CWTC Multi Family ICAV acting solely in respect of its sub fund DTBR SCR1 Fund

Bailey Gibson 2
Proposed Strategic Housing Development

VOLUME I
NON-TECHNICAL SUMMARY

JUNE 2022

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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.

Broadly, the proposed development will deliver a high-quality, sustainable, mixed-tenure residential led development together with non-residential floor space and open space for active and passive surveillance.

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. However, it does exceed the thresholds applied for the type of development proposed as set out under Part 2 of Schedule 5, namely;

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

The proposed development includes 345 new homes, and this is below the 500-unit threshold for mandatory EIA. Having regard to the wide scope and broad purpose of the EIA Directive, it is deemed appropriate to examine extant permissions within the wider SDRA 12 area. The Player Wills site received permission (Ref. 308917-20) from An Bord Pleanála in April 2021 for the development of 492 no. apartments, 240 no. shared accommodation units. Cumulatively, this proposed development together with the permitted development would breach the 500-unit threshold and it could thus be concluded that EIA is mandatory.

10(b) (iv) Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere. (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 site 5.5 hectares within the inner-city 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	Kayleigh Sexton
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	Arantxa Martinez-Peral
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	Faith Bailey
14	Cultural Heritage – Built Heritage	Slattery Conservation	Shóna O'Keeffe

Chapter	Aspect	Consultancy	Lead Consultant
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, as cited in section 1.5above;
- Environmental Impact Assessment of Projects Guidance on the preparation of the Environmental Impact Assessment Reports (European Commission, 2017)
- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (Environmental Protection Agency, May 2022).
- Guidelines on Information to be Contained in Environmental Impact Statements (EIS) (Environmental Protection Agency, 2002)
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning and Local Government, 2018).

In addition, contributors have had regard to other relevant discipline-specific guidelines, these are noted in individual chapters of the EIAR.

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 primarily 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 in the **Table** 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 and Frequency 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
Reversible Effects	Effects that can be undone, for example through remediation or restoration.

Frequency of Effects	Describe how often the effects will occur (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually).

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. PL0005** contained within the architectural suite of drawings.

CWTC Multi Family ICAV acting solely in respect of its sub fund DBTR SCR1 Fund intend to apply to An Bord Pleanála for permission on a site of 5.5 hectares for a mixed-use combined Build to Rent and Build to Sell Strategic Housing Development at the Former Bailey Gibson Site, former Player Wills Site, Dublin City Council land (formerly Boys Brigade pitch and part of St. Teresa's Gardens (all within Strategic Development Regeneration Area 12), South Circular Road and Donore Avenue, Dublin 8. The design rationale is to create and deliver a high quality, sustainable, mixed tenure 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.

This application area includes all of the former Bailey Gibson site and a small portion of the former Player Wills site, both of which are owned by the Applicant, CWTC Multi Family ICAV acting solely in respect of its sub fun DTBR SCR1 Fund. The balance of the proposed development site relates to land owned by Dublin City Council (DCC) known locally as the 'Boys Brigade pitch' and part of the St. Teresa's Gardens site, together with DCC controlled public roads.

The application area is predominately within Strategic Development Regeneration Area (SDRA) 12, St. Teresa's Gardens & Environs as identified in the Dublin City Development Plan 2016-2022. The part of the proposed development site not within SDRA 12 relate to works proposed in the public roads surrounding the site, South Circular Road, Donore Avenue and Rehoboth Place.

A comprehensive description of the proposed development is set out in the Planning Statement. The Statutory Notices should also be referenced.

Briefly, it is proposed to demolish the existing vacant buildings and structures on the Bailey Gibson site to make way for development of 345 new homes across 5 blocks, BG 1 - BG 5, ranging in height from 2-7 storeys. The residential blocks will be contained within the Bailey Gibson site. The typology is predominantly apartments with 4 townhouses proposed in block BG5.

This is a mixed tenure scheme, with 292 units proposed as Build to Rent (BtR) across blocks BG1-BG3 and 53 units proposed as Build to Sell (BtS) in blocks BG4 and BG5. It is proposed to deliver 34 social and affordable homes as part of the overall total.

All apartments have private amenity space. At ground floor this is in the form of terraces and on upper levels, balconies. Each of BG1-BG4 have communal amenity areas either as a courtyard or podium area.

Tenant amenities and facilities are proposed in the BtR blocks and include a gym, co-working space, kitchen/lounge areas, concierge, and waste facilities.

Over 2 hectares of public open space including a multi-sport play pitch, a playground, ‘St. Teresa’s Playground’, a boulevard, ‘St. Teresa’s Boulevard’, a park, ‘Players Park’, a plaza, ‘Rehoboth Plaza’.

The proposed non-residential uses include in blocks BG1 and BG2 commercial units that have the capacity to support daily living needs e.g., a shop, pharmacy and professional services. A creche with capacity for approx. 60 children. In block BG2 the design includes floorspace for a café/restaurant/bar.

In total there are 89 car parking spaces allocated to the proposed apartments and all are contained within the Bailey Gibson site. Apart from 1 space at podium level, the parking is contained within a basement. Additionally, 10 ‘Go Car’ spaces are proposed at podium level for residents use only. Each of the 4 townhouses has 1 on-curtilage car parking space.

Visitor parking is at street level and the proposed sport pitch will be serviced separately by new spaces on the public roads. The scheme includes set down parking for the creche, a loading bay for deliveries and coach parking area.

Provision is made for disabled parking, electric vehicle charging, a car sharing scheme and motorcycle parking.

784 spaces are proposed for cycle parking including secure residents parking, visitor parking and spaces for cargo bicycles.

Other works include the development of a network of streets across the proposed development site that will link with other sites within SDRA 12 and into the wider street network of Dublin 8. Improvement works within existing local streets to facilitate access and safe movement.

Ancillary development works includes the construction of electricity substations, meter rooms, plant rooms at basement level, waste storage areas, solar photovoltaics, drainage, landscaping, and lighting.

The site contains existing vacant industrial buildings that will be demolished to make way for the proposed development. None of the structures on the subject site are included on the Dublin City Council Record of Protected Structures or listed on the National Inventory of Architectural Heritage (NIAH).

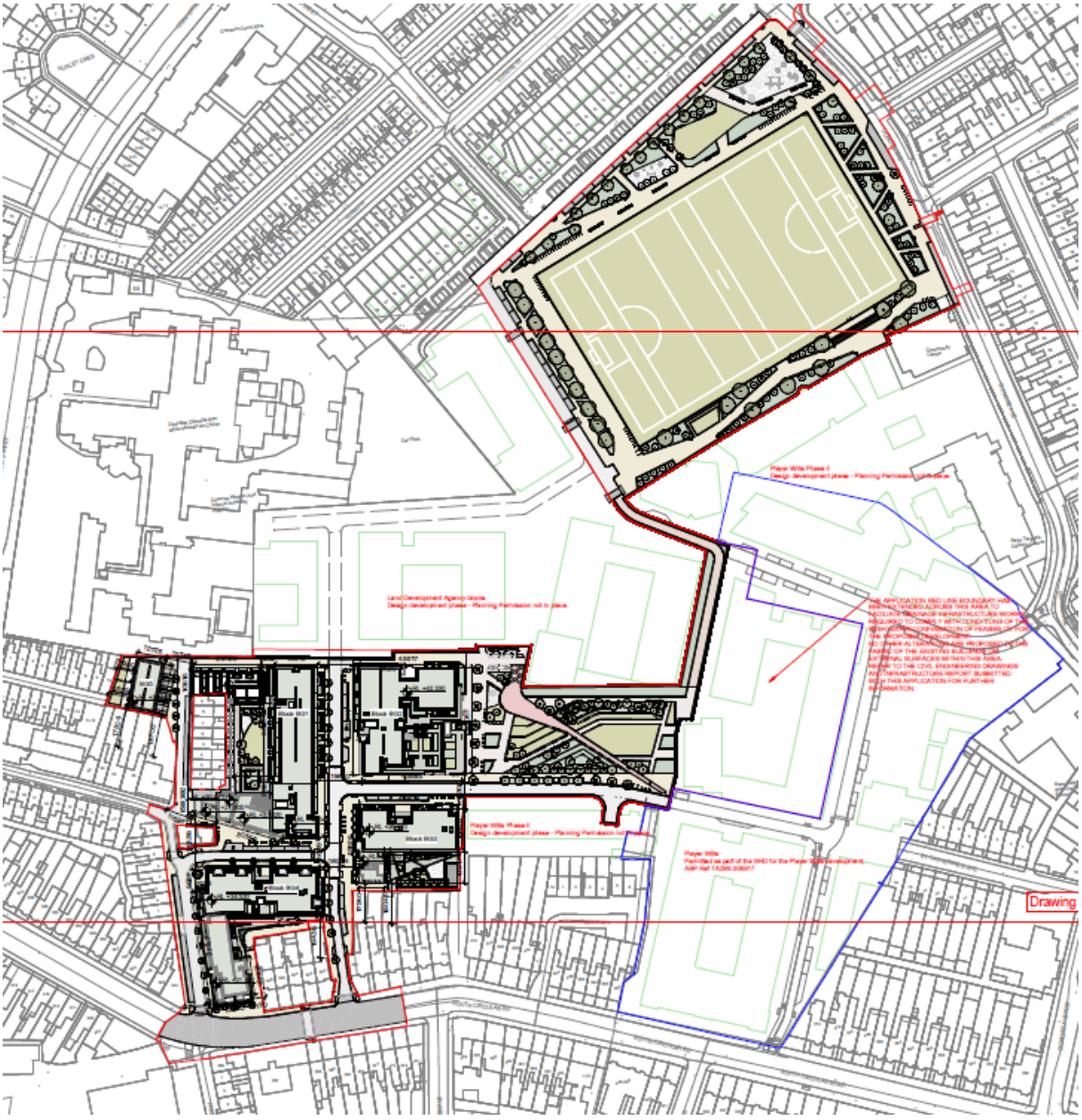


Figure 2 Proposed Layout

An overview of the key development statistics is set out in the Table below.

Development Statistics	
Site Area	5.5 ha (gross) 1.57 ha (under Applicant's control)
No. Units	345 no. units in 5 no. blocks (BG1, BG2, BG3, BG4 and BG5).
Tenant Amenities & Facilities	• 104 sq.m in BG1 • 709 sq.m in BG2 • 22 sq.m in BG3
Non-Residential Uses	• BG1 – 2 commercial units (83 sq.m and 234 sq.m) to facilitate a range of uses including Class 1 (shop), Class 2 (financial/professional services), Class 8 (health services), Class 10 (community/arts) and Class 11 (bingo hall); • BG2 – restaurant/café/bar 163 sq.m
Density	225 uph (net) (excludes DCC lands)
Building Height	2 to 7 storeys
Unit Mix Summary	• 10% Studio • 57% 1-Bedroom • 30% 2-Bedroom • 2% 3-Bedroom • 1% 4-Bedroom
Car Parking	• 88 no. Spaces (plus 10 car share spaces)
Bicycle Parking	• 471 no. long stay • 172 no. short stay
Dual Aspect Units	42%
Public Open Space	• A multi-purpose play pitch • A public boulevard, 'St. Teresa's Boulevard', • A public park, 'St. Teresa's Playground' • A public park 'Players Park' • A public plaza 'Rehoboth Plaza'
Communal Amenity Space	A total of 2,526 sq.m including: • BG1 – 775 sq.m of courtyard • BG2 – 909 sq.m of podium level terrace • BG3 – 527 sq.m of courtyard • BG4 – 315 sq.m of courtyard
Plot Ratio	1.84 (nett)
Site Coverage	43%

Table 3 Development Overview

2.1.1 Residential

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

Built to Rent								
Building Ref.	**Studio**	**1 Bed**	**2 Bed**	**2 Bed Duplex**	**3 Bed Triplex**	**4 Bed Townhouse**		**Total**
BG 1	28	108	10	-	5	**-**		**151**
BG 2	-	44	45	-	-	**-**		**89**
BG 3	5	30	15	2	-	**-**		**52**
Total	33	182	70	2	5	**4**		**292**
Build to Sell								
BG 4	**-**	**15**	**34**	**-**	**-**	**-**		**49**
BG 5	**-**	**-**	**-**	**-**	**-**	**4**		
Total	**-**	**15**	**34**	**-**	**-**	**4**		**53**
	33	**197**	**104**	**2**	**6**	**4**		**345**

Table 4 Unit Numbers and Mix

The proposed unit mix as a percentage of the overall development is:

- 33 no. Studios – 10%
- 197 no. 1 Bed Apartments –57%
- 106 no. 2 Bed Apartments– 30%
- 5 no. 3 Bed Apartments– 2%
- 4 no. 4-Bed Townhouses – 1%

It is proposed to provide 34 no. units for Part V (of the Planning and Development Act 2000) purposes, and these will be contained in BG3. The Part V mix is 12% (4 no.) studios, 62% (21 no.) 1-bed units, 26% (9 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 part 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 (2020) which would apply;

"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 835 sq.m of residential support and amenities is proposed;

- BG1 - 104 sq.m
- BG2 – 654 sq.m
- BG3 – 22sq.m

2.1.2 Non Residential Use

The scheme includes a childcare facility that will accommodate 60 no. pre-school children. The creche is of a sufficient scale to accommodate all of the scheme's childcare demand, estimated to be 11 no. spaces (see Childcare Demand Report) and it will be open for use by the wider community where a deficit in childcare is identified in the Social infrastructure Audit.

2 commercial units are proposed in BG1 (234 sq.m and 83 sq.m) which will be reserved for Class 1, 2, 8, 10 and 11 uses. Food and beverage floor space is proposed in Block BG2 (163 sq.m).

2.1.3 Height/Massing

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 having regard to the standards as set out in the City Development Plan, incorporating four apartment blocks (BG1-BG4) ranging in height from two to seven storeys, and 4 three storey town houses.

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
BG1	2-7	24m
BG2	2-7	24m
BG3	3-5	16m
BG4	3-4	13m
BG5	3	9m

Table 5 Building height

Figure 3 Building Height

Varied building heights are proposed which are consistent with the Dublin City Development Plan 2016-2022 are used to create a dynamic built environment with rich character, variety and structure, and the overall guiding principle for SDRA 12. 2 midrise buildings has been approved as part of the extant planning permission on the Player Wills site (ABP Reg. Ref: 308917). The height disposition generally builds towards the centre of the site flanking the neighbourhood park.

The 7 storey elements as proposed are positioned to terminate key vistas or address the primary open spaces. The proposed 2/3 storey perimeter blocks are placed where the Bailey Gibson lands interface with adjoining 2 storey neighbourhood streets, these smaller scaled blocks enable the development to knit into its surrounding neighbourhood context.

2.1.4 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:

- Reflect the domestic proportions of openings in the surrounding areas;
- Create a material palette that is sympathetic to surrounding urban fabric and builds on the established sense of place of Dublin 8;
- Generate a material palette for Bailey Gibson that creates order between the elements and has a connection to its context.;
- Balconies are semi-recessed to help with wind loading and improve the daylighting within units, and;
- Create depth within the facade to articulate the building volume.

Plate 1 Proposed Materials

Dublin 8 is renowned for its brick buildings and the proposal will utilise two styles of brick from the area, the redbrick of South Circular Road and the Dolphin's Barn-style brick and this allows the proposal to integrate into the neighbourhood and complements the nearby Player Wills factory building. Other brick types including grey brick, buff brick and dark coloured bricks (see **Plate 2** below) are also used to provide for different character areas throughout the development and enhance navigation around the site.

Plate 2 Material Examples

2.1.5 Access, Parking & Connections

Vehicular access to the development will be via a one-way entrance off South Circular Road/Rehoboth Place with a one-way exit via South Circular Road. The road network will ultimately link to the DCC lands north and east of the development which will provide further accesses to Donore Avenue. A secondary access will be provided to the north of Rehoboth Avenue; however, this will provide access to just 4 houses and accompanying parking spaces. The access to the multi-purpose playing pitch on-street car parking will be from Donore Avenue, along Margaret Kennedy Road and the proposed new road Western Connection Road, which will be a no through road with a turning facility for cars.

Car Parking is proposed as follows:

- Basement Level: 88 no. car parking spaces including 10 disabled parking spaces. 20% of spaces fitted with electric charging points. 12 motorcycle spaces will also be provided at basement level.
- Podium level: 11 car parking spaces, including 1 disabled parking space and 10 no. reserved for a car sharing scheme, 'Go Car' or similar.
- On street visitor: 15 car parking spaces (4 no. reserved for a car sharing scheme), including 2 disabled parking spaces, together with 3. set down parking spaces for taxis and crèche drop offs and a loading bay to service the commercial units.

Additionally, 33 on-street parking spaces are proposed for visitors to serve the playing pitch including 4 spaces on Donore Avenue (including 2 disabled parking), 20 spaces on Margaret Kennedy Road and 9 spaces provided along the proposed Western Connection Road west of the proposed playing pitch.

Access to the basement is proposed via a ramp access to the south of the BG2 building.

468 no. long-stay bicycle parking spaces are proposed, comprising of 207 spaces at basement level for residents and staff of commercial units accessed via a dedicated cycle stairway and a bike lift and 4 cargo bike spaces at podium level for resident use. 2 no. bike sheds are also proposed comprising 257 spaces in BG1 and BG4 for the residents of BG1 and staff of the creche.

172 no. short stay visitor cycle spaces including 8 spaces for cargo bicycles at surface level within the Bailey Gibson site and 144 bike parking spaces including 8 spaces for cargo bicycles are proposed to serve the playing pitch.

The public realm is conceived as a pedestrian priority environment and the internal road network has been designed to encourage lower speeds.). Pedestrian access to the external network is provided at multiple points across the development to promote the principle of permeability including two access onto Rehoboth Place and a further two onto the South Circular Road. The site provides permeable footpaths and a shared pedestrian/cycle path around the perimeter and provided from 'Players Park' to the south corner of the multi-purpose playing pitch. These paths also provide access to some of the long stay cycle parking.

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

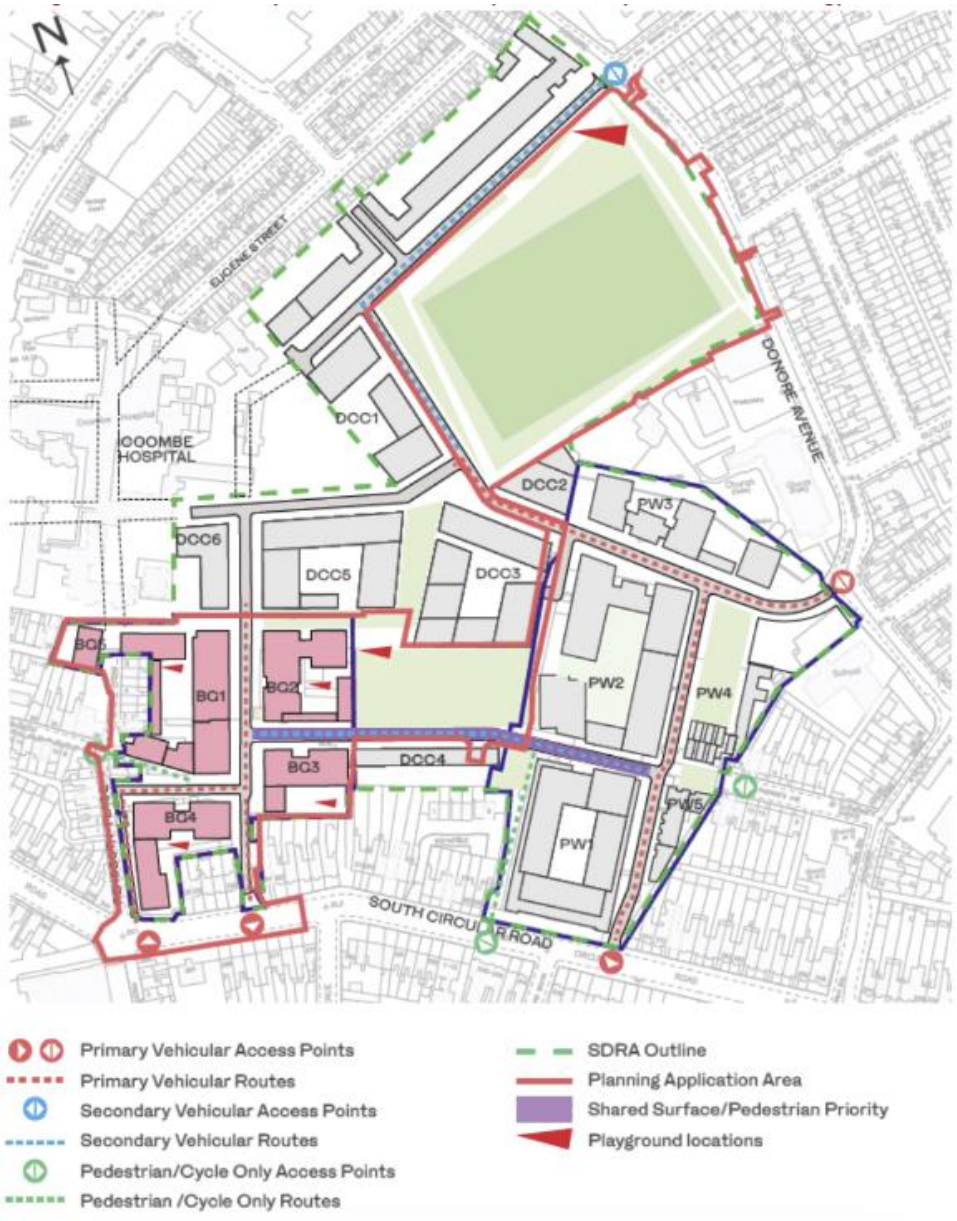


Figure 4 Proposed Pedestrian, Cycle & Car Access

2.1.6 Landscape, Public Open Space & Amenity Space

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

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).

A clear hierarchy of attractive and usable open spaces have been designed throughout the scheme.

5 no. public open spaces are proposed;

a) A multi-purpose play pitch within DCC lands to the northeast of the application area

b) A public boulevard, 'St. Teresa's Boulevard', to the south of the proposed pitch

c) A public park, 'St. Teresa's Playground' incorporating a playground to the north of the proposed pitch

a) A public park ('Players Park') to the east of the Bailey Gibson site and,

b) A public plaza ('Rehoboth Plaza') at the entrance to the Bailey Gibson site.

The **Daylight and Sunlight Analysis** submitted under separate cover demonstrates all proposed amenity areas have been tested for sunlight provision and all meet the B2 209 (2022) recommendation for direct sunlight.

Communal amenity space in the form of courtyards and podium level terraces is distributed throughout the scheme as illustrated in the **Figure 5** below.

The distribution is as follows;

- BG1 – 775 sq.m of courtyard
- BG2 – 909 sq.m of podium level terrace
- BG3 – 527 sq.m of courtyard
- BG4 – 315 sq.m of courtyard

The scheme is in accordance with Appendix 1 of the Sustainable Urban Housing: Design Standards for New Apartments (2020). 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.

The individual courtyards and ground floor and podium level terraces integrate both hard and soft landscaping that provide variety both in form and use and an extensive tree planting schedule to enhance biodiversity. Formal and informal play areas together with seating, lawn areas and opportunities for community gathering are all features of the proposed design.

Figure 5 Open Space

Plate 3 CGIs of Courtyard

The Housing Quality Audit that accompanies this application demonstrates that the proposed private amenity space is compliant with Appendix 1 of the Apartment Guidelines. The provision of private amenity space for Build to Rent (BtR) proposals, the proposed design includes private amenity space for all of the proposed BtR units i.e. 292 of the total 345 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.

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 promotes health and well-being through active and passive measures including the provision of allotment gardens, nature trails and the variety of spatial typologies, which have a positive mental impact both to look upon and to be in. This includes 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.

On-street car parking is minimised, and the feature paving links ‘Players Park’ with a visual way finder. The high-quality paving is a motif with the theme of weaving a thread across the various sites.

The perimeter landscape includes the retention of existing boundary walls where possible and existing party walls will be retained where feasible along all other interfaces.

2.1.7 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.

2.1.7.1 Wastewater

The local area gradually falls from south-west to north-east. The existing 225mm combined sewer, which is currently located within the multi-sport playing pitch site, will be diverted to the north side of the multi-sport playing pitch and increased in size to cater for the proposed Bailey Gibson development flows as well as future development flows which may arise from the development of the wider SDRA 12 landbank.

The proposed basement car park will be a concrete structure design comprising a series of gullies and drainage channels to cater for a limited amount of waste water run off. These channels will connect to a network where it will be pumped through a rising main to the nearest foul manhole on the main system via a standoff manhole.

A response to the Pre-Connection Enquiry submitted to Irish Water was received on 11th May 2022 and confirms feasibility of a connection to the Irish Water network at this location. The foul sewer design has been carried out in accordance with the Irish Water Code of Practice for Wastewater. Foul wastewater discharge from the proposed development will be Average – c.1.892 l/s and Peak – c. 8.518 l/s.

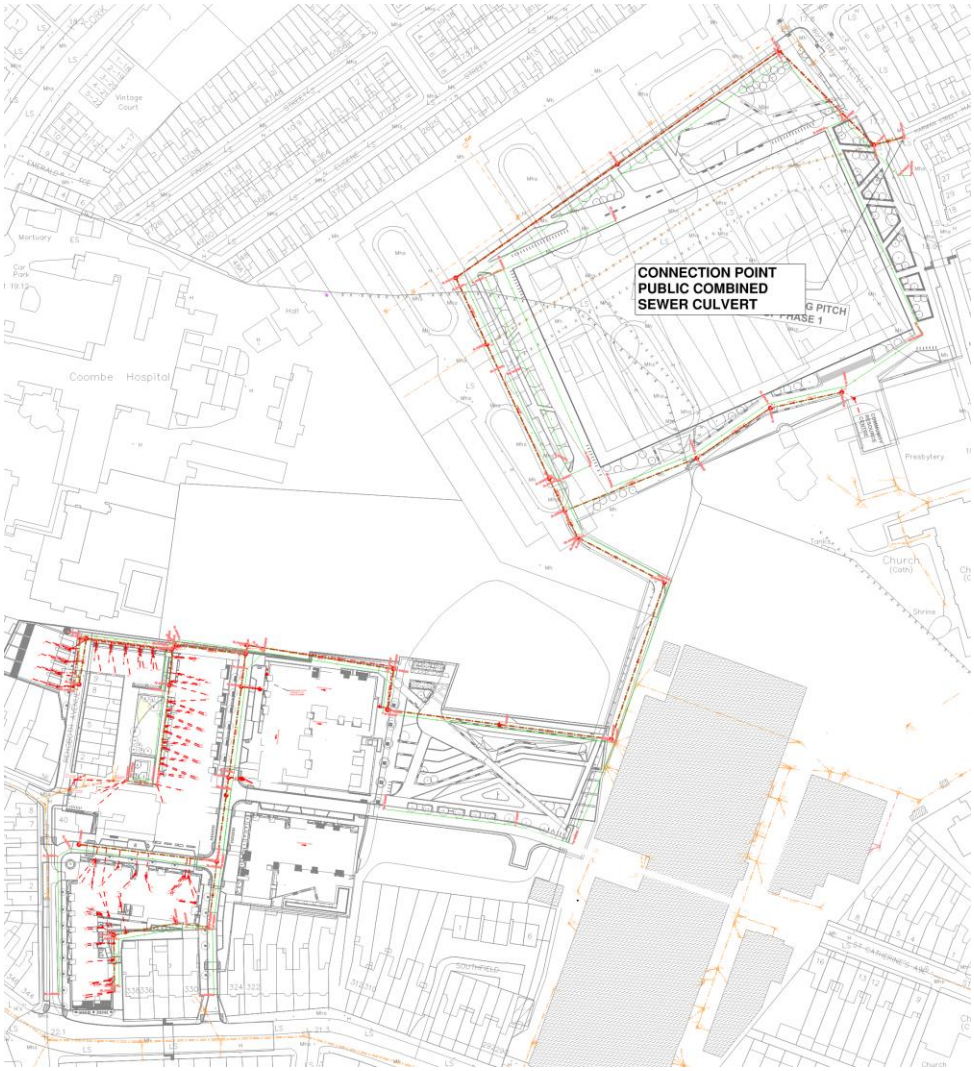


Figure 6 Proposed Wastewater Drainage Strategy

2.1.7.2 Surface Water

DCC Drainage Planning Department required that consideration be given to storm water management across the proposed development site, the adjacent Player Wills site and adjoining DCC owned land, all contained within SDRA 12. A 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 SDRA 12 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 proposed development will flow generally northeast, through Players Park to the east of the Bailey Gibson site and the multi-sport playing pitch and its surrounds, before finally discharging to the existing stormwater culvert in Donore Avenue, close to Ebenezer Terrace (See **Figure 7** below).

The multi-sport playing pitch surface which forms part of this application, shall be a fast draining synthetic or similar type surface. Runoff from the pitch shall be attenuated prior to discharge to the main surface water network.

The proposed Players Park to the east of the Bailey Gibson site, which also forms part of this application, will have a significant area of soft landscaping and other measures which essentially shall ensure that all stormwater in the park shall be capable of discharging to ground over the full surface area of the park.

Part of the stormwater management strategy includes the construction of a stormwater attenuation tank to the north side of the proposed multi-sport playing pitch. This attenuation tank has been sized to cater for stormwater runoff from the Bailey Gibson site, the adjacent DCC owned land and any runoff from Players Park to the east of the Bailey Gibson site and the multi-sport playing pitch and surrounding landscaped areas.

Storm Event	Flow (l/s)
5 Year ARI +20% for climate change	24.7
30 Year ARI +20% for climate change	27.4
100 Year ARI +20% for climate change	28.3

Table 6 Stormwater Peak Outflow Rates

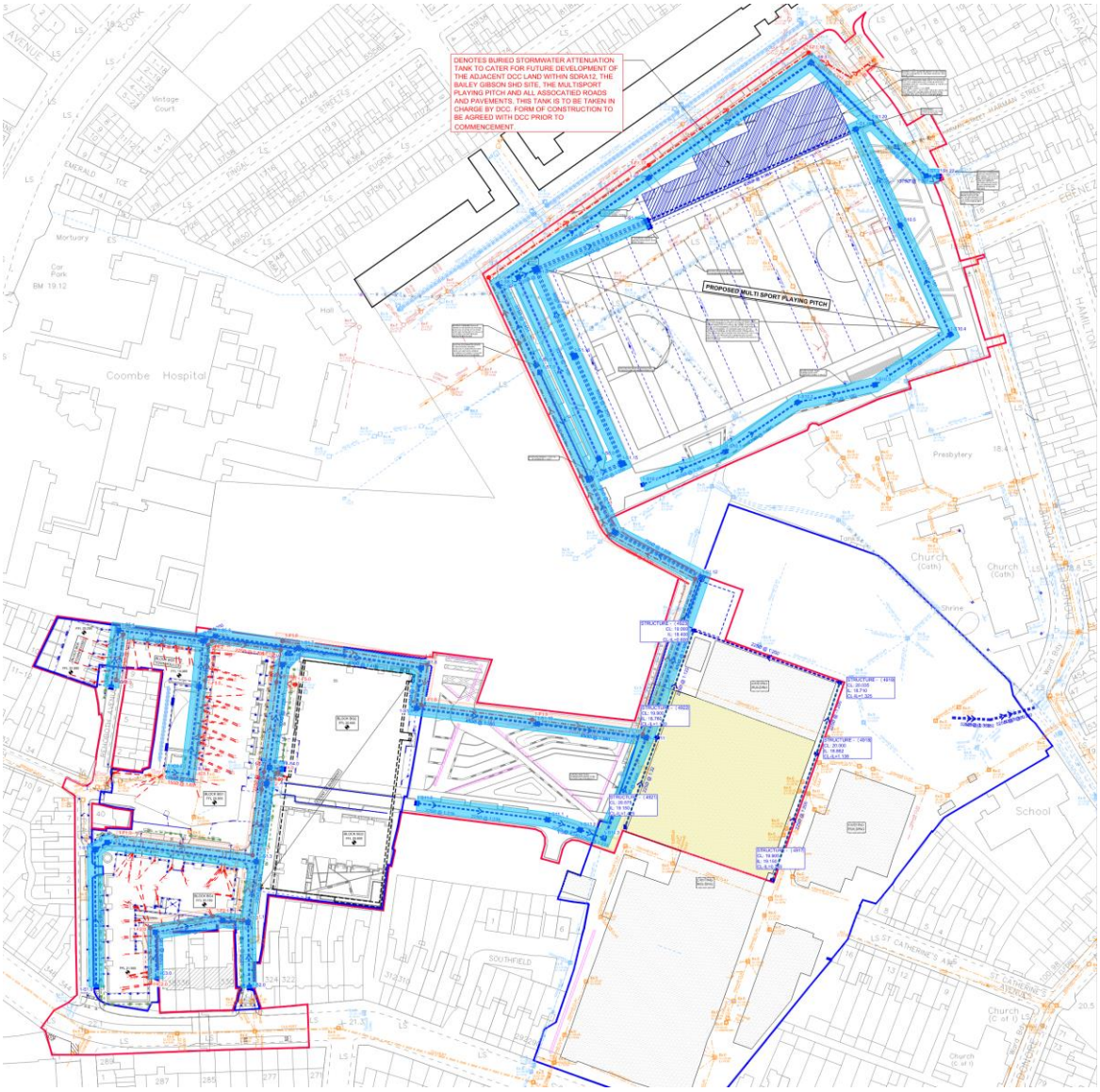


Figure 7 Proposed Surface Water Drainage Strategy

2.1.7.3 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.

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.

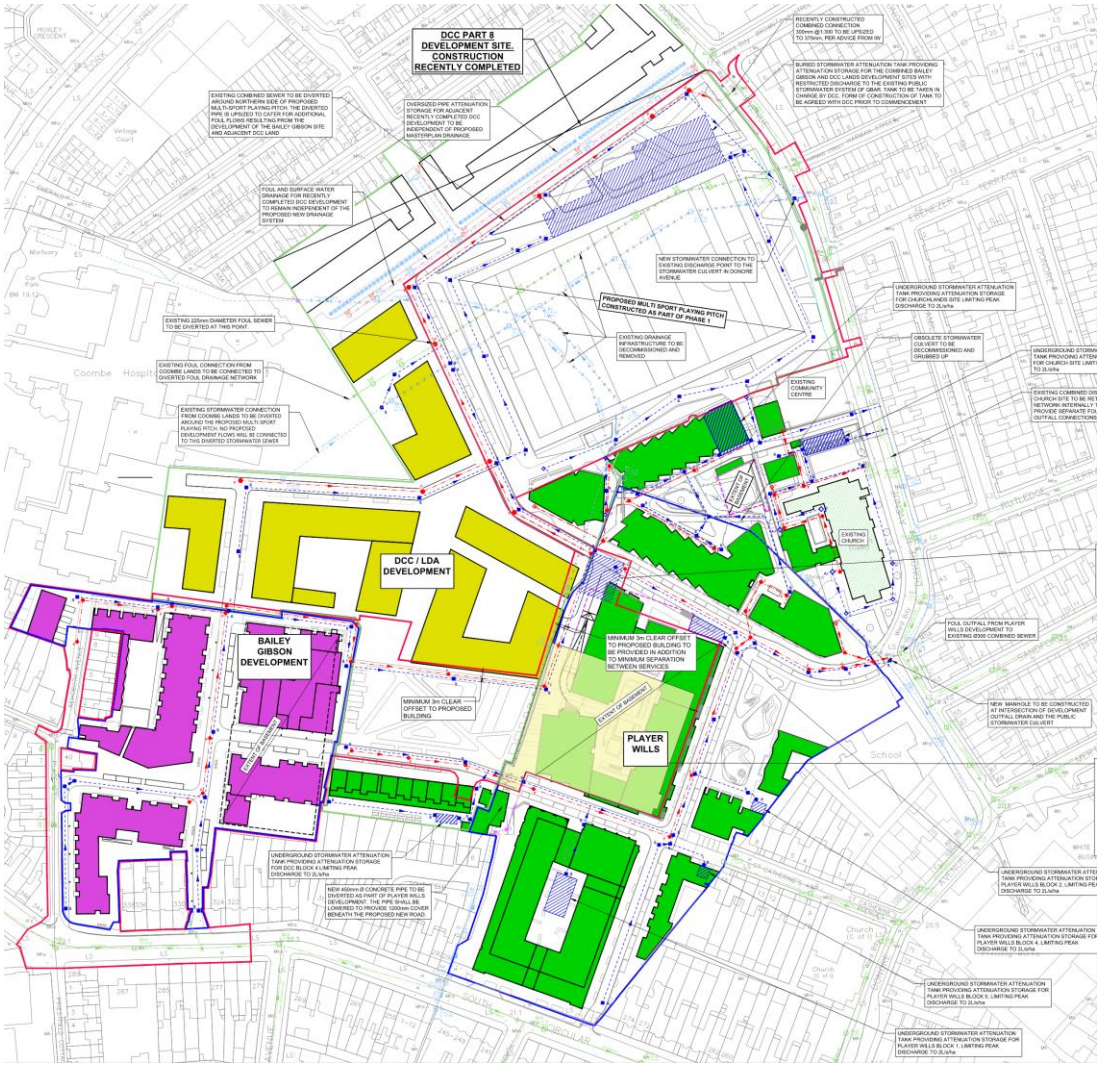


Figure 8 Proposed SuDS Strategy

2.1.7.4 Water Supply

A new 250mm diameter looped watermain is proposed to service the Bailey Gibson 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 – 2.155. Peak – 10.754 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 9 Proposed Water Supply

2.1.8 Sustainability

2.1.8.1 Energy

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

The Part L 2021 (Dwellings) 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 very 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.

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 across all buildings which convert solar radiation into electricity.

Additionally, exhaust air heat pumps may be utilised. They work by collecting warm air as it leaves a building via the ventilation system and then reuse the heat that would otherwise be lost to heat fresh air coming into the building. Exhaust air heat pumps operate on a similar basis to other heat pumps and are suitable for providing hot water and heating for apartments.

A BEMS (Building Energy Management System) is to be installed in the non-residential areas to monitor the use of all major systems in the building, including space heating; space cooling; water consumption; and water leak detection. The BEMS system is a graphical interface which allows the facilities/building manager to monitor and control all systems throughout the building.

2.1.8.2 Traffic

The quantum of carparking proposed is below the maximum standards established in the Dublin City Development Plan. The basis for the reduction is set out in the **Traffic and Transport Assessment** that accompanies this application. Reducing carparking has a positive impact on greenhouse gas emissions.

2.1.9 Services

2.1.9.1 Electrical Supply

A new underground cable shall connect into the existing network and route through our development to serve 2 new Sub-stations with the final location to be agreed with ESB Networks. The existing sub-station is to be decommissioned (see **Figure 10** below).

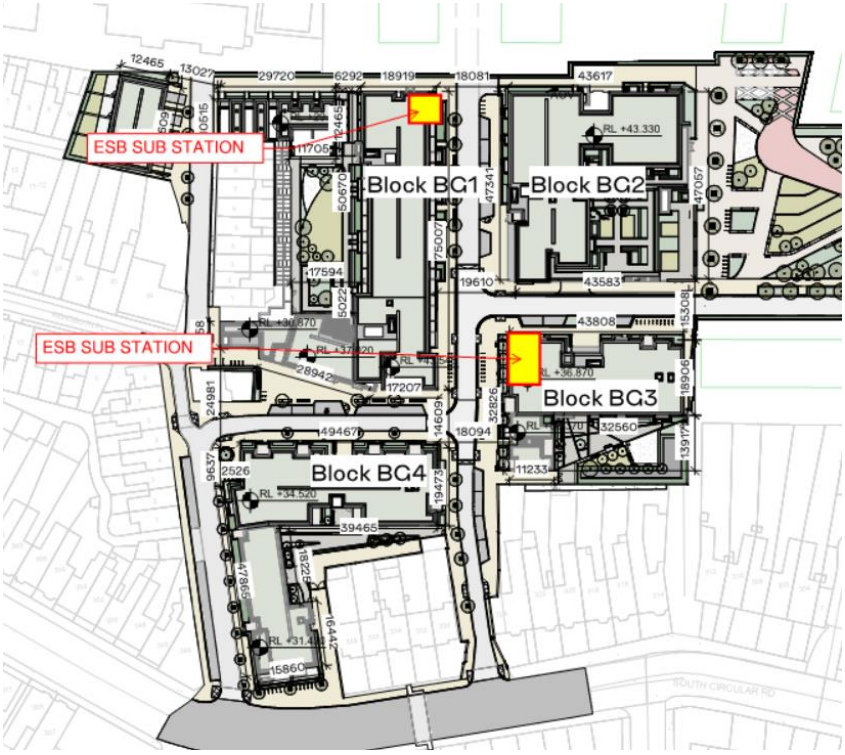


Figure 10 proposed ESB infrastructure

2.1.9.2 Gas Supply

The supply of gas to the Proposed Development site will be provided by way of a metered connection to the main plant room(s) from the existing Gas Networks Irelands national gas supply network, the red line shows the proposed connection point to the existing network (see **Figure 11** below).

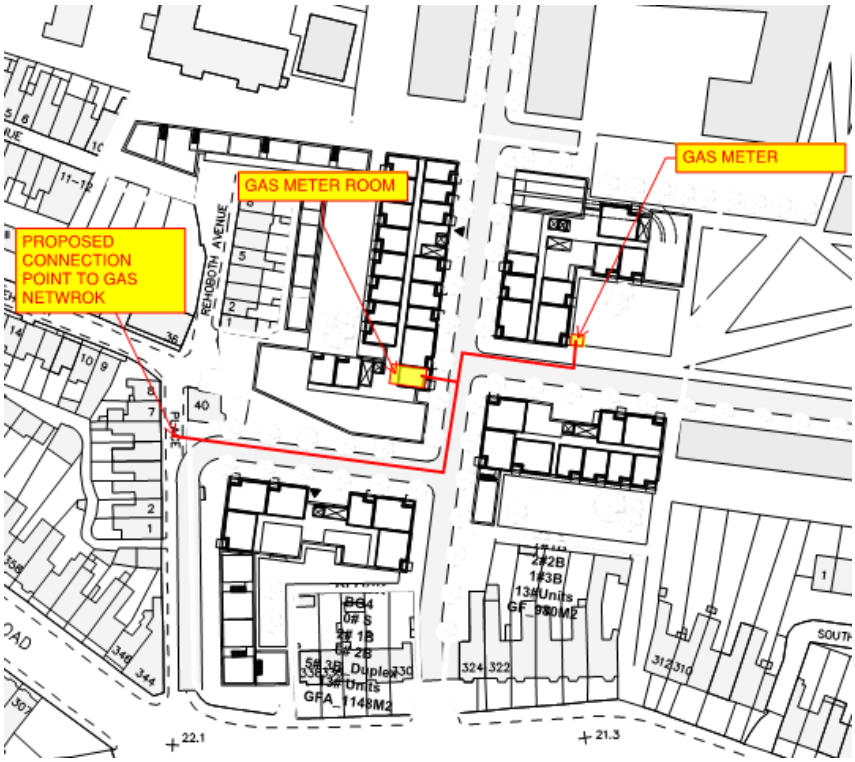


Figure 11 Proposed Gas Infrastructure

2.1.9.3 Telecommunications

The supply of telecoms infrastructure to the Proposed Development site will be provided by way of a connection to a telecoms control room from the existing telecommunication networks (see **Figure 12**).

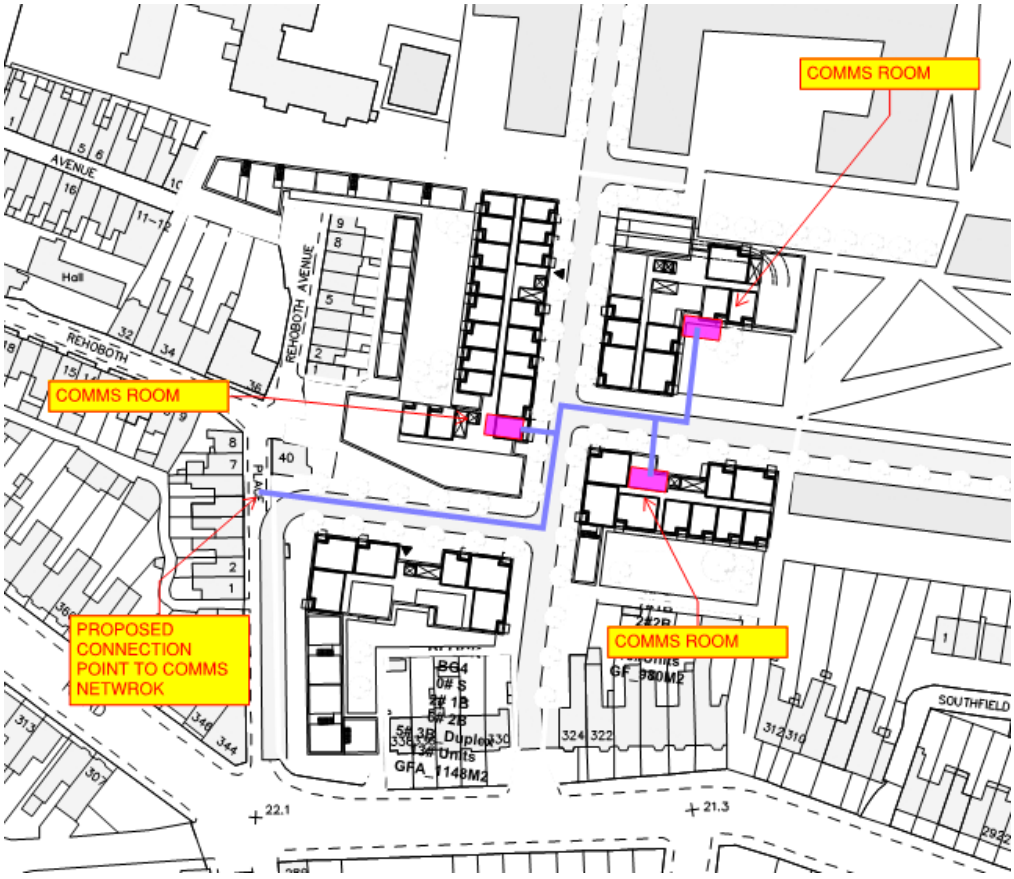


Figure 12 Proposed Telecoms Infrastructure

2.1.9.4 Waste Management

An **Operational Phase Waste Management Plan** prepared by Byrne Environmental accompanies this application under separate cover. Please refer to **Figure 2.5** (in Chapter 2, Vol. II of this EIAR) for details on waste storage area locations.

The typical wastes that will be generated at the proposed development will include e the following:

- Dry Mixed Recyclables (DMR) - includes waste-paper (including newspapers, magazines, brochures, catalogues, leaflets), cardboard and plastic packaging, metal cans, plastic bottles, aluminium cans, tins and Tetra Pak cartons;
- Organic waste – food waste and green waste
- Glass; and
- Mixed Non-Recyclable (MNR)/General Waste.

To facilitate source segregation of wastes and to maximise the re-use, recycling and recovery of waste with diversion from landfill wherever possible, communal 3-bin systems are provided and a Bring Bank for glass are proposed.

Residents will be required to take their segregate waste materials to the dedicated waste storage areas (WSAs) and dispose of their segregated waste into the appropriate waste receptacle.

Waste generated by the creche shall be separately managed by the operators of the creche who shall engage a commercial waste contractor to collected waste generated.

Wastes from the retail and café units shall be stored within a dedicated, separate and lockable commercial waste area within the basement bin store.

2.2 Changes to Proposed Development Following Section 5 Tripartite Meeting

There have been three material changes made to the development since the Section 5 – PAC Meeting request was submitted. These have been made in response to An Bord Pleanála's Opinion which was issued on the 20th of April 2022 (ABP Reg. Ref: 311959), and as a result of working up a more detailed design. These changes are outlined below:

- **Car Parking** – The car parking ratio for the proposed development has increased from 75 no. spaces with a ratio of 0.25 spaces per unit (which included the car sharing spaces), to 88 car parking spaces with a ratio of 0.26 spaces per unit which excludes the car sharing spaces. It was raised by Dublin City Council in their Opinion to An Bord Pleanala that the car parking ratio for the proposed development should reflect the other permissions approved in SDRA (including the extant Player Wills development), and therefore, the Applicant increased the car parking ratio to overcome DCC's concerns.
- **Inclusion of a Section of the Existing Player Wills Factory for Infrastructure Works –** A section of the Player Wills Factory building has been included in the red line for this application to facilitate drainage infrastructure works required to comply with the conditions of the Irish Water Confirmation of Feasibility for the proposed development.
- **Removal of the Community Resource Building**
- **Upgrade Works to the Public Realm including Road and Footpath Upgrades –** The details of this can be found in the **Traffic and Transport Assessment** prepared by Systra which is submitted under separate cover.

2.3 Demolition and Construction Phase

This application is accompanied by a **Construction Environmental Management Plan** (CEMP) and a **Construction and Demolition Waste Management Plan**. Both reports should be read in conjunction with this chapter for a comprehensive description of the construction phase.

2.3.1 Programme

Construction works will take place in accordance with a single agreed phasing plan. It is estimated that the development will be constructed over 24-30 months. 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.

2.3.2 Site Compound

The Contractor's construction compound will be included within the Bailey Gibson Development site. The site compound will include as a minimum offices, accommodation, and welfare facilities. The compound will be serviced with electrical power, water supply and toilet facilities. Details of the primary compound are illustrated in **Figure 13** below. The primary compound will comprise a total area of 5,190m^2. Staging areas for haul routes and storage will be established within each Block site area.

Suitably robust hoarding will be erected around the perimeter of each storage area and hoarding will typically be standard plywood to a height of 2.40m.

The site will be maintained secure and unauthorised access will be strictly prohibited. Where practicable, the original site boundary wall will be retained. Additional perimeter hoarding will be erected, where required, to restrict unauthorised access to the demolition/construction area. Controlled access points to the site, in the form of gates or turnstiles, will be maintained locked when unattended.

All construction chemicals, fuels and hydrocarbons maintained on site will be stored in a safe and secure manner. All foul water generated by welfare units will be contained and disposed of in an appropriate manner to prevent pollution, in line with relevant legislation and in accordance with site specific conditions post approval of the trade effluent waste discharge licence.

Figure 13 Details of Primary Compound

2.3.3 Access/Parking

It is anticipated that the majority of construction vehicles accessing the sites will come from the M50 via the Long Mile Road. Traffic would access the site via the left-in/left-out gateway on the South Circular Road.

Construction traffic will be generated for the duration of works on site, with levels of vehicles movements varying throughout the demolition process depending on activities on-going. Approximately 150 no. carparking spaces are available in areas of the site. A similar number of spaces can also be made available on the Player Willis site as required.

Should a need arise to provide temporary pedestrian and/or vehicular access outside the hoarding line, a detailed Traffic Management Plan will be development in compliance with the relevant requirements. This plan will be required to be approved by Dublin City Council prior to implementation with appropriate forward notice shared with all Dublin 8 stakeholders.

Signage will be erected at all site access points. Appropriate overflow contractor car parking can be available in areas of the Client landholding, where required. They will be maintained secure and unauthorised access will be strictly prohibited.

2.3.4 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.

2.3.5 Construction Personnel & Parking

During the peak construction phase, it is estimated that there will be 150-200 personnel on site. 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. A total of 180 no. cycle parking spaces will be provided and appropriate changing and drying facilities will be available within the site compound.

The majority of movements associated with construction personnel will occur before 07:00 and depart after 18:00, limiting the impact on peak hour conditions.

Locally, on street parking is €3.20 per hour and over a working week this would result in a charge of €150 and this is considered a significant deterrent to the use of on street parking.

2.3.6 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 40 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 (70 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).

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.

2.3.7 Demolition Phase

All demolition works are to be in accordance with the following guidelines:

- BS 6187:2000 'Code of practice for demolition'
- Health and Safety Executive Guidance Notes GS 29 / 1, 2, 3 & 4.
- S.I. 504 Safety, Health & Welfare at Work (Construction) regulations 2013
- Air Pollution Act 1987
- Environmental Protection Agency Act 1992
- BS 5228:2009 Part 1 'Noise & Vibration Control on Construction & Open Sites'.

The proposed hard demolition works shall include the safe removal of all building structural members, external facades and roof finished.

The demolition contractor is required by law to appoint a competent person, experienced or trained for the operations they are involved in, to supervise and control work on site.

The BRE Waste Benchmark Data, June 2012, provides guidance on demolition waste estimates based on the gross internal floor area of a building and the type of building;

- Commercial Offices 16.8 tonnes/ 100m2
- Industrial Building 12.6 tonnes / 100m2

Based on the above it is estimated that 1,502 tonnes of waste will be generated from the building demolition.

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

Number	Product	Percentage (%)	Tonnage (tn)
1	Concrete	64	962
2	Timber	13	195
3	Slate	8	120
4	Asphalt, tar, and tar products	6	90
5	Plasterboard	4	60
6	Glass	3	45
7	Metals	2	30
	Total waste	**100%**	**1,502**

Table 7 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 3.2.7 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.

2.3.8 Earthworks

2.3.8.1 Ground Conditions

A geotechnical investigation undertaken by Ground Investigations Ireland has established the sequence of strata across the site;

- Surfacing | topsoil;
- Fill;
- Made Ground;
- Cohesive Deposits; and
- Bedrock.

2.3.8.2 Invasive Species

It is confirmed in the Construction Environmental Management Plan that there are no invasive species on site. Therefore, no specialist treatment is required prior to construction.

2.3.8.3 Waste

An Environmental Risk Assessment and Waste Characterisation Report prepared by O'Callaghan Moran is included in Volume III and establishes that the soils and subsoils are generally

uncontaminated across most of the site. The includes Dig Plans identifying the zones attributable to each of the above classifications to a depth of 3.00m. The vast majority of the material is classified as “Meets Inert WAC”.

Excavation and the stripping of topsoil or the placement of soil stockpiles etc. will not be undertaken until absolutely necessary. Excavated material shall undergo earthworks testing in accordance with the TII Specification for Road Works (SRW) to establish its suitability for reuse as engineering fill.

Demolition works at the site will involve the removal of the existing buildings on site, bituminous and concrete surfaces, grubbing up existing buried services, and bulk excavation for basements areas, as well as general site strip and foundation excavations.

2.3.8.4 Bulk Excavation

The bulk earthworks for the proposed development are associated with the basement excavation for BG2 and BG3. In addition, earthworks consist of site strip, levelling to suit the new buildings, foundations, and trenches for services. The ground floor levels of the building structures are intentionally located close to the existing ground surface level to minimise excavations. Based on the ground conditions encountered, it is envisaged that toothed buckets on standard large excavation plant will be used up to depths of approximately 3.00m below existing ground level(s). Deeper excavations may require mechanical extraction by other means such as breaking or drilling.

It is estimated that approximately 30,120m3 will be excavated. Based on the proposed design of the development, it is envisaged that the excavated material generally will be disposed of off-site at a licenced facility as there are limited opportunities for re-use. There will be little or no stockpiling of excavated soils. In the event that short term (24 – 48 hour) storage is required, the material will be retained in the designated stockpile storage area. All excavated soils being disposed of will be recorded using a material dispatch log detailing the date of transport, vehicle registration, quantity, type of material and the destination.

Groundwater pollution will be minimised by the implementation of good construction practices by the Contractor. Such practices will include adequate bunding for all potentially contaminating liquids including fuel and lubricating oils and chemicals, wheel wash and dust suppression on site roads, and regular plant maintenance.

2.3.8.5 Foundations and Services

There will be excavation associated with the pouring of foundations and the establishment of trenches for site services.

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.

2.4 Health and Safety

2.4.1 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.

2.4.2 Operational Phase

A COVID-19 site prevention strategy will be prepared by the Contractor and implemented to ensure that all WHO and HSE protocols have been met on site, and that the possible transfer of the virus is significantly reduced.

2.5 Monitoring

2.5.1 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.

2.5.2 Integrated Pest Management

An Integrated Pest Management (IPM) is to be established in accordance with best practice within the guidelines for the campaign for responsible rodenticide use (CRRU Ireland – Wildlife Aware).

Competent rodent pest control will be appointed to fully implement best practice in the delivery of rodent pest management services, based on consideration of the risk hierarchy and implementation of an Integrated Pest Management (IPM) approach.

2.5.3 Environmental

The monitoring proposed in 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.

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.

2.6 Commissioning

The testing and commissioning of services (drainage, watermain, gas, electricity) will be completed in accordance with relevant codes of practice as set out in Chapter 7 of the EIAR.

2.7 Property Management

A property management company would be appointed to manage the scheme and common areas to ensure that the scheme is well managed, and the development is maintained to an extremely high level. They will be responsible for inter alia cleaning, landscaping, refuse management, insurance, maintenance of mechanical/electrical lifts/ life safety systems, security etc.

The property management agents will be responsible for setting the service charge budget for the common areas and the estate. In order to effectively manage the estate and common areas an annual budget would be billed to the owners / tenants on a quarterly in advance basis to ensure enough funds are received to enable effective management of the estate.

2.8 Decommissioning

The design life of the scheme is greater than 60 years. Thus, for the EIA process, the development is considered permanent, and a decommissioning phase is not considered in this report.

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

3.2 Actual Do Nothing

Under a 'Do-nothing' scenario, the Bailey Gibson site would remain in its current condition which 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.

A do-nothing approach would mean that much needed homes in the inner city area would not be delivered with consequent negative effects to human health, air quality and climate change. Having regard to the time required to progress through design development, planning, procurement and build out, it is likely that this would remain the case in at least the short-term.

In the absence of this proposed development, delivery of the sports pitch, playground and public park would be at risk.

The Material Assets – Traffic & Transport chapter in Volume II identifies that given the unused nature of the proposed development site, it doesn't generate traffic. In the absence of the project it is anticipated baseline traffic would evolve in accordance with regional forecasts. This results in the following growth in background traffic for each year:

- 2020 – 2024: 4.9%
- 2020 – 2029: 13.7%
- 2020 – 2039: 22.9%

The existing noise levels and air quality are considered representative of an urban area near a major route. In the absence of this proposed development, noise levels and similarly ambient air quality would likely increase reflecting the growth in background traffic.

If the proposed development were not to proceed, there would be no increase in the demand on built services (water demand, electricity and gas supply) and the effect would be neutral.

The land and soils chapter in Volume II identifies that while the soils and subsoils are generally uncontaminated across most of the site, investigations established the presence of slight hydrocarbon contamination. In the event that the site is not developed the hydrocarbon contaminated soils would remain on site with the potential to impact on the soil and groundwater environment beneath the site.

All collected surface water from the site drains to combined sewers located in Rehoboth Place and the South Circular Road. There are no sustainable drainage systems or flow control devices in place at the site. In storm events, un-attenuated 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 (WwTP) 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 in Dublin Bay through combined sewer overflows. This scenario would fail to address water quality issues in Dublin Bay.

The Biodiversity chapter in Volume II of this EIAR identifies that the proposed development site is of no ecological importance, and is virtually entirely hardstanding, buildings or heavily disturbed. Should the site remain undeveloped, no significant improvement in the biodiversity value of the proposed development site can be expected. If left unmanaged, the Dublin City Council-owned lands would develop more scrub vegetation which could in turn provide additional nesting bird habitat.

In terms of built heritage, the existing Block D contains some architectural features of interest and it is presently vacant. The building is not in good condition and it is likely that its condition will continue to deteriorate if the site is not redeveloped, causing damage to the features of interest.

The Table below summarises the effect of the 'Do Nothing' alternative described above.

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

Table 8 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 lands which would have negative environmental consequences for population and human health, the local landscape and visual environment, land and soils, water quality in Dublin Bay and the industrial built heritage that exits at Bailey Gibson.

3.3 Do Nothing – Implement Extant Permission

In September 2020, An Bord Pleanála granted permission (Ref. ABP-307221-20) for a Build to Rent strategic housing development (SHD) development at the Former Bailey Gibson Site, 326-328 South Circular Road, Dublin 8. The permission is for;

i. **Demolition -** The demolition of all buildings and structures on site including the demolition of 9 buildings comprising of a gross floor area of 11,234.42 square metres and the demolition of an ESB substation (21 square metres) to facilitate the following on site.
ii. **Residential Accommodation** - The construction of 416 residential units set out in five blocks together with 812 sq.m of tenant amenities. The proposed development is summarised in detail in Chapter 3 of Volume II.

The application was accompanied by an Environmental Impact Assessment Report (EIAR) and the Board's Order under the section titled *Reasoned Conclusions on the Significant Effects*, identifies the main significant direct and indirect effects of the proposed development on the environment which are detailed in Chapter 3 of Volume II.

In summary, the Order identifies that the Board concluded in their EIA that the proposed development would not be likely to have significant adverse effects on;

i. human health,
ii. biodiversity,
iii. land and soil, climate,
iv. micro-climate,
v. material assets and
vi. archaeological, architectural and cultural heritage.

The proposed development was determined not likely to increase the risk of natural disaster.

3.4 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** below.

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 9 Strategic Environmental Protection Objectives (source SEA DCDP 2016-2022)

Table 10 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 10 Assessment of Development Alternatives (source SEA DCDP 2016-2022)

The proposed development site is subject to three land use zonings.

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 11 Summary of Impacts of Land use 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 and public amenities in Dublin 8. This approach represents a sustainable urban expansion and consolidation of Dublin City.

The site's designation as Strategic Development Regeneration Area (SDRA) 12 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.

The suitability of this site for the proposed development has been anticipated in the DCDP which itself was subject to 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;

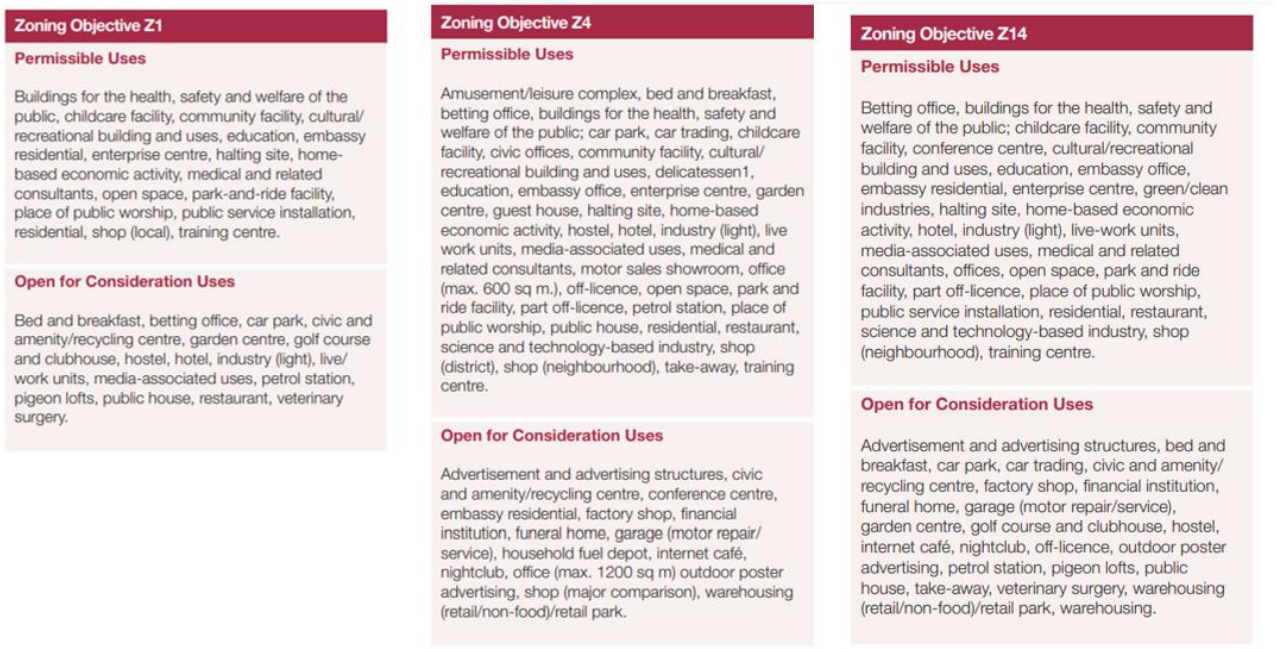
- Opportunity to bring a vacant brownfield industrial site in close proximity to Dublin City into productive use, thus promoting the principles of compact growth.
- location within walking distance of public transport modes (Dublin Bus and LUAS, Fatima Stop) would promote a modal shift from the private car to more sustainable forms of transport.
- The site is not subject to any statutory nature conservation designation.
- There are no listed views or vistas pertaining to the site.

Redevelopment of this site 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.

3.5 Alternative Uses

3.5.1.1 Dublin City Development Plan

The primary determinant of suitable uses is established in the site's zoning. The majority of the proposed development site is zoned Z14, with the western part of the Bailey Gibson site zoned Z4 and a small area to the north west zoned Z1. The permissible uses and open to consideration uses attached to each of these zonings is 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 Z4

Permissible Uses

Amusement/leisure complex, bed and breakfast, betting office, buildings for the health, safety and welfare of the public; car park, car trading, childcare facility, civic offices, community facility, cultural/ recreational building and uses, delicatessen1, education, embassy office, enterprise centre, garden centre, guest house, halting site, home-based economic activity, hostel, hotel, industry (light), live work units, media-associated uses, medical and related consultants, motor sales showroom, office (max. 600 sq m.), off-licence, open space, park and ride facility, part off-licence, petrol station, place of public worship, public house, residential, restaurant, science and technology-based industry, shop (district), shop (neighbourhood), take-away, training centre.

Open for Consideration Uses

Advertisement and advertising structures, civic and amenity/recycling centre, conference centre, embassy residential, factory shop, financial institution, funeral home, garage (motor repair/ service), household fuel depot, internet café, nightclub, office (max. 1200 sq m) outdoor poster advertising, shop (major comparison), warehousing (retail/non-food)/retail park.

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 permissible and open for consideration 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. 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 demolition of the existing structures and a similar approach to the build stage. Thus, 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 the significance would range from not significant to at worst moderate.

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, 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 which would increase employment opportunities within the City.

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

3.5.2 Alternative Design (including size & scale)

The Dublin City Development Plan 2016-2022 establishes the overall guiding principles for development within SDRA 12 and these principles are the framework for the design development. The Applicant must demonstrate compliance with these design principles in so far as they relate to the development proposed.

The guiding principles that are relevant to this application are:

- The development of a network of streets and public spaces will be promoted to ensure the physical, social and economic integration of St Teresa's Gardens with the former Player Wills and Bailey Gibson sites, with further integration potential with the sites of the Coombe Hospital and White Heather Industrial Estate.
- A vibrant mixed-use urban quarter will be promoted with complementary strategies across adjoining sites in terms of urban design, inter-connections and land-use. To provide for an area zoned sufficient in size to accommodate a minimum 80 m by 130 m playing pitch.
- A new public park is proposed as a landmark feature with passive supervision by residential and other uses; it will have a comprehensive landscaping strategy to provide significant greenery within the scheme and will make provision for a diverse range of recreational and sporting facilities for use by the wider neighbourhood.

- There is potential for one or two midrise buildings (up to 50 m) within the site, subject to the criteria set out in the standards section of this plan.
- To acknowledge the existing sports lands of St Teresa's gardens and its environs and act to retain and augment these lands as sporting facilities for the benefit of the wider community and use by local sports clubs. That at least 20% of the SDRA 12 be retained for public open space, recreation & sporting facilities including an area to facilitate organised games.
- Strong permeability through these lands will be encouraged to generate movement 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 will be promoted.
- A community hub will be incorporated into the scheme to provide a wide range of community facilities accessible to the wider neighbourhood; opportunities to highlight the heritage of the local area by proposing community uses close to important landmark buildings such as St Teresa's Church will be promoted. It is noted that this is provided for in the extant Player Wills permission.

There is an extant permission for a strategic housing development on the Bailey Gibson site. That permission relates to a smaller application area. It constitutes a reasonable design alternative and is presented as Alternative Design No. 1.

The proposed development represents an alternative design and is reasonably included for assessment as Alternative Design No. 2.

This section of the report sets out the high-level assessment of the environmental issues associated with each alternative design which have been fully considered by the applicant in advance of selecting the proposed preferred alternative.

3.5.2.1 Alternative Design No. 1 – Extant Permission

As set out above and in Chapter 3 of Volume II, in September 2020, An Bord Pleanála granted permission for a Build to Rent SHD at Former Bailey Gibson Site, 326-328 South Circular Road, Dublin 8. The permission is for the demolition of all buildings and structures within the Bailey Gibson site and the development of 416 units across 5 blocks together with 812 sq.m of tenant amenities. Open space is predominately for residents in the form of communal amenity courtyard areas. The commercial floorspace includes a creche and a retail/community space/office area. The development includes 140 car parking spaces. Bicycle parking includes 543 long term spaces and 84 short term (visitor) spaces.

The Order identifies that the Board concluded in their EIA that the proposed development would not be likely to have significant adverse effects on;

- human health,
- biodiversity,
- land and soil, climate,
- micro-climate,
- material assets and
- archaeological, architectural and cultural heritage.

The proposed development was determined not likely to increase the risk of natural disaster.

3.5.2.2 Alternative Design No. 2 - Proposed Development

In design terms this proposed development is very similar to the extant permission. The key differences relate to tenure, building height (max. 7 storeys), number of units and inclusion of public amenities namely, the sports pitch and public park.

Population and Human Health

This is a 345 unit scheme i.e. 17% less units than the extant permission. Under this option 34 social and affordable homes would be delivered, this is 7 units less than the extant scheme. The effect in terms of delivery of new homes slightly less positive when compared with the extant permission.

This scheme design includes a mix of build to rent (85%) and build to sell (15%) units. The introduction of choice in the tenure is a positive when compared with the previous mono-tenure approach.

This design includes a larger creche and this is deemed positive in the context of the identified existing local need.

This alternative has significant benefits for health when compared with the extant permission having regard to the inclusion of the sports pitch and the public park, Players Park.

Landscape & Visual

The height strategy in the proposed development is compliant with the City Development Plan. Having regard to the Board's assessment with regard to the extant permission i.e. that it would not negatively impact the landscape and visual amenity of the area, it is reasonably concluded that the significantly reduced height proposed in this development would have a lesser impact with at worst a moderate effect on the skyline.

Material Assets: Traffic & Transport

According to the European Energy Agency (EEA) in 2018 private cars emitted 120.4g of CO_2/km[1] and according to the Central Statistics Office (CSO) for the same year each private car travelled on average 17,000. Thus each car emits 2,040kgs of CO_2 per annum. DCCs maximum car parking standard is 1 car parking space/unit, for the proposed scheme this would mean providing 345 carparking spaces and based on the foregoing this would give rise to the emission of 703,800kgs of CO_2/annum. This alternative design approach of reducing car parking means that the scheme would generate 187,680kgs of CO_2/annum which is a significant positive benefit for air quality and climate change.

Put in context, it takes 5 trees to offset 1 tonne of CO_2, so under this scenario the reduced car parking associated with the proposed development when compared with the extant permissions parking is the equivalent of planting approx. 100 trees.

Material Assets: Built Services

The reduced number of units in this alternative will place less demand on services. However, it is noted that there are no service supply issues in the local area and so the effect under all 2no. design alternatives on built services is neutral.

[1] https://www.eea.europa.eu/data-and-maps/data/co2-cars-emission-18

Land & Soils

Development of the site would require clearance and excavation of soils to facilitate the basement construction, and this is also the case in the extant permission. Thus, the effect on soils is permanently negative with an imperceptible to not significant effect under both options.

Both alternatives would offer the opportunity to remediate the contaminated land on the Bailey Gibson site with a consequent positive effect.

Water & Hydrology

The hydrogeological environment would be protected under both options due to the hardstanding for buildings and the public realm. The effect would thus be neutral and imperceptible locally with a permanent duration.

Biodiversity

This option includes a significant quantum of public and communal open space that far exceeds the extant permission. It includes a comprehensive landscape scheme that incorporates a planting regime to promote biodiversity. The effect locally is deemed a permanent moderate positive effect.

Noise & Vibration

The introduction of development will increase the noise generated at the site, the effect is considered to be locally neutral and not significant with a permanent duration under all options.

Air Quality & Climate

Having regard to the site's location, any development on this site would promote a modal shift and this will have moderate-significant positive effects on air quality locally.

The development of the site would be required to comply with the Nearly Zero Energy Building Regulations and this would have a slight-moderate effect on national climate change targets to reduce greenhouse gas emissions.

Cultural Heritage - Archaeology

Due to the developed nature of large areas of the proposed development site, it has already been subject to a significant degree of disruption. However, basement excavations may reveal hitherto undisturbed archaeological deposits. The effect is at this stage not determinable until it is known if archaeological remains exist.

Cultural Heritage – Built Heritage

The effect of implementing this proposed design on the built heritage is consistent with the other option as tit would also offer the opportunity to recover the salvage deemed to have architectural merit during the construction process.

3.5.3 Alternative Processes

When considering the relevant construction processes, including those outlined in the Construction and Demolition Environmental Management Report submitted as part of this application, alternative construction processes were considered as part of this process.

The Applicant intends seeking BREEAM (Building Research Establishment Environmental Assessment Method) certification for the proposed development. This is a sustainability assessment method that sets standards for the environmental performance of buildings. The process evaluates

the procurement, design, construction and operation of a development against a range of targets based on performance benchmarks.

- Energy
- Land use and ecology
- Water
- Health and wellbeing
- Pollution
- Transport
- Materials
- Waste
- Management

Independent licenced assessors carry out an assessment of a scheme and each of the criteria is scored and then multiplied by a weighting.

The Applicant is seeking to achieve an 'Excellent' rating to enhance the wellbeing of the people who live, work and visit the scheme. In light of the objective of BREEAM certification, it is assessed that the construction processes included in the development will have a significant positive effect of permanent duration, and are assessed as having a better impact than the alternative processes that would be implemented if BREEAM certification was not an objective.

3.6 Difficulties Encountered

There were no difficulties encountered in the preparation of this assessment for the proposed development.

3.7 Proposed Preferred Alternative

It Is demonstrated that the proposed preferred alternative performs better in terms of human health having regard to the quantity of public open space included that provides a variety of opportunities to engage in active recreation.

The height strategy under each of the 2 design alternatives 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 and in the inner city area. The preferred alternative is 7 storeys consistent with the City Development Plan's height strategy.

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.

The site's ability to satisfy environmental criteria has been considered and it offers the following attributes;

- Development of the site offers the opportunity to bring a previously developed 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 options 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 (CO2, NO2 and particulate emissions) and a reduction in noise pollution.

- The site is not subject to any statutory nature conservation designation.

In light of the foregoing, it is considered that the application area is an appropriate site from an environmental perspective for the proposed development of a mixed-use scheme.

To conclude, the Table below sets out a high level quality of effects for the operational phase of the 2 design options. As is demonstrated neither alternative has a clear advantage over the other. However, on balance, having regard to the quantity of public open space in the proposed development, the increased childcare spaces and the reduced height, it is considered that the proposed development is appropriate.

Aspect	Alternative Design No. 1 Extant Bailey Gibson Permission	Alternative Design No. 2 Development
Population - Housing Delivery	Significantly Positive	Significantly Positive
Population - Social & Affordable Homes	Significantly Positive	Significantly Positive
Human Health – Public Open Space	Neutral	Significantly Positive
Human Health – Air Quality (CO_2 emissions)	Significantly Positive	Significantly Positive
Landscape Character – New Urban Neighbourhood	Significantly Positive	Significantly Positive
Visual – Height	Positive	Positive
Material Assets – Efficient use of existing built services and utilities	Significant Positive	Significant Positive
Water & Hydrology	Significant Positive	Significant Positive
Biodiversity – quantum of communal and public open space	Positive	Significant Positive
Noise & Vibration	Neutral	Neutral
Air Quality & Climate – reduction in CO_2 emissions	Significant Positive	Significant Positive
Cultural Heritage - Archaeology	Neutral	Neutral
Cultural Heritage - Built Heritage	Significant Positive	Significant Positive

Table 12 High Level Comparison of Environmental Effects of 2 no. Design Alternatives

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.5.5 hectares, it includes the Bailey Gibson site (1.53 hectares) and 2.74 hectares to accommodate public open space and works to facilitate connections to municipal services and works proposed to public roads, see **Figure 15** below. It forms part of a wider Strategic Development and Regeneration Area (SDRA) as include in the Dublin City Council Development Plan 2016-2022. It is approximately 2.3km southwest of Dublin city centre and within the canal cordons.

The site is accessed via an entrance between numbers 324 and 330 SCR and 2-storey Victorian era houses line the street to the east and west of the entrance. The site has a secondary access point along its frontage with Rehoboth Place.

The application area includes lands that extend beyond the former Bailey Gibson site to facilitate a public park, playground, a playing pitch and a public road connecting the Bailey Gibson and Player Wills site, public road improvements and connections to municipal services. This area comprises 3.97 hectares and is in the ownership of Dublin City Council.

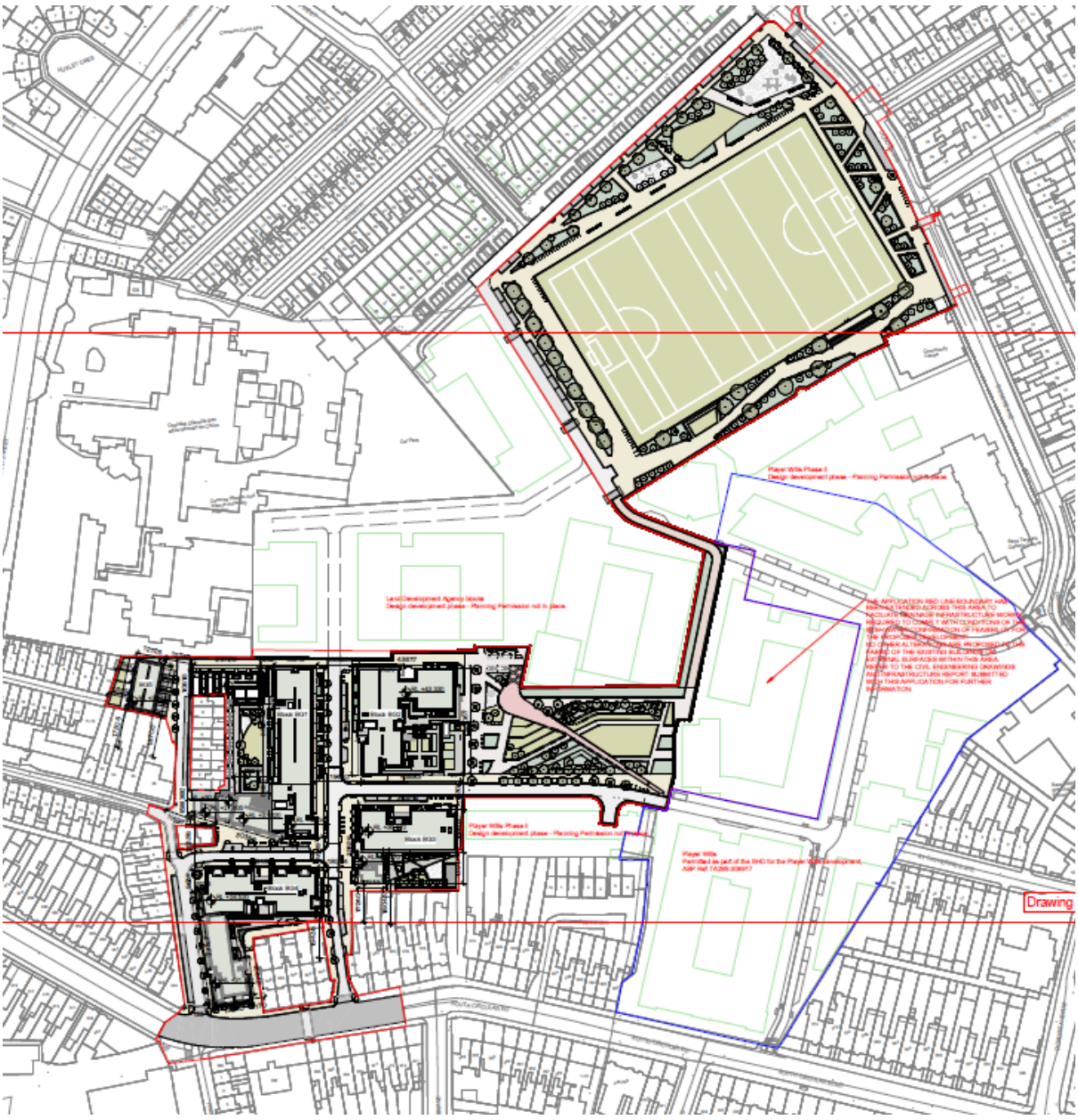


Figure 15 Application Area

4.1.2 Do nothing

4.1.2.1 Actual Do Nothing

If the proposed development is not realised, it is anticipated that in the short to medium term the Bailey Gibson 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 Do Nothing – Implement Extant Permission

As described in Section 3, i September 2020, An Bord Pleanála granted permission (Ref. ABP-307221-20) for a Build to Rent development at the Former Bailey Gibson Site, 326-328 South Circular Road, Dublin 8.

The Board Order identifies that the Board concluded in their EIA that the proposed development would not be likely to have significant adverse effects on;

i. human health,

ii. biodiversity,

iii. land and soil, climate,

iv. micro-climate,

v. material assets and

vi. archaeological, architectural and cultural heritage.

4.1.3 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.

4.1.3.1 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 150-200 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 150-200 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.

4.1.3.2 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 761. 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	4 Bed House	Total
BG1	28	108	8	4	0	5	0	151
BG2	0	44	45	0	0	0	0	89
BG3	5	30	15	0	2	0	0	52
BG4	0	15	34	3	0	0	0	49
BG5	0	0	0	0	0	0	4	4
Total Units	**33**	**197**	**102**	**7**	**2**	**5**	**4**	**345**
Occupancy	1	2	2.75	2.75	2.75	2.75	2.75	
Projected Population	**33**	**394**	**281**	**19**	**6**	**14**	**14**	**761**

Table 13 Unit Mix & Projected Population

The **Childcare Demand Report** that accompanies this application estimates that the proposed development will generate a requirement for 11 no. childcare spaces, and all will be accommodated on site.

As outlined above, the proposed creche is oversized and will provide places for 69 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 application site, there is a full-scale playing pitch is proposed that will be available for residents and the wider population. 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 also includes dedicated amenities and facilities to serve future occupants. 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 Bailey Gibson 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 485 sq.m of floorspace to facilitate a range of uses including Class 1 (shop), Class 2 (financial/professional services), Class 8 (health services), Class 10 (community/arts) and Class 11 (bingo hall) and cafe/bar/restaurant use. The estimated employment that will be generated from the non-residential uses is 30 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 12 no. employment positions.

Age Group	No. of Children	Adult: Child Ratio	Employees
0-1 year	8	01:03	3
1-2 years	19	01:05	4
2-3 years	14	01:06	3
3-6 years	19	01:08	2
Total	**60**	**-**	**12**

Table 14 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

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 car parking and prioritises both pedestrian and cyclists. 471 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. Theresa's Playground' and communal open spaces distributed throughout the development in the form of courtyards and podium level 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 (88 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 '**Daylight and Sunlight Analysis**' prepared by ARUP. The report assesses the proposed development in terms of it's; illuminance levels within the proposed development, views, impacts on surrounding buildings, and performance of proposed amenity spaces. The report concludes that the proposal is in accordance with the minimum requirements of the relevant national guidance documents. (BR 209 (2022) – Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice, BS EN 17037:2018 – Daylight in Buildings, and IS EN 17037:2018 – Daylight in Buildings)

A **Wind Microclimate Assessment Report** prepared by ARUP 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.

Thoroughfares:
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 wind conditions estimated at key locations along the thoroughfares shows compliance with the requirements of these criteria, except for one location as discussed below.

The Lawson's Pedestrian safety criteria for Able-bodied Access stipulates that the local air speed at designated locations should not exceed 20m/s for more than one hour a year. The Lawson's Pedestrian safety criteria for General Public Access stipulates that the local air speed at designated locations should not exceed 15m/s for more than one hour a year. Elderly people and children are usually classified as general public. The wind conditions along a section of the walking path connecting Players Park to the multi-sport playing pitch are in marginal exceedance of the safety criteria for general public access for up to 3 hours per year. This would not be considered significant.

Entrances:
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 wind conditions estimated at the primary entrances of the proposed development shows compliance with the requirements of these criteria.

Public open spaces (including the amenity spaces around the buildings and public parks):
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. 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 wind conditions estimated at key sitting locations in the amenity spaces around the buildings show compliance with the requirements of these criteria. The wind conditions estimated at key sitting locations in the parks (Players Park and the multi-sport player pitch) show compliance with the requirements of these criteria with the exception of a sitting area to the east of Players Park, where the wind conditions are in the 'walking' range. This could lead to some discomfort during windy days for sedentary activities and does not pose a safety risk.

Balconies:
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 shows compliance with the requirements of this criterion.

For more details refer to the wind microclimate assessment report.

4.1.3.3 Cumulative Impact

The proposed development forms part of a **Strategic Development and Regeneration Area (SDRA 12)**. The application area forms part of a wider SDRA 12, including the proposed development site, permitted Player Wills SHD 1, LDA/DCC Donore Project and Player Wills Phase 2. Proposed development details:

- **Permitted St. Teresa's Gardens Part VIII –** includes the demolition of the 2 blocks required to facilitate those aspects (namely amenities – multi sports play pitch, boulevard and playground) of this proposed development that will take place on the St. Teresa's Garden site will be undertaken by Dublin City Council under permission 2475/18 and in line with the conditions attached to that permission.
- **Permitted Player Wills 1 development** – construction of 492 no. Build to Rent (BTR) apartments, 240 no. Build to Rent shared accommodation along, creche and associated site works. Including 280 car parking spaces (249 on basement, 31 on-street parking and creche/taxi set down and loading bays), 903 long stay cycle parking spaces and 110 short-stay bicycle spaces.
- **LDA/DCC Donore Project** - an application for permission on this site has not been lodged at the time of making this application. It is acknowledged that the project is in design development phase. The information used is derived from the available published information https://donoreproject.ie/ - It is envisaged circa 550 new homes will be provided over four

separate buildings. The current proposal shows that car parking will be provided at ground floor level, with approximately 79 parking spaces.

- **Player Wills Phase 2** - an application for permission on this site has not been lodged at the time of making this application. It relates to the balance of land not in the permitted PW1 together with land associated with the adjacent St. Teresa's Church site. The applicant is progressing the design development phase and it will likely be a large-scale residential development application to DCC. Proposed number of units 403 BTR, proposed car parking spaces approx. 81.

The additional population that will be generated by the proposed development coupled with the permitted Player Wills development and the anticipated development in the wider SDRA 12 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 Player Wills 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.

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 (Player Wills Phase 2) and on lands which will be developed by the Land Development Agency on behalf of Dublin City Council (the Donore Project) as envisaged in the SDRA 12 which are also considered in the cumulative impact within this EIAR.

The SDRA 12 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;

- TA29S.308917, permission for a strategic housing development on the Former Player Wills site, Dublin 8 for the demolition of all buildings excluding the original fabric of the former Player Wills Factory, construction of 492 no. Build to Rent apartments, 240 no. Build to Rent shared accommodation along, creche and associated site works in blocks ranging in height from 2 to 19 storeys.

- 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 ground floor and 39 no. apartments.

Each of these developments requires a construction and environmental management plan (CEMP) to manage each of the construction phases. Subject to adherence to measures contained in the individual plans, the cumulative effect of these developments 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.

4.1.4 Mitigation

4.1.4.1 Incorporated Design

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.

4.1.4.2 Construction Phases

A **Construction and 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.

All other environmental aspects relating to the human environment which could have an adverse effect on the local population such as soils, geology & hydrogeology, water and ecology have been addressed in the relevant chapters of this EIAR.

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.

4.1.4.3 Operational Phase

The impact assessment section did not identify likely significant environmental impacts on population and human health arising from the operational phase of the proposed development. Accordingly, mitigation measures are not proposed.

4.1.5 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.

All other environmental aspects relating to residual impact which could have an adverse effect on the local population such as soils, geology & hydrogeology, water and ecology have been addressed in the relevant chapters of this EIAR.

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 phases of the proposed scheme. Indeed, the delivery of much needed housing will realise a likely **significant positive** effect for the local area.

4.2 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.

4.3 Landscape & Visual Character

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

4.3.1 Existing Environment

The proposed development site at Bailey Gibson is mainly occupied by single- and two-storey factory buildings in brick and render, accompanied by concrete yards; a modest brick chimney provides a local landmark. It has a distinctly industrial character and the majority of the proposed development site does not support trees, green spaces or other landscape features; however a small enclosed green space (allotments / community garden) fronting onto South Circular Road and Rehoboth Place is included within the development boundary. Residential buildings, communal open space and vacant land at St. Teresa's Gardens are also included within the proposed development site. Altogether, the existing site has a low landscape and visual sensitivity to the proposed development.

The proposed development site forms parts of the wider SDRA 12, comprising the former Player Wills site to the east and the former public housing site at St. Teresa's Gardens to the northeast (owned by Dublin City Council). The former Player Wills factory site shares some of the vacant industrial characteristics of the proposed development site alongside the more distinctive 3-4 storey main factory building. The former St. Terresa's Gardens site is now largely demolished, vacant and covered in rough grassland, except for the north-eastern quarter. The northern edge of this area, backing onto Eugene Street, has recently undergone residential development by Dublin City Council. Both areas have a very low landscape and visual sensitivity to the proposed development.

The Coombe Hospital adjoins the Bailey Gibson and DCC lands 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 SDRA 12 lie extensive residential areas comprising traditional two-storey Victorian/Edwardian 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 SDRA 12, 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 a short distance 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 area neighbouring the proposed development site to the west comprises a narrow street lined by one and two storey Victorian terraced houses. The intimate human scale and 'traditional' appearance of the streets combined with proximity to the Proposed development site lend them a moderate to high landscape and visual sensitivity to the proposed development.

Beyond SDRA 12 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 SDRA 12, also the Grand Canal both east and west, and from parts of the residential neighbourhoods east and south of the proposed development site. 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 Verified Photomontages by Modelworks.

4.3.2 Impact Assessment

4.3.2.1 Do Nothing

In the event that the proposed development does not go ahead, the existing site is likely to retain its industrial landscape character in the short-term. The proposed development 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. 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 landscape character and its visual impact upon the surrounding area.

4.3.2.2 Demolition Phase

Landscape and visual impacts arising during the demolition stage are likely to be very localised. There are no tall structures on the proposed development site to be demolished, therefore there will be no significant change to the wider landscape arising from the removal of buildings and structures from the landscape/skyline. Moderate to high temporary adverse landscape and visual impacts will arise from perimeter hoardings and limited visibility of the demolition of factory buildings at the Bailey Gibson site and residential buildings at St. Teresa's Gardens. A minor adverse impact will arise from the removal of a small number of trees at the site perimeter.

4.3.2.3 Construction Phase

Temporary landscape and visual impacts will initially be slightly to moderately adverse, arising from basement excavation/construction 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.

4.3.2.4 Operational Phase

The proposed development will take a former low-rise industrial site transform it into a medium- to high-density residential neighbourhood. This will introduce a significant change of character to the proposed development site. New buildings will be of increased scale and height and will exhibit richer elevational detailing. New public streets and open spaces will replace closed-off concrete/tarmac yards. The proposed development will have a character more in common with neighbouring residential areas and the contemporary mixed use development on Dolphin's Barn / Cork Street than the existing site does, and as a result will have a moderately positive impact on landscape character.

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 incorporates buildings ranging from 2 to 7 storeys high. Lower buildings themselves are likely to be screened from the wider area by intervening buildings, while taller buildings are likely to be partially visible from a wider area, with the potential to intrude upon sensitive landscapes. The resulting impact upon landscape character and visual amenity is likely to be moderately adverse.

The proposed development will include new buildings on Rehoboth Place / Rehoboth Avenue and a small part of South Circular Road. These will be of a similar scale to existing buildings but will be contemporary in design. By reinforcing the residential scale and character of the street, impacts are likely to be moderate and neutral.

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 is likely to 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 the contrast of scale and architectural styles to give rise to moderately or highly negative landscape and visual effects, particularly at close quarters.

The Grand Canal lies nearby to the south, with moderate to high sensitivity to the proposed development. As a more intense urban form of development, interruptions to the skyline are likely to have slightly to moderately adverse visual impacts upon views from the canal corridor.

The proposed development is likely to 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.

4.3.2.5 Cumulative Impact

The cumulative effects of the proposed development are two-fold.

Firstly, the proposed development will take place as part of the wider SDRA 12. The additional areas of development will adopt a similar approach to layout, scale and architectural design with a coordinated network of streets and open spaces; they are also likely to include taller buildings than those appraised here. This will make the proposed development part of a much more extensive and cohesive urban landscape than might be evident when seen on its own. While the landscape and visual effects of the proposed development might appear neutral or even slightly negative on its own, the inclusion of further development on adjacent land within SDRA 12 significantly enhances the scope and delivery of good placemaking, which will have a significant positive effect on landscape and visual impacts.

Secondly, the proposed development along with the wider SDRA 12 will take place in an already changing urban environment, where lands along Dolphin's Barn Street, Cork Street and in pockets elsewhere have already undergone transformation to contemporary architecture and taller buildings - typically 5-8 storeys but up to 12 storeys. The proposed development will therefore be consistent with this change and positively reinforce an emerging urban character area. This will have a slightly or moderately positive impact upon landscape character and visual amenity in the area.

4.3.3 Mitigation

4.3.3.1 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. The construction phase is expected to take 24-30 months.

Perimeter hoardings will be carefully maintained and contractors' compounds sensitively located within the site.

Visual impacts will extend to a wider area with the temporary installation of tower cranes within the proposed development site and the gradual emergence of the building 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 machinery 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 will be parked in compound areas and/or away from the proposed development site perimeter in order to minimise visibility outside of working hours.

4.3.3.2 Operational Phase

A sensitive approach has been taken to building height, incorporating transitions to the surrounding low-rise neighbourhoods. Two- to four-storey blocks are positioned at the perimeter adjoining existing residential areas, providing screening and a transition to taller blocks behind them up to seven storeys high. The taller elements at seven storeys are located towards the centre of SDRA 12, where they will provide a transition towards taller buildings currently proposed for the adjacent Player Wills and DCC sites. The proposed building heights for this application comply with Development Plan policy and the Development Framework for SDRA 12.

Varied building heights are used to create a dynamic built environment with rich character, variety and structure, where taller buildings frame open spaces and vistas within the development and beyond, while lower buildings interface with the street scale and neighbouring residential areas. 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. Double-height

street façades below taller buildings emphasise the human/street scale. Semi-recessed balconies add depth and contrast within elevations.

Sympathetic palettes of materials incorporate traditional brick and render with complementary modern materials. The 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) complements the development's surroundings but are used with a more contemporary expression of texture and arrangement. A simpler approach to courtyard-facing elevations uses render to reflect light and contrast with other materials. Glass balustrades and dark coloured aluminium finishes add further detail and contrast.

The layout adopts a 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 through regular front doors, retail units and community spaces.

Street trees, soft landscaping and rich/dynamic hard surfaces create high quality streets and reinforce the human scale. A 'chain' of hard and soft public open spaces weave their way through the proposed development site, while courtyard spaces provide a green outlook and buffer to adjacent existing residential areas.

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.

4.3.4 Residual Impact Assessment

4.3.4.1 Landscape Character

Within the context of the wider SDRA 12 landscape, the proposed development will make a moderate and positive contribution to this new urban neighbourhood. Impacts upon the surrounding urban landscape will also be moderately positive, replacing an abandoned industrial premises with an attractive residential environment.

The taller blocks BG1 and BG2 give structure and form to the development, helping to define its core and creating a gateway into the proposed development site from the west (via Rehoboth Place) and from the south (via South Circular Road). The scale of each block is broken down by façade recesses, the pattern/layout of window openings and contrasting materials, creating a slender vertical emphasis at the same time.

A human scale is reinforced at street level through active frontages, double-height where retail/community uses are place; through height transitions to 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.

Enclosed communal courtyards and gardens provide an attractive outlook from some neighbouring residential areas as well as a spatial buffer between them and the proposed residential buildings.

The residential development along the eastern side of Rehoboth Place will provide a much more complete and unified streetscape, with a small-scale but highly positive impact upon the residential character of this neighbourhood.

The new multi-use sports pitch and adjacent park / play space will transform the former St. Teresa's Gardens from remnant housing and vacant land to a major new public space, providing a setting for the proposed development and for recent development on Margaret Kennedy Road while also enhancing the streetscape of Donore Road. The high quality landscape and public access to this

space will have a major positive impact upon landscape character for this part of the site and adjacent streets.

4.3.4.2 Visual Impacts

Overall, the proposed development adds depth and diversity to the urban landscape where visible beyond intervening roofscapes. It subtly signals the presence and character of a new urban quarter, particularly where seen alongside the wider development of SDRA 12, which will be more prominent and provides a contrasting backdrop to the prevailing streetscapes in each view. Views generally have a low to moderate sensitivity to the proposed development, where visual impacts are mostly neutral or slightly positive, sometimes becoming moderately positive with the addition of development in the wider SDRA 12.

Donore Avenue borders SDRA 12, while the neighbouring eastern residential areas are mostly characterised by Victorian terraces, where visual sensitivity is considered low to moderate. Buildings within the proposed development are mostly screened from view due to its restrained height. Principal views occur from the northern half of Donore Road across the multi-use sports pitch and play/park area, which also form part of the proposed development. Visual impacts from new buildings are neutral or slightly positive while visual impacts arising from the new public open spaces are moderately to majorly positive.

Development of the wider SDRA 12 screens views of the proposed buildings from Donore Avenue and the eastern residential area, therefore they have no visual impact in the context of the wider SDRA development. The new public open spaces continue to have a moderate to major positive visual impact.,

South Circular Road is characterised mostly by late 19th century and early 20th century terraced houses. In close proximity to the proposed development, a moderate magnitude of change provides a contemporary intervention to the street with a slightly positive visual impact, where it replaces vacant industrial buildings and adds depth and variety to the urban landscape. Further afield, the proposed development is screened by intervening buildings and trees, with no visual impact as a result. Wider development of SDRA 12 has an overall slightly positive visual impact by consolidating the character and presence of this new urban district as a backdrop to South Circular Road.

At Dolphin's Barn, the urban landscape is more variable, incorporating a weak mixed character of modern and traditional building styles. Proposed buildings are mostly screened from view. Wider development of SDRA 12 is more prominent and adds a welcome contemporary character, resulting in a moderately positive visual impact.

The Cork Street area to the north comprises a contemporary urban spine surrounded by more traditional residential areas. There are no significant views of the proposed development from Cork Street itself, while neighbouring residential areas afford occasional glimpses towards the proposed development. The magnitude of change is typically low and visual impacts slight and neutral as a result.

With the wider development of SDRA 12, this new emerging urban district becomes more visible as an backdrop to existing residential areas, enriching the diversity and architectural character of these views and having a moderately positive visual impact, to which the proposed development makes a small contribution.

The Grand Canal is an attractive landscape feature and a Conservation Area, and is therefore moderately sensitive to the proposed development. Residential areas beyond the canal have a low sensitivity to the proposed development. Approaching along the canal from the east and west, the proposed development is substantially or entirely screened from view by intervening trees and

buildings, with no perceptible visual impact as a consequence. With the wider development of SDRA 12, visual impacts become slightly or moderately positive with a consolidated urban landscape as a backdrop to the canal and its setting. Nearby residential areas experience mostly neutral visual impacts from the proposed development, sometimes becoming positive as part of the consolidated backdrop created by the wider SDRA 12 development.

In a longer view from the Crumlin Road, the proposed development is not visible and makes no change to this wide, busy urban road corridor. The wider development of the SDRA 12 makes only a minor addition to this, with a slight and neutral visual impact overall.

There is also no view of the proposed development from Mount Jerome cemetery. The wider development of SDRA 12 establishes a little more depth and variety to the urban landscape, signalling a contemporary urban neighbourhood beyond the immediate environs of the cemetery, with a slightly positive visual impact as a result.

4.3.5 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.

4.4 Material Assets: Traffic & Transport

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

This chapter of the EIAR has been prepared to assess the potential impact of the proposed development in terms of traffic and transport. This chapter provides an overview of the existing receiving environment, a detailed and robust assessment of the proposed developments potential impacts on the operation of the local road network during the short-term construction phase and long-term use phase, and outline of 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, Construction Traffic Management Plan and Mobility Management Plan reports included under separate cover as part of the planning application for the Proposed Development.

4.4.1 Existing Environment

The proposed development is situated on a brownfield site located along the South Circular Road, Dublin 8 with connections to with connections to Rehoboth Place and Avenue to the west, Donore Avenue to the East and Margaret Kennedy Road to the north. The primary access point to the site is currently located along the South Circular Road. The surrounding land use is large residential comprising of predominantly terraced housing. The site is currently disused but was formerly the Bailey Gibson Architectural and Reclamation Salvage Yard.

4.4.2 Impact Assessment

4.4.2.1 Do Nothing

The site is currently vacant and generates no traffic. However, it is zoned for development and it is likely that in the absence of this proposal that a development of a similar nature will be proposed given the National Planning Framework's objective that 50% of new homes in Dublin should be located the existing urban footprint.

4.4.2.2 Demolition and Construction Phase

The Demolition & Construction will be short-term in nature relative to the Operational Phase. In total, it will last approximately 24-30 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.

During the peak of the construction phase for the proposed development, it is estimated that up to 200-150 personnel will be working on site. 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. However, to ensure that where driving is required that there is no overspill of traffic onto the surrounding road network a total of 120 on-site parking spaces will be provided for visitors and staff combined. This will result in 120-200 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 South Circular Road.

Working hours are determined and conditioned by the Grant of Permission - envisaged working hours for all Blocks is 07:00 – 18:00 Monday to Friday and 08:00 – 14:00 on Saturday, meaning the majority of staff will be arrive before busiest morning peak and after evening peak.

It is assumed that the majority of these staff/visitor (200max one-way) trips will travel southbound along South Circular Road where the estimated AADT is 9,000 vehicles per day, and they will represent an increase of 4.4% of daily traffic. Given the increase in daily traffic on the surrounding road network is relatively low the impact is considered to be slight, negative but short-term in nature and local.

Heavy Construction Vehicles will enter and exit Bailey Gibson Site from the South Circular Road, and from Donore Avenue to access the Playing Pitch Area, via designated routes for HGVs within the DCC HGV strategy.

The maximum number of HGVs to the site will be during the basement excavation with 70 one-way trips however this will be temporary lasting 3 months. The average number of HGVs to site over the entire construction phase will be closer to 40 one-way HGV trips (trips to and away from site).

On average, this will increase the absolute number of HGVs along the South Circular Road by 9.30% & on the Dolphin's Barn Cross Canal Bridge by 5.22% though the percentage HGV will increase by less than 0.5%. This will have an imperceptible effect based on criteria outlined in Table 6.3 of the EIAR Chapter 6, though HGV have a more significant impact than general traffic and therefore the overall impact is considered slight.

4.4.2.3 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, Eastern in this case, 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 and deliveries and taxis.

The retail/food and beverage element of the development, comprising of a commercial unit and a Bar/Restaurant/Café unit are expected to be predominantly used by residents and by those within walking catchment of the site. There is no extra traffic expected to be generated by these elements of the development particularly during weekday peak hours. However, to ensure a robust assessment of the impact of the development some vehicular trips have been estimated for these units to allow for deliveries and service vehicles.

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 32 arrivals and 12 departures in the AM peak period, and 26 arrivals and 14 departures in the PM peak period.

Operational Traffic Contribution

The distribution of traffic from the development has been taken from the ERM and shows the majority of trip wills travel south and westwards away from the city in both peaks. In total it is expected that the residential units will generate vehicular trips of 25 departures and 4 arrivals during the AM peak (08:00-09:00) and 7 departures and 17 arrivals during the PM peak (17:00-18:00). The majority of trips will be by walking, cycling and public transport with approximately 15% travelling by car (passenger and driver).

The combined trips generated by each element of the development, including the retail, delivery, and servicing vehicular trips resulted in 32 departures and 12 arrivals during the AM peak (08:00-09:00) and 14 departures and 26 arrivals during the PM peak (17:00-18:00). In total, there will be just one vehicle leaving the site every 90 seconds on average during the AM peak and one returning every 90 seconds during the PM peak.

This results in a maximum increase in traffic of 3.3% along the South Circular Road during peaks with the contribution along other links lower again. Overall, it is considered the impact of the development is likely not significant, negative, and long-term but local in nature as the contribution of the development to surrounding traffic volumes is low. Minor increases in delays due to increases in queuing along Cork Street Southbound during the evening peak with traffic increases of less than 1.5% for any of the main junctions local to the site and is considered to have an imperceptible effect on the local network.

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 TII's guidelines which state that impact assessments are recommended where the number of residential units exceed 200 dwellings.

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 with queuing along Cork Street and minor delays at nearby junctions. Mitigation is proposed to address where moderate to slight impacts are predicted. Overall, the impact will be long term but local in nature and not significant.

4.4.2.4 Cumulative Impact

The proposed development site is part of the wider SDRA 12, including Player Wills Phase 1, the planned LDA/DCC Donore Project and Player Wills Phase II which includes lands of the adjacent St. Teresa's Church site.

The traffic generated by the Player Wills Phase 1 (also under the control of the Applicant) site during both construction and operational phases has been considered in combination with the proposed development. In addition, the operation impact of the LDA/DCC Donore Project and Player Wills Phase II, has been considered for the forecast years of 2029 & 2039. The construction impacts of the LDA/DCC Donore Project and Player Wills Phase II and operational impacts in 2024 have not

been considered as these lands are unlikely to be constructed within the same timeframe as the Bailey Gibson & Player Wills sites and therefore are unlikely to be operational within the opening year. Currently Player Wills is estimated to begin construction approximately 3-4 months after Bailey Gibson.

As part of the cumulative assessment the TII National Planning Framework (NPF) traffic growth rates have been adopted. These have been developed in line with the NPF Population and Employment Projections which assume for significant development across the entire Greater Dublin Area accommodating a 25% increase in population within the City by 2040. As part of the development of these traffic growth rates consideration was given to all zoned lands within each Local Authority. It is considered the use of these growth rates is significantly robust and accounts for any additional cumulative impacts, likewise it addresses the estimated growth in transport demand which may arise from the relevant planning applications in the area provided by ABP as part of the pre-planning application information.

The combined light vehicles 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 in Chapter 6 of the EIAR represent the 'worst case' effects.

In summary, the cumulative 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 16.9% 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 framework plan, 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.

4.4.2.5 Mitigation

A number of mitigation measures to alleviate the operational phase impact have been incorporated into the design of the development to reduce any potential negative impact on the local transport network arising from additional traffic generated by the development. The most significant measure is the proposed parking ratio, with 0.26 car parking spaces being provided per residential unit (apartments) and 1 bike space provided per bedroom. This has been included in the results presented, resulting in a significantly lower number of car trips generated.

Based on the site location, availability of alternative modes, proposed on-site mobility services, baseline levels of existing car ownership, national and international guidance, a parking ratio of 0.26 car spaces per apartment unit is proposed for the development. This figure aligns with the current commuting car mode share in the local area, which is 25.9%. Furthermore, for small areas with higher proportions of apartments or rented accommodation within the local area, which are more representative of the subject site, the car mode share is significantly lower, approximately 18-20%. In addition, this ratio is aligned with the DHLGH Apartment Guidelines and will encourage walking, cycling and public transport, whilst also providing for a sustainable level of car storage.

A Construction Traffic Management Plan (CTMP) and Construction Environmental Management Plan (CEMP) submitted under separate covers 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.

In addition, a Mobility Management Plan (MMP) has been developed for the site which will be implemented by the management company during the operational phase and is intended to reduce

the need for car travel. These includes measures to further reduce car trips generated by the developing including use of 10 car spaces for 10 GoCar exclusively for the use of residents, appointment of Mobility Manager, Welcome Travel Pack, incentivised use of public transport and/or GoCar.

4.4.3 Residual Impact Assessment

The CTMP will help alleviate the impact of the development construction traffic particularly during the peak hours. It will also help ensure that the standard of the surrounding public network is maintained and free from dust and dirt from construction traffic. With the CTMP in place the impact will be not significant directly and cumulatively.

The MMP will help further reduce the car traffic, from an already low base, generated by the development. The residual impact of the development alone will be not significant directly and slight cumulatively.

4.4.4 Monitoring

The implementation of the CTMP will be monitored by the Contractor and will be included in the Contractor's appointment. The Site Manager will monitor the CTMP and provide progress reports through the construction programme. The MMP will be monitored by the appointed Mobility Manager. Post Occupation surveys will be undertaken as part of the MMP to monitor the effectiveness of the measures included.

4.5 Material Assets: Built Services

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

4.5.1 Existing Environment

4.5.1.1 Water Supply

There is an existing 110MOPVC watermain within Rehoboth Place to the west of the site. There are two number 6inch cast iron watermains located in the South Circular Road to the south of the site. There is also an 18inch cast iron watermain located in the South Circular Road. There is a 6inch cast iron watermain located in Donore Avenue to the east of the development site. There is a 110mm MOPVC watermain in Rehoboth Avenue/Rehoboth Place to the west of the development site. There is an existing watermain which extends through the proposed multi-sport playing pitch site and has a service connection to the Coombe Hospital. This watermain also serves the remaining blocks of St. Teresa's Gardens flats which have planning permission to be demolished. There are four existing connections from the development to the public watermains to the south, west and northeast of the site.

4.5.1.2 Waste Water Drainage

A 1060mm brick combined sewer is located within the South Circular Road with a flow direction of west to east, parallel to the southern boundary of the site. A 150mm diameter combined sewer is located in Rehoboth Place to the west of the site. The southwest corner of the proposed development site which is the site of the former Bailey Gibson salvage yard, includes a combined sewer connection to each of these public sewers. There is a combined sewer located within Donore Avenue, to the east of the Player Wills site and the proposed multi-sport playing pitch. This sewer is a 300mm diameter vitrified clay sewer up to the southeast corner of St. Teresa's church. Here, it increases in size to a 990 Brick sewer culvert. It increases again to a 1020 culvert further north along Donore Avenue as it flows towards Cork St. There is an existing 225mm diameter concrete combined sewer which extends from the Coombe hospital site, through the proposed multi-sport playing pitch site and connects to the combined sewer culvert in Donore Avenue.

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

Existing dry weather design foul flows from the site are not significant. However, in storm events, unattenuated and untreated surface water discharge to the foul/combined sewer system can contribute to inundation of this system and untreated discharge to open water bodies through combined sewer overflows as well as increased flows being sent to the Ringsend WwTP

4.5.1.3 Surface Water Drainage

The natural surface level falls across the site from south-west to north-east. There is a 1050mm brick combined sewer located within the South Circular Road to the south of the site and a 150mm diameter combined sewer is located within Rehoboth Place to the west of the site. There is also an existing 1050mm public surface water culvert located in Donore Avenue to the east of the 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. It flows north along Donore Avenue before turning east to the rear of the properties on Ebenezer Terrace. This culvert is historically known as the Abbey Stream, a distributary from the original river Poddle. It once traversed the St. Teresa's Gardens SDRA, entering at the south corner of St. Teresa's church, but was diverted to continue beneath Donore Avenue to the east of the church many years ago. Due to many drainage works which have occurred upstream, this culvert now

carries the main river Poddle flow. There is a 375mm diameter stormwater pipe which traverses the Multi-Sport Playing Pitch site, entering from the Coombe hospital in the south west and travelling north east before discharging to the stormwater culvert in Donore Avenue.

Currently, all positively drained surface water from the Bailey Gibson salvage yard discharges to the combined sewers located in Rehoboth Place and the South Circular Road. There are no sustainable drainage systems or flow control devices in place at the site. As noted earlier, 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. The remaining St. Teresa's Gardens Flats have surface water drainage connections to the culvert in Donore Avenue but there are no flow control or surface water treatment systems in place. The proposed Players Park and remaining area of the Multi-Sport Playing Pitch are undeveloped fields with no positive drainage to the public surface water network.

4.5.1.4 Gas Supply

There is an existing 180mm 25mBar gas pipe located in the South Circular Road to the south of the site and an existing 125mm 25mBar gas pipe located in Donore Avenue.

4.5.1.5 Telecommunications

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

4.5.2 Impact Assessment

4.5.2.1 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.

4.5.2.2 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. In making the new watermain connections to the existing public water supply system and the diverted connection from the Coombe hospital to the replacement watermain, there is the potential for a disruption to water supply in the area. This disruption would be brief, localised between adjacent sluice valves and not significant. The Coombe hospital has other water supply connections from watermains in Cork St which will ensure continuity of supply while the watermain diversion crossover connection is constructed. Therefore, impact on the Coombe Hospital water supply will be neutral, brief and imperceptible.

Wastewater Drainage

Wastewater discharge during demolition and construction shall be via the existing connections at the development site. 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.

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 long term 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.

4.5.2.3 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

Due to the presence of low permeability boulder clay soils on the site, all areas outside of soft landscaped zones will be positively drained and finally discharge 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.

4.5.2.4 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. 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. However, Irish Water have advised through two subsequent Pre-Connection Enquiries for future proposed developments directly adjacent to the development site, that a watermain extensions and upgrades will be required within both Donore Avenue and the South Circular Road. These watermain upgrades will be designed by Irish Water and constructed by Irish Water's regional contractor. During the construction works for the new watermain, there will be some disruption of traffic flows on Donore Avenue and the South Circular Road. Hence, it can be concluded that the cumulative effects are negative, not significant, local and short term.

Wastewater Drainage

The development site forms part of SDRA 12. There is a possibility that adjacent development sites, in combination with the proposed development, could impact the capacity of the local foul water drainage network. However, Irish Water have already reviewed the proposed foul flow calculations for the proposed development, the permitted Player Wills development and the proposed LDA Donore Project development within the SDRA and confirmed that those developments can be catered for without network upgrades in the area. 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 for all proposed developments, will result in a cumulative increase in flows within the surface water network due to the gradual removal of those flows from the combined sewerage network 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 effect on the surface water infrastructure is neutral, imperceptible and long term. In the absence of mitigation measures to treat and limit the rate of discharge of stormwater, the effect on the public surface water drainage network would be negative, moderate, 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.

4.5.3 Mitigation

4.5.3.1 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.

4.5.3.2 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.

4.5.4 Residual Impact Assessment

4.5.4.1 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, 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.

4.5.4.2 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.

4.5.4.3 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.

4.5.5 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.

4.6 Land & Soils

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

4.6.1 Existing Environment

The site is located approximately 2.4 km southwest of Dublin city centre and covers c. 4.74 hectares (ha). It is accessed from the South Circular Road along the southern site. The site rises up slightly from South Circular Road but is generally flat with a slight gradient from west to east. The DCC lands are also flat and are currently unused. They were previously used as football pitches. The Bailey Gibson site includes 10 buildings including warehousing and offices, a small portion of open green area that is part of the Player Wills site owned by the Applicant which is to be included in the 'Players Park' (0.048ha) and DCC lands to the east and northeast of the Bailey Gibson site which are currently open space but will be developed for a multi-purpose play pitch, a public park and internal street network.

The Teagasc subsoils map indicates the site is covered by Made Ground underlain by Limestone till (TLs). The 2019 site investigations established that the open paved areas at the Bailey Gibson site are underlain by Made Ground comprising dark brown gravelly clay with occasional red brick fragments, ranging in thickness from c. 0.9 -1.2m.

The underlying Natural Ground comprises greyish brown silty gravelly CLAY with black angular limestone gravel, which is consistent with the Teagasc soils descriptions for glacial tills. The subsoils range in thickness from 3.5-4.5m below ground level (bgl) and is thicker in the east of the site.

While the soils and subsoils are generally uncontaminated across most of the site, the investigations established the presence of hydrocarbon contamination, which the laboratory analysis has identified as kerosene, between c0-2m below ground level across an area of c800m^2 around the above ground oil storage tank in the north-east of the site. It extends c 15m to the east and 25m to the north and south of the oil tank.

The 2020 site investigations in the proposed Players Park area east of Bailey Gibson and north east in the former flats complex established that these areas were also underlain by Made Ground comprising dark brown gravelly clay with occasional red brick fragments, ranging in thickness from c. 0.9 -1.8m.

The underlying Natural Ground comprises greyish brown silty gravelly CLAY with black angular limestone gravel, which is consistent with the Teagasc soil descriptions for glacial tills. The subsoils range in thickness from 5-6.5m below ground level (bgl) and is thicker in the east of the former Flats complex site.

Ninety five 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. The S4UL limits were only exceeded in three of the ninety five samples and were confined to the area where hydrocarbon contamination was identified in the upper 2m were in open areas close to the 10,000 litre above ground kerosene oil storage tank.

A further investigation comprising excavation of slit trenches and the collection of eight additional soil samples was completed in June 2019 to delineate the extent of hydrocarbon contamination in that area.

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.

4.6.2 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. 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.

4.6.2.2 Demolition Phase

During the demolition phase c. 2,641m^3 of soils, 30,137m^3 of surface paving and below paving granular fill, 10,405m3 of made ground and 14,209m^3 of subsoils. The demolition works will have a neutral, insignificant, temporary effect at the local/site scale on the soils and geology beneath the site.

4.6.2.3 Construction Phase

A construction compound will be located on the lands to the east of the Bailey Gibson site on lands that will form part of the Players Park. 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 negligible amounts of bedrock. The total volume of soils and subsoil material to be removed is estimated at c. 16,840m^3.

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

4.6.2.4 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.

4.6.2.5 Cumulative Impact

Nineteen 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 3% of the subsoil and 0.4% of the bedrock 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 Player Wills lands includes for the redevelopment of the local area including the Bailey Gibson site. These include proposed developments at the former Player Wills site to the east of the site, and redevelopment of lands at the Coombe Hospital to the northwest 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.

4.6.3 Mitigation

The proposed design involves the removal of soils and very small amounts of bedrock in the east 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.

4.6.3.1 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.

4.6.3.2 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.

4.6.4 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.

4.6.5 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 Water & Hydrology

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

4.7.1 Existing Environment

The site is located approximately 2.4km southwest of Dublin city centre and covers c. 4.74 hectares (ha). It is accessed from the South Circular Road. The site rises up slightly from South Circular Road but is generally flat with a slight gradient from west to east. The DCC lands are also flat and are currently unused. They were previously used as football pitches. The Bailey Gibson site includes 10 buildings including warehousing and offices, a small portion of open green area that is part of the Player Wills site owned by the Applicant which is to be included in the 'Players Park' (0.048ha) and DCC lands to the east and northeast of the Bailey Gibson site which are currently open space but will be developed for a multi-purpose play pitch, a public park and internal street network.

Currently run-off in unpaved areas of the site percolates to ground. There are no public surface water drains located in either the South Circular Road or Rehoboth Place, which abut the Bailey Gibson site to the south and west. 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. A site specific flood risk assessment was prepared by Barret Mahony Consulting Engineers (BMCE) which concluded that there is no risk of flooding affecting the Bailey Gibson and Players Park site, so it is possible to develop the site within Flood Zone C. The multi-sport playing pitch is in Flood Zone A, but is classified as a Water Compatible Development.

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 west to east across the site. Samples of the groundwater were collected from six wells installed across the site. Electrical conductivity, and chloride exceeded the IGV in BH-2, while the sulphate exceeded the GTV. Potassium exceeded the IGV in BH3 and 4. Ammonium exceeded the GTV in BH-8. All the remaining parameters were below the GTV or IGV where established.

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

4.7.2 Impact Assessment

4.7.2.1 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.

4.7.2.2 Demolition Phase

During the demolition phase c.2,641m^3 of soils, 30,137m^3 of surface paving and below paving granular fill, 10,405m^3 of made ground and 14,209m^3 of subsoils will be removed from the site. Given the proposed excavation depth there will be negligible volumes of bedrock excavated. The

excavations will encounter the water table and dewatering will be required. This will result in a local lowering (c.2m) of the water table in the immediate vicinity of the basement excavation footprint. Even during the dewatering process the water table will rebound a short distance from the excavation. The water from the excavation dewatering programme is expected to be clean. The water will be discharged to the Irish Water storm sewer that will be regulated by a trade effluent discharge license. The dewatering will therefore result in a slight, negative, temporary effect on the water table around the excavation footprint. 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

4.7.2.3 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.3.4-4.15 bgl to form basement levels. This will result in the excavation and removal of c. 16,8403 of soils subsoils and negligible amounts of 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.

4.7.2.4 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.

4.7.2.5 Cumulative Impact

Nineteen 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 3% 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 Bailey Gibson 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.

4.7.3 Mitigation

The proposed design involves the removal of soils and negligible amounts of bedrock which will require dewatering only on the east 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.

4.7.3.1 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.

4.7.3.2 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.

4.7.4 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.

4.7.5 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.

4.8 Biodiversity

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

4.8.1 Existing Environment

With the exception of the south western corner of the site, which abuts South Circular Road (a former community garden known locally as the South Circular Road Garden), the Bailey Gibson site almost entirely comprises buildings and artificial surfaces. It is completely built up, with a mix of buildings, mainly warehouses and storage sheds. Apart from small patches of ruderal plants and some isolated pockets of scrub and small trees there are no vegetated habitats of any description on the site. Within the former community garden there are a number of trees and shrubs, including sycamore and cherry. Although there are numerous buildings on the site, the bat surveys undertaken recorded no evidence of any use of the site by roosting bats, and it concluded that there are virtually no features suitable for use by roosting bats within the proposed development site. Similarly, there is no evidence of nesting birds with the exception of small numbers of feral pigeons on the site. There is no evidence of nesting gulls on the roofs of any of the buildings on the site, and other species such as swallow and swift are not nesting on the site.

Although there are numerous buildings on the site, the bat surveys undertaken recorded no evidence of any use of the site by roosting bats, and it concluded that there are virtually no features suitable for use by roosting bats within the proposed development site. Similarly, there is no evidence of nesting birds with the exception of small numbers of feral pigeons on the site. There is no evidence of nesting gulls on the roofs of any of the buildings on the site, and other species such as swallow and swift are not nesting on the site.

With the exception of the community garden, parts of which may be of some very limited value to common nesting birds, and the recolonising ground within the Dublin City Council lands, the proposed development site contains no features of any ecological significance.

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

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 130m to the south at its closest point.

Overall the site is entirely unsuited to use by any protected fauna, other than, potentially, small numbers of nesting birds in the former South Circular Road Garden. 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.5.0km to the east; North Dublin Bay SAC (site code 000206), c.7.7km to the north east; South Dublin Bay and River Tolka Estuary SPA (site code 004024), c.4.9km to the east; and North Bull Island SPA (site code 004006), c.7.7km 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 25m from the Bailey Gibson site, this section of the pNHA is located on the White Heather Industrial Estate. The Grand Canal itself is approximately 130m to the south.

4.8.2 Impact Assessment

4.8.2.1 Do Nothing

The proposed development site (including Bailey Gibson, the Dublin City Council-owned lands and part of Player Wills) is of no ecological importance, and with the exception of the community garden and the Boys Brigade lands, the site is virtually entirely hardstanding, buildings or heavily disturbed. 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. If left unmanaged the Dublin City Council-owned lands 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, or in accordance with the existing grant of planning permission (ABP Reg. Ref.: 307221) it is reasonable to expect that any potential impacts would be similar to those predicted to arise as a result of the proposed development.

4.8.2.2 Demolition & Construction Phase

The proposed development will require the removal or significant alteration of the existing hard-standing areas / buildings as well small areas of scrub and the former community garden and their replacement with the mixed-use development and significant landscaping.

These areas are of no ecological value and there will be no significant effects as a result of this loss.

The landscaping and open space proposed include a new park (Players Park) as well as St. Teresa's Verdant Boulevard and St. Teresa's Playground. These two areas, to be provided on either side of the new multi-sport playing pitch, include biodiverse landscape planting.

No bat roosts were recorded on the proposed development site. 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, as none were recorded on the site and there is no suitable habitat.

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

There will be a minor reduction in vegetation cover for nesting birds as a result of the proposed development.

There will not be any impacts on water related to biodiversity.

4.8.2.3 Operational Phase

Operational impacts related to surface or ground water management, or flooding, in the context of biodiversity, as a result of the proposed development, will not be significant.

4.8.2.4 Cumulative Impact

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

4.8.3 Mitigation

The proposed development incorporates a comprehensive landscape design, with biodiversity-focussed planting, including pollinator-friendly planting appropriate to the site. 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, both in the proposed parks and within the development in general.

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

4.8.3.1 Demolition & Construction Phases

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, and the planting has been designed with a view to maximising the new biodiversity resource at the proposed development site. The proposed planting/landscaping strategy (includes a mix of appropriate species, incorporating species that will attract feeding invertebrates, including moths, butterflies and bees. It takes full account of the All-Ireland Pollinator Plan 2021 – 2025.

The proposed planting schedule as set out in the Landscape Design Statement contains no invasive species and none will be introduced, either deliberately or inadvertently, to the proposed development site. Further, over 70% of the roof area within the proposed Bailey Gibson development will be green roofs, and the SuDS features will be similarly biodiverse.

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 or in tall trees if appropriate, at least 3-5m above the ground.

4.8.3.2 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.

4.8.4 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 this 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.

4.8.5 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. This primarily relates to the area located within the South Circular Road Community Garden, but equally applies to any vegetated areas. 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.

4.9 Noise & Vibration

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

4.9.1 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.

4.9.2 Impact Assessment

4.9.2.1 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.

4.9.2.2 Demolition and 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***.

4.9.2.3 Operational Phase

The primary sources of outward noise in the operational context are long term and will comprise building services plant noise 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, not significant 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. There is a loading bay at street level serving retail and café units on the west side of Block BG2. This location is well screened from off-site noise sensitive locations by the development buildings themselves. Best practice measures in relation to minimising delivery noise to the noise-sensitive locations within the site are discussed in the Mitigation section of the Chapter 11.

Additional Traffic on Public Roads

in order 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	Comment
Traffic on Public Roads	Neutral, not imperceptible, permanent	
Delivery Activity	Negative, slight and permanent.	
Building Services Plant	Neutral, not significant, permanent	

Table 15 Noise Impact Assessment

4.9.2.4 Cumulative Impact

If the Bailey Gibson and Player Wills developments were constructed at the same time, the cumulative effect of construction noise has found that there is likely to be a significant noise impact within a 40m zone around the boundary of the sites. Outside the 40m zone of influence, the impact of construction noise is not significant.

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.

4.9.3 Mitigation

4.9.3.1 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.

4.9.3.2 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.

4.9.4 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 low to medium; 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.

4.9.5 Monitoring

During the construction phase, noise and vibration monitoring shall 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.

4.10 Air Quality & Climate

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

4.10.1 Existing Environment

In terms of the existing air quality environment, baseline data and data available from similar environments indicates that levels of nitrogen dioxide, particulate matter less than 10 microns and less than 2.5 microns 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 57.7 Mt CO_2eq in 2020. This is 6.73 Mt CO_2eq higher than Ireland's annual target for emissions in 2020. The EPA predict that Ireland can achieve compliance with the GHG targets over the period 2021 – 2030 provided full implementation of the Climate Action Plan and use of the flexibilities available.

4.10.2 Impact Assessment

4.10.2.1 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.

4.10.2.2 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 the Coombe Hospital to the north-west 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 medium 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.

4.10.2.3 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 and climate 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, localised, neutral and long-term impact on air quality and climate.

The proposed development has been designed to reduce the impact on climate where possible during operation. 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.

4.10.2.4 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, and Player Wills development, together with future planned developments as outlined in the SRDA 12 Development Framework. It was predicted that there will be a neutral and imperceptible impact to air quality and climate during the operation of the proposed development.

4.10.3 Mitigation

4.10.3.1 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.

4.10.3.2 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.

4.10.4 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, neutral and long-term.

4.10.5 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.

4.11 Cultural Heritage - Archaeology

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

4.11.1 Existing Environment

The eastern end 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 10 recorded monuments within a 500m study area, of which watercourses form the majority. There have been 36 previous archaeological investigations within the study area, of the eight which encountered archaeological features or deposits they predominately consisted of evidence of medieval and post-medieval watercourses. One previous archaeological investigation was carried out within the proposed compound area. This comprised test-trenching adjacent to the zone of archaeological potential for Dublin city (DU018-020; Figure 13.2). Three trenches were excavated revealing a stratigraphy of modern tarmac and rubble to a depth of c. 0.5m below ground level (bgl), grey brown silt with sherds of 19th/20th-century glazed china to a depth of c. 2m bgl, and a layer of grey marl subsoil underlying this (Licence 06E0994, Walsh 2006, Bennett 2006:644). No archaeological deposits, including any evidence for the city watercourse, was identified.

The proposed development is situated to the immediate east of Dolphins Barn and throughout the post medieval period was occupied by a number of different structures including houses, a nunnery, a school, and factories. The field inspection and review of the aerial photography did not identify any features of archaeological interest. No cultural heritage sites have been identified within the study area. Nothing of archaeological significance was identified during the monitoring of the geotechnical investigation trenches.

4.11.2 Impact Assessment

4.11.2.1 Do Nothing

If the proposed development were not to proceed there would be no negative impact on the archaeological and cultural heritage resource. However, as development has been permitted on site (An Bord Pleanála Ref: 307221-20), the potential impacts on any potential archaeological deposits at the site would be consistent with the identified impacts set out in this assessment.

4.11.2.2 Demolition Phase

No upstanding archaeological sites 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 Bailey Gibson Factory will be subject to partial demolition during this phase. Detailed impacted assessment relating to this is included in Chapter 14 of this EIAR.

4.11.2.3 Construction Phase

Previous archaeological investigations at the northern part of the proposed development area have shown that evidence for the medieval Abbey Stream survives from c. 0.6m below ground level in this area. Evidence for the laundry diversion watercourse directly to the southwest of the development area was found at c.1.85m below ground level. The proposed development in this location includes the construction of a multi-purpose play pitch and public boulevard connecting the pitch to the main residential development to the south. Potential impacts to medieval and post-medieval watercourses in these areas may result from site strip and levelling and excavations associated with utility services trenches. Impacts are likely to be permanent, direct and moderate negative due to the proposed ground disturbances.

Evidence for original Bailey Gibson Factory (IH27) and ropewalk (IH28) may survive below the existing ground surface within the southern part of the proposed development area. Impacts in this area may result from site strip and levelling and excavations associated with construction of the proposed residential units and utility services trenches. Impacts are likely to be permanent, direct and significant negative due to the proposed ground disturbances.

There are no predicted impacts to Tramway IH 40 located along South Circular Road

Given the disturbance in the southern part of the site from 19th century and modern industrial and residential development, there is low potential for archaeological remains pre-dating the 18th century to survive within this part of the site. However, should there be previously unknown archaeological remains present beneath the existing ground level, prior to mitigation, there may be a permanent, direct moderate to significant negative impact due to the proposed ground disturbances.

4.11.2.4 Operational Phase

No upstanding archaeological sites have been identified within or surrounding the proposed development site. Therefore, there will be no direct or indirect impacts on any known archaeological sites or monuments or cultural heritage assets during the operational phase of the proposed development.

4.11.2.5 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.

4.11.3 Mitigation

4.11.3.1 Demolition & Construction Phases

The existing Bailey Gibson Factory will be subject to partial demolition and redevelopment. Detailed mitigation measures relating to this are included in Chapter 14, of this EIAR.

All ground disturbances associated with the proposed development, will be monitored by a suitably qualified archaeologist under licence from the National Monuments Service of the Department of Housing, Local Government and Heritage.

Full provision will be made by the applicant, 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 (DoHLGH).

4.11.4 Residual Impact Assessment

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

4.11.5 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.

4.12 Cultural Heritage – Built Environment

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

4.12.1 Existing Environment

The subject site is a modern industrial site, comprising a number of 20th century warehouse structures. Some earlier structures survive on site, however these structures have been significantly altered and retain little or no original fabric. None of the structures on the subject site are included on the Dublin City Council Record of Protected Structures. None of the buildings on the site are included on the National Inventory of Architectural Heritage survey of this area.

Protected Structures within the wider vicinity of the subject site include the Our Lady of Dolours Church, South Circular Road (RPS Reg. Ref: 1849), the former Player Wills Factory, South Circular Road (RPS Reg. Ref. 8796) 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 zoned Z2 Residential Conservation Areas.

One building on site appears to survive from the 19th century, referred to as Block D. This structure retains some features of historic interest, including the Gibbsian stone doorway and encaustic floor tiles to the front entrance hall.

4.12.2 Impact Assessment

4.12.2.1 Do Nothing

Block D, which contains some architectural features of interest, is presently vacant and not in use. The building is not in good condition and the upper floor is inaccessible. It is likely that its condition will continue to deteriorate in a do-nothing scenario, causing damage to the features of interest.

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.

4.12.2.2 Demolition Phase

The demolition of the structures on site will result in the loss of historic features of interest in Block D.

4.12.2.3 Construction Phase

There are no direct or indirect impacts on the built heritage during the construction phase.

4.12.2.4 Operational Phase

There are potential visual impacts on the built heritage in the wider setting arising from the completed redevelopment.

4.12.2.5 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.

4.13 Mitigation

Historic features of interest from Block D will be salvaged.

Visual impact assessment has informed the design of the proposed new development so as to minimize potential visual impact of the development on built heritage within the wider area. This has resulted in the blocks to the perimeter of the site being low-rise and of a material palette to match the character of the existing residential conservation area.

4.13.1 Residual Impact Assessment

Following the implementation of the mitigation measures, the proposed development will have no likely significant impacts on built heritage.

4.13.2 Monitoring

No monitoring works related to Built Heritage are required.

4.14 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	Table 16 - Incorporated Design Mitigation
Population & Human Health (Ch. 4)	• 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 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
Landscape & Visual (Ch. 5)	None Proposed
Material Assets: Traffic & Transport (Ch. 6)	• Parking ratio of 0.26 car parking spaces and 1 bicycle space per bedroom 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.
Material Assets: Built Services (Ch. 7)	• The design has been prepared based on relevant codes of practice, design guidance and in consultation with relevant local and statutory authorities to ensure best practice design, considering the effect on local and wider network for water supply, foul and surface water drainage, gas supply, electrical network, and telecommunication network. • The development will be constructed to the Part L Near Zero Energy Building (NZEB) standard which will result in an improved thermal performance along with the incorporation of renewable technology, the demand on infrastructure (gas and electricity) will thus be reduced.
Land & Soils (Ch. 8)	• The proposed design involves the removal of soils and small amounts of bedrock in the eastern 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.

Aspect	Table 16 - Incorporated Design Mitigation
Water & Hydrology (Ch. 9)	• The proposed design involves the removal of soils and bedrock which will require a small amount of dewatering on the east of the site where the basements are 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.
Biodiversity (Flora & Fauna) (Ch. 10)	• The proposed development incorporates a comprehensive landscape design[2], with biodiversity-focussed planting (refer to Chapter 5 and the Landscape Design Statement that accompanies the application). 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, both in the proposed parks and within the development in general.
Noise & Vibration (Ch. 11)	• None Proposed
Air Quality & Climate (Ch. 12)	• The Energy and Sustainability Report prepared O'Connor Sutton Cronin (OCSC) submitted under separate cover with this planning application details a number of design measures that have been considered in order to reduce the impact on climate wherever possible. The Mobility Management Plan prepared by Systra details integrated initiatives to promote and encourage sustainable travel methods by residents thereby reducing travel related impacts to climate. Such measures included in the proposed development to reduce the impact to climate are: - Achieving as high as possible BER rating (A2/A3); - The development will be in compliance with the requirements of the Near Zero Energy Building (NZEB) Standards; - A renewable energy rating (RER) of 20% will be achieved to comply with Part L (2021) of the NZEB regulations; - Minimising heat loss where possible; - Use of natural ventilation where possible; - Use of heat pumps; - Use of PV solar panels; - Use of energy efficient lighting and maximising natural daylight where possible; - Provision of electric car charging points; - Provision of increased bicycle parking; - Reduction in maximum DCC car parking spaces to promote a modal shift in transport uses; - Accessible public transport links to reduce dependence on private cars. • In addition, WELL and BREEAM certification is being sought in relation to the proposed development with every effort made to achieve a BREEAM Excellent certification. BREEAM is a sustainability assessment for buildings which promotes climate resilience and more sustainable environments. • Adequate attenuation and drainage have been incorporated into the design of the development to avoid potential flooding impacts as a result of increased rainfall events in future years.

[2] By Niall Montgomery & Partners (NMP)

Aspect	Table 16 - Incorporated Design Mitigation
Archaeological & Cultural Heritage (Ch. 13)	• None Proposed.
Built Heritage (Ch. 14)	• Discussions about the proposal were held with the Dublin City Council conservation office at an early design development stage. • Visual impact assessments have informed the design of the footprint, massing and architecture of the proposed redevelopment, so as to minimise visual impact of the proposed new blocks on the neighbouring residential conservation area and any Protected Structures within the wider context of the site.

Table 16 Incorporated Design Mitigation

Aspect	Table 17 - Demolition & Construction Mitigation Measures
Population & Human Health (Ch. 4)	• A Construction and Environmental Management Plan (CEMP) and Construction & Demolition & Waste Management Plan (CDWMP) have been prepared and submitted with this application under separate cover. 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 health and safety issues from the design stage through to the construction phases of the development.
Landscape & Visual (Ch. 5)	• The demolition and construction phases of development will be completed expediently through careful construction planning and management prior to commencing on site and throughout the construction phase • The contractors' compound, including site offices and parking, will be located within the site and away from nearby houses. • Perimeter hoardings will be installed along the site boundaries. • A construction materials and waste storage area will be located within the proposed development site, screened from public view by intervening buildings as well as perimeter hoardings. • The tower cranes will be the tallest and most visible elements, but are temporary structures for the duration of construction only. These will be 'parked' in an orderly manner when not in use and removed from the site at the earliest opportunity. • Plant machinery, when not in use, these will be parked in compound areas and/or away from the site perimeter in order to minimise visibility outside of working hours. • A vehicle management strategy will be implemented, to minimise visual impacts and other impacts on neighbouring streets and residents, including the defined haul routes and times of operation; consolidation of vehicle movements for deliveries to site or removal of materials from site; and staggering of vehicle movements to minimise or avoid queuing on neighbouring streets.
Material Assets: Traffic & Transport (Ch. 6)	• A preliminary Construction Traffic Management Plan (CTMP) and Construction Environmental Management Plan (CEMP) including a plan for scheduling and management of construction traffic have been submitted under separate cover. The implementation and monitoring of the CTMP will be managed by the appointed Construction manager. • The CTMP measures include the following: - Construction Staff encouraged to arrive before 7:30am and leave after 18:00pm and outside of school drop off hours; - Limited parking on site for staff with majority required to arrive by sustainable means; - Parking provided to prevent overspill onto surrounding network; - Appointment of Construction Manager/Community Liaison Officer; - Construction Travel Plan to be developed by appointed Contractor; - Bike parking, storage and drying areas provided on site; - Agreed haulage routes along designated HGV routes; - Wheel wash facilities;

Aspect	Table 17 - Demolition & Construction Mitigation Measures
	- Road cleaning and sweeping along section of South Circular Road adjacent to the site; - Construction signage at all entrances and exits; - HGVs carrying soil to be fully sheeted; - HGVs inspected for dirt and mud before exiting onto public road network; - Control and timing of deliveries where possible; - Entrances and exits manned by flag men during deliveries.
Material Assets: Built Services (Ch. 7)	• A Construction and Environmental Management Plan (CEMP) have been submitted under separate cover and includes a range of integrated control measures and associated management activities to mitigate the effect of the proposed development on-site construction activities. • 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 and be tested in accordance with Irish Water Code of Practice for Water Infrastructure. • Pressure testing prior to connection to public network to prevent the ingress of ground water. • Protection in place of all underground services for which diversions are not required. • Any leakage from foul sewers will be cordoned off and contaminated effluent and soil collect ed and disposed of by a licenced contractor. • 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.
Land & Soils (Ch. 8)	• Best practice measures will be applied in the demolition and construction stage to minimise impacts on soils and geology. • Removal of all potentially contaminating liquids in the existing site buildings and their disposal in accordance with the requirements identified in the CEMP. • 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 in accordance with the CEMP, which is included under separate cover. • 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 in accordance with the CEMP, which is included under separate cover. • Excavation and the stripping soil/made ground undertaken only when necessary to prevent sediment run off and leaching of nutrients from soils

Aspect	Table 17 - Demolition & Construction Mitigation Measures
	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: - All batching and mixing activities will be located in contained areas; - Pouring of cementitious materials will be carried out where possible in the dry; - Pumped concrete will be monitored to ensure no accidental discharge; - Excess concrete will not be discharged to ground; - There will be no hosing into the ground surface of spills of concrete, cement, grout or similar materials; • Washout from mixing plant or concrete trucks will not be permitted on the site.
Water & Hydrology (Ch. 9	• Standard best practice measures including CIRIA, (2001), Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors, (C532) will be applied to minimise potential impacts on surface water hydrology and groundwater. • 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 CEMP requirements, which is included under separate cover. • All construction and demolition plant will be regularly checked to ensure there are no leaks or drips of oils to ground. Plant maintenance will not be undertaken on site. All fuel oils for plant will be stored in bunded storage areas in the site compound. • All construction materials with the potential to impact on water will be stored in secure bunded areas in the construction compound or at designated storage areas on the construction site footprint. Drip trays will be provided for drum storage. • All waste containers (including all ancillary equipment such as vent pipes and refuelling hoses) will be stored within a secondary containment system. • Excavation and the stripping of soils will not be undertaken until absolutely necessary to prevent sediment run off and leaching of nutrients from soils into drains or to groundwater. • 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 Environmental Management Plan submitted under separate cover. • Excavated soils will be stockpiled to minimise the effects of weathering. Care will be taken in re-working this material to minimise dust generation, groundwater infiltration and generation of runoff. • The following mitigation measures will be used to control the interaction of wash down water from concrete and cementitious material with water - All batching and mixing activities will be located in contained areas; - Pouring of cementitious materials will be carried out where possible in dry weather conditions;

Aspect	Table 17 - Demolition & Construction Mitigation Measures
	- Pumped concrete will be monitored to ensure no accidental discharge; - Excess concrete will not be discharged to ground; - There will be no hosing into the ground surface of spills of concrete, cement, grout or similar materials; - Washout from mixing plant or concrete trucks will not be permitted on the 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 (Flora & Fauna) (Ch. 10)	• No designated conservation areas will be impacted in any way by the proposed development and no mitigation measures are required in this regard. • 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 are no roosting bats on the site, however, six bat boxes and three triple cavity swift boxes will be installed under the supervision of a suitably experienced ecologist. • There will be no surface water related impacts on biodiversity as a result of the proposed development
Noise & Vibration (Ch. 11)	• A Construction Noise and Vibration Management Plan, such as the example document included with this EIAR in Appendix 11.1, will be prepared by the appointed contractor in advance of construction. • 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, to comply with the EC Directive on Outdoor Noise Emissions 2000/14/EC. • Screening. • 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 (Ch. 12)	• The pro-active control of fugitive dust to ensure the prevention of significant emissions. A dust management plan will be implemented on site, included in Appendix 12.2 of Volume III of this EIAR. These measures will be incorporated into the overall Construction Environmental Management Plan (CEMP) for the site. • The specification and circulation of a dust management plan and development means by which performance of the plan can be monitored and assessed.

Aspect	Table 17 - Demolition & Construction Mitigation Measures
	• 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.
Archaeological & Cultural Heritage (Ch. 13)	• All ground disturbances associated with the proposed development, will be monitored by a suitably qualified archaeologist under licence from the National Monuments Service of the Department of Housing, Local Government and Heritage. • Full provision will be made by the applicant, 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 (DoHLGH).
Built Heritage (Ch. 14)	• Significant architectural features will be carefully removed and salvaged during the demolition phase from block D. A method statement for the salvaging of the historic fabric included in Volume III of the EIAR (Appendix 14.5). • Fabric of architectural or historic interest from Block D will be salvaged • A full photographic and drawn record has been made. See Volume III of the EIAR (Appendix 14.3 and 14.4) • Visual impact assessments have been carried out at design stage to minimise visual impact on the character of the building and of the wider area.

Table 17 Demolition & Construction Phase Mitigation Measures

Aspect	Table 18 - Operational Phase Mitigation Measures
Population & Human Health (Ch. 4)	• None proposed.
Landscape & Visual (Ch. 5)	• 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 SDRA 12. The design approach also seeks to satisfy the guiding principles of good urban design contained in section 3.2 of the Urban Development and Building Height Guidelines, and also the development standards contained in Chapter 16 of the Development Plan. • The design of the proposed development has also evolved from the previously permitted scheme for the Bailey Gibson site under ABP Ref. TA29S.307221, particularly with regard to the scale and height of the proposed buildings. Key changes are described below, while a more detailed account of the changes can be found in Section 4.8 of the Architectural Design Statement that accompanies the planning application. • A sensitive approach has been taken to scale, 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. • The layout adopts a street hierarchy, some with slow speeds, shared surfaces and pedestrian priority or home zones. • 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 (Ch. 6)	• Implementation of a Mobility Management Plan (MMP) submitted under separate cover which is intended to reduce the need for car travel.
Material Assets: Built Services (Ch. 7)	• 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 Sustainable Drainage Systems (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 on the existing gas network will be low due to NZEB energy efficient design, thermal performance of the buildings and use of renewable technology. The apartment system is proposed to be exhaust air heat pump which does not require gas. 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. • Design and construction of required telecommunication services infrastructure and electrical services in accordance with the relevant guidelines.
Land & Soils (Ch. 8)	• Sustainable Drainage Systems (SuDS) measures are incorporated into the developed surface water management system. The SUDS Strategy Plan was prepared by Barret Mahony Consulting Engineers (BMCE) and the details are shown on BMCE Drawings No C-1021 and C-1022. These

Aspect	Table 18 - Operational Phase Mitigation Measures
	include both intensive and extensive green roofs, blue roofs, interconnected tree pits, attenuation storage beneath each of the building blocks and oil interceptors in basement parking areas, to prevent the discharge of oily run-off to ground or surface water courses. • Much 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. • Soft landscaping will incorporate clean top soils and planting which will enhance the quality of the soil environment. The details are presented in the Landscape suite of drawings that accompany this application under separate cover. • The Player Park to the east of the Bailey Gibson site and the development of the Sports pitches in the northeast of the site will also enhance the quality of the operational site.
Water & Hydrology (Ch. 9	• Sustainable Drainage Systems (SuDS) measures are incorporated into the developed surface water management system. These include attenuation for stormwater beneath each building block, both intensive and extensive green roofs, blue roofs, interconnected tree pits, attenuation storage and oil interceptors in basement parking areas to prevent the discharge of oily run-off to ground or surface water courses. These measures are outlined in detail in the BMCE Drainage Design report included under separate cover with this application. • 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.
Biodiversity (Flora & Fauna) (Ch. 10)	• There will be no impacts related to foul water as a result of the proposed development and therefore no mitigation measures are required. • There will be no impacts related to surface water as a result of the proposed development.
Noise & Vibration (Ch. 11)	• In order to ensure that acceptable operational noise levels at the nearest noise sensitive locations are achieved, the following mitigation measures will be implemented where appropriate during the detailed design stage. • In addition to selecting plant with suitable noise levels, the following best practice measures are recommended for all plant items in order to minimise potential noise disturbance for adjacent buildings: - where ventilation is required for plant rooms, consideration will be given to acoustic louvers or attenuated acoustic vents, where required to reduce noise breakout; - ventilation plant serving plant rooms and car parks will be fitted with effective acoustic attenuators to reduce noise emissions to the external environment; - the use of perimeter plant screens will be used, where required, for roof top plant areas to screen noise sources; - the use of attenuators or silencers will be installed on external air handling plant; - all mechanical plant items e.g. fans, pumps etc. shall be regularly maintained to ensure that excessive noise generated by any worn or rattling components is minimised; - any new or replacement mechanical plant items, including plant located inside new or existing buildings, shall be designed so that all

Aspect	Table 18 - Operational Phase Mitigation Measures
	noise emissions from site do not exceed the noise limits outlined in this document, and; - Installed plant will have no tonal or impulsive characteristics when in operation. • Deliveries be restricted to daytime periods to avoid disturbance to noise-sensitive locations. • Noise mitigation measures with respect to the outward impact of traffic from the development are not deemed necessary.
Air Quality & Climate (Ch. 12)	• None proposed.
Archaeological & Cultural Heritage (Ch. 13)	• None proposed.
Built Heritage (Ch. 14)	• There are no relevant mitigation works at Operational Phase as the likely significant effects arising from the Operational Phase have been considered as part of the incorporated design mitigations.

Table 18 Operational Phase Mitigation Measures