to the natural topography of the site, which falls from south west to north east, natural gravity flows of sediments of harmful substances spills affecting the public combined sewer network are unlikely, not significant and temporary in duration.

Surface Water Drainage

Demolition of the existing buildings and hardstand will result in an immediate reduction in surface water discharge to the combined sewer network. This will have a positive, imperceptible, likely and temporary effect. Due to the natural topography of the site and location of surface water sewers, natural gravity flows of sediments of harmful substances spills affecting the public surface water network are unlikely, not significant and temporary in duration. There is a risk of the following occurring during the construction stage:

- Mobilisation of sediments and harmful substances during the construction phase, due to exposed soil and earth movement, which may be flushed into the surface water drainage system during rainfall events;
- Accidental spills of harmful substances such as petrol or oil during the delivery and storage of harmful substances or by leakages from construction machinery.
- Discharge of untreated ground water to public surface water network due to failure of treatment plant.

Electricity/Gas and Telecommunications

Temporary power and communications required for construction and demolition activities will be provided from the existing infrastructure. The location of this infrastructure will be assessed by the contractor in accordance with their construction programme.

Gas Supply

No gas connection will be required for the construction phase.

4.4.2.3 Operational Phase

Water Supply

Irish Water have confirmed through the pre-connection enquiry application process and subsequent design vetting process that the water demand from the proposed development can be catered for without network upgrades. Hence, the operational impact of the proposed development is considered to be neutral, imperceptible, and long-term.

Wastewater Drainage

Irish Water have confirmed through the pre-connection enquiry application process and subsequent design vetting process that the wastewater discharge from the proposed development can be catered for without sewer upgrades. Hence, the operational impact of the proposed development is considered to be neutral, imperceptible, and long-term. The removal of all surface water discharge from the combined sewer system will contribute to a reduction in peak flows in the combined sewers with a positive, imperceptible and long-term impact.

Surface Water Drainage

The vast majority of the proposed development site surface water will be positively drained and finally discharged to the surface water culvert in Donore Avenue. Without mitigation measures to treat and attenuate surface water discharge to the surface water system, this would result in accumulation of silts and other debris within the surface water sewer network as well as high flows in moderate/high intensity rainfall events. The impact on the public surface water drainage network would be negative, moderate and long-term. The provision of sustainable drainage systems to treat and attenuate surface water discharge in the development to replicate pre-development flows, shall ensure that the cumulative effect on the surface water infrastructure is neutral, imperceptible and long term.

Electricity

Due to the operational procedures of the ESB, they do not confirm if network upgrade works will be required until planning permission is granted. We do note that there is already ESB capacity allocated to the site with the existing sub stations and the ESB electrical distribution maps indicate substantial infrastructure in the area with MV distribution cables routing down south circular road.

Gas

Gas Networks Ireland have confirmed that the gas demand from the proposed development can be catered for in their network. Hence, the operational impact of the proposed development is considered to be neutral, imperceptible, and long-term.

Telecommunications

Eir and Virgin have confirmed through their early engagement process that the demand from the proposed development can be catered for. Hence, the operational impact of the proposed development is considered to be neutral, imperceptible, and long-term.

4.4.2.4 Cumulative Impact

Water Supply

The proposed development water demand on the Irish Water supply network has been assessed by Irish Waters' Developer Services and Capital Needs Assessment teams as part of the Pre-Connection Enquiry process. The assessment uses a model of the Dublin area water supply network. Through the pre-connection enquiry process, Irish Water assess the feasibility of a connection for all proposed developments prior to granting a connection to their system or deciding on whether network upgrades are required to facilitate same. Where high demand is placed on the Irish Water network from individual or an accumulation of developments which cannot be catered for by the network, Irish Water will advise this in their pre-connection enquiry response, citing that either network upgrades are necessary to facilitate the water demand of the proposed development, or potentially, that the scale of development cannot be catered for without large scale upgrades to the network. As Irish Water have provided confirmation of feasibility through the Pre-Connection Enquiry process that the proposed development can be catered for within the capacity of the current water supply network, as no network upgrades are required, and that this process includes a review of the effect on the existing water supply network from both existing and all other known proposed developments, it is considered that the cumulative effects are neutral, not significant and long term.

Wastewater Drainage

The development site forms part of a Masterplan, consisting of the Player Wills site, DCC Lands and the Bailey Gibson site within SDRA 12 lands. There is a possibility that these developments could impact the capacity of the local foul water drainage network. However, Irish Water have already reviewed the proposed foul flow calculations for both the Player Wills and Bailey Gibson sites and confirmed that both developments can be catered for without network upgrades in the area. Irish Water also review the wastewater discharge requirements for all proposed developments and confirm if the public network has capacity to cater for same, with or without upgrades, prior to connection to the network. Therefore, it is considered that the cumulative impact of the proposed development on wastewater infrastructure will not be significant, with neutral long-term effects. The policies of Irish Water and Dublin City Council for the provision of separate foul and surface water drainage systems, as well as the provision of sustainable drainage systems to treat and attenuate surface water discharge in new developments, shall result in a cumulative significant reduction in stormwater discharge to the wastewater infrastructure in rainfall events, resulting in a moderate, positive, long term effect, particularly in this brown field area.

Surface Water Drainage

The policies of Irish Water and Dublin City Council for the provision of separate foul and surface water drainage systems shall result in a cumulative increase in flows within the surface water network and corresponding decrease in flows within the combined drainage system. The provision of sustainable drainage systems to treat and attenuate surface water discharge in new developments, to replicate pre-development flows, shall ensure that the cumulative impact on the surface water infrastructure is neutral, imperceptible and long term.

Gas Supply

Based on the advice of GNI that the existing gas supply network has capacity to cater for the development gas demand and the above-mentioned mitigation measures, there should be no residual cumulative impact to the gas supply infrastructure.

Electrical Supply

The ESB will review the network capacity following successful planning permission. Should any infrastructures works be required these will be carried in line with the ESB operational procedures. The cumulative impact of installing new infrastructure for this development is positive, long term effect which will improve the local network.

Telecommunication

Based on the advice of the telecommunications providers that the existing networks have capacity to cater for the development's telecommunication demand without network upgrades and the above-mentioned mitigation measures, there should be no residual cumulative impact to the telecommunication supply infrastructure.

4.4.2.5 Mitigation

4.4.2.6 Demolition & Construction Phases

Water Supply

Appropriate construction methodology as outlined in Irish Water – Code of Practice for Water Infrastructure, will be employed to ensure against contamination risk of the local water supply and all watermain connection works shall be carried out by the Irish Water accredited regional contractor.

Wastewater Drainage

Appropriate construction methodology as outlined in Irish Water – Code of Practice for Wastewater Infrastructure will be employed to ensure against contamination or sediment risk of the local foul drainage network. The connection of the new foul sewer to the public combined sewer network shall be carried out by the Irish Water Regional Contractor after all Irish Water construction quality assurance testing and inspections have been carried out. Temporary discharge licences during construction shall be in accordance with the requirements of the licencing authority via on-site treatment systems.

Surface Water Drainage

To prevent the ingress of ground water, all new sewers shall be tested and surveyed and, where necessary, repaired in accordance with the Greater Dublin Area Regional Code of Practice for Drainage Works prior to connection to the public surface water system. Filters and silt traps will be used to prevent rain from washing silts and other materials into the surface water network and creating blockages. All oils/diesel stored on site for construction equipment are to be located in appropriately bunded areas. Road sweeping and/or wheel wash facilities should be provided, as required.

Electricity / Telecommunications

The locations of the electricity and telecommunications network infrastructure relative to the proposed works will be confirmed as part of the Detailed Design Phase to mitigate the risk of damage to the electricity and telecommunication infrastructure before construction starts. Prior to excavation the Contractor will carry out additional site investigation, including slit trenches, in order to determine the exact location of the electricity network in close proximity to the works area. This will ensure that the underground electricity and telecommunications network will not be damaged during the construction phase

Gas Supply

The locations of the gas network infrastructure relative to the proposed works will be confirmed as part of the Detailed Design Phase to mitigate the risk of a gas main hit before construction starts. Prior to excavation the Contractor will carry out additional site investigation, including slit trenches, as a mitigation, in order to determine the exact location of the gas network in close proximity to the works area. This will ensure that the underground gas network will not be damaged during the construction phase.

4.4.2.7 Operational Phase

Water Supply

A water audit will be carried out by Irish Water to ensure the construction is fully in compliance with Irish Water Code of Practice and standard details prior to taking in charge. A bulk site water meter will be provided for detection of leaks and prevent ongoing water loss.

Wastewater Drainage

A wastewater audit will be carried out by Irish Water to ensure the construction is fully in compliance with Irish Water Code of Practice and standard details prior to taking in charge. Areas to be taken in charge as indicated on the submitted taking in charge drawing will be maintained by Irish Water. Areas to remain in the charge of the applicant (private side drainage) will be maintained on a scheduled basis as part of the building management plan.

Surface Water Drainage

The development has been designed in accordance with DCC Drainage Department's guidelines for planning applications, the recommendations of the GDSDS and Ciria Guide C753 – The SUDS Manual, to incorporate best practice Sustainable Drainage Systems to intercept, filter and attenuate surface water run-off from the site. The provision of the sustainable drainage systems will result in a significant improvement on the public drainage system from existing conditions.

Electricity Network

The power demands during the operational phase on the existing electricity network are considered to be imperceptible due to the energy efficient design including LED lighting and the ESB have confirmed that their network has the capacity to serve this development.

The design and construction of the required electrical services infrastructure in accordance with the relevant guidelines and codes of practice is likely to mitigate any potential impacts during the operational phase of the development, with the exception of any routine maintenance of the site services.

Gas Supply

The gas demands during the operational phase on the existing gas network are considered to be low due as the apartment heating system proposed is an electrical exhaust air heat pump which does not require a gas

connection. The gas demand will be in the form of the ground floor retail units and it is predicted that this gas demand will be small.

Telecommunications Network

The design and construction of the required Telecommunication services infrastructure in accordance with the relevant guidelines and codes of practice is likely to mitigate any potential service outage impacts during the operational phase of the development, with the exception of any routine maintenance of the site services.

4.4.3 Residual Impact Assessment

4.4.3.1 Water Supply, Foul and Surface Water Drainage

Based on the confirmation received from the relevant authorities that the existing water supply and drainage networks have capacity to cater for the proposed development water demand and foul and surface water discharge rates without network upgrades, which is based on their assessment of the effect of the proposed development, existing demand and all other known proposed developments in combination, along with the above-mentioned mitigation measures, the residual impact will be neutral, imperceptible and long term.

4.4.3.2 Gas and Telecommunications

Based on the confirmation received from the relevant authorities that the existing networks have capacity to cater for the proposed development without network upgrades, which is based on early engagement with the utility providers, along with the above-mentioned mitigation measures, the residual impact will be neutral, imperceptible and long term.

4.4.3.3 Electrical Network

The ESB will review the network capacity following successful planning permission. Should any infrastructure works be required these will be carried in line with the ESB operational procedures. The cumulative impact of installing new infrastructure for this development is positive, long term effect which will improve the local network.

4.4.4 Monitoring

All utilities shall be constructed in accordance with Code of Practice, inspection and testing procedures relevant to the utility provider.

For the duration of any temporary ground water discharge to the public combined sewer or surface water system, a treatment regime with sample testing shall be employed to treat ground water to achieve acceptable discharge limits as set out in the discharge licence.

4.5 Land & Soils

The assessment of Land & Soils is contained within Chapter 8 of Volume II.

4.5.1 Existing Environment

The site is located approximately 2.39 km southwest of Dublin city centre and covers c. 2.70 hectares (ha). It is accessed from the South Circular Road along the southern site boundary and also along the northeast site boundary via Donore Road. The site is generally flat with a slight fall from west to east. The site was formerly the John Players & Sons Cigarette Factory. The main production building is a three storey structure in the south of the site, with warehousing joining the northern side and an office block to the east. There is a second block of warehouses in the north-east of the site. There is a bunded oil storage area along the western site boundary, but the oil tanks have been removed. The remainder of the site is bitumen and concrete paved yard area which was used for car parking and truck deliver.

The Teagasc subsoils map indicates the site is covered by Made Ground underlain by Limestone till (TLs) and this was confirmed by the 2018 and 2019 site investigations. The subsoils range in thickness from 5-6.5m below ground level (bgl) and is thicker in the east of the site. The investigations did not identify any contamination in the ground beneath the site. The site is underlain by the Lucan Limestone bedrock known as "The Calp".

Fifty six soil samples were collected from across the site and were analysed for a suite of contaminant indicator parameters. The results were compared to Human Health Risk Guideline limits. Five of the samples collected in the 2018 site investigations and five of the samples collected in the 2019 investigations exceeded the guidelines for Polycyclic Aromatic Hydrocarbons. The exceeding values were from samples collected from made ground beneath the site. The underlying natural ground samples did not exceed the guideline values.

4.5.2 Impact Assessment

4.5.2.1 Do Nothing

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. In the event that the site is not developed there will be no changes in the made or natural ground soil quality beneath the site.

4.5.2.2 Demolition Phase

During the demolition phase c.14,415m3 of Made Ground and surface paving will be excavated as part of the site clearance works and removal of existing underground services (foul and storm sewer pipe work, and electrical ducting. The demolition works will have a neutral, insignificant, temporary effect at the local/site scale on the soils and geology beneath the site.

4.5.2.3 Construction Phase

A construction compound will be located to the west of the development site on Dublin City Council lands. During the construction phase, Made Ground and natural soils will be excavated to allow the installation of new services (storm foul and water and electrical ducting) building foundations in the basement car parking and plant rooms. This will result in the excavation and removal of Made and Natural Ground and a small portion of bedrock. The total volume of material to be removed is estimated at c. 40,958m3

Concrete will be used to form foundations, basement levels, and buildings and hard paved areas.

The removal of the natural soils and rock will have a slight negative, permanent effect on the soils and geology at the site/local scale.

The removal of soils where the Soil Guideline values were exceeded as part of the construction phase works will have a positive, significant and permanent effect on the soils and geology.

The remaining construction works will have a negative, slight, temporary effect on the soils and geology beneath the site.

There is the potential for accidental release of fuel oils or chemicals to the ground during the demolition or construction phases. Should that occur, it could have significant negative effect of temporary nature at the site scale on the soils and geology

4.5.2.4 Operational Phase

During the operational phase the development will have a positive, moderate, permanent effect on the soil and geology at the site and local area scale. This will be as a result of the construction of buildings and hard paved surfaces over a large portion of the site. The soils will be protected against infiltration by contaminated surface water by the use of Sustainable Drainage Systems (SuDS) measures including green roofs, blue roofs, interconnected tree pits, attenuation storage and petrol interceptors.

4.5.2.5 Cumulative Impact

Eight developments have been granted planning permission in the local area by Dublin City Council or by An Bord Pleanala under Strategic Housing Development provisions which include for the excavation of soils and formation of basement levels.

A conservative estimate for basement void space for the combined developments indicates that these developments will result in the loss of approximately 2.2% of the subsoil in this local area. The potential effect on soils will be negative, insignificant, and permanent at the local area scale. The effect on the bedrock geology will be negative, imperceptible, and permanent on the local scale.

The Strategic Development and Regeneration Area 12 (SDRA 12) and the non-statutory Master Plan for Player Wills, Dublin City Council and Baily Gibson lands includes for the redevelopment of the local area including the Player Wills site. These include proposed developments at the former Bailey Gibson site to the west of the site, and redevelopment of lands at the Coombe Hospital to the north west lands owned by Dublin City Council to the north including the development of a park and GAA playing pitches. The redevelopment of these areas may also have slight, temporary impacts on the soils and geology at the local area scale. It is envisaged that the regeneration project will have a positive, moderate, permanent effect on the soils and geology on the SDRA 12 area.

4.5.2.6 Mitigation

The proposed design involves the removal of soils and bedrock in the west of the site. The remainder of the development will be constructed at or close to ground level, which minimizes the impacts on the soil and geology.

4.5.2.7 Demolition & Construction Phases

Best practice measures will be applied in the demolition and construction stage to minimise impacts on soils and geology. All potentially contaminating liquids in the existing site buildings, including oil storage tanks, boilers, chemicals and cleaning agents will be removed from the site and disposed in accordance with the requirements of the construction management plan (CMP)

All construction materials with the potential to impact on soils will be stored in secure bunded areas within the site compound.

Other than Made Ground and soils, waste generated on-site will be stored in designated waste storage areas in covered skips to prevent materials being blown or washed away. Hazardous wastes such as waste oil, chemicals and preservatives, shall be stored in sealed containers and kept in the designated waste storage area, separate from other waste materials, while awaiting collection and treatment or disposal at a licensed hazardous waste facility.

Excavated soils will be temporarily stockpiled pending removal and appropriate recovery or disposal to permitted or licensed waste management facilities.

4.5.2.8 Operational Phase

Sustainable Drainage Systems (SuDS) measures are incorporated into the developed surface water management system. These include both intensive and extensive green roofs, blue roofs, interconnected tree pits, attenuation storage and oil interceptors in parking areas, including basement levels to prevent the discharge of oily run-off to ground or surface water courses.

Most of the site will be hard paved with buildings walkways and parking areas which will minimise the risk of oil spills or leaks from cars or trucks discharging to ground beneath the site.

4.5.3 Residual Impact Assessment

The impacts of the demolition phase on soils and geology post mitigation will be neutral, imperceptible, temporary and at the site scale.

The impacts of the construction phase on soils and geology post mitigation will be slight negative, insignificant, permanent and at the site scale.

The impacts of the Operational Phase on soils and geology post mitigation will be positive, significant, permanent and at the site scale.

A number of developments have been granted planning permission in the local area by Dublin City Council or by An Bord Pleanala under Strategic Housing Development provisions. Developments which include for the excavation of soils and formation of basement.

Mitigation measures incorporated in this development combined with those in the above referenced developments will have neutral, temporary impacts on the soils and geology at the local area scale at demolition and construction stage and a positive, moderate, permanent effect on the soils and geology on the SDRA 12 area at the operational stage.

4.5.4 Monitoring

During the construction phase monitoring measures have been incorporated in the Construction Management Plan to ensure that impacts from demolition and construction activities are appropriately mitigated.

During the operational phase monitoring of the performance of the site infrastructure including the surface water drainage and interceptors will be undertaken as part of the site maintenance programme.

4.6 Water & Hydrology

The assessment of Water & Hydrology is contained within Chapter 9 of Volume II.

4.6.1 Existing Environment

The site is located approximately 2.39km southwest of Dublin city centre and covers c. 2.70 hectares (ha). It is accessed from the South Circular Road. The site is generally flat with a slight fall from west to east. The site was formerly the John Players & Sons Cigarette Factory. It comprised a main production building is a three storey structure in the south of the site, with warehousing joining the northern side and an office block to the east. There is a second block of warehouses in the north-east of the site. There is a bunded oil storage area along the western site boundary, but the oil tanks have been removed. The remainder of the site is bitumen and concrete paved yard area which was used for car parking and truck delivery.

Currently rainfall run-off in unpaved areas around the eastern boundary of the site percolates to ground. There are combined storm and foul sewers on both South Circular Road and Rehoboth Place into which the run-off from buildings and paved areas on the site discharges. There are no streams or rivers on or adjacent to the site. The Grand Canal is approximately 130 m to the south and the River Poddle is 710 m east of the site.

The site is not located in a flood risk zone and there is no historical records of flooding on or adjacent to the site.

The limestone bedrock aquifer beneath the site is characterised as a one that does not produce large volumes of groundwater. There are no known groundwater abstraction well within 500m of the site. The aquifer is considered to have an extreme vulnerability in terms of the risk of groundwater contamination because the soils above it are less than three metres thick in some parts of the site.

The groundwater body of which the aquifer is a part (The Dublin Urban Groundwater Body) has been designated as being of Good status.

The groundwater flow direction is from southwest to northeast across the site. Samples of the groundwater were collected from four wells installed across the site. Hydrocarbons were detected in one of seven wells from which groundwater samples were collected on the site.

Ammonium was marginally above the IGV limits in MW-3 and BH-. Ammonium and sulphate exceeded the GTV limits in BH-11. Ammonium, naphthalene, aliphatic and aromatic hydrocarbons exceeded the GTV limits in MW-2. Xylene, chloride, potassium and electrical conductivity exceeded the IGV in MW-2.

The elevated parameters appear to be localised and are not indicative of significant contamination in the groundwater beneath the site.

4.6.2 Impact Assessment

4.6.2.1 Do Nothing

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. Alternatively, the site would remain a vacant brown field site.

4.6.2.2 Demolition Phase

During the demolition phase c. c.14,415m3 of Made Ground and subsoil will be excavated to clear the site and remove existing underground services. These works will be undertaken above the groundwater table. There are no surface water courses either on, or adjacent to the site. The demolition works will have a neutral, insignificant, temporary effect at the local/site scale on surface water downstream of the site and the groundwater beneath the site.

There is the potential for accidental release of fuel oils or chemicals to the ground during the demolition or construction phases. Should that occur, it could have significant negative effect of temporary nature at the site scale on the groundwater beneath and down hydraulic gradient of the site

4.6.2.3 Construction Phase

During the construction phase Made Ground and natural soils will be excavated in the west of the site but will not extend below the water table.

In the east of the site deeper excavations will take place to c.7.5m bgl to form basement levels. This will result in the excavation and removal of c. 40,958m3 of Made Ground, granular fill, subsoils and bedrock.

The basement excavations will encounter the water table, and temporary dewatering will be required to lower the water table in the immediate vicinity of the basement excavation footprint. Extracted ground water shall be pumped from the excavation to a treatment system to remove suspended solids and other contaminants, as required, to meet the water quality discharge limits of the temporary discharge licence agreement with Dublin City Council or Irish Water.

The water from the excavation dewatering programme will be discharged to the Irish Water storm sewer that will be regulated by a trade effluent discharge license.

Concrete will be used to form foundations, basement levels, and buildings and hard paved areas on the site. This has the potential to have a negative, slight, temporary effect on the groundwater quality immediately beneath the site.

4.6.2.4 Operational Phase

When constructed, shallow groundwater flow will be diverted around the basement and this may result in slight mounding of the water table on the western side and slight lowering of the water table on the eastern side of the basement.

It is considered that the basement will have a slight negative, permanent effect on the groundwater table at the excavation footprint, but will have a neutral, imperceptible effect on the water table beyond the site boundary to the east.

During the operational phase the development will have a positive, moderate, permanent effect on the groundwater at the site and local area scale. This will be as a result of the construction of buildings and hard paved surfaces over a large portion of the site. The groundwater will be protected against infiltration by contaminated surface water, for example caused by oil leaks from cars or delivery vehicles.

4.6.2.5 Cumulative Impact

Eight developments have been granted planning permission in the local area by Dublin City Council or by An Bord Pleanala under Strategic Housing Development provisions which include for the excavation of soils and formation of basement levels with the potential to impact on surface and or groundwater. A conservative estimate for basement void space for the combined developments indicates that these developments will result in the loss of approximately 2.2% of the subsoil in this local area. As most of these sites were previously developed the percentage of recharge to the subsoil lost by redevelopment is likely to be negligible. A small amount of groundwater storage will be lost as a result of the basement construction. It is considered therefore that the potential effect on surface water hydrology will be neutral, imperceptible, permanent at the local area scale, and the potential effect on groundwater will be negative, insignificant and permanent at the local area scale.

The Strategic Development and Regeneration Area 12 (SDRA 12) development plan includes for the redevelopment of lands in the immediate environs of the Player Wills site.

The redevelopment of these areas may also have slight, temporary impacts on the groundwater at the local area scale. It is envisaged that the regeneration project will have a positive, moderate, permanent effect on surface and groundwater on the SDRA 12 area.

4.6.2.6 Mitigation

The proposed design involves the removal of soils and bedrock which will require dewatering only on the west of the site. The remainder of the site will be constructed at or close to ground level without the need for dewatering of the subsoil or bedrock which minimises the potential impact on groundwater. There will be no direct run-off to surface water courses during the demolition and construction phase.

4.6.2.7 Demolition & Construction Phases

Standard best practice measures will be applied to minimise potential impacts on surface water hydrology and groundwater. All potentially contaminating liquids in the on-site buildings including oil storage tanks, boilers, chemicals and cleaning agents will be removed from the site and disposed in accordance with the requirements of the CMP, which is included under separate cover with this application.

All construction materials with the potential to impact on water will be stored in secure bunded areas.

Excavation and the stripping of soils will not be undertaken until absolutely necessary. The groundwater removed from the excavations will be treated on site to allow for settlement prior to discharge to the Irish Water storm sewer.

4.6.2.8 Operational Phase

Sustainable Drainage Systems (SuDS) measures are incorporated into the developed surface water management system. These include both intensive and extensive green roofs, blue roofs, interconnected tree pits, attenuation storage and oil interceptors in parking areas, including basement levels to prevent the discharge of oily run-off to ground or surface water courses.

The bulk of the site will be hard paved with buildings walkways and parking areas which will minimise the risk of spills or leaks from cars or trucks discharging to groundwater beneath the site.

4.6.3 Residual Impact Assessment

The impacts of the demolition phase on hydrology and groundwater post mitigation will be neutral, imperceptible, temporary and at the site scale.

The impacts of the construction phase on hydrology and groundwater post mitigation will be slight, insignificant, temporary and at the site scale.

The impacts of the Operational Phase on hydrology and groundwater post mitigation will be positive, significant, permanent and at the site scale.

A number of development projects have been granted planning permission in the local area by Dublin City Council or by An Bord Pleanála under Strategic Housing Development provisions. It is reasonable to assume that mitigation measures similar to those being implemented at this development will apply to other developments in the area.

Post mitigation, it is considered therefore that the potential effect on surface water hydrology will be neutral, imperceptible, permanent at the local area scale, and the potential effect on groundwater will be negative, insignificant and permanent at the local area scale.

4.6.4 Monitoring

During the construction phase monitoring measures have been incorporated in the Construction Management Plan to ensure that impacts from demolition and construction activities are appropriately mitigated.

During the operational phase monitoring of the performance of the site infrastructure including the surface water drainage and interceptors will be undertaken as part of the site maintenance programme.

4.7 Biodiversity

The assessment of Biodiversity is contained within Chapter 10 of Volume II.

4.7.1 Existing Environment

The Player Wills site is almost entirely occupied by buildings and artificial surfaces. With the exception of small patches of ruderal plants, some isolated pockets of scrub and small trees and an area of bramble scrub and trees along the northern boundary (adjoining St. Theresa's Church), there are no vegetated habitats of any description on the site.

Although there are numerous buildings on the site, including the old Players factory itself, the bat surveys undertaken recorded no evidence of any use of the site by roosting bats. Similarly, there is no evidence of nesting birds with the exception of feral pigeons on the site. No evidence of nesting swifts, swallows or house martins was recorded anywhere within the site.

There are no known records of rare or protected plant species within the immediate vicinity of the proposed development site.

Although they have been recorded nearby, no invasive plant species such as Japanese knotweed (Fallopia japonica) or giant hogweed (Heracleum mantegazzianum) were identified on site.

There are no watercourses present on or in the immediate vicinity of the site. The Grand Canal is approximately 100m to the south at its closest point.

Overall the site is entirely unsuited to use by any protected fauna. Birds recorded on the site were very limited, and there is no habitat on the site suitable for use, even on a very occasional basis, by any overwintering birds, such as pale-bellied Brent goose, or any other protected bird species listed as a Special Conservation Interest (SCI) in any European site.

The nearest European sites are the Special Areas of Conservation (SAC) and Special Protection Areas (SPA) associated with Dublin Bay (South Dublin Bay SAC (site code 000210), c.4.7km to the east; North Dublin Bay SAC (site code 000206), c.7.5km to the north east; South Dublin Bay and River Tolka Estuary SPA (site code 004024), c.4.7km to the east; and North Bull Island SPA (site code 004006), c.7.5km to the north east. Full details of these and all other European sites with potential links to the proposed development site are contained in the Appropriate Assessment Screening Report.

The nearest site designated for nature conservation, not otherwise designated as a European site, is the Grand Canal proposed Natural Heritage Area (pNHA site code 002104). At its closest point the pNHA is c.100m from the Bailey Gibson site.

Overall the proposed development site contains no features of any ecological significance.

4.7.2 Impact Assessment

4.7.2.1 Do Nothing

The Player Wills site is of no ecological importance, and with the exception of very small patches of ruderal scrub and the small number of trees on the northern boundary, the site is virtually entirely hardstanding and buildings. Should the site remain undeveloped and the current uses continue, no significant improvement in the biodiversity value of the proposed development site can be expected, although if left unmanaged the adjacent DCC lands, which include the proposed site compound, would develop more scrub vegetation which could in turn provide additional nesting bird habitat.

The site is zoned for development and it is likely that in the absence of this subject proposal a development of a similar nature would be progressed on the site that accords with National policy for compact growth on

brownfield sites. Should the site be redeveloped at a later stage it is reasonable to expect that any potential impacts would be similar to those predicted to arise as a result of the proposed development.

4.7.2.2 Demolition & Construction Phase

The proposed development will require the removal of the existing hard-standing areas and buildings and their replacement with the mixed-use development and landscaping.

There will be no significant impacts as a result of this habitat loss.

There are no bat roosts on the Player Wills, and none of the structures present are likely to contain roosting bats. Similarly there are no trees on the proposed development site remotely likely to be used by roosting bats, even occasionally.

There will be no disturbance to or loss of habitat for other mammals, such as otters or badgers.

There will be no significant impacts as a result of disturbance to or loss of habitat for mammals.

The construction phase of the proposed development could potentially have short term impacts on water quality, via contaminated run-off and sedimentation. There are however no streams or rivers on or adjacent to the site.

4.7.2.3 Operational Phase

There will be no significant impacts related to surface water, ground water management, flooding or foul water management, in the context of biodiversity, as a result of the proposed development.

4.7.2.4 Cumulative Impact

The cumulative impacts of this project and others, including the Masterplan, have been assessed. There are no predicted cumulative impacts in relation to biodiversity.

4.7.2.5 Mitigation

The proposed development incorporates a comprehensive landscape design, with biodiversity-focussed planting, including pollinator-friendly planting appropriate to the site.

No designated conservation areas will be impacted in any way by the proposed development and no mitigation measures are required in this regard.

4.7.2.6 Demolition & Construction Phases

The proposed planting/landscaping strategy will use a mix of appropriate species, incorporating a range of species that will attract feeding invertebrates, including moths, butterflies and bees. It will take account of and implement the relevant objectives of the All-Ireland Pollinator Plan 2015-2020.

All planting plans and landscaping proposals will further ensure that no invasive species are introduced, either deliberately or inadvertently, to the proposed development site.

Where feasible and practicable, the clearance of scrub area and any other vegetation that may be suitable for use by small numbers of nesting birds will be undertaken outside the bird nesting season.

The lighting design for the proposed development includes measures to prevent any impacts on commuting or foraging bats.

Bat boxes and swift boxes will be installed on the walls of buildings within the site.

4.7.2.7 Operational Phase

There will be no biodiversity-related impacts via foul or surface water as a result of the proposed development and therefore no mitigation measures are required.

4.7.3 Residual Impact Assessment

The proposed development will result in the removal of buildings, hard surfaces and habitats of very limited ecological value and their replacement with new development and associated communal open space and landscaped areas. The application of mitigation measures as set out in the EIAR will result in no residual demolition, construction, or operational residual impact on any ecological receptors, either within or in the vicinity of the proposed development site, or associated with any site designated for nature conservation.

Furthermore, given the lack of any habitats of any significant ecological value at the proposed development site, no reinstatement is required. Ecologically sensitive planting will be undertaken, leading to an overall increase in ecological diversity at the proposed development site.

4.7.4 Monitoring

Should scrub clearance be required during the bird nesting season a Project Ecologist will be retained for the duration, to ensure that all construction works take place in accordance with the Construction, Demolition & Environmental Management Plan and the mitigation measures set out in the EIAR. No long-term ecological monitoring is required, other than post-construction monitoring of the bat and bird boxes installed, to ensure they continue to be functional.

4.8 Noise & Vibration

The assessment of Noise & Vibration is contained within Chapter 11 of Volume II.

4.8.1 Existing Environment

The baseline noise environment has been established through an environmental noise survey 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.

4.8.2 Impact Assessment

4.8.2.1 Do Nothing

In the absence of the proposed development being constructed, the noise environment at the nearest noise sensitive locations and within the development site will remain largely unchanged resulting in a neutral impact in the long-term.

4.8.2.2 Demolition & Construction Phase

There is no published statutory Irish guidance relating to the maximum permissible noise level that may be generated during the construction phase of a project. Local Authorities typically control construction activities by imposing limits on the hours of operation and consider noise limits at their discretion.

Reference has been made to BS 5228 2009+A1 2014 Code of practice for noise and vibration control on construction and open sites. Part 1 to set appropriate construction noise limits for the development site.

A detailed construction programme has not been established; therefore, it is difficult to calculate the actual magnitude of noise emissions to the local environment. However, it is possible to predict typical noise levels using guidance set out in BS 5228-1:2009+A1:2014.

Worst-case construction noise levels predicted at nearest sensitive properties at 40m from construction activity are predicted to be above the threshold for significant impact during the general construction phase. At distances greater than 40m from noise-generating construction activity the predicted levels are below the criterion for a significant noise impact.

The application of binding noise limits, hours of operation, along with implementation of appropriate noise and vibration control measures, will ensure that noise and vibration impact are minimised.

For any noise sensitive locations within 40m of the proposed development potential **negative, significant** and **short-term** effects are likely.

At greater distances greater than 40m the effects are expected to be **negative, moderate** and **short-term**.

4.8.2.3 Operational Phase

The primary sources of outward noise in the operational context are long term and will comprise building services plant noise, delivery activity and traffic movements to site using the existing road network.

Building Services Plant

The principal items of building and mechanical services plant will be for heating and ventilation of the buildings. These items and their location will be selected at the detailed design stage to ensure that noise emissions to sensitive receivers both external and within the development itself will be within the relevant criteria set out in Chapter. The effects are considered neutral, imperceptible and permanent.

Delivery Activity

Principal noise sources during delivery activity are the movement of vehicles, opening and closing of doors and movement of goods on palettes, trolleys or similar. Best-practice measures in respect of minimising noise

during deliveries is set out within the Chapter. It has also been recommended that deliveries be carried out within daytime hours. With these measures in place, the effects are considered negative, slight and permanent.

Additional Traffic on Public Roads

To increase traffic noise levels by 1dB, traffic volumes would need to increase by the order of 25% approximately. A review of the potential traffic level increases attributable to the proposed development indicates that the development will not give rise to increases of this magnitude on the surrounding road network.

The predicted increase in traffic flows associated with the development will result in an increase less than 1dB along all roads. The effect is therefore neutral, imperceptible and permanent.

The Table below sets out the predicted effects of the proposed development during the operational stage.

Descriptor	Assessment
Building Services Plant	Neutral, imperceptible, permanent
Delivery Activity	Neutral, slight, permanent
Traffic on Public Roads	Neutral, imperceptible, permanent

TABLE 17 NOISE IMPACT ASSESSMENT

4.8.2.4 Cumulative Impact

The cumulative effect of construction traffic noise has found that the impacts remain imperceptible if both Player Wills and Bailey Gibson sites were constructed at the same time.

The key potential source of cumulative noise associated with the operation of the proposed development relates to additional traffic on the surrounding road network. The cumulative noise impacts associated with existing and development related traffic has been considered within this assessment and there are no perceptible impacts.

4.8.3 Mitigation

4.8.3.1 Demolition & Construction Phases

Mitigation measures proposed during the construction phase are in line with the guidance contained within BS5228: 2009 + A1 2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites - Part 1 Noise for appropriate mitigation measures, which offers detailed guidance on the control of noise and vibration from construction activities.

Various mitigation measures will be considered and applied during the construction of the proposed development to ensure noise and vibration limit values are complied with.

4.8.3.2 Operational Phase

During the operational phase of the development, noise mitigation measures with respect to the outward impact of traffic from the development are not deemed necessary.

For building services noise, an assessment at detailed design stage will ensure that the criteria set out in Chapter 11 are met.

4.8.4 Residual Impact Assessment

A noise impact assessment has been undertaken for the proposed mixed-use development. Construction noise impacts were assessed against relevant guidance and noted to be significant but short-term at the closest noise-sensitive locations.

The impact of existing and proposed transportation noise sources on the proposed residential development has been assessed. The Noise Risk Impact has been found the risk be medium to high; a minimum sound insulation performance for the glazing for facades near South Circular Road has been specified.

Further to appropriate mitigation measures being incorporated into the proposed development, it was found that operational noise from the proposed development is likely to have a negligible impact during both the daytime and night-time periods.

Given the above, it can be concluded that residual effects from the construction and operation of the proposed development would not be deemed significant.

4.8.5 Monitoring

During the construction phase, noise and vibration monitoring will be carried out by the contractor to ensure that the recommended threshold levels set out in the EIAR Chapter or any conditioned noise and vibration limits are not exceeded.

Commissioning measurement of building services noise carried out post-construction will ensure that the criteria are note exceeded.

4.9 Air Quality & Climate

The assessment of Air Quality & Climate is contained within Chapter 12 of Volume II.

4.9.1 Existing Environment

In terms of the existing air quality environment, baseline data and data available from similar environments indicates that levels of nitrogen dioxide, carbon monoxide, particulate matter less than 10 microns and less than 2.5 microns and benzene are generally well below the National and European Union (EU) ambient air quality standards.

The existing climate baseline can be determined by reference to data from the EPA on Ireland's total greenhouse gas (GHG) emissions and compliance with European Union's Effort Sharing Decision "EU 2020 Strategy" (Decision 406/2009/EC). The EPA have determined that Ireland had total GHG emissions of 60.93 Mt CO2eq in 2018. This is 5.59 Mt CO2eq higher than Ireland's annual target for emissions in 2018. Emissions are predicted to continue to exceed the targets in future years, therefore, reduction measures are required in all sectors.

4.9.2 Impact Assessment

4.9.2.1 Do Nothing

Under the Do Nothing scenario the proposed development will not be constructed. In this scenario, ambient air quality at the site will remain as per the baseline and will change in accordance with trends within the wider area. 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 proposed development.

4.9.2.2 Demolition & Construction Phase

The greatest impact to air quality during the demolition and construction phases of the proposed development is from dust emissions. There are a number of residential properties bordering the site as well as a school on the north-eastern boundary of the site. The UK Institute of Air Quality Management guidance was used to assign a high level of sensitivity to dust soiling impacts to the area in the immediate vicinity of the proposed development. The local area is considered of low sensitivity to human health impacts from dust emissions.

The scale and nature of the construction works were reviewed, and it was determined that a high level of dust control was required for the demolition and construction phases of the proposed development. Once the dust mitigation measures outlined in Appendix 12.2 of Chapter 12 are implemented, dust emissions are predicted to be short-term, negative, localised and imperceptible and will not cause a nuisance at nearby sensitive receptors.

The best practice dust 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 impact of construction of the proposed development is likely to be short-term, localised, negative and imperceptible with respect to human health.

There is also the potential for air quality impacts to human health to occur during the removal of asbestos containing materials during the demolition phase. All remedial and removal works will be conducted by a suitably qualified contractor with standard best practice mitigation measures in place to avoid release of asbestos to nearby sensitive receptors. Impacts to human health associated with asbestos removal are predicted to be temporary, negative, localised and imperceptible.

Construction stage impacts to climate are considered short-term and imperceptible due to the scale and nature of the works.

4.9.2.3 Operational Phase

Potential impacts to air quality and climate during the operational phase of the proposed development are as a result of increased traffic volumes on the local road network. The changes in traffic flows were assessed against the UK Design Manual for Roads and Bridges (DMRB) screening criteria for an air quality assessment. As the changes in traffic did not meet the screening criteria no air quality or climate assessment was required, and it can be determined that the operational phase of the proposed development will have an imperceptible, localized, negative and long-term impact on air quality and climate.

The proposed development has been designed to reduce the impact on climate where possible. The proposed development will comply with the NZEB standards and will seek BREEAM Excellent certification. Electric vehicle car charging points have been incorporated into the development with a reduction in typical car parking spaces and increased bicycle parking to promote a modal shift and thus reduce GHG emissions.

4.9.2.4 Cumulative Impact

Cumulative construction phase impacts can occur if the construction phase overlaps with the construction phase of other developments within 350 m. This can result in cumulative dust impacts on nearby sensitive receptors. Provided the dust mitigation measures are implemented throughout the construction phase of the proposed development cumulative dust impacts are predicted to be short-term, negative, localized and imperceptible at nearby receptors.

Cumulative impacts have been included as part of the traffic assessment for the operational phase. The traffic data includes the traffic associated with the proposed development, the Bailey Gibson site, the Phase 3 Player Wills site and the nearby Churchlands site. It was predicted that there will be an imperceptible impact to air quality and climate during the operation of the proposed development.

4.9.2.5 Mitigation

4.9.2.6 Demolition & Construction Phases

A detailed dust management plan has been included in Appendix 12.2 of Chapter 12 and will be incorporated into the overall Construction Environmental Management Plan for the site. The measures outlined in the plan will be in place for the duration of the construction phase to ensure no significant dust impacts occur.

4.9.2.7 Operational Phase

There are no mitigation measures proposed for the operational phase of the development as it is predicted to have an imperceptible impact to air quality and climate.

4.9.3 Residual Impact Assessment

Once the dust mitigation measures outlined in Appendix 12.2 are implemented dust related impacts during the demolition and construction are predicted to be short-term, negative and imperceptible.

The impact to air quality and climate as a result of increased traffic volumes during the operational phase of the proposed development is imperceptible, negative and long-term.

4.9.4 Monitoring

Monitoring of construction dust deposition is recommended along the site boundary with sensitive receptors to ensure dust mitigation measures are working satisfactorily. Monitoring can be carried out using the Bergerhoff method in line with the requirements of the German Standard VDI 2119. Monitoring will ensure that

mitigation measures are working satisfactorily. Compliance should be assessed against the TA Luft limit value of 350 mg/(m2*day) and averaged over the period of a year.

4.10 Cultural Heritage - Archaeology

The assessment of Cultural Heritage - Archaeology is contained within Chapter 13 of Volume II.

4.10.1 Existing Environment

The north-eastern corner of the proposed development boundary extends in to the zone of archaeological potential for the historic town of Dublin (DU018-020). There are also a further nine recorded monuments within a 500m study area, of which watercourses form the majority. A review of the Excavations Bulletin (1970-2019) has revealed that there has been one previous archaeological investigation within the proposed development, which did not identify anything of archaeological significance. These excavations, together with the monitoring of ground investigation works within the site boundary has shown deposits of made ground up to c. 2m bgl. There have been 44 investigations within the study area, 28 of which did not identify anything of archaeological significance. The remaining investigations encountered evidence of medieval and post-medieval watercourses and evidence of post-medieval habitation, tanning, and military activity.

The proposed development area was situated within open fields bordered by watercourses to the north and west, with minor residential development throughout the post-medieval period until the 20th century. The site and its environs were subject to significant development in the 20th century when a tobacco factory was built within its confines. The field inspection and review of aerial photography did not identify any previously unknown archaeological features. It did reveal that c. 80% of the site area is occupied by structures and has been subject to significant disturbance during the 20th century.

There is one cultural heritage site within the proposed development area, which consists of the Player Will factory, which is included in the Dublin City Industrial Heritage Record. The inclusion in this record does not afford the site statutory protection. The architectural heritage of this site is dealt with in detail in Chapter 14 of the EIAR.

4.10.2 Impact Assessment

4.10.2.1 Do Nothing

If the proposed development were not to proceed there would be no negative impact on the archaeological or cultural heritage resource. However, as the area has been zoned for development it is likely that a development of a similar nature would be progressed, in which case there would be a negative impact to any potential archaeological deposits at the site.

4.10.2.2 Demolition Phase

No upstanding archaeological remain 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 demolition phase of the proposed development.

The existing Player Wills Factory is listed within the Dublin City Industrial Heritage Record and as such possesses cultural heritage significance. The partial demolition and redevelopment of these structures will result in a direct significant negative impact on the cultural heritage resource.

4.10.2.3 Construction Phase

The construction of the proposed development will include excavations of up to c.8m below ground level for the creation of a double level basement at the northern end of the site; excavations up to 3.5m for a small single basement and general site strip of c. 0.5m below ground level to include foundation excavations of c.1m below ground level and topsoil stripping across the greenfield area to facilitate landscaping and construction of a road in this area.

A small section of the Zone of Archaeological Potential for Dublin City (DU018-020) is located at the north eastern corner of the site. This area of the Zone of Potential covers the culverted course of the River Poddle, which is used as part of the municipal storm water drainage network. Excavations associated with the site strip and drainage in this area may directly impact on archaeological deposits in this area, impacts prior to mitigation may range from slight to moderate negative.

Given the disturbance on site from 19th century and modern industrial development, there is low potential for archaeological remains pre-dating the 18th century to survive within the main area of development, although less disturbance has taken place within the greenfield area where a park is proposed. It remains possible that should previously unknown archaeological remains survive beneath the existing ground level, prior to mitigation, there may be a moderate to profound negative direct impact on these feature or deposits. This would be caused by ground disturbances associated with the proposed development including all ground reduction and excavation works associated with the insertion of the proposed basements within the northern part of the site.

4.10.2.4 Operational Phase

No impacts are predicted upon the archaeological or cultural heritage resource during the operation of the proposed development.

4.10.2.5 Cumulative Impact

There are no predicted cumulative impacts to the archaeological or cultural heritage resource. Should any archaeological or cultural heritage remains be identified on the site, they will be preserved by record, mitigating any negative impacts and adding to the understanding of the historical development of this area. Where proposed and granted developments in the surrounding area have the potential to impact on archaeological remains, it is highly likely that mitigation measures have also been proposed to preserve by record any identified archaeological remains.

4.10.2.6 Mitigation

4.10.2.7 Demolition Phase

The existing Player Wills Factory will be partially demolished and redeveloped as part of the development. Detailed mitigation measures relating to this site, including written and photographic records, are included in Chapter 14, Architectural Heritage.

4.10.2.8 Construction Phase

All ground disturbances associated with the proposed development, including site investigations, will be monitored by a suitably qualified archaeologist under licence from the National Monuments Service of the Department of Culture, Heritage, and the Gaeltacht.

Full provision will be made by the client, through the archaeological licencing system, for the resolution of any archaeological features/deposits that may be discovered during the course of works. Should any archaeological remains be identified, further mitigation, such as the preservation by record (archaeological excavation) may be required. Any further mitigation will require consultation with the Dublin City Archaeologist and National Monuments Service (DoCHG).

4.10.3 Residual Impact Assessment

Following the implementation of the above mitigation measures, there would be no residual impacts on the archaeological or cultural heritage resource

4.10.4 Monitoring

The mitigation measures recommended above would also function as a monitoring system to allow the further assessment of the scale of the predicted impacts and the effectiveness of the recommended mitigation measures.

4.11 Cultural Heritage – Built Environment

The assessment of Cultural Heritage – Built Environment is contained within Chapter 14 of Volume II of this EIAR.

4.11.1 Existing Environment

The subject site is largely comprised of modern industrial buildings, with a range of 20th century factory and warehouse structures in varying condition. None of the structures on the subject site are included on the Dublin City Council Record of Protected Structures. The main factory building, Block A, is included on the National Inventory of Architectural Heritage survey of this area, with a rating of 'Regional' significance.

No buildings on the subject site were considered by Dublin City Council to be of sufficient significance to warrant inclusion on the Record of Protected Structures. Further, the National Inventory of Architectural Heritage survey of the area did not identify any structure on site, apart from the Block A, as being of any particular significance. The significance of Block A is based largely on architectural, historic and social grounds. Some features in Block A and in its immediate setting are of artistic interest, including the decorative iron gates. The significance of Block A is largely based on its external appearance, and its visual prominence on the South Circular Road. The front façade is of primary significance, with the more decorative front three bays of the side elevations also considered to be of significance.

Block B is considered to be of secondary significance, on architectural and historic grounds. This significance is diminished by the loss of the original primary facades of the building, and of all internal machinery etc.

Blocks C, D and E are not considered to be of any particular significance under any headings.

Protected Structures within the wider vicinity of the subject site include the Our Lady of Dolours Church, South Circular Road (RPS Reg. Ref: 1849), and the Church of St. Catherine and St. James, Donore Avenue (RPS Reg. Ref: 2326). The neighbouring terraced houses along the South Circular Road are included on the National Inventory of Architectural Heritage, with a rating of 'Local' significance, and are zoned as a residential conservation area within the Dublin City Council Development Plan 2016-2021.

4.11.2 Impact Assessment

4.11.2.1 Do Nothing

Block A, which is the structure of primary significance on this site, is presently vacant and not in use. Water ingress and years of vacancy has led to the deterioration of the building fabric and the loss of architectural detail. It is likely that its condition will continue to deteriorate in a do-nothing scenario, causing damage to the features of interest and potentially the eventual loss of the building.

It should be noted that the site is zoned for redevelopment and it is likely that a development of a similar nature will proceed at some point.

4.11.2.2 Demolition Phase

The demolition of some of the structures on site may result in the loss of historic features of interest.

4.11.2.3 Construction Phase

The construction of a new two-storey extension at roof-level of Block A has the potential to detract from the significance of the structure. The proposed conservation works to the historic fabric of Block A and the reinstatement of multi-pane steel windows on the front façade will have a positive impact on the character of the structure.

4.11.2.4 Operational Phase

The proposed development will have a visual impact on the surrounding area.

4.11.2.5 Cumulative Impact

The cumulative impact of the redevelopment of this and other vacant sites within the area will have a positive impact on the character of the area.

4.11.2.6 Mitigation

A full photographic survey of the structures to be demolished has been carried out for record purposes. Any features of architectural, historic or artistic interest will be salvaged.

Structural remediation and conservation works to the historic fabric are to be carried out to Block A.

Visual impact assessment has informed the design of the proposed new development so as to minimize potential visual impact of the development on the significance of Block A and on the built heritage within the wider area. This has resulted in the stepping back of the proposed new roof-level extension to Block A, and the siting of proposed taller blocks towards the centre of the site.

4.11.3 Residual Impact Assessment

Following the implementation of the mitigation measures, the proposed development will have a positive impact on the built heritage of the site.

4.11.4 Monitoring

The proposed works to Block A are to be carried out under the supervision of a Conservation Architect.

4.12 Description of Significant Interactions

Likely significant interactions are set out in Chapter 15 of the EIAR. In practice many impacts have slight or subtle interactions with other disciplines. During the preparation of this EIAR each of the specialist consultants engaged with each other with respect to the likely interactions between effects predicted as a result of the proposed development. Mitigation measures to alleviate identified likely significant effects address identified interactions. This approach meets with the requirements of Part X of the Planning and Development Act 2000, as amended, and Part 10, and schedules 5, 6 and 7 of the Planning and Development Regulations 2001, as amended.

5 Summary of Mitigation & Monitoring Measures

A key objective of the Environmental Impact Assessment process is to identify likely significant environmental impacts at the pre-consent stage and where necessary to propose measures to mitigate or ameliorate such impacts. Monitoring Measures must be incorporated in the Development Consent for a Project if the Project is likely to have significant adverse effects Article 8a of the EIA Directive, requires that monitoring measures proposed (if appropriate) should be included in the EIA Report.

This section summarises the proposed mitigation and monitoring measures set out in Chapters 4 to 16 of Volume II of this EIAR.

It is proposed that the appointed contractor will develop a site-specific Construction and Environmental Management Plan (CEMP) prior to works commencing on-site. All the mitigation and monitoring measures proposed within the individual specialists' assessments will be incorporated into the plan.

Aspect	Incorporated Design Mitigation
Population & Human Health	• Appointment of a project supervisor for the design process (PSDP) to oversee and coordinate the design work including: - identification of hazards; - elimination and / or reduction of hazards where possible; - communication of necessary control measures and remaining risks to PSCS for addressal in safety and health plans; and - ensure compliance with Building Regulations.
Landscape & Visual	• None Proposed
Material Assets- Traffic & Transport	• Parking ratio of 0.28 car parking spaces and 1.3 bicycle spaces per unit has been applied to reduce additional vehicular traffic and encourage bicycle use and / or ownership. • Inclusion of several on-site facilities which shall reduce the need for external travel. • Optimal design of public realm and road network to limit the impact of traffic on the local road network and prioritise walking and cycling on internal road networks. • Revised access strategy in the Mobility Management Plan which is anticipated to positively affect the local area.

TABLE 18 INCORPORATED DESIGN MITIGATION

Aspect	Incorporated Design Mitigation
Material Assets- Built Services	• All new-build service infrastructure is to be designed in accordance with the relevant service provider and asset owner's code of practice. • The development will be constructed to the Near Zero Energy Building standard with improved thermal performance and incorporation of renewable technology which shall reduce demand on infrastructure. • It is noted that the proposed development includes 81 no. car parking spaces in the basement of PW2 for future residential development within the wider Masterplan area and lands contiguous with SDRA 12, that will be subject to a separate application for permission. It is noted that while residential parking is incidental to the primary purpose of the building, in this case, the proposed 81 no. spaces are included to serve a future development proposal and as such constitute 'other use' for the purpose of this SHD application, as they are not associated with the residential use proposed in this application. The proposed inclusion of these 81 no. car parking spaces does not assume that any future application for permission will be successful. The 81 no. car parking spaces will not be set out or used in the absence of a separate grant of planning permission for future residential development. Accordingly, an alternative use in the form of storage receptacles for this area is proposed (in the event that a future grant of planning permission for residential development is not forthcoming). In this event, the applicant would be satisfied to accept a condition requiring that the 81 no. spaces together with the circulation area would be used as storage ancillary to the proposed residential development in the event that a planning permission for future residential development is not granted before the expiration of the subject planning permission.
Land & Soils	• The proposed design involves the removal of soils and bedrock in the northern portion of the site. The remainder of the development will be constructed at or close to ground level, which minimises the impacts on the soil and geology.
Water & Hydrology	• The proposed design involves the removal of soils and bedrock which will require dewatering on the east of the site where the basement is being developed and for attenuation basins beneath each of the building blocks. • The remainder of the site will be constructed at or close to ground level without the need for dewatering of the subsoil or bedrock which minimises the potential impact on groundwater. • There are no watercourses on or adjacent to the site. There will therefore be no direct run-off to surface water courses during the demolition and construction phase.

TABLE 18 INCORPORATED DESIGN MITIGATION, CONTD.

Aspect	Incorporated Design Mitigation
Biodiversity	• Incorporation of a comprehensive landscape design which adopts a biodiversity-focused planting approach. • The planting proposed in the Landscape Design Statement will greatly enhance the biodiversity resource on the proposed development site by creating new, pollinator-friendly habitats.
Noise & Vibration	• None Proposed
Air Quality & Climate	• Incorporation of design measures as outlined in the Energy and Sustainability Report will reduce the impact on climate where possible. This shall include: - Achieving a high BER rating and compliance with the requirements of the Near Zero Energy Building Standards; - Use of natural ventilation, heat pumps, PV solar panels and minimisation of heat loss; and - The provision of electric car charging points and accessible public transport links.
Cultural Heritage	• None Proposed.
Built Heritage	• Discussions about the proposal were held with the Dublin City Council conservation office at an early design development stage. • The design responds to the particular conditions of the subject site and mitigates any negative cultural heritage impacts through the retention of significant fabric and features, and the siting of new build elements to the rear of the primary façade of Block A.

TABLE 18 INCORPORATED DESIGN MITIGATION, CONTD.

Aspect	Demolition & Construction Mitigation
Population & Human Health	• Preparation of a Construction and Environmental Management Plan (CEMP) and Construction & Demolition & Waste Management Plan (CDWMP). To be further updated and agreed with Dublin City Council prior to commencement of construction. • Construction personnel to implement requirements of CEMP and CDWMP. • Appointment of project supervisors for the construction phase (PSCS) and the preparation of a Preliminary Health and Safety Plan to address healthy and safety issues from the design stage through to the construction phases of the development.
Landscape & Visual	• An expedient construction programme will help to remove visual impacts arising from the construction phase as quickly as possible. • Where practicable, contractor's compounds, site offices and parking areas will be positioned to minimise overlooking from nearby streets and dwellings. • Installation and good maintenance of perimeter hoardings along site boundaries. • Appropriate positioning of tower cranes and removal of same from the site at the earliest opportunity. • Where practicable, completion of buildings at site perimeters first to provide screening to ongoing construction works elsewhere within the site.
Material Assets-Traffic & Transport	• Preparation of a preliminary Construction Traffic Management Plan (CTMP) and Construction Management Plan (CMP) including a plan for scheduling and management of construction traffic to be prepared by the lead contractor appointed for the construction of the development.
Material Assets-Built Services	• Preparation of a Construction Management Plan (CMP). • The appropriate construction methodology as outlined in Irish Water (IW) Code of Practice will be employed. All watermain connection works shall be carried out by the IW accredited regional contractor. • Pressure testing prior to connection to public network. • Protection in place of all underground services for which diversions are not required. • All new infrastructure is to be installed and constructed to the relevant codes of practice and guidelines. • Implementation of on-site treatment system to meet discharge licence requirements. • Connections to service providers carried out to the approval of the Local Authority or relevant provider. • If excavation is required in public areas, all utilities and public services are to be identified and checked.

TABLE 19 DEMOLITION & CONSTRUCTION PHASE MITIGATION MEASURES

Aspect	Demolition & Construction Mitigation
Land & Soils	• Removal of all potentially contaminating liquids in the existing site buildings and their disposal in accordance with the requirements identified in the CMP. • Regular maintenance of construction and demolition plant, and storage of all fuel oils for plant in bunded storage areas. • Storage of all construction materials with potential to impact on soils in secure bunded areas within the site compound. Drip trays provided for drum storage. All waste containers shall be stored within a secondary containment system. • Storage of waste generated on site (excluding Made Grounds and soils) shall be stored in designated waste storage areas in covered skips. • Storage of hazardous waste such as waste oil, chemicals and preservatives shall be stored in seal containers and kept in designated waste storage areas separate from other waste materials while awaiting collection and treatment or disposal at a licensed facility. • Excavation and the stripping soil/made ground undertaken only when necessary to prevent sediment run off and leaching of nutrients from soils into drains. Excavated soils shall be temporarily stockpiled to minimise effects of weathering. • Careful management when re-working material to minimise dust generation, ground water infiltration and generation of runoff. • In relation to the preparation, pouring and management of concrete and cementitious materials: - Batching / mixing activities shall be located in contained areas; - Pouring of materials carried out in dry weather; - Monitoring of pumped concrete to ensure no accidental discharge; - Excess concrete will not be discharged to ground; - No hosing into the ground surface of spills of such materials; and Washout from mixing plant or concrete trucks will not be permitted on site.

TABLE 19 DEMOLITION & CONSTRUCTION PHASE MITIGATION MEASURES, CONTD.

Aspect	Demolition & Construction Mitigation
Water & Hydrology	• Removal of all potentially contaminating liquids from the existing buildings (including oil storage tanks, boilers, chemicals and cleaning agents) from the site and disposal in accordance with CMP requirements. • Regular maintenance of construction and demolition plant and storage of all fuel oils for plant in bunded storage areas. • Excavation/stripping of soil/made ground only when necessary to prevent sediment run off and leaching. • Excavated soils will be temporarily stockpiled to minimise effects of weathering. Careful management when re-working material to minimise ground water infiltration and generation of runoff. • In relation to the preparation, pouring and management of concrete and cementitious materials and the interaction of these materials with water: - Batching / mixing activities shall be located in contained areas; - Pouring of materials carried out in dry weather; - Monitoring of pumped concrete to ensure no accidental discharge; - Excess concrete will not be discharged to ground; - No hosing into the ground surface of spills of such materials; and - Washout from mixing plant or concrete trucks will not be permitted on site. • Groundwater removed from excavations will be treated on site prior to discharge to the IW storm sewer, and the appropriate licence will be obtained prior to commencement.
Biodiversity	• None proposed in relation to Designated Conservation Areas (DCAs) as none will be impacted by the proposed development. • There will be no significant habitat loss as a result of the proposed development – there will be no loss of Key Ecological Receptors, regardless, a significant amount of new planting has been incorporated into the landscape design. • Where practicable, the clearance of scrub area and any other vegetation potentially suitable for use by nesting birds will be carried out outside the bird nesting season. Should the construction programme require clearance within the nesting period the appropriate nesting surveys will be undertaken by suitably qualified ecologists. • there will be no surface water related impacts on biodiversity as a result of the proposed development

TABLE 19 DEMOLITION & CONSTRUCTION PHASE MITIGATION MEASURES, CONTD.

Aspect	Demolition & Construction Mitigation
Noise & Vibration	• Selection of quiet plant. • Siting of noisy plant as far away from sensitive properties as permitted by site constraints and the use of vibration isolated support structures where necessary. • Application of sound reduction methods were removal of source of noise is not viable or practicable. • Liaison between the contractor/developer and residents. • Limiting the hours during which site activities likely to create high levels of noise are permitted and monitoring levels of noise during critical periods and at sensitive locations; • Appointing a site representative responsible for matters relating to noise and vibration;
Air Quality & Climate	• The pro-active control of fugitive dust to ensure the prevention of significant emissions. • The specification and circulation of a dust management plan and development means by which performance of the plan can be monitored and assessed. • Undertaking of remedial measures prior to demolition works as specified in the Asbestos Survey Report, to be carried out by a suitably qualified contractor. • Prevention of on-site or delivery vehicles from leaving engines idling and minimising waste of materials due to poor timing or over ordering on site.
Cultural Heritage	• As there will be no impact on any archaeological or cultural heritage remains during the demolition phase of the proposed development, no mitigation measures are required. • All ground disturbances associated with the proposed development, including site investigations, will be monitored by a suitably qualified archaeologist under licence from the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht.
Built Heritage	• The re-use of this fabric within the proposed scheme will be considered. This will ensure that significant features are not lost as part of the proposed development and that the loss of historic fabric is minimised.

TABLE 19 DEMOLITION & CONSTRUCTION PHASE MITIGATION MEASURES, CONTD.

Aspect	Operational Mitigation
Population & Human Health	• None proposed.
Landscape & Visual	• The design evolution of the proposed development has incorporated a series of measures to minimise or avoid adverse landscape and visual impacts while delivering a scale and quality of development envisaged by the Masterplan - A sensitive approach has been taken to layout and height of buildings, incorporating transitions to the surrounding low-rise neighbourhoods - A range of built form is used within the site in response to existing/neighbouring buildings and opportunities elsewhere for a bolder approach. - Regular maintenance of the external building fabric and public/private open spaces will be undertaken to maintain the highest standards of building presentation and landscaping
Material Assets- Traffic & Transport	• None Proposed
Material Assets- Built Services	• The relevant audits will be carried out by IW prior to completion of the defect liability period to ensure compliance with the relevant Codes of Practice and standard details prior to taking in charge. • Integration of SuDs to improve on the existing public drainage system. All SuDs shall be maintained either by the Applicant, or where taken in charge, the Local Authority to maintain their optimal functioning. • Gas demands will be low due to the exhaust air heat pump systems proposed to heat apartments which do not require gas. • Design and construction of required telecommunication services infrastructure and electrical services in accordance with the relevant guidelines.
Land & Soils	• Incorporation of SuDs into the surface water management system. These shall include green roofs, blue roofs, tree pits, attenuation storage and oil interceptors in parking areas to prevent the discharge of oily run-off to ground or surface water courses. • Hard paving across the site in building walkways and parking areas to minimise the risk of oil spills or leaks from cars or trucks to ground. • Soft landscaping will incorporate clean topsoils and planting will enhance the quality of the soil environment.
Water & Hydrology	• Incorporation of Sustainable Drainage Systems (SuDs) measures including green roofs, blue roofs, tree pits, attenuation storage and oil receptors in parking areas.

TABLE 20 OPERATIONAL MITIGATION

Aspect	Operational Mitigation
Biodiversity	• None proposed.
Noise & Vibration	• In order to ensure that acceptable operational noise levels at the nearest noise sensitive locations are achieved, the following mitigation measures will be considered: - Noise levels at the façade of the noise-sensitive location do not exceed the criteria - Use of perimeter plant screens where required for roof top plant areas; - Location of delivery areas are well-screened from the surrounding area. - Regular maintenance.
Air Quality & Climate	• None proposed.
Cultural Heritage	• None proposed.
Built Heritage	• None proposed.

TABLE 20 OPERATIONAL MITIGATION, CONTD.