Declan Brassil + Company

Environmental Impact Assessment Report

Non-Technical Summary

To accompany a planning application for

Build to Rent (BTR)
Residential Development

At

Cornelscourt Village,
Old Bray Road,
Cornelscourt,
Dublin 18

Submitted on Behalf of

Cornel Living Limited

November 2021

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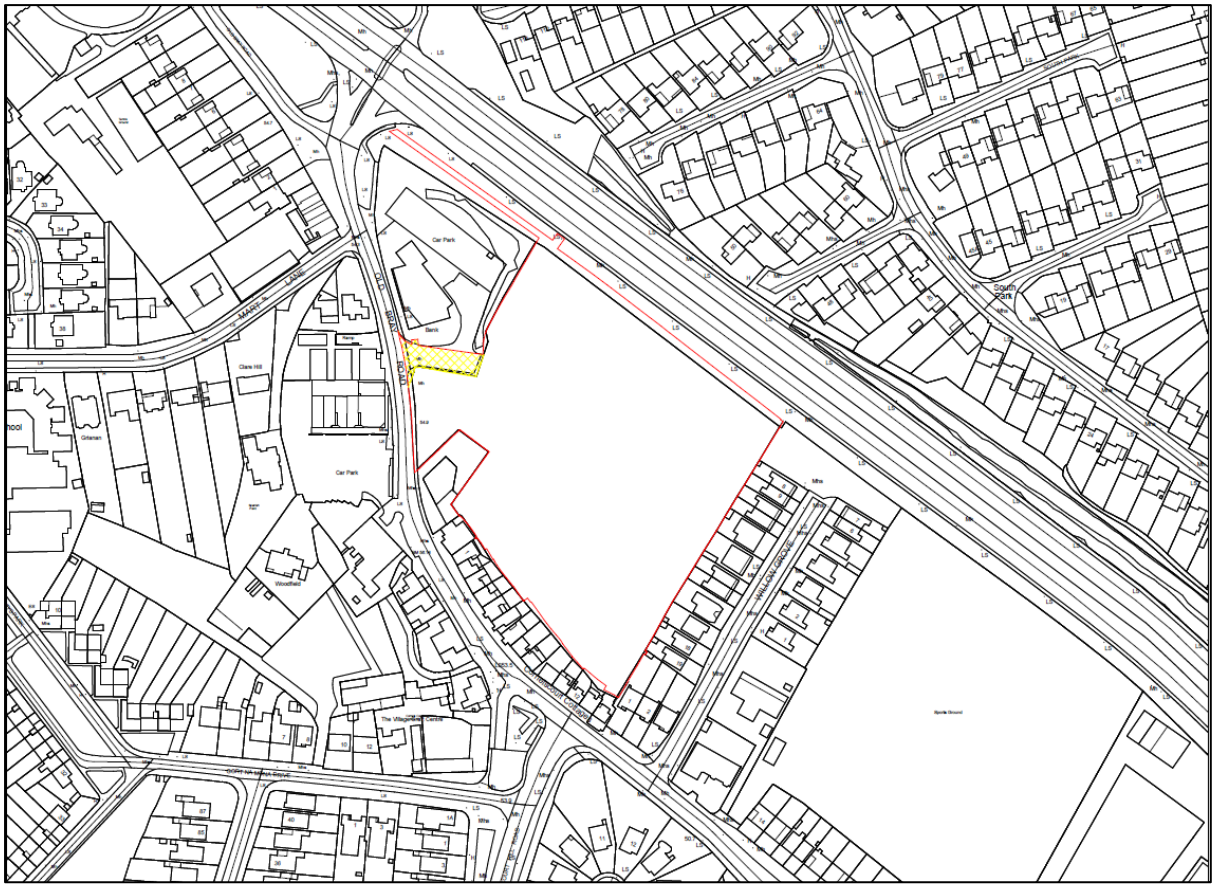
(I) INTRODUCTION

This document provides a non-technical summary of the Environmental Impact Assess Report (EIAR) submitted with an application for a Strategic Housing Development on lands located at Cornelscourt Village, Old Bray Road, Cornelscourt, Dublin 18.

Figure 1 Application Site



(Source: HJL Architects)

The proposed residential development provides for 419 no. build-to-rent (BTR) residential dwellings, a childcare facility, a café/retail unit together with all associated and ancillary infrastructure and open space provision.

This document provides a summary in plain English and free of technical jargon, describing the likely environmental impacts and inter-relationships between environmental factors as a result of the proposed development. This summary reflects the findings of the main EIAR document that accompanies the planning application submitted to An Bord Pleanála.

Table 1. below lists the competent experts who have prepared each section.

The EIAR presents an evaluation of the likely significant environmental impacts and applicable mitigation and monitoring measures associated with the construction and operation of the proposed development. It is the document which Cornel Living Ltd. is required to submit to the Board to inform the Board's Environmental Impact Assessment (EIA) of the Proposed Development. The EIAR has been completed in order to comply with and exceed the requirements of all relevant legislation and guidance.

The EIAR addresses all of the issues listed in Schedule 6 of the Planning and Development Regulations 2001 (SI No. 600 of 2001) (as amended) (the PDRs), having regard to the requirements of Article 5(1) and Annex IV of Directive 2011/92/EU as amended by Directive 2014/52/EU (the EIA Directive), and assesses the following;

- Population & Human Health
- Biodiversity, with particular attention to species and habitats protected under the Habitats Directive and the Birds Directive
- Land, Soil & Geology
- Water
- Noise and Vibration
- Air, Dust and Climatic Factors
- Wind & Microclimate
- Landscape & Visual Impact Assessment
- Material Asset: Traffic & Transport
- Material Asset: Utilities
- Cultural Heritage: Archaeology & Architectural Heritage
- The interaction between the factors mentioned above

Table 1. Competent Experts Responsible for the preparation of this NTS

Section Title	Author
(I) Introduction (II) Site Location & Context (III) Description of Development (IV) Consideration of Alternatives (XIV) Interactions with the foregoing (XVII) Mitigation Measures	**Declan Brassil & Company Ltd.** Mr. Declan Brassil Ms Jean Strong
(III) Description of Development (IV) Consideration of Alternatives	**Henry J Lyons Architects** Mr. Seán Attley
(III) Description of Development (IV) Consideration of Alternatives	**Cameo & Partners (Landscape Architects)** Mr. Mike Martyn
(V) Population & Human Health	**Future Analytics** Mr. James Sweeney
(VI) Biodiversity	**Biosphere Environmental Services**

	Dr. Brian Madden
(VII) Land Soil & Geology (VII) Water: (XIII) Material Assets: Traffic & Transport (XIV) Material Assets: Utilities	**DBFL Consulting Engineers** Mr. Brendan Keogh Mr. Robert Kelly Ms. Helen Gendy
(IX) Noise & Vibration (X) Air Quality, Dust & Climatic Factors	**AWN Consulting Ltd.** Ms. Ciara Nolan Mr. Alister Maclaurin
(XI) Wind & Microclimate	**IES** Mr Harshad Joshi
(XII) Landscape & Visual Impact Assessment	**Mitchells + Associates, Landscape Architects** Mr. Dave Kirkwood
(XIV) Material Assets: Water Supply, Drainage & Utilities	**O'Connor Sutton Cronin Consulting Engineers** Mr. Declan Barry
(XV) Cultural Heritage: Archaeology & Architectural Heritage	**Archer Heritage** Mr. Liam Coen

Construction and Operational Phase Overview

Construction of the proposed development is expected to take place over 28-34 months, commencing in Q3/Q4 2022. A Preliminary Construction & Environment Plan has been developed to ensure that the construction phase minimises the potential for environmental impact.

During the operational phase of the Proposed Development the scheme will accommodate a residential population of approximately 931 persons, based upon an estimated occupancy rate of 2.22 persons per unit (CSO Average Household Size, 2016).

The proposed BTR scheme will be institutionally managed as private rented accommodation by a single investment entity for a minimum period of 15 years. Accordingly, the scheme will be maintained and managed by a private management company to ensure a secure, attractive, well-maintained environment for future residents and visitors.

Vulnerability to Risks of Major Accidents and/or Disaster

The EIA Directive requires that the proposed development is assessed in respect of its potential to cause accidents/disasters, and the vulnerability of the proposal to accidents/disasters. These risks can be from both man-made and natural disasters and there is a requirement to build resilience into projects and to invest in risk prevention. Principle risks that have been considered as part of the detailed design include; accidental spillages, ground instability, fire within the design, landslides, flooding, major traffic accidents, and work-place construction accidents. The vulnerability of the proposed development to major accidents and/or disasters is not considered significant

(II) SITE LOCATION AND CONTEXT

The subject site is a vacant infill site of 2.15 ha located to the north of Cornelscourt Village. Cornelscourt is a suburban village located in South Dublin, between Cabinteely and Foxrock.

Cornelscourt is located east of Sandyford (approx. 4.4 km to the west) and offers excellent connectivity towards various areas of Dublin via the N11 Stillorgan Road. The N11 Stillorgan Road is an important strategic connection network, as,a two-way dual carriageway road with a bus lane in both directions as well as a cycle track immediately adjacent to the bus lane, in both directions.

The subject site forms part of a long 'island' created between the Old Bray Road and the N11. The N11 by-passes the village of Cornelscourt which is located on both sides of the Old Bray Road to the west of the subject site.

Cornelscourt village provides a vibrant mix of smaller scale shops, café/restaurants, local services and facilities serving the needs of the substantial residential areas around it. Located to the south of the of the site is Cornelscourt Shopping Centre which provides district level comparison shopping together with a range of other local level retail and services.

The surrounding residential areas are characterised by predominantly 2-storey detached and semi-detached family homes in a range of styles and finishes, generally with front and rear gardens. Beyond the village of Cornelscourt to the west and north is the residential area of Foxrock. To the north and east, across the N11, the Beech Park and South Park housing areas extend as far as Kill Lane and the Clonkeen Road. To the south, either side of the Cornelscourt Hill Road, the residential areas of Gort Na Mona and the Glen rise up through Hainault and Sycamore, towards the Brennanstown Road and the M50 beyond.

Recent developments in the wider area, and in particular along the N11 corridor, have tended to be taller, high density apartment schemes such as The Grange, Beechwood and Booterstown Wood where building heights between 6 and 10 storeys are more common.

The site is situated immediately adjacent to this well served public bus transport infrastructure with high capacity links to/from Dublin City Centre and to key destinations in the Dun Laoghaire – Rathdown.

Dublin Bus routes 46a and 145 are easily accessible to the site (within 800m and 200m respectively) and provide links to/from Dublin City Centre. Dublin Bus route 84 and its route variations (within 800m) provides linkages to towns to the south of Dublin, including Bray, Greystones and Newcastle. Go Ahead Bus 63 (within 40m) connects the site to Dún Laoghaire to the north and to Carrickmines and Kilternan to the south. Bus route 75 (within 800m) links the site to Dún Laoghaire in the east and to Stillorgan Business Park, Dundrum and Tallaght in the west.

The application site is bounded by the N11 Stillorgan Dual Carriageway to the north/east, the rear gardens of two-storey houses fronting onto Willow Grove to the east/south, a service station and a terrace of cottages (residential and commercial) to the south east fronting onto the Old Bray Road to the south/west, and by a three-storey commercial building (AIB Bank) and associated car park to the north/west.

The site is currently undeveloped, save for a hardstanding area that was a former temporary car park in the north of the site. The site shares an access road off the Old Bray Road with the carpark to the rear of the adjoining AIB bank. The site has approximately 150m frontage onto the N11 / Stillorgan Dual Carriageway.

Figure 2 Site Location in Context

(Source: HJL, Architects)

(III) DESCRIPTION OF DEVELOPMENT

This chapter of the EIAR has been coordinated by Declan Brassil & Company with input from Henry J Lyons, DBFL Consulting Engineers, Cameo & Partners and OSCS Consulting Engineers and provides a description of the proposed development.

The proposed development will consist of 419 Build to Rent units, comprising 294 no. one-bed apartments, 111 no. two-bed apartments, 7 no. three-bed apartment units and 7 no. three bed houses. The proposed apartments are arranged in 5 no. blocks, over a basement/podium level, which range in height from 4 no. storeys to 12 no. storeys. The proposed houses are two storeys in height. The application site extends to 2.15 ha.

The proposed development generally comprises 5 no. blocks as follows:

- **Building A** forms the westernmost of the three 'finger' buildings (Buildings A, B & C) located along the N11. Building A is part 5, part 6 storey in height, rising to 12 storeys adjacent to the N11. Residential amenity space is provided at ground and first floor level with 117 no. apartments comprising the balance of the building.
- **Building B** forms the central 'finger building' located between Buildings A and C. Building B is part 5 storey rising to 9 storeys proximate to the N11 edge. Similarly, Building B has residential amenity space at ground and first floor level with the balance of the building residential comprising 120 no. units.

  A single storey **multi-purpose residential amenity pavilion** sits in the courtyard space between Buildings A and B.
- **Building C** is the third 'finger building' located to the east of Building B. Building C provides a further step down in height and is predominantly 6 storeys height over a partial lower-ground floor, below podium level. [Building C presents as a 6 storey building over podium level and seven storey building over lower-ground level to the east of the site.] A residents' gym is provided at the lower ground floor level with the balance of the building comprising 70 no. apartments.

- **Building D** is an 'L' shaped building located to the south of the site**.** Building D responds to the more village scale with a setback 4 storey western wing, to the boundary with Cornelscourt Cottages, rising to 5 storeys to the eastern wing over a partial lower ground floor level (eastern wing only). [Building D presents as a 4 storey rising to 5 storey building over podium level and 6 storey building over lower-ground level (eastern wing only) to the east of the site.] A childcare facility and a further residential amenity space are provided at ground floor level with 87 no. apartments comprising the balance of the building.
- **Building E** fronts onto the Old Bray Road (Cornelscourt Village) and is 4 storey building with 1 no. café/retail unit providing active frontage to the Village and a residential amenity space provided at ground floor level, with 18 no. apartments from first floor to third floor level.
- **Houses:** The eastern boundary of the site is characterised by 7 no. 2 storey houses arranged in two terraces of three and four units.

The BTR units are for the purposes of providing long term rental housing and will be subject to a long-term covenant or legal agreement in accordance with Specific Planning Policy Requirement 7 (SPPR 7) of the Sustainable Urban Housing: Design Standards for New Apartments.

A range of internal residential amenities and facilities are provided throughout the scheme totalling 779sqm. Internal Residential amenity spaces include a gym; a variety of tenant amenity lounges; concierge and a multi purposes pavilion building within the communal courtyard. Further communal amenity space is provided externally through the provision of a range of landscaped courtyards and plazas, connected by an active fitness and play areas, providing a range of high-quality amenity areas for future residents.

The proposed development includes 1 no. café/retail unit which will provide a mix of use and will complement the residential use. The unit fronts onto the Old Bray Road and provide a total gross floor area of 264sqm.

The proposed development also includes a childcare facility (approximately 255 sqm) with capacity for in the order of 50-60 children to serve the needs of the proposed development. The childcare facility has been located adjacent to a dedicated open space (163sqm).

Vehicular access to the site is via the existing access road onto the R842 Old Bray Road. This is a shared access road with the adjacent AIB to the west. A total of 237 no. car parking spaces (236 no. at basement level and 1 no. at ground level), 819 no. bicycle parking spaces (664 no. at basement level and 155 no. at ground level), and 10 motorcycle spaces (all at basement level), are proposed.

The proposed development includes on-site pump station integrated with an underground foul sewer balancing storage tank (approx. 2,150m^3), at the eastern corner of the site, together with all associated works.

An ESB Substation is located at the eastern corner of the site.

The proposed development includes an upgrade to the existing cycle lane to include a segregated pedestrian connection along the N11, from the subject site to N11/Old Bray Road junction, with the bus stop beyond, together with future potential pedestrian and/or cycle connections to the Old Bray Road and Willow Grove.

The proposed development provides for all associated and ancillary infrastructure, landscaping, boundary treatments and development works on a total site of approximately 2.15 hectares.

Figure 3 Proposed Layout & Landscape Plan

(Source: Extract from Landscape Design & Accessibility Statement, Cameo)

(IV) CONSIDERATION OF ALTERNATIVES

This chapter of the EIAR has been coordinated by Declan Brassil & Company with input from Henry J Lyons, DBFL Consulting Engineers and Cameo & Partners.

This Chapter provides '*a description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) 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 selecting the chosen option, including a comparison of the environmental effects'* as required by Schedule 6 of the Planning and Development Regulations, 2001-2021.

Alternative Development Locations

The proposed development provides for the delivery of residential development on available, serviced and appropriately zoned lands within Dublin City Suburbs. The lands are predominantly zoned Objective 'A' *'to protect and/or improve residential amenity'* under the current Dun Laoghaire Rathdown County

Development Plan 2016-2022 (the Development Plan) and similarly zoned under the Draft Dun Laoghaire Rathdown County Development Plan 2022-2026 (the Draft Plan).

Both the Development Plan and the Draft Plan were subject to Strategic Environmental Assessment (SEA). The issue of alternatives is a critical function of the Strategic Environmental Assessment (SEA) process and is necessary to evaluate the likely environmental consequences of a range of alternative development strategies for the county within the constraints imposed by environmental conditions. The SEA for the Development Plan and the Draft Plan considered alternatives at an early stage of the process and through an iterative process the most appropriate scenario for the growth of the administrative area was selected.

The site offers significant opportunity to deliver substantial residential development on an underutilised vacant site in close proximity to existing services at Cornelscourt village. The site is located along a key public transport corridor (the N11) and a number of employment areas. The site has capacity to absorb development without significantly effecting the existing landscape and visual characteristics of the surrounding area. The size of the site at 2.15 ha offers a significant opportunity to deliver infill residential development along a key public transport corridor which supports the provisions of the National Planning Framework.

Based on the foregoing, it was not considered necessary to appraise any alternative locations for the proposed residential development

Alternative Construction & Methods

The residential development is envisioned as a single-phase development. In terms of construction methods, the design team considered prefabrication of various elements of the building and traditional construction. Ultimately It will be up to the contractor to choose the most appropriate method t based on factors including cost, speed and market availability.

Alternative Layouts

The design teams considered a number of options in terms of overall layout as follows:

- **Design Iteration A:** Series of 6 no. buildings arranged off a pedestrian avenue
- **Design Iteration B:** Series of 8 no. buildings sitting on a central landscaped podium space
- **Design Iteration C:** Design progression of Iteration C (preferred option for previous SHD application ABP-306225-19
- **Design Iteration D:** Revised Design to address Reasons of Refusal in respect of ABP-306225-19 (Pre-Planning Consultation Scheme)
- **Design Iteration E:** Scheme submitted to ABP for pre-application consultation (Pre-Application Consultation Scheme)
- **Design Iteration E:** Preferred Scheme – Proposed Development

The alternatives considered have been based on the planning history associated with the site planning history of the site. Previous SHD application in respect of the application site under ABP-306225-19 was subject to EIA. The determination in respect of ABP-306225-19 has directly informed the layout and design of the current scheme.

During the design process, the layout and design of the proposed development evolved in response to planning history, architectural, and visual requirements and several iterations of the site layout and alternative designs were considered. Any difficulties from an architectural, landscape or environmental viewpoint were assessed and, where necessary, the design was amended to address the issues encountered. Furthermore, the final scheme has been directly influenced by the technical and specific issues raised in the Board's Opinion.

(V) POPULATION & HUMAN HEALTH

This chapter of the EIAR has been prepared by KPMG Future Analytics in order to assess any potential impacts the proposed development may have on Population and Human Health in accordance with the requirements set out within the EIA legislation and guidance on preparation and content of EIAR.

The assessment of potential impacts of the proposed development on the Population and Human Health of residents in the Study Area are based on local population information sourced from the Central Statistics Office (CSO) Census data captured in the previous Censuses of 2011 and 2016. Data sets analysed in this assessment include: Population data, household data, data on general human health, economic activity and employment data. To provide further context to the social and demographic assessment, a similar data analysis exercise, at a broader scale, was performed on the Dun-Laoghaire Rathdown County Council (DLRCC) administrative area, Dublin City and the State. Furthermore, an assessment of the current provision of social infrastructure was conducted through spatial analysis.

Population and Human Health

The construction of the proposed development may give rise to short term impacts to the locality, such as construction traffic and surface contaminants, dusts, exhaust emissions and noise. It is unlikely that these impacts will be of a scale to either encourage people to move from the area or discourage people from moving to the area.

The operational phase of the proposed development will result in the provision of 419 no. residential units, a creche facility, a gym and a clearly defined range and hierarchy of public, communal, and private open spaces.

This will provide accommodation for approximately 930 persons, based upon an estimated occupancy rate of 2.22 persons per unit. The uplift in local population generated by the proposed development will contribute to the compact development targets set out in the National Planning Framework i.e. at least 50% of all new homes within or contiguous to the existing built up area in Dublin and 30% in other settlements. On consideration of the above, the proposed development will have a significant permanent positive impact on the population and households in the area.

The operational stage of the development is unlikely to cause any adverse impacts on the existing and future residents of the locality in terms of human health. The design of the development has been formulated to provide for a safe environment for the future residents and visitors alike. The paths, roadways and public realm have been designed in accordance with the best practice and applicable guidelines. All open areas have been designed to be inviting, safe and conveniently located. A neutral and permanent impact has been determined.

Economic Activity and Employment

The construction of the proposed development is likely to have a moderate, positive effect on the local economy. The development in the short term will provide for increased construction related employment. During the construction phase, businesses directly involved in the sector and also those indirectly involved will generate economic benefits which will provide a positive net impact on the economy.

The operational phase of the proposed development will provide accommodation for approximately 930 persons, based upon an estimated occupancy rate of 2.22 persons per unit. This increase in occupancy in the area will enhance local spending power and will contribute to a critical mass of population to support a wide range of employment generating opportunities. In particular, the proposed residential development will bring positive benefits in supporting the local retail environment. Collectively, it is considered that the development will have a moderate, positive impact on economic activity and employment.

Impact on Childcare / Creche Facilities

The construction of the proposed development will have a slight but neutral impact on childcare and creche facilities within close proximity to the proposed development in terms of construction noise, traffic and emissions.

The operational phase of the proposed development, however, will have a significant, positive, long-term impact on childcare and creche facilities within the vicinity, as the development includes the provision of a childcare facility (258sq.m). In addition, the increase in population generated by the Proposed Development over the medium to long term will have a positive impact on facilities in and surrounding the study area through the economic benefit of potential additional enrolment.

It is considered that the childcare facility proposed as part of the overall development will offset any potential negative impacts the Proposed Development may have on existing childcare facilities within the area. The proposed childcare facility may also bring a positive impact to existing / approved residential developments within the vicinity of the subject site by providing additional childcare spaces to serve the wider area.

Impact on Primary and Post Primary Schools

During the construction phase, the impact on primary and post primary school facilities is expected to be imperceptible, with only 3 primary schools and 2 secondary schools located within 2km of the Proposed Development.

During the operational phase, the proposed development is estimated to have a population 29no. pupils in the 5-12 age cohort, and 23no. pupils in the 13 – 18 age cohort. However, given that the development will be constructed in a phased manner, it is not expected that this level of demand will be generated instantly. It is expected that the primary and post primary school facilities in proximity of the Proposed Development will sufficiently absorb the school going population generated by the development.

Taking the surrounding residential land use into consideration, the cumulative impact on primary and post primary schools will be slight and positive, given the low amount of pupils estimated to be generated from the proposed development and also the existing capacity of schools in the area currently.

Impact on Amenities and Open Space

The construction of the Proposed Development will take place on an undeveloped site. As such, the Proposed Development will not negatively impact amenities of open space on the development site. The Proposed Development will, however, add new areas of pedestrianised public open space and landscaped areas. The impact on Amenities and Open Space during the construction phase is considered to be temporary and not significant.

The amenity and open space impacts likely to arise from the Proposed Development will be positive over the long term as it will improve the existing character and aesthetics of the site. The design of the Proposed Development's residential and public spaces improves the site and as such the impact is considered to be positive. The planned landscaping will mature over the long term and create public spaces that are conducive to enjoyable public interaction.

The cumulative impact on Amenities and Open Space arising from the proposed development will be positive, significant and long term. Specifically, the proposals include the provision of a hierarchy of public, communal, and private open spaces which make great use of the site and respond well to its natural typography.

(VI) BIODIVERSITY

This Chapter was prepared by Biosphere Environmental Services and provides an assessment of the potential impacts by the proposed project on biodiversity.

The greater part of the site comprises grassland (classified as Dry meadow and grassy verges GS2). Part is maintained by occasional mowing, whilst other parts are in a rank, unmanaged state. Other habitats on site include Recolonising bare ground ED3**,** Buildings and artificial surfaces BL3 (comprising an area of hardcore) and Scrub WS1. The site does not support any legally protected flora species or any species rare or scarce in the context of County Dublin. A survey in 2019 recorded Japanese Knotweed *Fallopia japonica* on site though this has since been removed. The site has low potential for supporting mammal species other than widespread species of urban and suburban areas, such as red fox. The habitats on site are not suitable for badger or bat species. Similarly, the site has low potential to support bird species of conservation importance. No part of the subject site is within a designated area or adjoins such an area. However, the site has theoretical hydrological linkages (via local watercourses) to various identified European sites and proposed Natural Heritage Areas. Overall, the site is considered to have an ecological rating of Local Importance (lower value).

The proposed development will result in the loss of the existing habitats on site. As these have negligible ecological interests and none is listed on Annex I of the EU Habitats Directive, the effect by the loss of the habitats as a result of development is considered to be Not significant. Despite loss of habitat for various mammal and bird species, it is expected that all species will continue to occur in the immediate locality as well as in landscaped areas of the proposed development. During both the construction and operational phases, the effect of the impact of the proposed development in respect of existing mammal and bird species is considered to be Not significant (with mitigation in place for nesting birds).

Whilst there are no watercourses or open drains on site, protection of surface and ground water is essential as natural drainage for this area is to local streams and rivers which enter the sea at Killiney Bay. Without appropriate mitigation, contaminated water emanating from the site could affect aquatic

life in local watercourses and ultimately inshore marine life. The effect of the impact would be dependent on the type of contamination and the duration of the event but could be Significant. As a hydrological pathway has been identified from the application site to various European sites and proposed Natural Heritage Areas, it is considered that in the absence of mitigation, there is potential for impacts and effects on the qualifying interests of such sites.

When considered with other projects, cumulative effects on the ecology of the local area have not been identified.

Mitigation measures are required for the following: protection of breeding birds, potential invasive species, protection of water quality (during both construction & operational phases), removal of an area of identified hydrocarbon contaminated soil on site, and landscaping.

With mitigation measures implemented as recommended, it is considered that the proposed project will not have any significant adverse residual impacts in terms of ecology and biodiversity.

(VII) LAND, SOILS & GEOLOGY

This chapter of the EIAR has been prepared by DBFL Consulting Engineers and comprises an assessment of the likely impact of the proposed development on soils and the geological environment as well as identifying proposed mitigation measures to minimize any impacts.

In summary, the project comprises the development of 412 apartments, 7 houses, residential amenities (a gym; a variety of tenant amenity lounges including a concierge; a single storey multipurpose pavilion building within the communal courtyard), a childcare facility and café / retail unit on a 2.15 ha site (approx.).

Assessment of the likely impact of the proposed development on soils and the geological environment included review of AWN's Environmental Due Diligence Report, review of GII's Ground Investigations Report, review of DBFL's Environmental Assessment – Executive Summary and review of information available on the Geological Survey of Ireland (GSI) online mapping service.

Ground conditions at the site are summarised as follows; 0.3m thick topsoil layer overlying; 0.5m to 1.1m made ground deposits overlying cohesive deposits.

The subsoils noted above overly Bedrock (encountered at depths of 2.6m to 12.0m below existing ground). Review of GSI's online mapping service ("Bedrock Geology") describes geology in the vicinity of the site as "Siluro-Devonian granitic rocks & appinite".

An area of the site adjacent to the neighbouring filling station (adjacent to the western boundary) had been highlighted in the 2018 AWN Environmental Report as being impacted by hydrocarbons. The AWN Report identified that the filling station was the likely source of the impact.

Ground Investigations Ireland subsequently carried out further investigation within the hydrocarbon impacted area to delineate the vertical and lateral extent of the contamination plume. GII confirms that the reduction in degree of impact moving downgradient and away from the filling station suggests that the impact is related to the filling station.

Site development works will include stripping of topsoil, excavation of subsoil layers (to allow road construction, basement and foundation excavations, drainage and utility installation, provision of underground attenuation of surface water and provision of the balancing storage tank) and importation

of fill (structural fill beneath apartments, houses and roadways). Due to relatively high level of groundwater encountered in the boreholes there may be a need to dewater the basement excavation during construction.

As noted previously, an area of the site adjacent to the neighbouring filling station has been impacted by hydrocarbons. Investigation within the hydrocarbon impacted area confirms that the reduction in degree of impact moving downgradient and away from the filling station suggests that the impact is related to the filling station. Two locations have been identified where these materials should be excavated and removed from site in the event of residential development. If these materials are excavated and removed from site they should be classified as and disposed of as hazardous. The natural subsoils outside the impacted area have been assessed and are suitable for removal to a suitably licenced inert facility.

Where possible, the designed basement level, ground floor levels and external pavement levels have been designed to follow the natural topography of the site, therefore minimising the need for cut fill operations to enable development.

Potential impacts during the construction phase include exposure of the underlying subsoil layers to the effects of weather and construction traffic resulting in subsoil erosion and generation of sediment laden runoff. Accidental spills and leaks during construction activities may result in contamination of the soils underlying the site. Risks to human health associated with works during the construction phase in relation to land and soils include works in relation to subsoils impacted by hydrocarbons.

Stripping of topsoil will be carried out in a controlled and carefully managed way and coordinated with the proposed staging for the development. At any given time, the extent of topsoil strip (and consequent exposure of subsoil) will be limited to the immediate vicinity of active work areas.

Disturbed subsoil layers will be stabilized as soon as practicable (e.g. backfill of service trenches, construction of road capping layers, construction of building foundations and completion of landscaping). The duration that subsoil layers are exposed is to be minimised in order to mitigate against weather effects.

Regarding construction traffic, earthworks plant and vehicles delivering construction materials to site will be confined to predetermined haul routes around the site.

Vehicle wheel wash facilities will be installed in the vicinity of any site entrances and road sweeping implemented as necessary in order to maintain the road network in the immediate vicinity of the site. Dust suppression measures be implemented as necessary during dry periods.

All temporary construction compounds and site entrances are to be removed upon completion of the construction phase. Such areas are to be reinstated in accordance with the landscape architects plan and engineer's drawings.

The Contractor will provide a Method Statement (to be agreed prior to commencing any works on site) for works in the vicinity of areas impacted by hydrocarbons including but not limited to details of their proposed specialist sub-contractors, proposals for containment of contamination, proposal for removal of hydrocarbons from dewatered groundwater prior to discharge, co-ordination of contamination removal with other site works, proposed licenced waste receiving facility and compliance with relevant legislation including HSA publications and the Waste Management Act.

Implementation of the mitigation measures outlined in Chapter 7 of the EIAR and the Preliminary Construction and Environmental Management Plan will ensure that the potential impacts of the proposed development on soils and the geological environment do not occur during the construction phase.

(VIII) WATER

This chapter of the EIAR has been prepared by DBFL Consulting Engineers and comprises of an assessment of the likely impact of the proposed development on the surrounding surface water and hydrogeological environments (including flood risk, surface water drainage, foul drainage and water supply) as well as identifying proposed mitigation measures to minimise any impacts.

In summary, the project comprises the development of 412 apartments, 7 houses, residential amenities (a gym; a variety of tenant amenity lounges including a concierge; a single storey multipurpose pavilion building within the communal courtyard), a childcare facility and café / retail unit on a 2.15 ha site (approx.).

Assessment of the likely impact of the proposed development on the surrounding surface water and hydrogeological environments included site inspection / walkover, review of topographic survey information, review of Irish Water utility plans, ground investigations, review of information available on the Environmental Protection Agency (EPA) online mapping service, review of information available on the Geological Survey of Ireland (GSI) online mapping service, review of Office of Public Works (OPW) National Flood Hazard Mapping and CFRAM Studies, consultation with Dún Laoghaire - Rathdown County Council's Water Services Section and consultation with Irish Water.

As part of assessing the likely impact of the proposed development, surface water runoff, foul drainage discharge and water usage calculations were carried out in accordance with the Greater Dublin Strategic Drainage Study (GDSDS) and methods outlined in Irish Water's Codes of Practice for Wastewater and Water Supply Infrastructure.

An existing 225mm diameter public surface water drain is located adjacent to the eastern corner of the site (lands north of Willow Grove). As the site falls from its western corner toward its eastern, the existing 225mm diameter public surface water drain noted above will provide a suitable surface water outfall for the proposed development. The existing surface water drain noted above ultimately discharges to the Deansgrange Stream.

An existing combined sewer (300 diameter) is located approx. 240m from the eastern corner of the site (in the verge adjacent to the N11).

Proposed foul drainage infrastructure includes provision of a 2,150 m3 balancing storage tank which will facilitate a potential future upgrade of the Foxrock catchment by Irish Water. Foul drainage flows from the development will be routed via a pump station which is to be incorporated within the balancing storage tank. Stored drainage flows are then returned to a proposed 300 diameter combined sewer which outfalls from the site's eastern corner, towards northern end of Willow Grove and onwards along the verge adjacent to the N11 prior to discharge to the existing foul drainage network (approx. 240m from the eastern corner of the site). An 825mm diameter combined sewer is also to be constructed, traversing the site from the entrance at Old Bray Road to the 2,150 m3 balancing storage tank (located in the eastern corner of the site). This pipeline and the proposed 300 diameter combined sewer outfall will also facilitate potential future upgrade of the Foxrock catchment by Irish Water.

Existing public water supply infrastructure is located along Old Bray Road (24" Cast Iron Watermain, 9" Cast Iron Watermain and 4" uPVC Watermain). The proposed development's water supply is to be taken from this existing infrastructure by way of 200mm connection off the existing 9" Cast Iron public water supply line.

A flood hazard assessment has been undertaken by reviewing information from the Office of Public Works (OPW) National Flood Hazard Mapping (www.floods.ie) and the Eastern CFRAM Study. This assessment has been carried out in accordance with the procedures for a "Flood Risk Assessment" as outlined in the OPW's Guidelines for Planning Authorities – The Planning System and Flood Management (November 2009). No fluvial flooding is indicated in the vicinity of the site (i.e. the site is located in Flood Zone C as defined by the Guidelines, therefore, the proposed development is appropriate for the site's flood zone category).

GSI's Groundwater Data Viewer indicates that the site is located on a "Bedrock Aquifer" and classifies the underlying aquifers as "Poor Aquifer – Bedrock which is generally unproductive except for local zones". GSI generally classifies the site's groundwater vulnerability as "Moderate" (although a localised area in the southern corner of the site is classified as "High").

Adjacent to the site's western boundary (the high side of the site), groundwater was observed at approx. 1.0m below existing ground level. Adjacent to the site's eastern boundary (the low side of the site), groundwater was observed at approx. 2.3m below existing ground level.

Potential impacts that may arise during the construction phase include, surface water runoff becoming polluted by construction activities, accidental spills and leaks associated with storage of oils and fuels, leaks from construction machinery and spillage during refuelling and maintenance, concrete runoff (particularly discharge of wash water from concrete trucks), improper discharge of foul drainage from contractor's compound and cross contamination of potable water supply to construction compound. Due to relatively high level of groundwater encountered in the boreholes there may be a need to dewater excavations during construction.

In order to mitigate construction phase impacts a site-specific Construction and Environment Management Plan will be developed and implemented during the construction phase. Site inductions will include reference to the procedures and best practice as outlined in the Construction and Environment Management Plan.

Oil, fuel etc. storage areas are to be decommissioned on completion of the construction phase. Any remaining liquids are to be removed from site and disposed of at an appropriate licenced facility. Dún Laoghaire - Rathdown County Council's Environmental Control Section is to be notified of the proposed destination for disposal of any liquid fuels.

Potential operational phase impacts include increased impermeable surface area potentially increasing surface water runoff and accidental hydrocarbon leaks with subsequent discharge into piped surface water drainage network.

In order to mitigate operational phase impacts surface water runoff from the site will be attenuated to the greenfield runoff rate as outlined in the Greater Dublin Strategic Drainage Study (GDSDS). Methodologies such as permeable paving, green roofs and discharge of surface water via a fuel / oil separator are being implemented as part of a SuDS surface water treatment train approach.

Proposed mitigation measures to address residual flood risks include maintenance of the drainage system on a regular basis to reduce the risk of a blockage and in the event of storms exceeding the 1%

AEP design capacity of the attenuation system, possible overland flow routing towards open space areas should not to be blocked.

In general, the designed basement level, ground floor levels and external pavement levels have been designed to follow the natural topography of the site, therefore minimising the need for excavation to enable development. As such. It is not envisaged that the proposed development works will have any direct impact on the underlying hydrogeology.

Implementation of the measures outlined in Chapter 8 of the EIAR and the Preliminary Construction Management Plan will ensure that the potential impacts of the proposed development on the surrounding surface water and hydrogeological environments do not occur during the construction phase.

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(IX) NOISE & VIBRATION

This chapter of the EIAR has been prepared by AWN Consulting Ltd. and assesses the likely noise & vibration impacts associated with the proposed residential development on lands at Cornelscourt Village, Old Bray Road, Cornelscourt, Dublin 18.

The noise impact assessment has focused on the potential outward impacts associated with the construction and operational phases of the proposed development on its surrounding environment, as well as the inward impact of noise on the proposed residential dwellings.

During the main construction phase involving site clearance and building construction works, the assessment has determined that there is the potential for some temporary significant noise impacts when works are undertaken within close proximity of the receptor locations. However, these occurrences will only be temporary and the vast majority of the construction works will take place at distances from the receptors where no significant impacts are predicted and the construction criteria will be complied with. A schedule of noise mitigation measures including, noise limits and screening will all be employed to ensure any noise and vibration impacts during this phase will be reduced as far as is reasonably practicable.

During the operational phase, the outward noise impact to the surrounding environment will be limited to any additional traffic on surrounding roads and plant noise from the commercial buildings as part of the development.

The impact assessment has concluded that additional traffic from the proposed development will have an insignificant impact on the surrounding noise environment. The resulting impact is of neutral, long-term and imperceptible.

The operational plant noise from the development will be designed to ensure the prevailing background noise environment is not increased by a significant level such that potential adverse noise impacts are avoided. Once noise emissions from operational plant and activities are designed in accordance with BS 4142 Methods for Rating and Assessing Industrial and Commercial Sound, resultant residual noise impact from this source will be of negative, not significant, long-term impact.

The potential for inward noise impact on the proposed development has been assessed. The assessment was carried out with reference to the guidance contained in Professional Practice Guidance on Planning & Noise (ProPG), BS 8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings (BSI); and the local and national Noise Action Plans relevant to the area. The assessment has identified facades

where upgraded acoustic glazing and ventilation will be required. With the implementation of these measures it is expected that the impact will be neutral, not significant and permanent.

(X) AIR QUALITY, DUST & CLIMATIC FACTORS

This chapter of the EIAR has been prepared by AWN Consulting Ltd. and assesses the likely air quality and climate impacts associated with the proposed residential development on lands at Cornelscourt Village, Old Bray Road, Cornelscourt, Dublin 18.

In terms of the existing air quality environment, baseline monitoring 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 estimate that Ireland had total GHG emissions of 57.7 Mt CO2eq in 2020. This is 6.73 Mt CO2eq higher than Ireland's annual target for emissions in 2020. The EPA predict that Ireland can meet its targets from 2021 to 2030 provided full implementation of the measures outlined within the Climate Action Plan published in 2019 and the updated Climate Action Plan published in 2021.

Impacts to air quality and climate can occur during both the construction and operational phases of the proposed development. With regard to the construction stage the greatest potential for air quality impacts is from fugitive dust emissions impacting nearby sensitive receptors. Impacts to climate can occur as a result of vehicle and machinery emissions. In terms of the operational stage air quality and climate impacts will predominantly occur as a result of the change in traffic flows in the local areas associated with the proposed development.

There are a number of sensitive receptors in close proximity to the site, directly north, south and east of the site boundary. Provided the dust mitigation measures outlined in Appendix 10C of Chapter 10 are implemented, dust emissions are predicted to be short-term, negative 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.

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. The operational phase air quality and climate modelling assessments determined that there is no potential for significant impacts as a result of traffic related to the proposed development. It can therefore be determined that the impact to air quality as a result of increased traffic volumes during the operational phase of the proposed development is localised, negative, imperceptible and long-term. The impact to climate is predicted to be long-term, negative and slight.

In addition, the proposed development has been designed to reduce the impact to climate where possible during operation.

As the National and EU standards for air quality are based on the protection of human health, and concentrations of pollutants in the operational stage of the proposed development are predicted to be significantly below these standards, the impact to human health is predicted to be imperceptible, negative and long term.

No significant impacts to either air quality or climate are predicted during the construction or operational phases of the proposed development.

(XI) WIND & MICROCLIMATE

IES have undertaken an analysis to study the potential wind conditions that might affect the pedestrians within the proposed build to rent (BTR) residential development comprising approximately 419 no. residential units, a childcare facility and a. retail/café unit together with all associated and ancillary infrastructure and open space provision at a site of approximately 2.15 ha at Cornelscourt Village, Old Bray Road, Cornelscourt, Dublin 18

The analysis used the Lawson's Pedestrian Comfort and Safety criteria to test the suitability of the various locations on the site for their purposes. The criteria looks at activities in terms of 'sitting', 'standing', 'leisure walking' and 'business walking'. The first two categories are aimed at locations like amenity spaces like balconies, terraces, gardens and outdoor seating areas of hospitality venues. The latter criteria are applied to courtyard pathways, exercise tracks, and thoroughfare paths for accessing various buildings on the site. These various criteria suggest that the site be designed in such a way that the wind is not allowed to reach speed exceeding about 4m/s for 'sitting' to 10m/s for 'business walking', for more than 95% of the year.

The safety criteria test the possibility of local winds exceeding 15m/s and 20m/s., where they can start affecting people remaining standing. The lower speed threshold applies to children and the infirm. The upper speed threshold is for general population.

Dublin exhibits predominantly south-westerly and westerly winds. The median wind speed for Dublin is around 5m/s, i.e. for 50% of the year wind speed exceeds 5m/s. Therefore, from outset the challenge, from wind comfort point of view, is to reduce wind speeds in amenity spaces to one tenth of their frequency of the occurrence of over 5m/s.

In general the locations with most likely exceedance of sitting comfort criteria included:

- West, and northern edge of the central sun decking and sitting space
- West corner of the deck around the multifunction pavilion
- Northern amenity space between Buildings B and C.
- Some balconies on Buildings A, B and C

However, in all cases, whenever the wind speed at the above locations exceeded 4m/s for more than 5% of the year i.e. exceeded the threshold for the Lawson's Sitting Comfort Criterion, it is also less than 6m/s for more than 95% of the year i.e. fully compliant with threshold for the Lawson's Standing Comfort Criterion. Hence, any exceedance noted for the Lawson's Sitting Comfort Criterion can be considered very marginal and, it will not lead to an environment which is unpleasant to use. The local air speed is

only going to be greater than a gentle breeze, but most frequently less than a moderate breeze. Such conditions are unlikely to have any impact on usability of this locations as amenity spaces. The environment on these locations will be typical of, and consistent with, any other location on and around buildings of a similar scale and design, in the Dublin area.

The site showed excellent compliance with the Lawson's Safety Criteria for the normal and sensitive pedestrians.

In general, the wind microclimate of the site as proposed can be considered much suitable for the intended purposes. The site has incorporated design features that reduce the effect of wind, ensure the use of public and private amenity spaces is comfortable and safe.

(XII) LANDSCAPE & VISUAL IMPACT ASSESSMENT

This chapter of the EIAR has been prepared by Mitchells + Associates and provides a Landscape and Visual Impact Assessment (LVIA) for the proposed development.

The proposed development is a comprehensive, high quality design for a residential (Build-to-Rent) development incorporating an integrated landscape design with a full range of amenities, open space, and facilities for modern urban living. The scale and density of the proposed development, whilst in line with current government policy for housing provision, creates challenges within the existing landscape context of a small village core and the surrounding low-rise suburban housing. However, the design takes into account the need to mitigate a number of potentially negative aspects of providing residential accommodation in the prevailing landscape context.

The proposed development will be located just east of and adjacent to the existing Cornelscourt village, on disused/underused lands (characterised by rough grasses, weed species and scrub vegetation) which fall very gently towards the N11. The N11 is effectively a village by-pass of large scale and was designed to take large volumes of commuting traffic in and out of the city but did not consider peripheral issues other than the direct accommodation of adjacent private properties in respect of their outer boundaries. The space created by the construction of the N11 created a landscape and visual problem for the village centred on the poor relationship between road and village, which has never been appropriately addressed. The proposed development represents an opportunity to address this issue.

The design strategy and rationale for the proposed development are appropriately based upon a consideration of three main aspects:

- The relationship between the large scale N11 road and the proposed development;
- The relationship between the existing village and the proposed development;
- The relationship between the proposed development and the existing adjacent residential properties.

The design approach taken is both appropriate and entirely logical in the existing context, in that it proposes the location of the required higher rise elements close to the large scale N11. This will have two main positive attributes, namely, (1) it provides a landmark element adjacent to the N11 signifying Cornelscourt as a place (one of a number of such built and proposed 'events' along the N11 corridor) and (2) it provides a designed separation or 'bulwark' between the village area and the road.

The proposed design incorporates reinforcement of the village functions, primarily through the provision of a building which specifically addresses the disused, 'derelict' gap site in the existing street (along the Old Bray Road) and which will provide opportunities for complementary commercial and social facilities. This building is an appropriately scaled new building within the village core which supports and confirms the status and viability of the village. The design also allows for a designed gradation from high rise at the road, down to lower scaled buildings at the village and approaching the existing adjacent residential properties. This stepping down nearer to the existing residential properties, successfully reduces the potential negative effects which could have accrued in respect of proximity and over-bearing. Open space is also created between the existing and the proposed residential buildings, which further accentuates this effect.

The design drawings and reports, together with the prepared photomontages indicate that the proposed development will create some significant landscape and visual impacts upon the existing landscape context. However, the design successfully mitigates the majority of any resultant negative effects, whilst providing many positive effects, particularly in respect of the broader landscape character of the area and the improved social and cultural aspects provided by the proposed scheme.

(XIII) MATERIAL ASSETS: TRAFFIC & TRANSPORT

This section of the EIAR has been prepared by DBFL Consulting Engineers and addresses all transport and related sustainability issues including means of vehicular access, pedestrian, cyclist and local public transport connections. The principal objective of this chapter is to quantify any level of impact across the local road network and subsequently ascertain the operational performance of the local road network.

The subject greenfield site is currently vacant, with vehicular access currently provided from the R842 Old Bray Road and is located in Cornelscourt, a suburb of South Dublin. The subject development lands are zoned as Objective A 'To protect and-or improve residential amenity' within the Dun Laoghaire - Rathdown County Development Plan.

The subject site benefits from excellent public transport accessibility levels including Dublin Bus and Go Ahead operated services which are easily accessible from the subject site, Luas services through the Carrickmines Luas Stop and heavy rail services that may be accessed at Dun Laoghaire Station.

The development proposals include the construction of a residential development comprising 412 no. residential apartment units and 7 no. houses, in addition to a small café. The site will accommodate car parking spaces, bicycle parking, storage, services and plant areas.

One appropriately located, sized and designed site access (priority) junction is being provided to serve the proposed development. It is located on the R842 Old Bray Road and is shared by the Cornelscourt AIB Bank. The site access junction benefits from an appropriate level of visibility splays ensuring its safe operation. In addition, the proposals include 2 no. dedicated pedestrian and cyclist accesses, one access connects the development directly to the N11 Stillorgan Road, the other access links the site to Willow Grove (to the south-east).

The proposals include the provision of a total of 237 car parking spaces on-site, which is equivalent to a car parking ratio of approximately 0.57 car parking spaces to every residential unit. In addition, a total of 155 short term and 664 long term bicycle parking stands (819 in total) on-site will be provided within the subject Cornelscourt development. The level of bicycle parking proposed on-site for the apartment

units has been provided in the context that the development car parking proposals are below the DLRCC development plan standards. This reduction is consistent with the 'substantial' reduction that the DHPLG guidelines recommend and at which the high DHPLG bicycle parking requirements would be of greater relevance.

For the purpose of this report, it was assumed that all 419 residential units have been built and occupied by 2023. A range of peak hour scenarios were investigated for an opening year of 2023 and a future design year of 2038 including the following four different assessment scenarios: -

Do Nothing

- A1 – 2023 Base Traffic Flows
- A2 – 2038 Base Traffic Flows

Do Something

- B1 - 2023 Do Nothing (A1) + Proposed Residential Development Flows (419 units)
- B2 - 2038 Do Nothing (A2) + Proposed Residential Development Flows (419 units)

The potential level of impact that may be generated by the subject proposals has been investigated at the site access junction with the R842 Old Bray Road in addition to the following three key off sites junctions;

- R842 Old Bray Road / Old Bray Road (Cul-de-sac);
- R842 Old Bray Road / Mart Lane; and
- R842 Old Bray Road / Cornelscourt Hill Road.

At these key off site junctions it was demonstrated that the proposed development (419 units) would result in a percentage increase in motorised traffic level above the 10% threshold for the R842 Old Bray Road / Old Bray Road (Cul-de-sac) junction. Accordingly, a more detailed evaluation of the operational performance of this key off site junction in addition to the new access junction was carried out within the TTA. The R842 Old Bray Road / Mart Lane junction was also evaluated having exceeded the 10% threshold for one 2023 scenario.

The analysis detailed within the TTA demonstrated that the new site access junction will operate well within capacity in the adopted 2038 design year peak hour scenario. The operational assessment of the key off site junctions in both the 2023 and 2038 design years, following the construction of the proposed development (419 units) indicates that whilst an increase in utilisation of all junctions are predicted they continue to operate within acceptable peak hour operational performance.

With the objective of mitigating the potential impact of the proposed development during its operational stage, the following initiatives and associated timescale for their implementation have been identified and subsequently form an integral part of the subject development proposals.

- Management – A number of management measures will be implemented prior to the subject scheme opening which include:-

    - A Mobility Management (MMP) is to be rolled out with the aim of guiding the delivery and management of coordinated initiatives by the scheme promotor. The MMP ultimately seeks

to encourage sustainable travel practices for all journeys to and from the proposed development site. This MMP will be developed in partnership with DLRCC to specifically consider the opportunities of shaping all journeys and promoting sustainable transport habits at the proposed residential development.

- The accesses to the under-croft parking areas will be barrier controlled to ensure unpermitted vehicles cannot gain entry. In order to be allocated a dedicated parking space within these under croft parking areas, tenants based at the site will have to apply to the management company to gain a parking permit and an assigned dedicated parking space.

- Service – The facilitation of a dedicated car share facility (10 spaces) will reduce the need to own a private motor car thereby contributing to reducing the overall number of vehicle trips generated by the proposed development.
- Facilities – The provision of a total of 155 short term and 664 long term bicycle parking stands (819 in total).

Accordingly, it is concluded that through the implementation of the proposed mitigation measures and the rollout / uptake of the Mobility Management Plan initiatives, the proposals will not result in a material deterioration of road traffic conditions.

The traffic and transport assessment concluded that the opportunity is available, in terms of transport and traffic, for the local authority to consider favourably the proposed residential development on the subject site. It was concluded that all four of the junctions investigated within the TTA will operate within acceptable peak hour performance and accordingly there are no traffic or transportation related reasons that should prevent the granting of planning permission for the proposed residential development.

(XIV) MATERIAL ASSETS: UTILITIES

This chapter of the EIAR has been prepared by DBFL Consulting Engineers and comprises of an assessment of the likely impact of the proposed development on existing utility services in the vicinity of the site as well as identifying proposed mitigation measures to minimize any impacts.

The material assets considered in this chapter of the EIAR include Power, Gas and Telecommunications. Note that Surface Water Drainage, Foul Drainage and Water Supply are addressed in Chapter 8 of the EIAR (Water).

In summary, the project comprises the development of 412 apartments, 7 houses, residential amenities (a gym; a variety of tenant amenity lounges including a concierge; a single storey multipurpose pavilion building within the communal courtyard), a childcare facility and café / retail unit on a 2.15 Ha site (approx.).

Assessment of the likely impact of the proposed development on existing material assets in the vicinity of the site included a desktop review of ESB Networks Utility Plans, Gas Networks Ireland Service Plans, Eir E-Maps and Virgin Media Maps.

Existing MV / LV underground cable routes are located to the north of the site (traversing the N11) and to the south of the site (Willow Grove). Existing LV / MV / 38 KV & Higher underground cable routes are also shown along Old Bray Road (to the west of the site).

An existing medium pressure gas distribution pipeline (125 PE 4bar) is shown running along the Old Bray Road (to the west of the site). An existing medium pressure gas distribution pipeline (8 In ST 4bar) is shown running along the N11 (to the north and east of the site).

Telecommunications infrastructure is located along Old Bray Road (to the west of the site) and to the south of the site (Willow Grove).

The existing infrastructure noted above will provide electrical, gas and telecommunication connections for the proposed development.

There is potential interruption to ESB's network, Gas Networks Ireland's infrastructure, Eir's infrastructure and Virgin Media's infrastructure while carrying out works in the vicinity of the site entrance to provide service connections to the proposed development.

A GPR utility survey has been carried out along Old Bray Road to confirm the location of the power, gas and telecommunication infrastructure. This survey is to be supplemented with slit trench investigations as required by the contractor in advance of commencing works in the vicinity of Old Bray Road.

Reinstatement of any excavations, trenches etc. relating to the provision of electrical, gas and telecommunications connections is to be carried out in accordance with the relevant utility provider's requirements.

Implementation of mitigation measures outlined in Chapter 14 of the EIAR and the Preliminary Construction Management Plan will ensure that the potential impacts of the proposed development on site services do not occur during the construction phase.

(XV) CULTURAL HERITAGE: ARCHAEOLOGY & ARCHITECTURAL HERITAGE

This chapter of the EIAR has been prepared by Archer Heritage Planning Limited and comprises a cultural heritage and archaeology study undertaken in respect of the application site.

The cultural heritage assessment has employed a variety of sources and methodologies to establish a baseline scenario. The following conclusions are presented in order to ascertain any likely significant potential direct and indirect impacts which the proposed development may have:

- The application area is large in scale, occupying an area of circa 2.15 hectares on the southern edge of Dublin City and the northern edge of the Dublin Mountains.
- Significant disturbance of the area has taken place in the recent past with the construction of what appears to be an overflow car park in the northern third of the site.
- There are no recorded monuments situated within the site boundary.
- There are no Protected Structures within the site boundary.
- There are relatively few recorded monuments located in the wider study area or Zones of Archaeological Interest as defined under the Dún Laoghaire-Rathdown County Development Plan 2015 22.
- No potential archaeological features were recorded in aerial photos of the subject site.
- No potential archaeological features were recorded in historic mapping of the subject site.
- Analysis of historical mapping has shown the area to be former agricultural land.

- The walkover site survey confirmed that much of the central and southern parts of the site remain relatively undisturbed.
- Geophysical survey under licence 19R0038 revealed no potential archaeological features.
- Test trenching under licence no, 19E0159 revealed no archaeological features.

These factors indicate that there is a low-moderate potential for the survival of buried archaeological remains at this site.

The greatest threat to unrecorded, buried archaeological sites/ features occur during the construction stage and include all ground disturbance works undertaken at this stage (excavations and other groundworks including the provision of access roads and service trenches), movement of machines and storage of material in sensitive areas. In the absence of appropriate mitigation measures, significant likely impacts on any buried archaeology and heritage sites would be direct, negative and permanent.

Mitigation measure

Any potential adverse impacts from construction activity on archaeological or cultural heritage features or material that may exist on the site will be mitigated by the monitoring of the topsoil stripping of the site by a suitably qualified archaeologist. If any archaeology is encountered then it will be cordoned off from construction activity; the Department of Housing, Local Government and Heritage (DHLGH) will be notified; and an appropriate strategy will be agreed, i.e. preservation in situ or full archaeological excavation under licence from the DHLGH in consultation with the National Museum of Ireland (NMI)..

(XVI) INTERACTIONS WITH THE FOREGOING

This chapter of the EIAR has been compiled by Declan Brassil & Company, based on the interactions identified in the preceding chapters, and provides an assessment of the interactions and interrelationships of the different environmental factors/impacts that will occur as a result of the proposed development including synergistic and cumulative impacts.

All environmental topics are interlinked to a degree such that interrelationships exist on numerous levels. The comprehensive assessments undertaken as part of this EIAR has revealed that the proposal will not result in any significant adverse effects on the environment. Mitigation measures have been proposed to avoid, remedy or reduce identified impacts.

This assessment of interactions arising concluded that the proposed development will not result in any significant synergistic interactions or cumulative adverse impacts on the environment.

In all instances, mitigation measures have been proposed to avoid, remedy or reduce identified impacts. Mitigation measures are proposed and outlined within individual EIAR chapters to ensure that any potential adverse impacts that may arise as a result of the proposed development are minimised/neutralised.

(XVII) MITIGATION MEASURES

This chapter of the EIAR has been coordinated by Declan Brassil & Company and compiles and lists the mitigation measures and monitoring requirements described in the previous chapters of the EIAR. The mitigation measures described in the EIAR are summarised in the sections above