

3 DESCRIPTION OF PROPOSED DEVELOPMENT

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3.1 Introduction

This chapter of the EIAR has been prepared by Brock McClure with input from the applicant Homeland Silverpines Ltd., and O'Mahony Pike Architects (OMP). This chapter describes the nature of the proposed development in accordance with the requirement of the relevant EIA legislation and guidance on preparation and content of the EIAR. The development will consist of a new residential and mixed use scheme to include apartments, residential amenity space, a café and a childcare facility.

A detailed description is now set out as follows:

The proposal provides for the demolition of 10 no. properties and associated outbuildings at 'Madona House' (single storey), 'Woodleigh' (2 storeys), 'Cloonagh' (2 storeys), 'Souk El Raab' (2 storeys), 'Welbrook' (2 storeys), 'Calador' (2 storeys), 'Alhambra' (2 storeys), 'Dalwhinnie' (2 storeys), 'Annaghkeen' (2 storeys) and 'The Crossing' (single storey) (combined demolition approx. 2,291.3 sq m GFA).

The new development will provide for (a) the refurbishment, separation, and material change of use of Saint Joseph's House (a Protected Structure) from residential care facility to residential use and a childcare facility; and (b) the construction of a new build element to provide for an overall total of 463 no. residential units, residential amenity space and a café.

The overall development proposal provides for the following:

- Block A (5 storeys) comprising 49 no. apartments (13 no. 1 bed units, 33 no. 2 bed units and 3 no. 3 bed units);
- Block B (4 - 7 storeys) comprising 88 no. apartments (28 no. 1 bed units, 57 no. 2 bed units and 3 no. 3 bed units);
- Block C (5 - 7 storeys) comprising 115 no. apartments (26 no. studio units, 26 no. 1 bed units and 57 no. 2 bed units and 6 no. 3 bed units);
- Block D (5 - 10 storeys) comprising 157 no. apartments (36 no. studio unit, 40 no. 1 bed units and 81 no. 2 bed units), residential amenity areas of approx. 636 sq m and a café of approx. 49 sq m;
- Block E (St. Joseph's House) (2 storeys) comprising 9 no. apartments (8 no. 2 bed units and 1 no. 3 bed units) and a childcare facility of 282 sq m and associated outdoor play areas of approx. 130 sq m;
- Block F (3 - 6 storeys) comprising 45 no. apartments (23 no. studio units, 10 no. 1 bed units; and 12 no. 2 bed units);

Each new build residential unit (Blocks A, B, C, D and F) has associated private open space in the form of a terrace/balcony. Open Space proposals for St. Joseph's House (Block E) include a mixture of private terrace/balcony areas and communal open space areas.

The extent of works proposed to Saint Joseph's House (a Protected Structure) include:

- The demolition of a single storey office, conservatory, glazed link and associated outbuildings. Also the demolition of the external store, external enclosed escape stairs with associated canopies, toilet extension and 3 no. outbuilding to the west of St Joseph's house. (demolition total approx. 173.4 sq m GFA);
- The removal of external steel gates, all external steel escape stairs, canopies, and existing disabled access ramps. Also removal of existing concrete steps to the west side of the structure and form new ones.
- Relocation of external granite steps and the provision of a new raised entrance terrace, steps and ramp areas;
- Replacement of existing rooflights, the addition of roof lights, part new roof / new zinc roof and external wall and roof to the east of the structure.
- The provision of new door and window openings;

- Modifications to internal layout including the removal of walls and partitions and the addition of new dividing walls.

The Residential Amenity Areas of approx. 636 sq m proposed in Block D comprise a residential club house/multi-purpose room, library/reading room, lounge area, concierge area, office area, post room, fitness club, all at ground floor level of Block D. A terrace lounge area is proposed at fifth floor level of Block D. 2 no. roof garden areas are also proposed at fifth floor level of Blocks C and D (approx. 400 sq m and 408 sq m respectively).

Open Space (approx. 9,885 sq m) is proposed in the form of (a) public open space areas (approx. 6,680 sq m) which include a public plaza/court area, a main area of public open space (including a play area and outdoor gym area) and woodland trail; and (b) all communal open space areas (approx. 3,205 sq m) which include areas adjacent to St. Joseph's House (Block E), Block D and Block F, a courtyard and play area located between Blocks A and B and roof terraces at fifth floor level of Blocks C and D. Visual amenity open space areas (approx. 1,000 sq m) are also proposed at various locations throughout the development.

Basement Level (approx. 9,445 sq m) is proposed with residential access from Blocks A, B, C, D and F. Bin Storage areas, water storage areas, and part attenuation are located at this level. 2 no. ESB Substations, 1 no. ESB Kiosk, 2 no. Switch Rooms, waste storage areas for Block E (St. Joseph's House, A Protected Structure) and bicycle storage areas proposed at surface level.

A total of 259 no. car parking spaces (232 no. at basement level and 27 no. at surface level) are proposed. At basement level a total of 30 no. electric vehicles and 202 no. standard parking spaces are provided for. A total of 968 no. bicycle spaces (816 no. at basement level and 152 no. at surface level) dedicated cycle lift and 10 no. motorcycle spaces (all at basement level) are also proposed.

Proposals for vehicular access comprise 1 no. existing vehicular access point via Silver Pines (an existing all movement junction onto Brewery Road) and 1 no. new vehicular access point at the general location of 'Annaghkeen' at Leopardstown Road (a new Left In / Left Out junction arrangement). The new access point along Leopardstown Road will replace 9 no. existing access points at 'Woodleigh', 'Cloonagh', 'Souk El Raab', 'Welbrook', 'Calador', 'Alhambra', 'Dalwhinnie', 'Annaghkeen' and 'The Crossing'. The internal permeability proposed will provide linkages for pedestrians and cyclists to Leopardstown Road and adjoining Greenway. Proposals also provide for the relocation of an existing bus stop along Leopardstown Road.

The associated site and infrastructural works include provision for water services; foul and surface water drainage and connections; attenuation proposals; permeable paving; all landscaping works including tree protection, tree removal and new tree planting; green roofs; boundary treatment; internal roads and footpaths; and electrical services.



3.2 Characteristics of Development

Schedule 6 para. 2(a) of the EIA Directive requires information on the site, design size and “other relevant features” of the proposed development.

We set out below the details of the site and relevant design features.

Site Location



The overall site extends to c. 2.74 ha to include service connections (the main development site area is 2.58ha) and is generally located to the south of Leopardstown Park; to the east of residential development at Silverpines; north of residential development known as 'The Chase'. The site is strategically located between the M50 motorway and the N11 Dual Carriageway.

In addition, the site is within a 500m radius of Sandyford Urban Core with associated shops and services and the Beacon South Quarter Urban Centre further southwest. It is also well served by public transport, specifically, the site is located 600m from the Green Line Luas Stop at Sandyford. In addition, there are a number of regular bus services on the R113 Leopardstown Road, N31 Brewery Road and N11 Stillorgan Road. The N11 is a primary arterial route connecting the suburbs of south Dublin with the city center. The closest bus stop on the N11 is approximately 16 minute walk away from the centre of the subject site, and is served by the 46A, 70, 75, 84X and 145 bus routes with services between the city centre at 10 minute intervals at peak periods.

Existing Land Use

As stated the overall site extends to c.2.74ha and contains St. Joseph's House, which is a protected structure and a number of other residential properties fronting Leopardstown Road. The site comprises 11 main structures including 10 residential dwellings known as 'Annaghkeen', Dalwhinnie', 'Marian Villa', 'Alhambra', 'Souk El Raab', 'Calador', 'Cloonagh', 'The Crossing', Wellbrook' and 'Woodleigh' and also St. Joseph's House (A Protected Structure), which was formally in use as a residential care facility for the adult and deaf blind. This property is currently vacant. It is proposed to demolish the 10 residential dwellings and refurbish and change the use of St. Joseph's House to residential use.

Size, Design and Appearance of the Project

The extent of the development is set out below.

The demolition of 10 properties and associated structures at:

- 'Madona House' (single storey), 'Woodleigh' (2 storeys), 'Cloonagh' (2 storeys), 'Souk El Raab' (2 storeys), 'Wellbrook' (2 storeys), 'Calador' (2 storeys), 'Alhambra' (2 storeys), 'Dalwhinnie' (2 storeys), 'Annaghkeen' (2 storeys) and 'The Crossing' (single storey) (combined demolition approx. 2,291.3 sq m GFA).

The construction of:

- A new residential scheme of 463 no. residential units, ranging from 2 -10 storeys in height (85 no. studio apartment units, 115 no. 1 bed apartment units, 250 no. 2 bed apartment units; and 13 no. 3 bed apartment units) in the form of 6 residential blocks (Blocks A - F), including a residential tenant amenity space (approx. 636 sq m), café (approx. 49sqm) and creche (282 sq m) as follows:
 - Block A (5 storeys) comprising 49 no. apartments (13 no. 1 bed units, 33 no. 2 bed units and 3 no. 3 bed units);
 - Block B (4 - 7 storeys) comprising 88 no. apartments (28 no. 1 bed units, 57 no. 2 bed units and 3 no. 3 bed units);
 - Block C (5 - 7 storeys) comprising 115 no. apartments (26 no. studio units, 26 no. 1 bed units and 57 no. 2 bed units and 6 no. 3 bed units)
 - Block D (5 - 10 storeys) comprising 157 no. apartments (36 no. studio unit, 40 no. 1 bed units and 81 no. 2 bed units) and residential amenity areas of approx. 636 sq m.
 - Block E (St. Joseph's House) (2 storeys) comprising 9 no. apartments (8 no. 2 bed units and 1 no. 3 bed units) and a creche facility of 282 sq m and associated outdoor play areas of approx. 130 sq m;
 - Block F (3 - 6 storeys) comprising 45 no. apartments (23 no. studio units, 10 no. 1 bed units; and 12 no. 2 bed units);

- 259 Car parking spaces (232 at basement level and 27 at ground level)
- 968 bicycle parking spaces (816 at basement level and 152 at ground level).
- 10 no. motorcycle spaces (at basement level)

Award winning architects O'Mahony Pike have led the design from the outset of the project and have delivered an exceptionally high quality residential scheme at this key suburban infill site in the heart of Dublin 18. The proposal has also been the subject of significant input and design advice from various consultants to ensure that the most appropriate form of development is delivered at this site. The residential scheme has been the subject of discussions with An Bord Pleanála and Dun Laoghaire Rathdown County Council and the final design is reflective of all points of consultation.

The proposal provides for the refurbishment of St. Joseph's House to provide for 9 no. residential units, and a creche facility. St. Joseph's House will become the focal point within the overall development with the key approach to the house maintained from Brewery Road and new views created to the house from Leopardstown Road. St. Joseph's House will be given suitable importance within the overall hierarchy of the buildings and appropriate distances are maintained within the scheme to ensure that the setting of the Protected Structure is maintained.

The extent of works proposed to Saint Joseph's House (a Protected Structure) include:

- The demolition of a single storey office, conservatory, glazed link and associated outbuildings. Also the demolition of the external store, external enclosed escape stairs with associated canopies, toilet extension and 3no. outbuilding to the west of St Joseph's house. (demolition total approx. 173.4 sq m GFA);
- The removal of external steel gates, all external steel escape stairs, canopies, and existing disabled access ramps. Also removal of existing concrete steps to the west side of the structure and form new ones.
- Relocation of external granite steps and the provision of a new raised entrance terrace, steps and ramp areas;
- Replacement of existing rooflights, the addition of roof lights, part new roof / new zinc roof and external wall and roof to the east of the structure.
- The provision of new door and window openings;
- Modifications to internal layout including the removal of walls and partitions and the addition of new dividing walls.

Open Space (approx. 9,885 sq m) is proposed in the form of public open space areas (approx. 6,680 sq m) including a public plaza/court area, a play area, and woodland trail. Communal open space areas (approx. 3,205 sq m) including areas adjacent to St. Joseph's House (Block E), Block D and Block F, a courtyard and play area located between Blocks A and B and roof terraces at fifth floor level of Block D. In addition, visual amenity open space areas (approx. 1000 sq m) areas located throughout the development. Pedestrian Connections are proposed throughout the site and to the adjoining Leopardstown Park.

There are 45 no. units in Block F proposed for Part V requirements. There are detailed costings, proposals (included in Section 9 of the Design Statement from OMP) and correspondence on this matter enclosed herewith.

Basement Level (approx. 9,445 sq m) is proposed with residential access from Blocks A, B, C, D and F. Bin Storage areas, water storage areas, and part attenuation are located at this level. 2 no. ESB Substations, 1 no. ESB Kiosk, 2 no. Switch Rooms, waste storage areas for Block E (St. Joseph's House, A Protected Structure) and bicycle storage areas proposed at surface level.

Proposals for vehicular access comprise 1 no. existing vehicular access point via Silver Pines (an existing all movement junction onto Brewery Road) and 1 no. new vehicular access point at the general location of 'Annaghkeen' at Leopardstown Road (a new Left in Left Out junction arrangement). The new access point along Leopardstown Road will replace existing access points at 'Woodleigh', 'Cloonagh', 'Souk El Raab', 'Welbrook', 'Calador', 'Alhambra', 'Dalwhinnie', 'Annaghkeen' and 'The Crossing'. New pedestrian and cyclist linkages are proposed through the site which provide permeability to

Leopardstown Road and the adjoining Greenway. Proposals also provide for the relocation of an existing bus shelter along Leopardstown Road.

Visual material submitted with this planning application (prepared by Modelworks Architectural Consultants), demonstrate the high quality design approach. The design of the scheme has ensured that there is appropriate scale and massing alongside adjacent residential development while also maximising the use of this land.

To the north and just outside the northern boundary, a large green open park (Leopardstown Park) and playing pitch is available for public use. It is this projects vision to retain the sylvan characteristics of the site while introducing new resident's courtyards and green open spaces to further enhance its landscape and amenity value. It is planned to have a 'Tree walk' and jogging route around the perimeter of the site set amongst the mature trees while the new buildings are set back from the boundary to respect this 'Green' edge. The development will also further enhance pedestrian movement by creating pedestrian linkages between the resident's courtyard spaces and the large public park and playing field to the North.

The associated site and infrastructural works include provision for water services; foul and surface water drainage and connections; attenuation proposals; permeable paving; all landscaping works including tree protection, tree removal and new tree planting; green roofs; boundary treatment; internal roads and footpaths; and electrical services.

Demolition

Overall, the applicant is proposing to demolish 10 residential dwellings known as 'Annaghkeen', Dalwhinnie', 'Madona House, 'Alhambra', 'Souk El Raab', 'Calador', 'Cloonagh', 'The Crossing', Wellbrook' and 'Woodleigh' as part of this application, none of which are protected structures. The 10 dwellings combined consist of a floor area of c. 2,291.3 sq m and are not considered to be of any particular architectural merit. The inclusion of the lands concerned form an opportunity to deliver on a sustainable approach to appropriate residential density at this site ensuring that a larger site area is achieved and a new streetscape with upgraded public realm is delivered on Leopardstown Road.

In addition, the extent of works proposed to St. Joseph' House (Protected Structure) will include the demolition of a single storey office, conservatory, glazed link and associated outbuildings, and the demolition of the external store, external enclosed escape stairs with associated canopies, toilet extension and 3no. outbuilding to the west of St Joseph's house. (total demolition approx. 173.4 sq m GFA);

Density

The proposed residential development at this site is set out as 463 units on a 2.58 ha site (net). This equates to a density of 179 units per ha and is considered a modest approach to the site and its context located proximate to the Green Luas Line. We note specifically that Policy RES3: Residential Density of the Dun Laoghaire Rathdown County Council (DLRCC) Development Plan 2016-2022 requires a minimum of 50 units per ha at locations that are within 1km of a Luas Rail line. The site is situated approximately 600m from the Sandyford Luas Stop and 650m from the Central Park green line Luas stops and as such, the site is well placed to maximise on densities and additional height, an approach which is now the subject of the national policy mandate. A density of this nature is supported by national policy which is aiming to deliver increased height and densities at appropriate locations.

The proposal also complies with Policy RES3: *Residential Density which states that:*

'It is Council policy to generally promote higher residential densities provided that proposals ensure a balance between the reasonable protection of existing residential amenities and the established character of areas, with the need to provide for sustainable residential development'¹

¹ https://www.dlrcoco.ie/sites/default/files/atoms/files/cdp_2010_chapter_5_and_6.pdf

The subject site is a prime underutilised suburban site located proximate to key public transport nodes such as the N11 bus priority route and the Green Luas line, also located within a 500m radius of Sandyford Urban Core with associated shops and services and the Beacon South Quarter Urban Centre further southwest as can be seen in Figure 3.3 below. The site is therefore optimally located to provide for a higher residential density and additional height in compliance with the national policy mandate.



Figure 3.3 – Map showing public transport stops and proximity to Business Parks in relation to the subject site

Height

The new build element of the proposal ranges in height from 2 - 10 storeys as follows:

Block	Height
Block A	4 storeys + Penthouse
Block B	4-7 storeys
Block C	5-7 storeys
Block D	8-10 storeys
Block E	2 storeys
Block F	3-6 storeys

Table 3.1 - Building Heights

Land Use Requirements

A total of 463 residential units are proposed in 6 Blocks (Blocks A - F). Residential Mix consists 463 residential units as follows:

- 85 no. studio apartment units,
- 117 no. 1 bed apartment units,
- 248 no. 2 bed apartment units;
- 13 no. 3 bed apartment units;

A total of 232 of the 463 units proposed have the benefit of dual aspect equating to 50.1% of the units. Heights of up to 10 storeys are proposed and these heights are considered appropriate to the site and surrounding context, having regard to proximity of the site to a public transport corridor; the prominence of the site along Leopardstown Road; and current national planning policy direction.

The site is identified by the relevant statutory context as being capable of accommodating residential development, by way of the residential zoning governing the site. We are of the opinion that the proposal will not have any significant effect on the surrounding uses and that the proposed development has been well designed internally to ensure that residential amenities within the development are protected.

Access

Vehicular access will comprise of an existing vehicular access point via Silver Pines (an existing all movement junction onto Brewery Road) and 1 no. new vehicular access point at the general location of 'Annaghkeen' at Leopardstown Road (a new Left in Left Out junction arrangement). The new access point along Leopardstown Road will replace 9 no. existing access points at 'Woodleigh', 'Cloonagh', 'Souk El Raab', 'Welbrook', 'Calador', 'Alhambra', 'Dalwhinnie', 'Annaghkeen' and 'The Crossing'. New pedestrian and cyclist linkages are proposed through the site which provide permeability to Leopardstown Road and the adjoining Greenway. Proposals also provide for the relocation of an existing bus shelter along Leopardstown Road.

Pedestrians and cyclists will have the benefit of a permeable site by way of new pedestrian and cyclist linkages with adjoining development and Leopardstown Road. There are pedestrian and cycle links through the site towards Sandyford Urban Core and to the surrounding green network along the park to the north. This includes footpaths, landscaping and planting, connectivity and generally improved permeability through the provision of pedestrian access points.

The permeability of the surrounding green network is enhanced through this development due to the additional routes and connections which provide access via a new pedestrian route through the site.

Open space and Landscaping

The delivery of a quality open space proposal and an exceptional landscape masterplan for the site has been a key objective for this proposal and planning application. The current proposal delivers generous and central open space areas with a permeable landscape layout, which will be accessible to all users. The quality of the open space now proposed has ensured the delivery of a superior landscape masterplan.

Open Space (approx. 9,885 sq m) is proposed in the form of :

- Public Open Space (approx. 6,6880 sq m) including a public plaza/court area, a play area, and woodland trail; and
- Communal Open Space (approx. 3,205 sq m) including courtyard, play areas and roof terraces at fifth floor level of Block D.
- Visual Amenity Open Space (approx. 1,000 sq m)

The site benefits from extensive mature planting along the north/east boundary, which provides a sense of enclosure to the site and privacy for future residents. Leopardstown Parks is situated to the north of the site, which provides for playing pitches and this is considered to be a key amenity for the

future residents of the scheme. The current proposal makes provision for 2 connection points to this public park and An Bord Pleanála are invited to condition this particular element of the proposal as they see appropriate.

The open space strategy has been focused on providing connected and functional spaces that provide excellent amenity for residents and knit successfully into the existing context by connecting to surrounding open space particularly to the north.

We note that the public open space requirements set out in the Development Plan are for 15 -20 sq m per person at a rate of 1.5 persons for 1 and 2 bed units and 3.5 persons for dwellings of 3 or more bedrooms. We note that a default minimum of 10% of the total site area should be delivered in terms of open space.

In addition, we recognise that the Apartment Guidelines (2018) set out requirements for minimum communal open space provision.

The current proposal has successfully delivered on the minimum 10% requirement of the Dun Laoghaire Rathdown Development Plan (DLRCC) 2016-2022 and the communal standards of the Apartment Guidelines.

Car Parking

The DLRCC Development Plan states that for apartments, the standards are based on the size of the unit in question. 1 No. car parking space is required for each 1-bedroom unit; 1.5 No. car parking spaces are required for each 2-bedroom unit; and 2 No. car parking spaces are required for 3- bedroom units. When those standards are applied to the proposed development, that results in a requirement for a provision of 601 No. spaces for the residential proposal.

The proposed development provides for 262 no. car parking spaces to cater for the residential element of the proposed development (ratio of 0.56 spaces per unit) which is acknowledged that it does not meet the standard set out in the Dun Laoghaire Rathdown Development Plan 2016-2022.

With regard to the 2020 Apartment Guidelines, the subject site location is classified as an 'Intermediate Urban Location', which is defined as:

"Such locations are generally suitable for smaller large-scale (will vary subject to location), higher density development that may wholly comprise apartments, or alternatively, medium-high density residential development of any scale that includes apartments to some extent (will also vary, but broadly >45 dwellings per hectare net) including:

- Sites within or close to i.e. within reasonable walking distance (i.e. up to 10 minutes or 800-1,000m), of principal town or suburban centres or employment locations, that may include hospitals and third level institutions;
- Sites within walking distance (i.e. between 10-15 minutes or 1,000- 1,500m) of high capacity urban public transport stops (such as DART, commuter rail or Luas) or within reasonable walking distance (i.e. between 5-10 minutes or up to 1,000m) of high frequency (i.e. min 10 minute peak hour frequency) urban bus services or where such services can be provided;
- Sites within easy walking distance (i.e. up to 5 minutes or 400-500m) of reasonably frequent (min 15 minute peak hour frequency) urban bus services."

We can confirm that the proposed development is located in close proximity to the following public transport services:

- Less than 10-minute walk from the Green Luas Line Sandyford and Central Park Stops. Services at 4 minute intervals during peak hour periods.
- Less than 10-minute walk from a number of Dublin Bus Routes in Leopardstown Road and Brewery Road.

Given the location of the proposed development to the south of Dublin City centre, the services and facilities in the area, and the short walking distance to frequent Luas services and reasonably frequent bus services it is considered that the subject site lies within an Intermediate Urban Location. Based on

the proposed developments intermediate location the 2020 Apartment Guidelines recommends the following relating to the proposed development:

‘Planning authorities must consider a reduced overall car parking standard and apply an appropriate maximum car parking standard.’

Development management will actively manage the site’s parking arrangements through a Parking Management Strategy. The low availability and cost of car parking spaces (0.56 spaces/apartment unit) will discourage the use and ownership of private vehicles and promote the use of sustainable transportation modes such as walking and cycling.

Cycle Parking

We can confirm that a total of 968 cycle spaces are delivered for the current proposal. 816 spaces are proposed at basement level and 152 are proposed at surface level to server the overall development.

The ‘Sustainable Urban Housing: Design Standards for New Apartment 2020’ (2020 apartment guidelines) recommend 1 cycle parking space per bedroom and 1 visitor space for every 2 apartments. The subject proposal provides c. 968 cycle parking spaces at basement and ground floor levels. As per Table 3.2 below the proposed development fully complies with the bicycle parking standards as per the 2020 apartment guidelines.

Minimum Requirement	Required	Proposed
1 cycle space per bedroom	737 cycle spaces	968 cycle spaces
1 visitor cycle space per 2 residential units	231.5 visitor cycle spaces	
Total	968.50 cycle spaces	

Table 3.2 - Bicycle Parking Requirements and Proposals as per 2020 apartment guidelines

The standard for cycle parking as set out in the Dun Laoghaire Rathdown ‘Standards for Cycle Parking and associated Cycling Facilities for New Development 2018’ document states that for residential developments 1 short stay (visitor) parking spaces per 5 units and 1 long stay parking space per 1 unit is required. As per Table 3-3 below the proposed development also fully complies with the bicycle parking standards as per the Dun Laoghaire Rathdown Development Plan 2016-2022.

Minimum Requirement	Required	Proposed
1 long stay cycle space per 1 unit	463 cycle spaces	968 cycle spaces
1 visitor cycle space per 5 residential units	92.6 visitor cycle spaces	
Total	555.60 cycle spaces	

Table 3.3 - Bicycle Parking Requirements and Proposals as per DLRCC

Use of Natural Resources

Soil

As detailed in the Construction and Environmental Management Plan prepared by AWN Consulting, site development works will include stripping of topsoil and excavation of subsoil layers. These activities have potential to expose the soils and geological environment to pollution.

In order to reduce the impacts on the soils, geology and hydrogeological environment a number of mitigation measures will be adopted as part of the construction works on site, as set out in the CEMP. The measures will address the main activities of potential impact which include:

- Control of soil excavation and export from site.
- Sources of fill and aggregates for the project.
- Fuel and Chemical handling, transport, and storage; and
- Control of Water during Construction.

Foul Water and Water Supply

The site is served by a 225mm diameter foul sewer system along Leopardstown Road. There is a separate 225mm concrete foul sewer network serving the Silverpines to the West of the proposed development. The houses fronting onto the Leopardstown Road & St. Joseph's House discharge to the foul sewer on the Leopardstown road.

There is an existing connection to the 160mm diameter MOPVC public watermain (1996) on the Leopardstown Road. This consists of a service pipe that supplies St. Joseph's House.

Gas

During operational stage, the only potential natural resources utilised will potentially be natural gas and water in quantities applicable to the daily operation of the new dwellings, and tenant amenity space.

Land, soil and biodiversity are not considered to feature as natural resources used at operational stage.

Energy & Sustainability

An Sustainability and Energy Report has been prepared for the proposed development by Fallon Design and is included with the application. This report sets out the mechanical and electrical strategy including Part L compliance for the development. The compliance will be in accordance with the latest 2019 Part L: Conservation of Fuel & Energy – Dwellings.

Element 51 – Heating Centre is the proposed heating and hot solution for the apartments and shall be designed as an exhaust air heat pump. An Exhaust Air Heat Pump (EAHP), is an energy recycling system. It extracts energy from the warm air as it leaves the home via the ventilation system and uses it to heat the radiators and Domestic Hot Water (DHW).

The installation of an EAHP is self-contained within each apartment and only requires an ESB connection and standard mains water connection. A local 200 litre hot water storage cylinder shall be located in a hot press of each apartment and meets the demands of the resident's hot water. An electric immersion shall be installed for boost and fast recovery of the cylinder if required.

The apartment units will be heated with steel, horizontal panel radiators in each room of the units and designed for the operating temperature of the heat pump. Each apartment unit shall have two heating zones, the first zone will be the main open plan kitchen / living room and the second zone will be the bedrooms.

The ventilation for the apartments shall be provided by the EAHP and be classed as mechanically ventilated. The central extract shall operate on the principle of mechanical extract ventilation (MEV).

A new ESB electrical supply will be brought to each apartment in accordance with ETCl and ESB standards. A centrally located meter enclosure shall be provided with direct access from the public road.

Low energy LED lighting shall be designed and specified in accordance the Building Energy Rating (BER), requirements in each unit and in the landlord areas in accordance with Part L. Low energy LED public lighting shall be designed in accordance with CIBSE lighting guide and local County Council public lighting standards.

30 no. Electric car park spaces shall be provided with EV charging points for the development as per the drawings. The remainder of the apartment car park spaces shall be enabled for 3rd party management company operated EV charging points. This will be managed with pre-paid open access for all residents and the number and points can be added as demand from the residents increases.

Visitor spaces shall be supplied and installed with EV points to allow the visitors of the apartments charge their electric cars. The supplies will be located around the development in the dedicated visitors' spaces and ducted to ESB mini-pillars for installation and operation by a third party.

Services

The following service proposals are detailed fully within the Civil Engineering Infrastructure Design Report prepared by Barrett Mahony Consulting Engineers. This report considers the proposed development's main infrastructural elements and how they connect to the public infrastructure in the area.

Water

A initial Pre-Connection Enquiry was submitted to Irish Water in November 2019 in relation to this application. Discussions were held with Irish Water following the Tripartite meeting. Detailed modelling of the sewer system was then carried out by RPS Group for our client. RPS liaised with Irish Water during this process. On foot of this modelling, a solution was agreed with Irish Water to provide a wastewater pumping station on the subject site with a pumped discharge to the foul sewer in Silver Pines housing estate adjacent to the development. This sewer connects to the Sandyford system.

The updated Confirmation of Feasibility letter from Irish Water, dated the 12th of July 2021, sets out their requirements. An updated buried foul layout drawing and accompanying pumping station detail drawings were then prepared to reflect the requirements of Irish Water. These drawings are part of the final application package.

The Confirmation of Feasibility letter is contained in Appendix II of the Infrastructure Report prepared by Barrett Mahony Consulting Engineers.

Surface Water Drainage and SUDS

The proposed surface water drainage system is designed to comply with the 'Greater Dublin Strategic Drainage Study (GDSDS) Regional Drainage Policies Technical Document – Volume 2, New Developments, 2005' and the 'Greater Dublin Regional Code of Practice for Drainage Works, V6.0 2005'. CIRIA Design Manuals C753, C697 and C609 have also been used to design the surface water drainage system within the site.

The site is divided into a number of surface water drainage catchments. The catchment areas have different SuDS measures which will have an influence on the runoff coefficient. The more porous the material, the lower the runoff coefficient. Materials in the area will consist of, but not limited to, Permeable Paving, Green roof structures, solid roofs, impermeable areas and landscaped grass areas

The development will be served by 3 no separated surface water drainage sub catchment areas, Each sub catchment will be served by a gravity drainage network, with run-off attenuated in each

catchment prior to discharging to the sw sewer on the Leopardstown Road or the sw sewer in Silver Pines. The proposed catchment division is as follows:

1. Blocks A,B & C and surrounds: The flow from these will be discharged via gravity to the existing 225mm surface water sewer located along Leopardstown Road via a concrete attenuation tank with a hydrobrake flow control device as per GSDS requirements.
2. Existing St Joseph's House and surrounds: The existing connection for St. Joseph's House to the surface water sewer in Silver Pines will be retained. The surface water from this area will go through a new buried Stormtech attenuation tank fitted with a hydrobrake flow control per GSDS requirements.
3. Blocks D & F and surrounds: It is proposed to build a new soakaway tank under the landscaped area west of Block D. Ground conditions on site show good infiltration characteristics which supports the use of this proposed infiltration system. Refer to Site Investigation report in Appendix IV of the Civil Engineering Infrastructure Design Report prepared by Barrett Mahony Consulting Engineers for information regarding the infiltration parameters. An emergency overflow manhole will be constructed to connect into the existing surface water network in Silverpines.

Foul Water Drainage

A new foul drainage system will serve the development. It is proposed to provide 1 connection point which will accommodate the whole site and will connect into the sewer network in Leopardstown road. The flow table below are calculated using Irish Water flow rates of 150 l/hd/person per day for residential use and the I.W. recommended occupancy rate of 2.7 per unit. A 10% of infiltration rate is also applied. Basement car park drainage will be pumped up from basement level via a petrol interceptor.

TOTAL FOUL WASTEWATER CALCULATION
<u>DOMESTIC:</u>
TOTAL AVERAGE FLOW = 2.17 l/s TOTAL PEAK FLOW = 13.239 l/s
<u>OTHERS:</u>
TOTAL AVERAGE FLOW = 0.225 l/s TOTAL PEAK FLOW = 0.99 l/s
<u>EXISTING:</u>
TOTAL AVERAGE FLOW = 0.0474 l/s TOTAL PEAK FLOW = 0.2891 l/s
<u>TOTAL WASTEWATER</u>
TOTAL AVERAGE FLOW = 2.217 l/s TOTAL PEAK FLOW = 14.229 l/s

Table 3.4 - Foul Network Summary

3.3 Description of Construction Stage

Duration and Timing

The construction works associated with the development will be undertaken in 3 no. phases. There will also be demolition and excavation phases associated with removing demolition material, excavating the basement, along with reprofiling spoil onsite.

The construction and demolition programme is intended to commence in the second half of 2022, with a 40-month programme.

Demolition Phase

Most of the existing structures on site except for St Joseph's House, will be demolished as part of initial enabling works before the construction of the proposed development.

The demolition shall be in full compliance with BS 6187 "Demolition in Buildings" and all measure necessary will be taken to protect the adjoining buildings from damage and persons from injury. Prior to the demolition works a Construction and Demolition Waste Management Plan in accordance with the "Department of the Environment Heritage and Local Government Best Practice Guidelines on the preparation of Waste Management Plans for construction and demolition projects" will be updated and prepared by the appointed Demolition Contractor.

The demolition will commence with the removal of any hazardous materials by an appropriately qualified contractor for disposal at an appropriate licensed waste collection facility. All non-structural items will then be removed segregated for re-use or re-cycling where possible. The remainder of the building structure will be removed in an approved sequence outlined in a Method Statement prepared by the yet to be selected Demolition Contractor's Structural Engineer

Excavation and Construction Phase

Excavation will involve excavations for new foundations, site levelling, basement level and excavations for roads and services. The Construction and Demolition Waste Plan prepared by AWN Consulting (ref CB_20_11580WMR01), for the development will be updated by the main contractor and will be in compliance with the requirements of the "Best Practice Guidelines for the Preparation of Waste Management for the Construction and Demolition Projects" published by the Department of the Environment Heritage and Local Government will identify and categorise any waste arising from the development.

The plan will also contain the proposals for the minimisation, re-use and re-cycling of site generated waste. As part of this plan separate storage areas will be designated on the site for various types of material in order to maximise the re-use and re-cycling potential. Procedure will also be put in place to ensure that all sub-contractors fulfil the requirements of the Waste Management Plan.

The project involves the construction 463 no. residential apartments and creche, along with all associated site works.

The scheme is split into 3 phases covering 6 blocks in total:

Phase 1

- Block A (5 storeys) comprising 49 no. apartments (13 no. 1 bed units, 33 no. 2 bed units and 3 no. 3 bed units);
- Block B (4 - 7 storeys) comprising 88 no. apartments (28 no. 1 bed units, 57 no. 2 bed units and 3 no. 3 bed units);

Phase 2

- Block C (5 - 7 storeys) comprising 115 no. apartments (26 no. studio units, 26 no. 1 bed units and 57 no. 2 bed units and 6 no. 3 bed units);

Phase 3

- Block D (5 - 10 storeys) comprising 157 no. apartments (36 no. studio unit, 40 no. 1 bed units and 81 no. 2 bed units) and residential amenity areas of approx. 636 sq m.
- Block E (St. Joseph's House) (2 storeys) comprising 9 no. apartments (8 no. 2 bed units and 1 no. 3 bed units) and a creche facility of 282 sq m and associated outdoor play areas of approx. 130 sq m;
- Block F (3 - 6 storeys) comprising 45 no. apartments (23 no. studio units, 10 no. 1 bed units; and 12 no. 2 bed units);



Figure 3.4 - Site Construction Phasing Strategy

Production Of Waste

The principal objective of sustainable resource and waste management is to use material resources more efficiently and to reduce the amount of waste requiring final disposal. However, where residual waste is generated, it should be dealt with in a way that follows the national waste hierarchy and actively contributes to the economic, social and environmental goals of sustainable development.

During the construction stage, quantities of construction and demolition related waste will arise. This quantum of waste is expected to be minimal. Any waste arising will be re-used, recycled or sent to a licensed waste facility.

The proposed development has been designed to comply with local, regional, and national waste legislation along with best practice. All waste generated from the operational phase of this development will be sent for reuse, recycling and/or disposal at appropriately licensed waste facilities.

We confirm for An Bord Pleanála that this application is accompanied by the following documents relating to waste management:

- Construction Management Plan prepared by AWN Consulting (AWN)
- Operational Waste Management Plan prepared by AWN Consulting (AWN)
- Chapter 15 EIAR – Material Assets -Waste Management.

These documents clearly set out how waste will be managed and relevant mitigation measures during the construction and operational stages of the project.

Demolition Waste

There will be a quantity of waste materials generated from the demolition of some of the existing buildings and hard standing areas on site, as well as from the excavation of the building foundations.

Further detail on the waste materials likely to be generated during the demolition works are presented in the project-specific Construction and Demolition Waste Management Plan (C&D WMP) in Appendix 15.1 of this EIAR. The C&D WMP provides an estimate of the main waste types likely to be generated during the C&D phase of the proposed development. The reuse, recycling/recovery and disposal rates have been estimated using the EPA National Waste Reports and these are summarised in Table 3-5 below

Waste Type	Tonnes	Reuse		Recycle/Recovery		Disposal	
		%	Tonnes	%	Tonnes	%	Tonnes
Glass	130.5	0	0.0	85	111.0	15	19.6
Concrete, Bricks, Tiles, Ceramics	739.8	30	221.9	65	480.8	5	37.0
Plasterboard	58.0	30	17.4	60	34.8	10	5.8
Asphalts	14.5	0	0.0	25	3.6	75	10.9
Metal	217.6	5	10.9	80	174.1	15	32.6
Slate	116.0	0	0.0	85	98.6	15	17.4
Timber	174.1	10	17.4	60	104.4	30	52.2
Asbestos	1.0	0	0.0	0	0.0	100	1.0
Total	1451.5		267.6		1007.4		176.5

Table 3.5 - Estimated off-site reuse, recycle and disposal rates for demolition waste

Construction Waste

The below table shows the estimated construction waste generation for the development based on the gross floor area of construction and other information available to date, along with indicative targets for management of the waste streams. The estimated waste amounts for the main waste types (with the exception of soils and stones) are based on an average large-scale development waste generation rate per m², using the waste breakdown rates shown in Table 3-3 below. These have been calculated from the schedule of development areas provided by the architect.

Waste Type	Tonnes	Reuse		Recycle/Recovery		Disposal	
		%	Tonnes	%	Tonnes	%	Tonnes
Mixed C&D	1125.7	10	112.6	80	900.6	10	112.6
Timber	955.1	40	382.1	55	525.3	5	47.8
Plasterboard	341.1	30	102.3	60	204.7	10	34.1
Metals	272.9	5	13.6	90	245.6	5	13.6
Concrete	204.7	30	61.4	65	133.0	5	10.2
Other	511.7	20	102.3	60	307.0	20	102.3
Total	3411.2		774.3		2316.2		320.6

Table 3.6 - Predicted on and off-site reuse, recycle and disposal rates for construction waste

In addition to the information in Table 3-5, there will soil, stones, clay, made ground and rock excavated to facilitate construction of new foundations, underground services, and the installation of the proposed basement. Any suitable excavated material will be temporarily stockpiled for reuse as fill or in landscaping, where possible, but reuse on site is expected to be limited and the majority of excavated material is expected to be removed offsite for appropriate reuse, recovery and/or disposal.

It should be noted that until final materials and detailed construction methodologies have been confirmed, it is difficult to predict with a high level of accuracy the construction waste that will be generated from the proposed works as the exact materials and quantities may be subject to some degree of change and variation during the construction process.

Waste materials generated will be segregated on site, where it is practical. Where the on-site segregation of certain waste types is not practical, off-site segregation will be carried out. There will be skips and receptacles provided to facilitate segregation at source where feasible. All waste receptacles leaving site will be covered or enclosed. The appointed waste contractor will collect and transfer the wastes as receptacles are filled. All waste arising's will be handled by an approved waste contractor holding a current waste collection permit. All waste arising's requiring disposal off-site will be reused, recycled, recovered or disposed of at a facility holding the appropriate registration, permit or licence, as required.

Operational Waste

An Operational Waste Management Plan (OWMP) has been prepared for the proposed project and is included as Appendix A15.2 of this EIAR. The OWMP provides a strategy for segregation (at source), storage and collection of all wastes generated within the building during the Operational Phase including dry mixed recyclables, organic waste and mixed non-recyclable waste as well as providing a strategy for management of waste glass, batteries, WEEE, printer/toner cartridges, chemicals, textiles, waste cooking oil and furniture.

The total estimated waste generation for the proposed project for the main waste types based on the AWN Waste Generation Model (WGM) is presented in Table 3-7 below, and is based on the uses and areas as advised by the Project Architects. Further unit breakdowns can be found in Appendix 15.2.

Waste type	Waste Volume (m ³ /week)		
	Residential Units (Combined)	Creche Unit	Café Unit
Organic Waste	6.81	0.03	0.04
DMR	48.25	1.10	0.10
Glass	1.32	0.01	0.01
MNR	25.37	0.49	0.13
Total	81.75	1.62	0.28

Table 3.7 - Estimated Operational Waste Volume m³/week for the development

The residents and tenants will be required to provide and maintain appropriate waste receptacles within their units to facilitate segregation at source of these waste types. The location of the bins within the units will be at the discretion of the residents. As required, the residents and tenants will need to bring these segregated wastes from their units to their allocated Waste Storage Areas (WSAs). All WSA's can be viewed on the plans submitted with the application.

The OWMP seeks to ensure the proposed Project contributes to the targets outlined in the *EMR Waste Management Plan 2015-2021* and the DLRCC waste Bye-laws.

Construction Methods – Phasing of Development

The construction methodology that will be utilised on the site will have three main attributes to minimise the impact of the construction phase.

- Phasing of construction
- Efficiency
- Minimisation of waste generated
- Construction methods will use techniques that afford safe, efficient, and cost-effective methods of working. In order to minimise the traffic impact associated with the removal of material from the site and the construction phase in general, the Contractor will prepare and implement a Construction Traffic Management Plan (CTMP) prior to commencement of construction of the development.

Construction Traffic, Parking and Site Working Hours

The Traffic and Transport Assessment and Mobility Management Plan prepared by ILTP Consulting address these issues in greater detail. It advises that the works associated with the new development will generate additional traffic on the public road network associated with the removal of excavated material etc. and the delivery of new materials, concrete trucks etc. Construction traffic will access the site from Leopardstown Road with no construction traffic allowed to use the Silverpines Residential Estate. Based on the quantities of excavation and fill to be moved to or from the site, construction waste removal, and general site deliveries for the intended construction works, HGV traffic is estimated to be a maximum of 10 movements per hour based on the information as set out in the Construction Environmental Management Plan (CEMP).

The vehicles associated with the construction activities are as follows:

- Excavators
- Dump Trucks

- Concrete delivery trucks
- Concrete pumps
- Mobile Cranes, and
- Mobile hoists.

It is proposed that the following construction working hours will apply:

- For the duration of the proposed infrastructure works, the maximum working hours shall be 08:00 to 19:00 Monday to Friday (excluding bank holidays) and 09:00 to 13:00 Saturdays, subject to the restrictions imposed by the local authority.
- No working will be allowed on Sundays and Public Holidays. Subject to the agreement of the local authority, out of hours working may be required for water main connections, foul drainage connections etc.

As part of the construction works the appointed contractor shall prepare a Construction Traffic Management Plan which will outline their approach to the project and detail potential impacts for the public road system. This may include provision of transport facilities and the encouragement of car sharing by construction personnel. It will also include measures to mitigate any potential noise and air quality impacts resulting from construction activities, namely from traffic movements in and out of the site.

A more detailed Traffic Management Plan will be prepared and agreed with the Transportation Department of Dun Laoghaire-Rathdown County Council in advance of the commencement of development to provide for mitigation of the impact of construction traffic associated with the proposed development.

Health & Safety Issues

The development will comply with all Health & Safety Regulations during the construction of the project. Where possible potential risks will be omitted from the design so that the impact on the construction phase will be reduced.

Noise & Vibration due to Construction Work

The potential impacts associated with noise and vibration due to construction work, are addressed in Chapter 11 Noise & Vibration.

Air Quality

The potential impacts associated with air quality due to construction work are addressed in Chapter 10 Air Quality and Climate.

Construction Waste Management

A standalone Construction and Demolition Waste Management Plan & an Operational Waste Management Plan for the proposed development have been prepared by AWN Consulting and are included with this application. The purpose of this report is to ensure the best practice is followed in terms of waste and environmental management during the construction phase of the proposed development, and to ensure adverse impacts on the receiving environment including local residents are minimised.

3.4 Mitigation Measures

The Construction Management Plan prepared by AWN Consulting as part of this application has summarised the possible impacts and measures to be implemented and to guide the Contractor who will be required to develop and implement the Construction Management Plan on site. The appointed contractor will be required to prepare a Construction Management Plan in advance of works commencing on site. This will incorporate all mitigation measures proposed within this EIAR for the protection of the environment and human health. Relevant conditions of planning will also be included within the plan.

Monitoring will be undertaken during the demolition and construction phase in line with the recommendations contained chapter 20 of the EIAR.