Redkite
Environmental

Screening Statement for Environmental Impact Assessment

Proposed Residential Development Phase 1

Finlay Park
Naas
Co. Kildare

Westar Homes Ltd.

December 2022

Redkite Environmental Ltd Registered Office: Hunter's Moon, Ballykeane Road, Redcross, Co. Wicklow, Ireland
Registration No: 542716
Siobhan Maher Managing Director Paul Whelan Director

Control Sheet

Document Title:	Screening Statement for Environmental Impact Assessment	**Document No.**	P030_08_R1

Rev	**Description**	**Originator**	**Reviewer**	**Change**	**Date**
01	Document	S. Maher	n/a.	Final.	12/12/2022

Proposed Residential Development
Finlay Park
Naas
Co. Kildare

Screening Statement for Environmental Impact Assessment

Contents

1.0 Introduction

Redkite Environmental Ltd. has been commissioned by Westar Homes Ltd. to prepare a Screening Statement for Environmental Impact Assessment (EIA) for a proposed development comprising a Large-Scale Residential Development (LRD) of 134 dwellings, open space and a commercial/ health/medical unit (247.6sqm.) on a 2.9-hectare (ha) site at Finlay Park, Naas, Co. Kildare. The proposed development will be known as Phase 1 Finlay Park, as part of a larger masterplan for the Northwest Quadrant of Naas Town and hereafter be referred to as "*the Project*" in this document.

This report assesses the potential significant impacts on the environment of the Project. The possible effects on the environment have been examined through the process of an EIA Screening.

This document forms part of a planning application to Kildare County Council (KCC) as set out in the following legislation:

- Planning and Development (Amendment) (Large-Scale Residential Development), Act 2021, and,
- Planning and Development (Large-Scale Residential Development), Regulations 2021 (S.I.716/2021).

2.0 Methodology

This report has been prepared having regard to the *European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018,* which transpose the Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment as amended by Directive 2014/52/EU (together, the "**EIA Directive**") into Irish law. The report has also considered the *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018),* the European Commission (EC) *Environmental Impact Assessment of Projects Guidance on Screening (2017) and* the *Office of the Planning Regulator (OPR) Practice Note PN02 on Environmental Impact Assessment Screening, June 2021.*

The report was prepared by Ms. Siobhan Maher of Redkite Environmental Ltd. Relevant qualifications and experience include:

- BSc. Analytical Science (Chemistry) from Dublin City University;
- Master of Technology (M.Tech.) Environmental Management from University of Limerick;
- Senior Consultant, Malone O' Regan Environmental Services, 1998 - 2001;
- Technical Director, Malone O' Regan Environmental Services, 2001 – 2013;
- Business Development, OES Consulting, 2013 – 2014;
- Managing Director, Redkite Environmental 2014 – present.

Ms. Maher has over 20 years' experience project managing and preparing assessments for EIARs covering a large variety of project types including major infrastructural projects such as road schemes and ports, industrial projects in

the dairy, food processing and pharmaceutical sectors, extractive industries including peat harvesting and leisure, residential and commercial projects.

This report references several other reports that are to be submitted as part of the LRD planning application and which have been reviewed in the preparation of this Screening Statement including:-

- Planning Design Statement, C&W O' Brien Architects.
- Engineering Services Report, Donnachadh O' Brien & Associates Consulting Engineers.
- Energy Statement, Waterman Moylan Engineering Consultants.
- Outline Construction Management Plan, Donnachadh O' Brien & Associates Consulting Engineers.
- Finlay Park, Phase 1, Residential Development, Transport Assessment, Reference Number 300/650/012, Systra.
- Mobility Management Plan, Systra.
- Building Lifecycle Assessment Report, C&W O' Brien Architects.
- Screening Report for Appropriate Assessment, OPENFIELD Ecological Services.
- Ecological Impact Statement, OPENFIELD Ecological Services.
- Bat Assessment for Lands at Naas West Proposed for the Finlay Park Housing Development, Mr. Brian Keeley.
- Arboricultural Report, The Tree File Ltd.
- Archaeological Heritage Report, Byrne Mullins & Associates.
- Finlay Park Flood Risk Assessment, Technical Report, Report Ref. 2021s0264, JBA Consulting.
- Noise and Vibration Impact Assessment Report, Redkite Environmental Ltd.
- Site Development & Construction Phase, Air Quality Impact Assessment Report, Redkite Environmental Ltd.
- Operational Waste Management Plan, Redkite Environmental Ltd.
- Resource & Waste Management Plan, Construction Phase Redkite Environmental Ltd.

In addition, the environmental data held on the Environmental Protection Agency (EPA) Maps application was reviewed to assist in the preparation of this report. https://gis.epa.ie/EPAMaps/

3.0 Site Description & Context

The subject site, hereafter referred to as "*the Site*" has an area of 2.9 ha and is located in one large parcel of land, approximately 0.8km to the west of the centre of Naas as indicated on Figures 1 and 2 overleaf. The Site is therefore located within an excellent position within the proposed Northwest Quadrant of the town and is within walking and cycling distance to nearby existing retail, amenity and educational facilities.

It is part of a larger landbank (masterplan lands) within the ownership of Westar Homes Ltd which will be further developed in time as part of the Northwest Quadrant in line with the Kildare County and Naas Local Development Plan(s) policies and objectives.

The Site is zoned as '*new residential*' with peripheral areas on the northern and southern boundaries zoned as '*open space and amenity*' in the land use zoning maps contained within the Naas Local Area Plan, 2021-2027.

The M7 lies approximately 1.7km to the west/northwest.

New developments, Caragh Court and Finlay Park, lie to west of the site.

The Old Caragh Road bounds the Site to the west and provides access including high quality walking and cycling infrastructure.

The Corbally branch of the Grand Canal lies along the tree-lined southern boundary. Lands in agricultural use lie to the north and immediate east.

The Site is greenfield in nature and is mainly grassed with some mounds of natural soils and subsoils present from the development of earlier phases of Finlay Park located within the overall landholding of Westar Homes Ltd. Refer to Plate 1 overleaf. Part of the Site is also currently in use as a construction compound for the ongoing development at Finlay Park. The Site is screened from the adjacent development Finlay Park by temporary hoarding up to 3m in height and from the canal by a line of existing trees to the south.

There are no watercourses listed on the EPA mapping https://gis.epa.ie/EPAMaps/, however a drainage ditch (the Oldtown Stream) and associated stone wall cuts through the northern part of the Site. There is no water quality data reported for this stream. Refer to Figure 2 overleaf for location. The Oldtown Stream, flows northwest from the harbour area in Naas town towards and into the northern portion of the site before eventually discharging to the River Liffey further northwest. The Liffey is assessed as 'good' status as far as Leixlip under the requirements of the Water Framework Directive (WFD). Thereafter it deteriorates to 'moderate' status.

The site is generally level with local falls to the Oldtown Stream in the northern portion. Regionally, the topography falls to the north.

The Site is on lands designated as Flood Zone C where the probability of flooding from rivers is low.

Subsoil mapping on the EPA website indicates that the site is underlain by alluvium in the southern portion close to the canal and by limestone till in the remainder of the site. According to the site investigation undertaken on-site, cohesive soils underlying the Site are brown sandy slightly gravelly CLAY overlying granular soils described as grey-brown clayey gravelly sand overlying slightly clayey sandy fine to coarse sub-angular to sub-rounded gravel.

The underlying bedrock comprises both the Ballysteen Formation and Feighcullen Formation. The underlying aquifer is of moderate productivity and moderate vulnerability indicating a groundwater depth of >10m. According to the Engineering Services Report, groundwater has been recorded on average at 2m below ground level at +84.5m OD.

It is noted from the Ecological Impact Statement, contained in Attachment 2, that the main habitats present on the Site include dry meadow, improved agricultural grassland and spoil/bareground. 'Higher significance' treelines are located along the southern boundary with the Grand Canal and also along a section of the Oldtown Stream in the northwest corner of the site where the stream turns in a northerly direction. Lower significance' hedgerows are present along the Oldtown Stream within the northern portion of the site as the stream runs from east to west. The importance of the habitats and species present vary from high local value (treelines and associated ditches) to negligible value (spoil and bare ground). There are no plant species listed as alien invasive on the Site.

There are no habitats which are examples of those listed in Annex I of the Habitats Directive while there is no evidence that species listed in Annex II of that Directive are present.

The Site is adjacent to the Grand Canal proposed National Heritage Area (Site Code 002104) along the southern boundary. The Grand Canal is a nationally valuable wildlife corridor and is home to a wide range of plants and animals, many of conservation value, including the Otter *Lutra lutra*. According to the Ecological Impact Statement, the Grand Canal is a feature of national value for biodiversity. It is assessed as 'good potential status' under the WFD.

Dedicated bat surveys were carried out by Brian Keeley of Wildlife Surveys Ireland between June 2020 and September 2022, well within the optimal flight period. No bat roots were recorded while five species were noted feeding or foraging: Common Pipistrelle, Soprano Pipistrelle, Leisler's Bat, Daubenton's Bat (along the canal) and a Myotis species. Further detail is provided in the Ecological Impact Statement in Attachment 2.

It is noted from the Archaeological Heritage Report, prepared by Byrne Mullins & Associates, that the Site is located outside the Naas town Zone of Archaeological Potential, is approximately 325m from the nearest monument and that there are no previously identified individual sites of archaeological interest located within the extent of the Site. No features of archaeological potential were noted as a result of cartographic, aerial photographic or satellite imagery research, examination of LiDAR survey or by subsequent detailed surface reconnaissance surveys. A programme of archaeological testing found that anomalies identified in the Geophysical Survey were not of

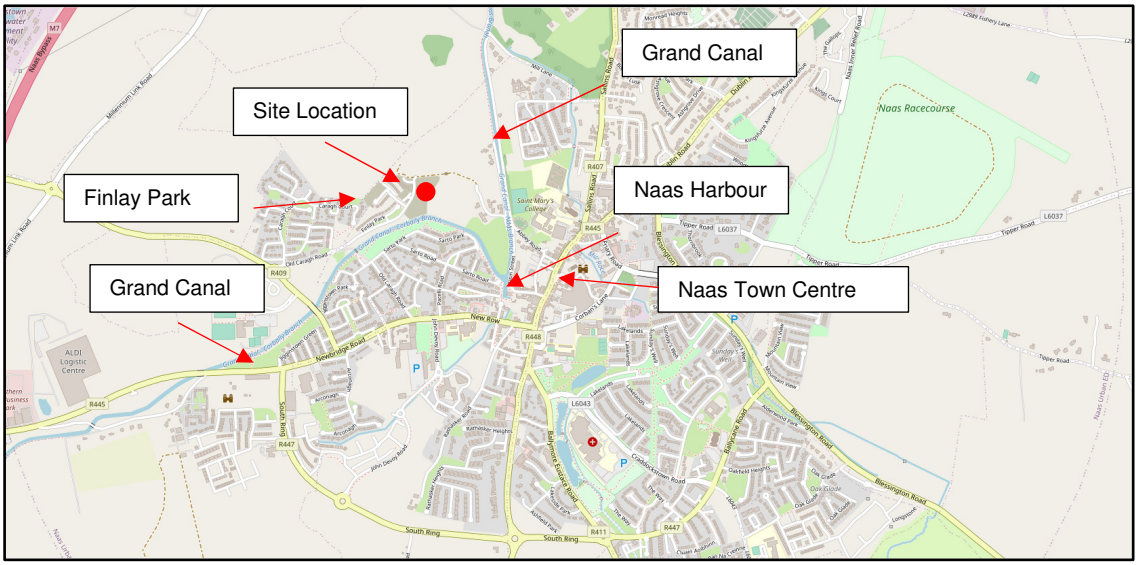
archaeological potential/interest within the Site. Therefore, the archaeological potential of the Site is of extremely low or negligible level.

The Site is located in an area where the Air Quality Index for Health (AQIH) is rated as 3 – Good. EU Air Quality Standards (AQSs) are not exceeded.

In terms of the existing ambient sound environment, the Site is unaffected by industrial, rail or significant road or aircraft noise. The existing soundscape can be described as quiet with a negligible risk rating for noise exposure to future residential development. The nearest Noise Sensitive Receptors (NSRs) are residential developments, Finlay Park, Caragh Court and Sarto Park to the southwest and south. These developments are similarly located in relatively quiet areas. A number of individual dwellings line the Old Caragh Road and are generally either set back or screened from the road by boundary walls.

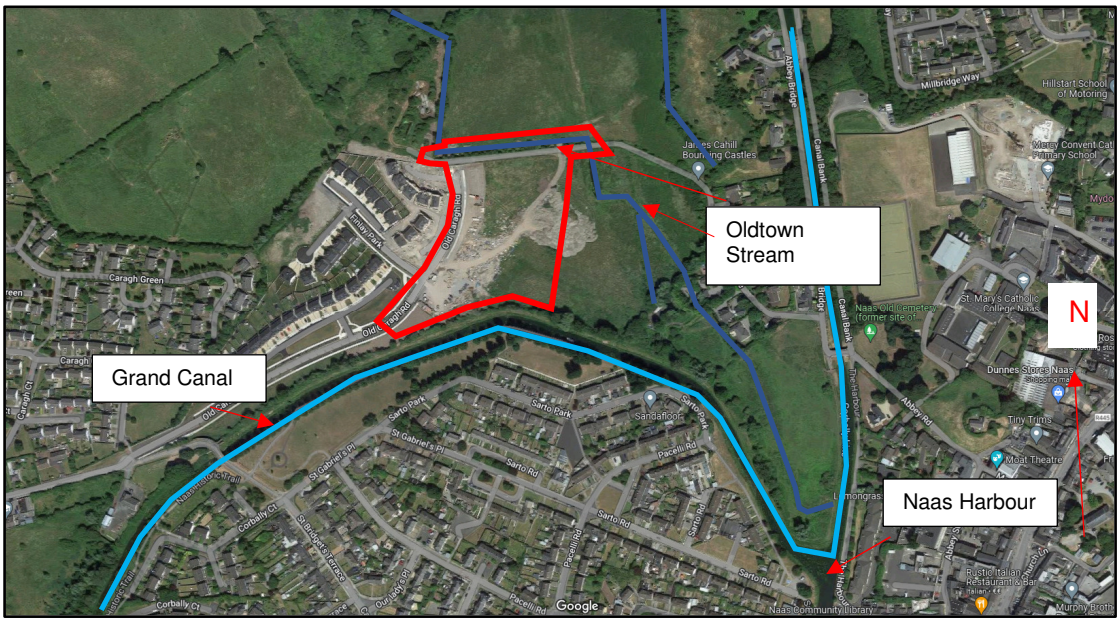
There are no listed/protected views within or to the Site.

Figure 1 Site Location (Local Context)



Source: EPA Mapping

Figure 2 Site Boundary (Aerial View)



Source: Google Maps. Red-line indicative of Site boundary.

Plate 1 View South-west into the Site (existing Finlay Park in right background, Sarto Park in left background)

4.0 Project Description

The Project will consist of the construction of 134 no. apartments (comprising a mixture of 70 no. 2 storey apartments and 64 no. apartments - 22 no. 1 bedroom apartments, 77 no. 2 bedroom apartments, and 35 no. 3 bedroom apartments) with private open space provided in the form of balconies/terraces as follows:

A) Block A (4 storey apartment block) comprising 26 no. apartments (6 no. 1 bed units, 16 no. 2 bed units & 4 no. 3 bed units); Block B (part 4 part 5 storey apartment block) comprising 66 no. apartments (10 no. 1 bed units, 33 no. 2 bed units and 23 no. 3 bed units), with a commercial/ health/medical unit (c. 247.6 sq. m) at ground floor; Block C (part 4 part 5 storey apartment block) comprising 42 no. apartments (6 no. 1 bed, 28 no. 2 bed units and 8 no. 3 bed units);

B) Vehicular/pedestrian and cyclist access from the Old Caragh Road (in new arrangement) along with the provision of 201 no. undercroft and surface car parking spaces as well as 388 no. undercroft and surface cycle parking spaces; internal road and shared surface networks including pedestrian and cycle paths;

C) Public Open space including proposed plaza, as well as central communal (courtyard) open space including outdoor playground area at podium level;

D) 1 no. temporary (for 3 no. years) 3-sided signage structure (c. 4.5m in height) at the entrance to the proposed development.

Provision of foul and surface water drainage, including relocation of existing foul main in northern part of site as well as green roofs; linear greenway path, bin stores; plant rooms; public lighting and all associated landscaping and boundary treatment works, site development and infrastructural works, ESB substations, and all ancillary works necessary to facilitate the development.

The total gross floor area of residential units and commercial combined is 11,885.24m^2.

The proposed layout is included in Attachment 1.

A proposed public plaza at the southwest entrance will provide a gateway to the Project.

The existing watercourse (Oldtown Stream) is to be retained and augmented with robust native trees and hedgerow planting. Additional tree planting is proposed along the southern boundary with the Grand Canal.

The bioretention pond in the northeast corner of the proposed development will have 1:3 side slopes and be planted with wetland grass and plant species.

Habitats to be removed as a result of the Site development include dry meadow, improved agricultural grassland, spoil and sections of internal field boundary. Sections of external hedgerows and treelines on the northern and southern boundaries are to be retained. A wide margin of vegetation along the Grand Canal (c.20m) is to be retained. Tree loss is confined to eight (8) specimens which were assessed by the arborist as 'category U' and so are unsuitable for retention in a residential scheme. According to the Ecological Impact Statement contained in Attachment 2, "*there will consequently be very little loss of habitat.*"

The proposed landscaping plan will provide additional native planting to augment retained vegetation. This will assist with integrating and establishing the Project as part of the local environment.

The net density of the site is 59 units per ha. Therefore, the Project represents efficient use of land zoned for residential development and is appropriate to the zoning and settlement strategy of the County Development Plan which in turn is guided by regional and national development plans as well as National Guidelines.

All of the apartment units are designed to meet the requirements "*Sustainable Urban Housing: Design Standards for New Apartments, 2018*" and in many instances more generous internal spaces are proposed to increase the quality of the unit types.

The buildings will be constructed of traditional construction, heavily insulated with internal layouts that can easily be adapted in the future. A number of units are specifically designed to allow for future alteration to adapt to changing needs. This is in line with circular economy thinking.

The Project ensures that the orientation of buildings ensure adequate daylight/sunlight and minimisation of overlooking. Each unit has been designed to create positive aspects.

All units are served with exclusive private open space and access to shared or communal open spaces.

The Acoustic Design Statement notes that all residents will have access to a quiet or relatively quiet external amenity space as required under the UK Pro-PG Planning and Noise: Professional Practice Guidance on Planning and Noise, New Residential Development, May 2017.

Adequate sound insulation will be provided in the building façade to ensure that good internal living conditions with regard to external noise break-in as set out in BS8233: 2014 Guidance on Sound Insulation and Noise Reduction for Buildings are achieved throughout.

Curtilage and undercroft car-parking spaces will have potential electric charging points ready for connection. Communal residential bicycle stores will also be provided with the provision for bicycle charging facilities.

4.1 Surface-water, Foul and Potable Water Management

The design and management of surface water will comply with the policies and guidance outlined in the Greater Dublin Strategic Drainage Study (GDSDS), the CIRIA SuDS Manual and the KCC Draft Sustainable Drainage Explanatory Design and Evaluation Guide. A 30% climate factor and a 10% urban creep factor are included in the design of the surface water network to mitigate against any potential flooding.

The SuDS hierarchy for surface water management will be followed. Accordingly, the SuDS features will include a combination of nature based, infiltration, filtration and detention systems SuDS including, retention pond,

bioretention areas, bioswales, blue and green roofs, green wall, treepits, unlined treepit trenches, unlined permeable paving, unlined infiltration trenches and filter drains. An existing underground attenuation tank serving the existing Finlay Park residential development will be relocated.

There will be no surface water discharges to the Grand Canal. Surface water run-off will discharge at greenfield rates via a hydrobrake and oil/petrol interceptor to the Oldtown Stream which eventually discharges to the River Liffey. Consequently, there will be no impact on surface water quality.

Existing 750 and 1050mm diameter foul sewers traverse the site. These pipes discharge into a large concrete chamber adjacent to the existing development of Finlay Park prior to discharging to Osberstown WWTP via another existing 750mm diameter pipe. A new foul wastewater drainage network will be installed throughout the site to serve the Project with final discharge to the existing 750mm pipe to Osberstown WWTP. The 1050mm sewer will be relocated as agreed with Irish Water.

An existing 225mm watermain is located along the R409 Caragh Road to the west of the development which reduces to a 100mm watermain to serve the existing dwellings in Caragh Court and Finlay Park. An existing 180mm watermain is located along the old Caragh Road to the southwest of the development. A new 200mm is required to link the existing 225mm water main on the R409 and the 180mm water main along the Old Caragh Road in order to serve the Project and also future developments. A 150mm water main network will be installed to serve the Project.

4.2 Accessibility and Transport Infrastructure

An existing access road with segregated footpaths and cycleways serves the existing development of Finlay Park. A section of the Old Caragh Road was recently upgraded by the Applicant creating a continuous 6.5m carriageway and offroad 3m shared pedestrian/cycle pathway on the western/Caragh Court side. Traffic lights have been installed to allow for safe pedestrian and cyclist crossing to Ploopluck Bridge which is closed to vehicular traffic (but may be used in emergency scenarios).

The Project will be accessed by a priority junction off the existing access road (Old Caragh Road) serving the existing development in Finlay Park. The new roads serving the Project will follow a roads hierarchy in accordance with the Design Manual for Urban Roads and Streets (DMURS) published by the Department of Transport. An internal road will lead off the junction to the undercroft car-parking on the eastern perimeter. Pedestrian and cycle routes will be provided and will extend along the western, southern and northern perimeters. All routes will easily link to future developments. The Project will enjoy good walking and cycling links to Naas town centre and will benefit further in this regard as the Northwest Quadrant of Naas is developed. The majority of main destinations within the Naas urban area are within a 15 – 20-minute walk from the Site.

In the longer term, bus stops will be provided at Finlay Park. At present, bus stops are an 11-minute walk south towards the R445 Newbridge Road.

The Project is located 3km from Sallins and Naas Railway Station. Travelling to the station (either by bike, bus or car) and then commuting onwards by train to Dublin represents a convenient option for future residents.

A Mobility Management Plan (MMP) has been prepared for the Project to enable residents to travel to and from the development by sustainable modes of transport.

Systra completed modelling of traffic impacts on key junctions potentially affected by the Project. The modelling covered future scenarios with and without the Millbridge Street link i.e. the Do Minimum and the Do Nothing scenarios. The Millbridge Street link will connect the Old Caragh Road to the Millbridge area of Naas, approx. 475m to the north of the town centre with a crossing of the Grand Canal. Modelled scenarios also accounted for the full Masterplan development including the Project up to 2030.

The modelling indicates that the Project will have only a very minor impact during AM and PM peak hours on three of the four junctions modelled for all scenarios modelled. The existing roundabout junction of the Old Caragh Road and the R409 to the west will operate within limits without the Millbridge Street link under the 2030 Do Nothing scenario for Phase 1 and the overall masterplan development. However, modelling indicates that it will operate at, or close to capacity, with the link in place even in the absence of Phase 1 or the masterplan due to re-distribution of existing traffic. More detailed modelling will be required in the future for the planning application for the link which will consider whether improvements of the junction or other junctions along the link will be required. This would be assessed as part of future phases of the masterplan, ideally when more detailed plans for the Northwest Quadrant, and delivery of the nearby elements of the Naas-Sallins Transport Strategy emerge.

The Transport Assessment (TA) demonstrates how the Project supports the future implementation of KCC's Naas Sallins Transport Strategy 2020.

4.3 Long-term Waste Management

A Management Company will control the operational phase of the Project including maintenance of landscaped areas and waste management.

An operational waste management plan (OWMP) has been developed in accordance with current legal requirements, industry standards and guidance including BS 5906:2005 Waste Management in Buildings – Code of Practice and *A Waste Action Plan for a Circular Economy, Ireland's National Waste Policy 2020 -2025* published in September 2020.

The OWMP aims to ensure maximum recycling and recovery of waste with diversion from landfill in line with the requirements of the waste hierarchy and the latest EU targets.

Three Waste Storage Areas (WSAs) are provided within the Project, located in the undercroft car-park.

Within individual apartments and duplexes, there will be adequate provision for the temporary storage of segregated materials prior to deposition in the communal WSAs.

The OWMP notes that more than adequate WSAs are provided to serve the Project and to ensure a high level of recycling, reuse and recovery by future occupiers.

The Management Company will be required to maintain the bins and their WSAs in good condition. All residents will be made aware of the waste segregation requirements and waste storage arrangements.

All residents will be required to segregate waste glass within their units and bring it for recycling at civic amenity centres unless otherwise agreed with the appointed waste contractor.

4.4 Energy

The Project will be required to comply with Part L of the Building Regulations, 2021 which sets out the requirements on conservation of fuel and energy in dwellings. Proposed solutions to meet the requirements include:

- Meet or exceed minimum U-value standards.
- Achieve air-tightness standards of 3 $m^3/m^2/hr$;
- Ensure thermal bridging details are optimised and utilise thermal modelling of junctions where appropriate.
- Provide an appropriate combination of technologies to ensure that energy consumption meets Part L requirements. Technologies include various types of heat pumps.
- Install centralised mechanical ventilation systems to ensure adequate ventilation rates are achieved in dwellings which maximises the benefits of the air-tight construction.

4.5 Construction Phase

The site development and construction phases are expected to comprise 4 phases over 30 - 36 months in total. There will be overlap between phases to complete the development within the envisaged timeframe.

Table 1 Proposed Construction Timetable

No.	Description	Timing (months)
1.	Site Development and foundations for all Blocks (A,B&C) and podium car-park	5
2.	Block B construction	12
3.	Block A construction	9
4.	Block C construction	12
TOTAL		**38***

Note;: there will be overlap between phases*

The following steps will be completed:

- Site enabling works
- Foundation
- Substructure
- Main structure
- Fit out
- Final site development, landscaping
- Handover

Based on existing site knowledge, vibro stone column (VSC) ground improvement techniques are proposed for foundations. However, this will be subject to site investigation and final construction design details. The envisaged duration for this element of the works will be 3 to 4 weeks. VSCs are an alternative to piling and deep foundation solutions. They densify or strengthen weak or poorly compacted soils in-situ. This technique is less likely to give rise to unacceptable vibration levels compared to more classic methods of piling. Further details are provided in Section 4.5.3 below.

4.5.1 Water Management During Construction

During construction, water pollution will be prevented by the implementation of good construction practices, such as *Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors – C532 CIRIA Report (Masters-Williams et al, 2001)*. Such practices will include adequate bunding for oil containers, wheel washers and dust suppression on site roads, and regular plant maintenance.

The *Guidelines on the Protection of Fisheries During Construction Works in and Adjacent to Waters* published by Inland Fisheries Ireland in 2016 will also be adhered to.

Mitigation measures listed in the outline Construction Management Plan (CMP) prepared by Donnachadh O' Brien & Associates Consulting Engineers for the prevention of surface water pollution include:

- Use of clean washed stone to form the contractor's compound which will facilitate infiltration to ground and will not result in overland flows in excess of the current mostly greenfield setting;
- Groundwater or runoff that collects in excavations or foundation trenches will be drained or collected in a construction site water treatment arrangement to remove silts;
- Silt trap fences will be installed along the width of the site to protect the Oldtown Stream as flow is towards the stream.

4.5.2 Air Quality/Dust Management During Construction

Key features for dust management during construction to prevent potential significant effects occurring are summarised as follows:

- A designated Site Representative will be assigned overall responsibility for Dust Management;
- The design of the site development and construction programmes will consider dust impact management and choose design approaches to minimise dust emissions;
- An effective training programme for site personnel will be implemented for the duration of the site development works and construction stages;
- A strategy for ensuring effective communication with the local community will be developed and implemented;
- A complaints procedure will be implemented;
- A programme of dust minimisation and control measures will be implemented and regularly reviewed;
- A monitoring programme will be implemented.

The following is a summary of the specific mitigation measures which will be employed in order to minimise emissions from the activity and the associated impacts of such emissions:

- Activities with potential for significant emissions will wherever possible be located at a position as far as possible removed from the nearest residential receptors;
- The areas on site which vehicles will be travelling on will generally be hard-surfaced or compressed ground thus significantly reducing the potential for dust emissions from the vehicles;
- Stock piles of soil and sub-soil and activities potentially giving rise to soil erosion will be strictly controlled;
- The construction compound area will have hard standing areas to minimise dust generation from wind-blow;
- In order to minimise the potential for wind-generated emissions from material storage bays, these bays will be oriented away from the dominant wind direction to minimise the effects of wind on release of dust and particulate;
- Existing vegetation and hoarding along the boundaries will be retained as screening;
- Fixed and mobile water sprays will be used to control dust emissions from material stockpiles and road and yard surfaces as necessary in dry and/or windy weather;
- A wheel-wash will be used where necessary to reduce mud deposition on local roads;
- A daily inspection programme will be formulated and implemented in order to ensure that dust control measures are inspected to verify effective operation and management, and,
- A dust deposition monitoring programme will be implemented at the site boundaries for the duration of the earthworks phase to verify the continued compliance with relevant standards and limits. At a minimum this will involve regular visual site inspections at receptors at Finlay Park and along the Old Caragh Road.

4.5.3 Noise Management During Construction

The following construction noise threshold value shall be applied at existing Noise Sensitive Receptors (NSRs) to mitigate against significant construction noise effects:

- 65 dB $L_{Aeq,1hr,}$ Mon-Fri (08.00 – 18.00hrs) and Sat (08.00 – 14.00 hrs) at Finlay Park, Abbey Bridge, Sarto Park and Caragh Court.

The following noise management measures shall apply to the short-term site development and construction phases to ensure that the construction noise threshold value is not met or exceeded.

- A Site Representative shall be appointed for matters related to noise and vibration.
- Any complaints received shall be thoroughly investigated.
- A written complaints log shall be maintained by the Site Representative. This shall, at a minimum, record complainant's details (where agreed) the date and time of the complaint, details of the complaint including where the effect was observed, corrective and preventative actions taken and any close-out communications. This will ensure that the concerns of NSRs who may be affected by site activities are considered during the management of activities at the site.
- Noise monitoring with capability for real-time review both on-site and remotely shall be conducted at the nearest NSR.
- In the event of meeting or exceedance of the threshold value at the NSR and depending on duration (measured or expected) works shall be ceased and measures implemented immediately to ensure that the threshold values are complied with including movement of equipment and temporary acoustic screening used directly to surround particularly noisy equipment when in use.
- Standard hoarding shall be placed around the site at the west boundary as is currently in place.
- Equipment shall be chosen by the contractor to ensure that the threshold values are met.
- The operation of certain pieces of equipment, where substitution etc cannot be carried out shall be managed through monitoring and timing of use to ensure that the threshold values/criteria specified are complied with.
- During the construction phase all equipment shall be required to comply with noise limits set out in EC Directive 2000/14/EC and the 2005/88/EC amendment on the approximation of the laws of the Member States relating to the noise emission in the environment by equipment for use outdoors. The directive covers equipment such as compressors, welding generators, excavators, dozers, loaders and dump trucks.

4.5.4 Vibration Management During Construction

Vibration impacts are not expected to occur due to the intervening distance to existing sensitive receptors. Vibration monitoring will be completed as a

precautionary measure, where deemed necessary. In this regard, test monitoring should be conducted with the equipment on at low levels before increasing incrementally to operational levels if deemed necessary. Works will be ceased, and mitigation measures implemented during the construction phase where monitoring detects vibration levels associated with the construction phase of the facility above the relevant guidance values set out below for continuous vibrations:

- Light Buildings – 7.5mm/sec
- Heavy Buildings – 25mm/sec

4.5.5 Resource & Waste Management During Construction

A Resource and Waste Management Plan (RWMP) has been developed for the construction phase of the Project in accordance with *Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects* published by the EPA in 2021. This plan will implement the principles of the circular economy. In this regard, "*waste out*" initiatives have been taken in the design phase and waste prevention measures will be taken during actual construction. The Plan will be updated throughout the site development and construction phases.

4.5.6 Construction Traffic Management

Construction traffic will access and exit the Site via the Old Caragh Road arriving via the R409/R445 Millennium Park Road/M7 from the west/northwest and via the R409/R445 Newbridge Road/Southern Ring Road from the south.

It is envisaged that 25 – 30 HGVs will access the site per day during peak activities. Based on construction working hours of 08.00 – 18.00 hrs Monday to Friday, this equates to on average 2-3 HGVs/hr accessing the site or 6 trips per hour.

An existing site compound located within the site will be used. The site compound will provide for storage of equipment and materials and provision of welfare facilities. Parking for construction workers will be provided in a dedicated adjacent area within the site.

A Construction Stage Traffic Management Plan has been prepared as part of the outline CMP. The following measures to minimise and mitigate construction traffic impacts to ensure no significant effects on human beings are likely have been included:

- Minimise the volume of imported and exported material;
- Control deliveries and collections to occur outside of peak hours for traffic movement and where possible during school opening and closing hours, rationalise and consolidate material orders, minimise waste generation and re-use materials on site as per the requirements of the RWMP;
- Minimise vehicle movements to and from the site;
- Promote shared transport arrangements for site operatives;

- Pre-plan operations on site to optimise the re-distribution of earthworks materials together with the minimisation of haul distances;
- Reduction in the amount of aggregates used on site by means of alternative construction techniques;
- A wheel-washing facility will be installed to remove dirt and debris;
- A speed limit of 30 km/hr will be applied to contractors to minimise potential traffic incidents;
- Temporary construction signage will be applied to warn of presence of construction site and activities, to apply speed limit for construction traffic and to provide directions for construction traffic;
- All staff and drivers will be provided with relevant training through an induction pack;
- All HGV drivers must hold a Drivers Certificate of Professional Competence.

5.0 EIA Screening

Screening is the term used to describe the process for determining whether a Project requires an EIA by reference to mandatory legislative threshold requirements or in the case of sub threshold development, by reference to the type and scale of the proposed project and the significance or the environmental sensitivity of the receiving baseline environment.

The first step is to consider whether the Project is of a type listed in Annex I or Annex II of the EIA Directive (or any transposing national legislation). If this does not provide a clear screening outcome then the nature and extent of the Project and the types of potential effects are examined. The totality of the Project is considered, including off-site and secondary projects as well as indirect, secondary and cumulative impacts.

5.1 Project Type

Projects requiring EIA are defined in Article 4 and set out in Annexes I and II of the EIA Directive.

All projects listed in Annex I require a mandatory EIA. For projects listed in Annex II, national authorities may set thresholds/criteria or determine effects on a case-by-case basis. Annex II projects require EIA if the project exceeds the threshold set by individual member states and significant effects are likely. The latter is established in two ways:

- Classes of project and associated thresholds whereby 'significant effects' are triggered.

- Sub-threshold projects that are likely to have "significant effects on the environment" – Annex III sets out criteria whereby significance of effects is assessed.

Member states are given a certain amount of discretion in respect of establishing thresholds/criteria by which Annex II projects will be required to undergo EIA.

It is noted, however, per Article 2(a)(1) of the EIA Directive, that projects should be subject to EIA if, arising from their nature, size or location, they are likely to have significant effects on the environment.

Where a project is of a specified type but does not meet, or exceed, the applicable threshold then the likelihood of the project having significant effects on the environment needs to be considered. This is done by reference to the criteria specified in Annex III of the Directive.

5.2 National Thresholds

Schedule 5 of the Planning and Development Regulations 2001 – 2022 (as amended) (the "**Regulations**")transposes Annex I and II into Irish law. Part 2 of Schedule 5 includes the following Annex II infrastructure projects and thresholds that are of relevance to the Project.

10. Infrastructure projects –
(b) (i) Construction of ***more than 500 dwelling units.***
(b) (iii) Construction of a **shopping centre** *with a gross floor space exceeding* **10,000 square metres.**
(b) (iv) Urban development which would involve an area greater than *2 hectares in the case of a business district,* 10 hectares in the case *of other parts of a built-up area and* ***20 hectares*** *elsewhere.*

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

Built-up area means a city or town (where "city" and "town" have the meanings assigned to them by the Local Government Act, 2001) or an adjoining developed area.

The Project provides for a total of 134 no. dwelling units. Therefore, a mandatory EIAR is not required in respect of 10(b)(i).

The commercial element will have a gross area of 247.6m^2. Therefore, a mandatory EIAR is not required in respect of 10(b)(iii).

In terms of land area, the site extends to 2.9 hectares. The site area is below the 20-ha threshold considered applicable to the site. Therefore, a mandatory EIA is not required in respect of 10(b)(iv).

5.3 Sub-threshold Projects requiring EIA

Schedule 5 Part 2 of the Regulations requires further consideration of projects that do not exceed thresholds, having regard to criteria set out in Schedule 7.

> *15. Any project listed in this Part which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development but which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.*

For the purposes of this screening, the updated criteria set out in Schedule 7 and Schedule 7A of the Planning and Development Regulations, 2001 - 2022(as amended) will be considered.

5.4 EIA Screening Exercise

Article 103(1A)(a) of the Planning & Development Regulations, 2001-2022 requires the following information for the purposes of making a decision on EIA Screening under Articles 103(1B)(b) and 103(3):-

A. the information specified in Schedule 7A,

B. any further relevant information on the characteristics of the Project and its likely significant effects on the environment, and

C. a statement indicating how the available results of other relevant assessments of the effects on the environment carried out pursuant to European Union legislation other than the Environmental Impact Assessment Directive have been taken into account.

Article 103(1A)(b) requires that the information above may be accompanied by a description of the features, if any, of the Project and the measures, if any, envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment of the development.

Schedule 7A requires the following information be provided by the applicant for the purposes of screening sub-threshold development for EIA.

1. *A description of the project, including in particular:*

   a) *a description of the physical characteristics of the whole project and, where relevant, of demolition works;*

   b) *a description of the location of the project, with particular regard to the environmental sensitivity of geographical areas likely to be affected.*

2. *A description of the aspects of the environment likely to be significantly affected by the project.*

3. *A description of any likely significant effects, to the extent of the information available on such effects, of the project on the environment resulting from:*

   a) *the expected residues and emissions and the production of waste, where relevant;*
   b) *the use of natural resources, in particular soil, land, water and biodiversity.*

4. *The criteria of Annex III shall be taken into account, where relevant, when compiling the information in accordance with points 1 to 3.*

In this report, the information has been set out under the more detailed headings provided for under Annex III, which corresponds to Schedule 7. In effect, this ensures that all of the information required under Schedule 7A has been furnished. It also presents the information in a manner that facilitates the competent authority in addressing the appropriate criteria in its screening assessment.

A. Characteristics of the Project

The characteristics of projects must be considered, in particular:

Criteria	**Analysis**
(a) the size and design of the whole project;	The Project provides for 21,891.26m^2 of residential development including the podium in 3 blocks on a 2.9 ha site. Block A will be 4 storeys in height. Blocks B&C will be part 5 storeys in height. 42% of the total site area will be designated as open space. 134 units will be provided. The gross floor area for the residential units is 11,637.64 m^2. The design incorporates features to aid sustainable development such as cycle and pedestrian links to Naas town and storm water drainage systems in accordance with the requirements of SuDS. Refer to Sections 4.1 and 4.2 earlier for further detail on SuDS measures proposed and details from the Transport Assessment respectively. The Project represents an efficient use of land and complies with the 12 criteria for urban design. Further detail is provided in the Design Statement prepared by C&W O'Brien Architects included in Attachment The Project is on lands zoned for residential and open space amenity. The zoning has been assessed as part of the strategic environmental impact assessment of the Naas Local Area Plan 2021-2027. Further detail on the design in terms of conservation of energy, sound insulation etc. is provided in the preceding Sections 4.0 and 4.4.
(b) cumulation with other existing and/or approved projects;	A review of the on-line planning files for developments in Naas indicate that two SHDs (An Bord Pleanala (ABP) refs. 307258-20 and 305701-19) to the south at Devoy Quarter and Devoy Link Road were granted planning by ABP in 2020. A further SHD (313276-2) at Devoy Barracks was recently granted permission by the Board on the 14/10/22. These projects are >600m from the subject site and are on the southern side of the R445 Newbridge Road within the south/southwestern quarter of Naas town. They are considered to be sufficiently distant from the subject site to prevent significant cumulative impacts during short term site development and construction phases (e.g. air, traffic, noise) and long-term completion of the

Criteria	Analysis
	Project. Westar Investments Ltd are currently building 4 dwellings on a 0.35ha site adjacent to the existing residential development, Finlay Park. The planning file reference number is 22/160. It is expected that this development will be fully complete before commencement on the Project. There is adequate capacity at Osberstown WWTP to treat domestic wastewater arisings and adequate treated potable water supply for development as indicated by Irish Water in correspondence contained in the Engineering Services Report. Refer to Section 4.1 earlier for further detail. In the long-term, additional traffic on the local roads arising from the Project and existing and future development including the masterplan for the Northwest Quadrant has been assessed. There will be no significant impact on the existing roads infrastructure. Cumulative impacts associated with traffic generation have been assessed by Systra using the VISUM model for Naas.
(c) the use of natural resources, in particular land, soil, water and biodiversity;	The main habitats present on the Site are not of significant conservation value. Features of higher significance such as the treeline along the southern boundary with the canal, and the hedgerow associated with the drainage ditch (Oldtown Stream) to the north will largely be retained as part of the landscaping plan. Some small sections will require removal. New landscaping proposals will compensate for any losses over the medium to long-term. The Ecological Impact Statement notes that pre-mitigation, there will be very little loss of habitats and that impacts to biodiversity will be minor negative during the construction phase. There will be no discharges to the canal, (a feature of national value for biodiversity) either during the short-term construction or long-term operational phase. No negative impacts will arise to the biodiversity of the canal. The main potential impacts of direct mortality of species such as bats and birds will arise during site clearance. In the long-term bats may be potentially affected by lighting. Mitigation measures to prevent potential significant impacts on species such as bats will be implemented during the construction and operational phases of development and are detailed in the Ecological Impact Statement prepared by OPENFIELD Ecological Services and the Bat Assessment prepared by Brian Keeley. Measures for bats include the erection of bat boxes, planting for insect diversity and provision of lighting control. Measures for birds include avoiding clearance during the nesting season. Further detail in this regard

Criteria	Analysis
	on mitigation measures and how they mitigate identified impacts is contained in the Ecological Statement in Attachment 2. After mitigation, no significant effects are likely to arise as a result of this development to biodiversity. Mitigation measures to prevent water pollution during the construction phase are detailed earlier in Section 4.5.1. No significant effects are likely. Excavation of natural soils and subsoils will be balanced and reused on site as much as possible to avoid movement off-site. Some material may require removal to a permitted or licensed waste facility, however this will be minimized as much as possible in line with the principles of the circular economy. In the long-term, the surface water regime will mimic existing greenfield conditions and will include nature based, infiltration and filtration SuDS. Refer to Section 4.1 earlier for further detail on measures. This will ensure that there is no significant effects on the hydrological regime including groundwater. Measures to prevent water pollution in the long term include interceptors on the final discharge to the Oldtown Stream. There are no significant features of interest associated with the landbank. In the past it would have been used for agriculture however its location on the edge of Naas town, in an emerging suburban area, indicates that the site is optimally placed for new development. There is ample agricultural land in use throughout Ireland. As noted earlier, the Project makes efficient use of zoned lands. In accordance with the European Union (Energy Performance of Buildings) Regulations, 2019, dwellings will be required to comply with the "*Nearly Zero Energy Building*" (NZEB) requirement set out in the Regulations. This means that the dwellings will have a very high energy performance and low carbon emissions. The requirements of the revised Technical Guidance Document, (Conservation of Fuel and Energy) Dwellings will apply. BER ratings of A2 or better will be applied. A Building Lifecycle Assessment Report has been prepared for the project as required under the Sustainable Urban Housing; Design Standards for New Apartments – Guidelines for Planning Authorities, March 2018. This ensures that resource usage is efficient. A bulk flow meter will be installed on water supply to each apartment block with facilities to measure water consumption for each individual unit. This measure will facilitate conservation of potable water supply.

Criteria	Analysis
(d) the production of waste;	**Site Development & Construction** The Resource and Waste Management Plan (RWMP) prepared in pre-construction format will be updated throughout the site development and construction phases in accordance with *Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects* published by the EPA in 2021. This plan implements the principles of the circular economy. In this regard, "*waste out*" initiatives have been taken in the design phase and waste prevention measures will be taken during actual construction. The Project is a Tier 2 project as defined in the Guidance. For example, the following initiatives will be taken in the Project design: • Materials certified to BES 6001 *Responsible Sourcing of Construction Products* will be sourced where possible for the project. This element does not reduce waste on-site but is representative of sustainable development principles employed in the design and to work towards a circular economy. • Low carbon products for construction will be preferred. To prevent waste, the RWMP will include measures such as appointment of a Resource Manager on site to oversee waste prevention measures such as planned deliveries, protection of materials against weather effects, training staff, using off-cuts where possible etc. Waste management will focus on the hierarchy of prevention, reduce, re-use, recycle on site. **Long-term Operational Phase** An Operational Waste Management Plan (OWMP) has been prepared for the Project. The OWMP aims to maximise waste prevention, recycling, reuse and recovery of waste with diversion from landfill, wherever possible. The OWMP also seeks to provide guidance on the appropriate collection and transport of waste to prevent issues associated with litter or more serious environmental pollution (e.g. contamination of soil or water resources). The plan estimates the type and quantity of waste to be generated from the Project during the operational phase and provides a strategy for managing the different waste streams. There is adequate WSAs provided in the undercroft parking to support the segregation of waste.

Criteria	Analysis
	On collection days, waste bins will be moved from the WSAs to a waste bin collection area near the entrance to the undercroft parking. Refuse trucks will reverse into the turning point (hammerhead) provided at the access to the undercroft parking to collect the bins. Waste contractors appointed will be required to ensure residual waste is used as refuse derived fuel (RDF) with an objective of zero waste to landfill. **Foul Water Arisings** Domestic wastewater arisings will be directed to the Osberstown WWTP which has adequate capacity to accept and treat the wastewater as confirmed by Irish Water. **Surface water System** All oil/petrol interceptors will be regularly inspected and emptied. Waste arisings from the interceptors will be disposed of in accordance with relevant hazardous waste legislation.
(e) pollution and nuisances;	Standard best practice methods will be employed during construction to mitigate potential impacts from pollution on the environment. During construction, water pollution will be prevented by the implementation of good construction practices, as outlined in *Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors – C532 CIRIA Report (Masters-Williams et al, 2001)*. Such practices will include adequate bunding for oil containers, wheel washers and dust suppression on site roads, and regular plant maintenance. Mitigation measures to prevent significant effects are detailed earlier in Section 4.5.1. There will be potential for localized noise and dust nuisance during construction. Standard noise and dust prevention measures will be employed as outlined in: • BS5228-2009 +A1:2014: Code of Practice for Noise and Vibration Control on Construction and Open Sites: Part 1: Noise and Part 2: Vibration, and, • Guidance on the Assessment of Dust from Demolition and Construction, Version 1.1 2014, Institute of Air Quality Management (IAQM) Sections 4.5.2 and 4.5.3 provide a list of mitigation

Criteria	Analysis
	measures relating to prevention of nuisance dust and noise during construction. Significant negative effects on the environment are not likely to arise due to pollution or nuisance.
(f) the risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge;	Standard construction practices will be employed throughout the construction phase. The subject site is not proximate to any Seveso site. The nearest SEVESO sites are located >15km to the northeast in Rathcoole, Co. Dublin and Leixlip, Co. Kildare. Therefore, there are no risks to the development or from the development arising from major accident hazards. A detailed Flood Risk Assessment has been carried out for the Project. A site-specific hydraulic model was prepared. As noted earlier, the Site is located within Flood Zone C "Low Probability" which has been fully confirmed as part of the assessment. The flood maps prepared by JBA Consulting demonstrate that the Project will not be affected by the 1% of 0.1% Annual Exceedance Probability (AEP) flood events. No inundation of the Site will occur from floodwaters that overflow into the Grand Canal as they predominantly remain within the system. The proposed finished floor level, 86.45mOD provides a 1m freeboard above the 0.1% AEP flood level. Climate change and residual risks have been assessed. The Project will not pose any flooding issues off-site. In this regard, the SuDS measures outlined earlier in Section 4.1 control flow off-site. The assessment demonstrates that the proposed design can manage flood risk appropriately.
(g) the risks to human health (for example due to water contamination or air pollution).	Foul water will discharge to the public sewer. As noted earlier, the Osberstown WWTP has adequate capacity to treat wastewater arisings from the Project. Indirectly, it is noted from the Screening Report for Appropriate Assessment prepared by OPENFIELD Ecological Services that: *"The Annual Environmental Report (AER) for the Osberstown WWTP indicates that the discharge is 'not having an observable' effect on Water Framework Directive status of the receiving water. The status of the River Liffey downstream of, Naas is 'good'. "* Accordingly, it can be concluded that there is no indirect risk to human health from wastewater

Criteria	Analysis
	discharge from the Project. Surface water will be managed using SuDS principles as detailed earlier. Infiltration tests in accordance with BRE Digest 365 were completed as part of the site investigation. The site is therefore suitable for surface water discharge to soil. Due to the nature of the Project, the surface water run-off is unlikely to be contaminated. In the long term, no impact on air quality is envisaged due to the nature (residential and commercial) and scale of the Project. Renewable technologies will be employed for heating and hot water supply. In the long term, no significant impact on the ambient sound environment at nearby NSRs is envisaged due to the nature (residential and commercial) and scale of the Project. Proposed plant rooms are enclosed with adequate sound insulation. An Acoustic Design Statement prepared for the Project indicates that future residents will have good internal living conditions with regards to noise and access to external amenity within the desirable range as indicated in BS8233:2014 and the UK Pro-Pg.

In summary, the characteristics of the Project will not generate significant negative impacts on the environment.

B. Location of the Project

The environmental sensitivity of geographical areas likely to be affected by projects must be considered, in particular:

Criteria	Analysis
(a) the existing and approved land use;	The lands are currently not in use except as a construction compound for earlier phases of Finlay Park. The Project is on lands zoned for residential and open space amenity.
(b) the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground;	There is no shortage of land/soil or water availability in the locality or further afield. The nature of the Project will ensure that there will be no impact on the quality or regenerative capacity of lands, soils and water as detailed earlier. The Project will incorporate SuDS measures to mimic the existing surface water run-off regime and interceptors to prevent pollution. Accordingly, there will be no impact on underlying groundwater resources in terms of availability, capacity or

Criteria	Analysis
	quality. The main habitats present on the Site are not of significant conservation value. The canal is a feature of national value for biodiversity but will not be impacted on either during the short-term construction or long-term operational phase. No negative impacts will arise to the biodiversity of the canal. Further detail is provided in the Ecological Impact Statement contained within Attachment 2.
(c) the absorption capacity of the natural environment, paying particular attention to the following areas: (i) wetlands, riparian areas, river mouths;	The Site is located adjacent to the Corbally Branch of the Grand Canal. There will be no discharges to the canal during the construction or operational phase of the Project. Therefore, water quality/absorption capacity will be unaffected. Planting, including native species, will be provided as part of the landscaping plans to potentially aid biodiversity.
(ii) coastal zones and the marine environment;	The Site is not located close to the coastal or marine environment. Indirectly discharges from the Osberstown WWTP and via surface water discharge from the Project will eventually enter Dublin Bay via the River Liffey however the pathways are weak. According to the Screening Report for Appropriate Assessment prepared by OPENFIELD Ecological Services: *"The Annual Environmental Report (AER) for the Osberstown WWTP indicates that the discharge is 'not having an observable' effect on Water Framework Directive status of the receiving water. The status of the River Liffey downstream of, Naas is 'good'. These data indicate that the zone of influence of the Osberstown WWTP does not extend to Dublin Bay. "* *"The installation of surface water attenuation measures will ensure that there will be no negative impact to water quality or quantity arising from the change in land use from agricultural to residential. These are standard measures which are included in all development projects and are not included here to reduce or avoid any effect to Natura 2000 site. They are not mitigation measures in an AA context."*
(iii) mountain and forest areas;	The Site is not within or directly connected to any mountain or forest areas.

Criteria	Analysis
(iv) nature reserves and parks;	The Site is adjacent to the Grand Canal pNHA. See earlier comments under Item (i).
(v) areas classified or protected under national legislation; Natura 2000 areas designated by Member States pursuant to Directive 92/43/EEC and Directive 2009/147/EC;	The Site is not ecologically (either directly or indirectly) or directly hydrologically connected to any Natura 2000 site. Item (ii) above provides detail on indirect links to Dublin Bay where there are a number of Natura 2000 sites. Water supply to the Project will be from the Poulaphuca Reservoir which is a designated SPA (Site Code:4063). According to the Screening Report for Appropriate Assessment prepared by OPENFIELD Ecological Services: *"There is no evidence that abstraction is resulting in negative effects to any Natura 2000 site. No effects to Natura 2000 sites will arise from this source."* The Appropriate Assessment Screening Statement submitted with the application concludes: *"This project has been assessed for the purposes of AA screening under the appropriate methodology. This report has found that significant effects are not likely to arise, either alone or in combination with other plans or projects to the Natura 2000 network. No mitigation measures are relied upon to arrive at this assessment. This assessment is based upon the best available scientific evidence."*
(vi) areas in which there has already been a failure to meet the environmental quality standards, laid down in Union legislation and relevant to the project, or in which it is considered that there is such a failure;	The Site is not located within such an area. Air quality is good.
(vii) densely populated areas;	The Site is not located within such an area.
(viii) landscapes and sites of historical, cultural or archaeological significance.	There are no listed views to or from the Site. It is noted from the Archaeological Heritage Report findings that the archaeological potential of the Site is of an extremely low or negligible level. The report notes: *"... it is considered that the development of the subject lands will not cause any impacts (direct indirect/visual) to any monuments, structures or*

Criteria	Analysis
	features or archaeological heritage, interest or potential; likewise there are no significant historical events associated with the lands. Consequently, it is not considered necessary to offer any mitigation measures."

C. Type and Characteristics of the Potential Impacts

The likely significant effects of projects on the environment must be considered in relation to criteria set out under paragraphs 1 and 2 of Schedule 7, with regards to the impact of the project on the factors specified in paragraph (b)(i)(I) to (V) of the definition of 'environmental impact assessment report' in Section 171(A) of the Act, taking into account:

Criteria	Analysis
(a) the magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected); (b) the nature of the impact;	Not applicable as no significant effects are likely.
(c) the transboundary nature of the impact;	There will be no transboundary impacts.
(d) the intensity and complexity of the impact;	Not applicable as no significant effects are likely.
(e) the probability of the impact;	Not applicable as no significant effects are likely.
(f) the expected onset, duration, frequency and reversibility of the impact;	Not applicable as no significant effects are likely.
(g) the cumulation of the impact with the impact of other existing and/or approved projects;	It is considered that cumulative impacts with other existing and approved projects are not likely to cause significant effects on the environment.
(h) the possibility of effectively reducing the impact.	Not applicable as no significant effects are likely.

As no significant adverse effects have been identified, no measures are recommended to avoid or prevent such effects.

5.5 Other Relevant Assessments

As required, under Article 103(3)(a)(v) the following table summarises the nature of the assessments carried out in accordance with EU Directives relevant to the Project. The outcome of these assessments related to the Directives have been taken into account in the EIA Screening Conclusions.

Directive	Directive Synopsis	Assessment
Directive on the Conservation of Wild Birds, 2009/147/EC and the Habitats Directive 92/43/EEC.	The Habitats Directive ensures the conservation of a wide range of rare, threatened or endemic animal and plant species. Some 200 rare and characteristic habitat types are also targeted for conservation in their own right. Europe is home to more than 500 wild bird species. But at least 32 % of the EU's bird species are currently not in a good conservation status. The Conservation of Wild Birds Directive aims to protect all of the 500 wild bird species naturally occurring in the European Union.	A Screening Report for Appropriate Assessment has been prepared by OPENFIELD Ecological Services. The report concludes: *"This project has been assessed for the purposes of AA screening under the appropriate methodology. This report has found that significant effects are not likely to arise, either alone or in combination with other plans or projects to the Natura 2000 network. No mitigation measures are relied upon to arrive at this assessment. This assessment is based upon the best available scientific evidence. "* **Bats** The application has been accompanied by a Bat Assessment Report prepared by Mr. Brian Keeley. All Irish bats are protected under the Habitats Directive including breeding sites and resting places. Relevant survey findings and mitigation measures have been included in the Ecological Impact Statement in Attachment 2. Potentially moderate negative impacts on bats during the construction and operational phases due to direct mortality arising from site clearance and lighting respectively. The report notes: *"With mitigation, the majority of the impacts can be reduced so that no moderate negative impact remains. "* The relevant mitigation measures are listed in the Ecological Impact Statement in Attachment 2.

		Birds: The site was surveyed for breeding birds. Breeding and wintering birds surveys found no record of any bird species which is listed as a qualifying interest of Natura 2000 sites.
Directive 2000/60/EC, Water Framework Directive	The EU Water Framework Directive requires all Member States to protect and improve water quality in all waters so that we achieve good ecological status by 2015 or, at the latest, by 2027. It establishes common principles and an overall framework for action in relation to water protection and developed the overall principles and the structure for protection and sustainable use of water in the European Union.	**Surface-water Features:** There are no watercourses listed on the EPA mapping https://gis.epa.ie/EPAMaps/, however a drainage ditch (the Oldtown Stream) and associated stone wall cuts through the northern part of the Site. There is no water quality data reported for this stream. The Oldtown Stream, flows northwest from the harbour area in Naas town towards and into the northern portion of the site before eventually discharging to the River Liffey further northwest. The Liffey is assessed as 'good' status as far as Leixlip under the requirements of the Water Framework Directive (WFD). Thereafter it deteriorates to 'moderate' status. The current site drainage is to the Oldtown Stream and eventually to the Liffey. The Oldtown Stream, where it passes through the Site is listed as highly altered and described as a drainage ditch in the Ecological Impact Statement in Attachment 2. Inland Fisheries visited the Site and confirmed that the watercourse is not of particular importance to Inland Fisheries and it is non-salmonid. No measures are proposed as part of the current application to conduct works to the instream channel. Accordingly, no potential negative impacts on the hydromorphology of the stream will occur. During construction mitigation measures will be implemented as described earlier in Section 4.5.1 to prevent construction related

		pollution entering the Oldtown Stream. As impacts are unlikely to arise there will be no significant effects on the water quality or ecological status. In the long term, oil interceptors on the final discharge to the Oldtown Stream will prevent pollution. In this regard, the interceptor will be regularly inspected and cleaned by the Management Company in order to prevent any incidents. The canal is the other main watercourse in the vicinity of the site and runs along the southern boundary. The topography of the Site falls to the north away from the canal and towards the Oldtown Stream. The majority of construction works are well-stet back >20m from the canal. These are mitigating factors in prevention of pollution of the canal. There will be no discharges to the canal either during the construction phase or long term. The same construction phase mitigation measures as detailed in Section 4.5.1 will also apply to the canal. **Groundwater:** The underlying bedrock comprises both the Ballysteen Formation and Feighcullen Formation. The underlying aquifer is of moderate productivity and moderate vulnerability indicating a groundwater depth of >10m. According to the Engineering Services Report, groundwater has been recorded on average at 2m below ground level at +84.5m OD. The mitigation measures identified in Section 4.5.1 equally apply to the prevention of impacts to groundwater quality during the construction phase. In the long-term, the surface water regime will mimic existing greenfield conditions and will include nature based, infiltration and filtration SuDS. Refer to Section 4.1 earlier for further detail on measures. This will ensure that there is no significant effects on the hydrological regime including

		groundwater. Overall, the Project will not impact on the achievement of water quality objectives set in the WFD.
Directive 2001/42/EC, SEA Directive	The Strategic Environmental Assessment (SEA) Directive aims to ensure a high level of environmental protection in that environmental considerations are taken into account when preparing, adopting and implementing public plans and programmes. It promotes sustainable development by ensuring that environmental assessment is carried out of certain plans and programmes likely to have significant effects on the environment.	The application for the Project is accompanied by a Planning Report prepared by John Spain Associates which demonstrates that the details of the Project are consistent with the relevant objectives of the Naas Local Area Plan 2021-2027 and other relevant Plans.
Directive 2002/49/EC Environmental Noise	The END aims to "define a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to the exposure to environmental noise". For that purpose several actions are to be progressively implemented. It furthermore aims at providing a basis for developing EU measures to reduce noise emitted by major sources, in particular road and rail vehicles and infrastructure, aircraft, outdoor and industrial equipment and mobile machinery.	An Acoustic Design Statement has been prepared for the Project in accordance with the UK ProPG: Planning and Noise: Professional Practice Guidance on Planning and Noise, New Residential Development, May 2017. The noise exposure risk of residents to transportation noise has been assessed. The Site is currently considered to present a negligible noise exposure risk to future residents. The Acoustic Design Statement assesses a future scenario with the Millbridge Street Link in place. Under this scenario, measures have been implemented in the design such as adequate building envelope sound insulation to ensure that good internal living criteria are achieved in all units. Proposed external amenity and links to the canal will ensure that all residents have access to a quiet or relatively quiet external amenity space as required under Pro-PG.
Directive 2008/50/EC Ambient Air Quality	This Directive defines objectives for ambient air quality designed to avoid, prevent or	The nature of the Project i.e. residential will ensure that air quality standards (AQS) set out in the CAFÉ Directive will not be breached. The

and Cleaner Air for Europe & Directive 2004/107/EC relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air	reduce harmful effects on human health and the environment as a whole. To this end, it sets out measures for the assessment of ambient air quality in Member States as well as for obtaining information on ambient air quality in order to help combat air pollution and nuisance. The Directive aims at increasing cooperation between the Member States in reducing air pollution.	Project has been designed and includes measures to encourage sustainable travel. The majority of main destinations within Naas are within 15-20 minutes walking distance of the Project. The buildings will comply with European Union (Energy Performance of Buildings) Regulations, 2019, dwellings will be required to comply with the "*Nearly Zero Energy Building*" (NZEB) requirement set out in the Regulations. Indirectly, this also ensures that local emissions to air during the operational phase are negligible. An assessment of impacts on ambient air quality during construction has been undertaken in accordance with the guidance outlined in the Assessment of Dust from Demolition and Construction, Version 1.1 Institute of Air Quality Management (IAQM), 2014. The predicted residual effects on human beings/health/ecological receptors in terms of dust deposition are expected to be temporary, neutral and imperceptible provided the dust generation avoidance, prevention and minimisation measures as outlined in the CMP are implemented. Refer to Attachment 4 for full listing of measures.
Directive 2007/60/EC Floods Directive	The objective of this Directive is to ensure effective flood prevention and mitigation of flood damage. It requires Member States to identify those river basins and associated coastal areas for which a potential significant flood risk exists and to prepare flood hazard and flood risk maps as well as flood risk management plans for these areas.	A detailed Flood Risk Assessment has been carried out for the Project. A site-specific hydraulic model was prepared. As noted earlier, the Site is located within Flood Zone C "Low Probability" which has been fully confirmed as part of the assessment. The flood maps prepared by JBA Consulting demonstrate that the Project will not be affected by the 1% of 0.1% Annual Exceedance Probability (AEP) flood events. No inundation of the Site will occur from floodwaters that overflow into the Grand Canal as they predominantly remain within the system. The proposed finished floor level, 86.45mOD provides a 1m freeboard

		above the 0.1% AEP flood level. Climate change and residual risks have been assessed. The Project will not pose any flooding issues off-site. In this regard, the SuDS measures outlined earlier in Section 4.1 control flow off-site. The assessment demonstrates that the proposed design can manage flood risk appropriately.
Directive 2010/75/EU Industrial Emissions Directive	Directive 2010/75/EU is the main EU instrument regulating pollutant emissions from industrial installations. The IED aims to achieve a high level of protection of human health and the environment taken as a whole by reducing harmful industrial emissions across the EU, in particular through better application of Best Available Techniques (BAT). Industrial activities listed in Annex I of the IED are required to operate in accordance with a permit (granted by the authorities in the Member States). This permit should contain conditions set in accordance with the principles and provisions of the IED.	This directive is not directly relevant to the Project as it a proposed residential development and will not involve industrial activities as listed in Annex 1 of the Directive. Indirectly, building materials for the construction of the Project will likely be supplied from licensed facilities. However, it is noted that the EPA cannot issue an IED license in the first instance to a facility in breach of EU and national environmental legislation. All emissions, resource usage etc is strictly controlled and/or managed. Therefore, not indirect significant effects are likely.
Directive 2012/18/EU Seveso III Directive	This Directive lays down provisions concerning the prevention of major accidents which involve dangerous substances, and the limitation of their consequences for human health and the environment, with a view to ensuring a high level of protection throughout the European Union in a consistent and effective manner. The Directive specifies obligations of operators in this field, with particular regard to notification obligations and the obligation	This directive is not directly relevant to the Project as it a proposed residential development. The subject site is not proximate to any Seveso site as listed on the Notified Seveso Establishments held by the Health and Safety Authority. The nearest Upper Tier Site is Intel, Ireland, Leixlip, approx. 19km northeast. The nearest lower tier site is in Rathcoole, Co. Dublin, approximately 17km northeast.

	to draw up a document in writing setting out the major-accident prevention policy (MAPP).	
Waste Framework Directive 2008/98/EC &2018/851 Amending Directive	The Waste Framework Directive provides a legal framework for the treatment of waste within the EU. The purpose of this directive is to protect the environment, human health and resources. The 2008 Directive aimed at moving the EU closer to the goal of being a recycling society by increasing the volume of waste that is collected separately and recovered. The latest waste management legislation and policy have evolved towards prioritising waste prevention and lifecycle thinking as waste management has evolved over time i.e. the focus is on a circular economy.	A RWMP and an OWMP have been prepared for the Project. Both reports set out how waste will be managed during the construction and operational phases respectively. The RWMP focuses on the waste hierarchy of firstly prevention, preparing for reuse, recycling and recovery and finally disposal if other options are exhausted. The RWMP has been prepared in accordance with *Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects* published by the EPA in 2021 which take account of the Directives objectives.
Directive 2008/56/EC Marine Strategy Directive	The Marine Strategy Framework Directive is specifically aimed at the protection of the marine environment and natural resources and creating a framework for the sustainable use of our marine waters.	Paragraph 18 of this Directive includes that "this Directive should also support the strong position taken by the Community, in the context of the Convention on Biological Diversity, on halting biodiversity loss, ensuring the conservation and sustainable use of marine biodiversity". The Screening Report for Appropriate Assessment prepared by OPENFIELD Ecological Services assesses potential impacts on Dublin Bay (marine waters) through hydrological pathways from the Site. The report notes: *There is an indirect, surface, natural hydrological connection from the development site to Natura 2000 sites in Dublin Bay via surface water run-off. However, due to the great distance separating source and the receptor, this pathway is extremely weak.*

		There is an indirect pathway to the River Liffey through the foul sewer en route to the Osberstown WWTP. Again, the pathway to Natura 2000 sites is weak. The report concludes: *This project has been assessed for the purposes of AA screening under the appropriate methodology. This report has found that significant effects are not likely to arise, either alone or in combination with other plans or projects to the Natura 2000 network. No mitigation measures are relied upon to arrive at this assessment. This assessment is based upon the best available scientific evidence.* The above includes for Dublin Bay.

5.6 Screening Conclusion

This screening report has been prepared to accompany a LRD planning application to KCC for the construction of a residential development with open space and a commercial unit. The report provides relevant information as required under Schedule 7A to inform the local authority's EIA screening at planning application stage.

This report has assessed the potential impact of the Project on the environment. The Project is below the thresholds for mandatory EIA. It is considered that a sub-threshold EIA is not required for the following main reasons (non-exhaustive list):-

1. No impacts on Natura 2000 sites or the Grand Canal pNHA (a feature of national biodiversity) are likely.
2. Long-term surface water will be managed in accordance with SuDS with nature-based SuDS options included that ensure no on-site or downstream flooding whilst also providing for enhancement of biodiversity on site.
3. New planting, erection of bat boxes and lighting control as part of the Project will provide for biodiversity in the medium to long term.
4. All wastes will be managed appropriately to prevent pollution and to implement the principles of the circular economy.
5. The principles of sustainable development will be incorporated into the design of the Project through the provision of links to, and development of, sustainable transport modes, compliance with NZEB and provision of water meters, blue roofs etc.
6. The Project will not result in long term significant emissions to air or noise.
7. No significant impacts are expected on cultural heritage or landscape.
8. The development will be connected to public services such as potable water and foul sewers/WWTP which have adequate capacity.
9. No identified impact in this screening exercise, cumulatively or individually is considered likely to cause significant effects on the environment.

Therefore, no significant effects on the environment are likely.

6.0 Conclusion

No significant negative effects on any of the environmental factors to be considered under the EIA Directive are anticipated as a result of the Project either cumulatively or individually.

7.0 References

1. Air Quality in Ireland, 2020, EPA, 2021

2. A Waste Action Plan for a Circular Economy, Ireland's National Waste Policy 2020 -2025, Department of Communications, Climate Action and Environment, September 2020.

3. Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects EPA, 2021.

4. BS8233: 2014 Guidance on Sound Insulation and Noise Reduction for Buildings.

5. BS 5906:2005 Waste Management in Buildings – Code of Practice.

6. BS5228-2009 +A1:2014: Code of Practice for Noise and Vibration Control on Construction and Open Sites: Part 1: Noise and Part 2: Vibration.

7. Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors – C532 CIRIA Report (Masters-Williams et al, 2001).

8. Draft Kildare County Development Plan, 2023 – 2029, Kildare County Council.

9. EPA Mapping available on https://gis.epa.ie/EPAMaps/

10. European Commission, Directorate-General for Environment, McGuinn, J., Lukacova, Z., McNeill, A., et al., *Environmental impact assessment of projects: guidance on the preparation of the environmental impact assessment report (Directive 2011/92/EU as amended by 2014/52/EU)*, Publications Office, 2017

11. Greater Dublin Strategic Drainage Study (GDSDS), Dublin Drainage, March 2005.

12. Guidance on the Assessment of Dust from Demolition and Construction, Version 1.1 Institute of Air Quality Management (IAQM), 2014

13. Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018), Department of Housing, Local Government and Heritage.

14. Guidelines on the Information to be Contained in Environmental Impact Assessment Reports, EPA 2022.

15. Guidelines on the Protection of Fisheries During Construction Works in and Adjacent to Waters, Inland Fisheries Ireland, 2016.

16. Kildare County Development Plan, 2017 – 2023, Kildare County Council.

17. Naas Local Area Plan, 2021-2027, Kildare County Council.

18. Naas/Sallins Transport Strategy, AECOM, November 2020.

19. Office of the Planning Regulator (OPR) Practice Note PN02 on Environmental Impact Assessment Screening, June 2021.

20. ProPG: Planning and Noise: Professional Practice Guidance on Planning and Noise, New Residential Development, ANC, IOA and UK CIEH, May 2017.

21. The SuDS Manual, C753, CIRIA and the UK Department for Environment, Food and Rural Affairs, 2015.

Attachment 1

1 Proposed Site Layout - Zone 1

1 : 500

Description:
Digital Cartographic Model (DCM)

Publisher / Source:
Ordnance Survey Ireland (OSi)

Data Source / Reference:
PRIME2

File Format:
Autodesk AutoCAD (DWG_R2013)

File Name:
v_50119998_1.dwg

Clip Extent / Area of Interest (AOI):
LLX,LLY= 687832.0,719115.0
LRX,LRY= 689356.0,719115.0
ULX,ULY= 687832.0,720311.0
URX,URY= 689356.0,720311.0

Projection / Spatial Reference:
Projection= IRENET95_Irish_Transverse_Mercator

Centre Point Coordinates:
X,Y= 688594.0,719713.0

Reference Index:
Map Series | Map Sheets
1:1,000 | 3559-07
1:1,000 | 3559-02
1:2,500 | 3558-B
1:2,500 | 3509-C
1:1,000 | 3509-22
1:1,000 | 3559-06
1:2,500 | 3508-D
1:2,500 | 3559-A

Data Extraction Date:
Date= 14-May-2020

Source Data Release:
DCLMS Release V1.128.109a

Product Version:
Version= 1.3

License / Copyright:
Ordnance Survey Ireland 'Terms of Use' apply.
Please visit 'www.osi.ie/about/terms-conditions'.

NOTES:

DESIGN INTENT DRAWING

FOR INFORMATION PURPOSES

LEGEND:

SITE OUTLINED IN RED
SITE AREA =28,825.07 m² / 2.9 H.A

LAND OWNERSHIP EXTENDS BEYOND RAWING. FUTURE DEVELOPMENT

APARTMENT BLOCKS

SCHEDULE OF ACCOMMODATION

1BED	2BED	3BED	TOTAL
22	77	35	134
16%	57%	26%	100%

Rev	Date	Description	Issued By
P01	06/12/2022	Planning Issue	

Project Stage

PLANNING

Client:

Westar Homes Limited

Project:

Residential @ Finlay Park
Finlay Park, Naas, Co. Kildare

Drawing Title:

Proposed Site Layout

Drawn	Checked	Paper Size	Scale	Date
VM	BB	A1	As indicated @A1	06/12/2022

Project No.	Drawing No.	Classification	Revision
PE17019	0111		P01

File Name
PE17019-CWO-01-ZZ-DR-A-0111

Status:
S2-Suitable for information

C+W O'BRIEN ARCHITECTS

No.1 Sarsfield Quay, Dublin 7, D07 R9FH
t: 01 518 0170 e: admin@cwoarchitects.ie
Dublin I Cork I Galway I London I UK & Europe +
www.cwoarchitects.ie

Please consider the environment before printing this sheet

Attachment 2

Ecological Impact Statement for Large-scale Residential Development at Finlay Park, Naas, Co. Kildare

Planning Ref. No. LRD2022002

Compiled by OPENFIELD Ecological Services

Pádraic Fogarty, MSc MIEMA

For Westar

www.openfield.ie

December 2022

1 INTRODUCTION

This Ecological Impact Statement has been prepared by Pádraic Fogarty of OPENFIELD Ecological Services. Pádraic Fogarty has worked for 25 years in the environmental field and in 2007 was awarded an MSc from Sligo Institute of Technology for research into Ecological Impact Assessment (EcIA) in Ireland. OPENFIELD is a full member of the Institute of Environmental Management and Assessment (IEMA).

2 STUDY METHODOLOGY

The assessment was carried out in accordance with the following best practice methodology: 'Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland' by the Institute of Ecology and Environmental Management (IEEM, 2018); 'Guidelines for Assessment Ecological Impacts of National Road Schemes (NRA, 2009).

Site visits were carried out on the 24th of February and May 20th 2020, the 2nd of February and 21st of June 2021, and the 2nd of February and the 24th of May 2022. The site was surveyed in accordance with the Heritage Council's Best Practice Guidance for Habitat Survey and Mapping (Smith et al., 2010). Habitats were identified in accordance with Fossitt's Guide to Habitats in Ireland (Fossitt, 2000).

The nomenclature for vascular plants is taken from *The New Flora of the British Isles* (Stace, 2010) and for mosses and liverworts *A Checklist and Census Catalogue of British and Irish Bryophytes* (Hill et al., 2009).

May and June lie within the optimal survey period for general habitat surveys (Smith et al., 2010) and so a full classification of habitats was possible. May and June also lie within the bird breeding season while February lies within the optimal period for surveying amphibians, large mammals (particularly Badgers) and wintering birds.

Separate bat surveys were carried out by Brian Keeley of Wildlife Surveys Ireland between June 2020 and September 2022 within the optimal flight period.

3 EXISTING RECEIVING ENVIRONMENT

3.1 Zone of Influence

Best practice guidance suggests that an initial zone of influence be set at a radius of 2km for non-linear projects (IEA, 1995). However, some impacts are not limited to this distance and so sensitive receptors further from the project footprint may need to be considered as this assessment progresses. This is shown in figure 1.

There are a number of designations for nature conservation in Ireland including National Park, National Nature Reserve, RAMSAR site, UNESCO Biosphere reserves, Special Protection Areas (SPA – Birds Directive), Special Areas of Conservation (SAC – Habitats Directive); and Natural Heritage Areas. The mechanism for these designations is through national or international legislation. Proposed NHAs (pNHA) are areas that have yet to gain full legislative protection. They are generally protected through the relevant County Development Plan. There is no system in Ireland for the designation of sites at a local, or county level.

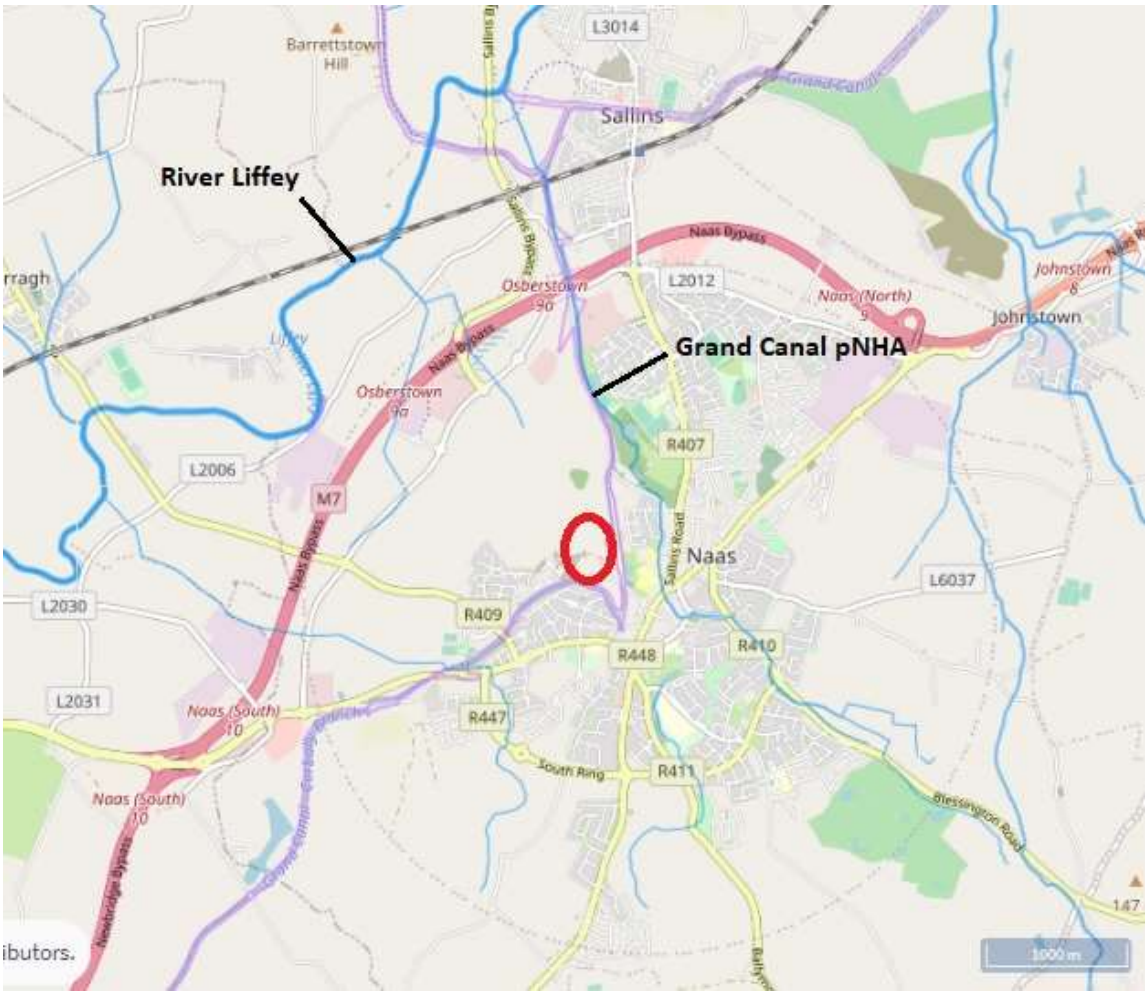


Figure 1 – Proposed development site (red circle) showing local water courses and areas designated for nature conservation (from **www.epa.ie**).

There is one area designated for nature conservation within 2km of the site: the Grand Canal pNHA (site code: 2104). According to the www.wfdireland.ie website, the development lands fall within the catchment of the River Liffey. The Liffey ultimately drains to Dublin Bay where it is subject to a number of designations.

Grand Canal pNHA (site codes: 2104): The Grand Canal was constructed in the 18th century and link Dublin to the River Shannon. It is a nationally valuable wildlife corridor and is home to a wide range of plants and animals, many of conservation value, including the Otter *Lutra lutra*.

South Dublin Bay SAC (side code: 0210) is concentrated on the intertidal area of Sandymount Strand. It has one qualifying interest (i.e. feature which qualifies the area as being of international importance) which is mudflats and sandflats not covered by seawater at low tide.

South Dublin Bay and Tolka Estuary SPA (side code: 4024) is largely coincident with the SAC boundary with the exception of the Tolka Estuary. The North Bull Island SPA (site code: 0206) is largely coincident with the North Dublin Bay SAC with the exception of the terrestrial portion of Bull Island. Table 1 lists the features of interest for these SPAs.

North Dublin Bay pNHA (site code: 0206). This are stretches north along the Dublin coast as far at Howth Head and east to the waters around (but not including) Bull Island. Much of the pNHA is now within the North Dublin Bay SAC (site code: 0206) while that portion that falls within the Tolka estuary is within the aforementioned SPA.

Table 1 – Features of interest for the South Dublin Bay and Tolka Estuary SPAs in Dublin Bay (EU code in square parenthesis)

Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]
Oystercatcher (*Haematopus ostralegus*) [A130]
Ringed Plover (*Charadrius hiaticula*) [A137]
Grey Plover (*Pluvialis squatarola*) [A140]
Knot (*Calidris canutus*) [A143]
Sanderling (*Calidris alba*) [A144]
Dunlin (*Calidris alpina*) [A149]
Bar-tailed Godwit (*Limosa lapponica*) [A157]
Redshank (*Tringa totanus*) [A162]
Black-headed Gull (*Croicocephalus ridibundus*) [A179]

Roseate Tern (*Sterna dougallii*) [A192]
Common Tern (*Sterna hirundo*) [A193]
Arctic Tern (*Sterna paradisaea*) [A194]
Wetlands & Waterbirds [A999]

Bird counts form BirdWatch Ireland are taken from Dublin Bay as a whole and are not separated between the two SPAs in this area.

Dublin Bay is recognised as an internationally important site for water birds as it supports over 20,000 individuals. Table 2 shows the most recent count data available[1].

Table 2 – Annual count data for Dublin Bay from the Irish Wetland Birds Survey (IWeBS)

Year	2010/11	2011/12	2012/13	2013/14	2014/15	Mean
Count	27,931	30,725	30,021	35,878	33,486	31,608

There were also internationally important populations of particular birds recorded in Dublin Bay (i.e. over 1% of the world population): Light-bellied brent geese *Branta bernicula hrota*; Black-tailed godwit *Limosa limosa*; Knot *Calidris canutus* and Bar-tailed godwit *L. lapponica*.

North Dublin Bay SAC/North Bull Island SPA

The North Dublin Bay SAC (site code: 0206) is focussed on the sand spit on the North Bull island. The qualifying interests for it are shown in table 3. The status of the habitat is also given and this is an assessment of its range, area, structure and function, and future prospects on a national level and not within the SAC itself.

Table 3 – Qualifying interests for the North Dublin Bay SAC

Code	Habitat/Species	Status
1140	Mudflats and sandflats not covered by seawater at low tide	Inadequate
1320	Salicornia and other annuals colonizing mud and sand	Favourable
1330	Atlantic salt meadows	Inadequate
1410	Mediterranean salt meadows	Inadequate
1210	Annual vegetation of drift lines	Inadequate
2110	Embryonic shifting dunes	Inadequate

[1] https://www.birdwatchireland.ie/?tabid=111

2120	Shifting dunes along the shoreline with Ammophila arenaria (white dunes)	Inadequate
2130	Fixed coastal dunes with herbaceous vegetation (grey dunes)	Bad
2190	Humid dune slacks	Inadequate
1395	*Petalophyllum ralfsii* Petalwort	Favourable

- **Annual vegetation of drift lines (1210)** This habitat of the upper shore is characterised by raised banks of pebbles and stones. They are inhabited by a sparse but unique assemblage of plants, some of which are very rare. The principle pressures are listed as gravel extraction, the building of pipelines and coastal defences.
- **Embryonic shifting dunes (2110).** As their name suggests these sand structures represent the start of a sand dune's life. Perhaps only a meter high they are a transient habitat, vulnerable to inundation by the sea, or developing further into white dunes with Marram Grass. They are threatened by recreational uses, coastal defences, trampling and erosion.
- **Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) (2120).** These are the second stage in dune formation and depend upon the stabilising effects of Marram Grass. The presence of the grass traps additional sand, thus growing the dunes. They are threatened by erosion, climate change, coastal flooding and built development.
- **Fixed coastal dunes with herbaceous vegetation (grey dunes) (2130 – priority habitat).** These are more stable dune systems, typically located on the landward side of the mobile dunes. They have a more or less permanent, and complete covering of vegetation, the quality of which depends on local hydrology and grazing regimes. They are the most endangered of the dune habitat types and are under pressure from built developments such as golf courses and caravan parks, over-grazing, under-grazing and invasive species.
- **Humid dune slacks (2190).** These are wet, nutrient enriched (relatively) depressions that are found between dune ridges. During winter months or wet weather these can flood and water levels are maintained by a soil layer or saltwater intrusion in the groundwater. There are found around the coast within the larger dune systems.
- **Petalwort (1395).** There are 30 extant populations of this small green liverwort, predominantly along the Atlantic seaboard but also with one in Dublin. It grows within sand dune systems and can attain high populations locally.

The North Bull Island SPA (site code: 0206) is largely coincident with the North Dublin Bay SAC with the exception of the terrestrial portion of Bull Island. Table 4 lists its features of interest.

Table 4 – Features of interest for the North Dublin Bay SPA

North Bull Island SPA	National Status
Light-bellied Brent Goose *Branta bernicla hrota*	Amber (Wintering)

Oystercatcher *Haematopus ostralegus*	Amber (Breeding & Wintering)
Teal *Anas crecca*	Amber (Breeding & Wintering)
Pintail *Anas acuta*	Red (Wintering)
Shoveler *Anas clypeata*	Red (Wintering)
Shelduck *Tadorna tadorna*	Amber (Breeding & Wintering)
Golden Plover *Pluvialis apricaria*	Red (Breeding & Wintering)
Grey Plover *Pluvialis squatarola*	Amber (Wintering)
Knot *Calidris canutus*	Amber (Wintering)
Sanderling *Calidris alba*	Green (Wintering)
Dunlin *Calidris alpina*	Red (Breeding & Wintering)
Black-tailed Godwit *Limosa limosa*	Amber (Wintering)
Bar-tailed Godwit *Limosa lapponica*	Amber (Wintering)
Curlew *Numenius arquata*	Red (Breeding & Wintering)
Redshank *Tringa tetanus*	Red (Breeding & Wintering)
Turnstone *Arenaria interpres*	Green (Wintering)
Black-headed Gull *Larus ridibundus*	Red (Breeding)
Wetlands & Waterbirds	

- **Oystercatcher.** Predominantly coastal in habit Oystercatchers are resident birds whose numbers continue to expand in Ireland.
- **Teal**. In winter this duck is widespread throughout the country. Land use change and drainage however have contributed to a massive decline in its breeding range over the past 40 years.
- **Pintail**. Dabbling duck wintering on grazing marshes, river floodplains, sheltered coasts and estuaries. It is a localised species and has suffered a small decline in distribution in Ireland for unknown reasons.
- **Shoveler**. Favoured wintering sites for this duck are inland wetlands and coastal estuaries. While there have been local shifts in population and distribution, overall their status is stable in Ireland.
- **Knot.** These small wading birds do not breed in Ireland but gather in coastal wetlands in winter. Their numbers have increased dramatically since the mid-1990s although the reasons for this are unclear.
- **Sanderling.** This small bird breeds in the high Arctic and winters in Ireland along sandy beaches and sandbars. Its wintering distribution has increased by 21% in the previous 30 years.

- **Dunlin.** Although widespread and stable in number during the winter season, the Irish breeding population has collapsed by nearly 70% in 40 years. Breeding is now confined to just seven sites in the north and west as habitat in former nesting areas has been degraded.
- **Black-tailed Godwit.** Breeding in Iceland these waders winter in selected sites around the Irish coast, but predominantly to the east and southern halves. Their range here has increase substantially of late.
- **Curlew.** Still a common sight during winter at coastal and inland areas around the country it breeding population here has effectively collapsed. Their habitat has been affected by the destruction of peat bogs, afforestation, farmland intensification and land abandonment. Their wintering distribution also appears to be in decline.
- **Redshank.** Once common breeders throughout the peatlands and wet grasslands of the midlands Redshanks have undergone a 55% decline in distribution in the past 40 years. Agricultural intensification, drainage of wetlands and predation are the chief drivers of this change.
- **Turnstone.** This winter visitor to Irish coasts favours sandy beaches, estuaries and rocky shores. It is found throughout the island but changes may be occurring due to climate change.
- **Black-headed Gull.** Widespread and abundant in winter these gulls are nevertheless considered to be in decline. The reasons behind this are unclear but may relate to the loss of safe nesting sites, drainage, food depletion and increase predation.

The NPWS web site (www.npws.ie) contains a mapping tool that indicates historic records of legally protected species within a selected Ordnance Survey (OS) 10km grid square. The subject site is located within the square N81 and four protected species are highlighted. It must be noted that this cannot be interpreted as meaning that protected species are absent.

Table 5 – Known records for protected species within the N81 10km square

Species	Habitat[2]	Current status[3]
Clinopodium acinos Basil Thyme	Field margins and sandy or gravelly places	Current
Galeopsis angustifolia Red Hemp-nettle	Calcareous gravels	
Saxifraga granulate Meadow saxifrage	Sandhills and pastures near the east coast	Record pre-1930
Otter *Lutra lutra*	Rivers, coasts and wetlands	Current

The Castlesize Stream which flows c360m to the north-east of the site boundary is a part of the Liffey Water Management Unit and the majority of the Liffey river system was assessed as satisfactory (good or high) under the Water Framework Directive (WFD) reporting period 2015-2018. However, natural surface water pathways in the immediate vicinity of the development land have been altered to a

[2] Parnell et al., 2012
[3] Preston et al., 2002

significant extent and particularly with the construction of the Grand Canal. The canal received water from a number of tributaries of the River Liffey and is an artificial and slow-moving body of water. It is assessed as 'good potential status' under the WFD. Site investigations for this application have shown that drainage ditches on the development site flow to the north-west and enter the River Liffey.

The Liffey is assessed as 'good' status as far as Leixlip. Thereafter it deteriorates to 'moderate' status. The Naas Stream meanwhile is 'moderate'.

In 2018 the second River Bason Management Plan was published and under this plan all water bodies in Ireland fall within a single River Basin District. The River Liffey now falls within the Eastern Region. This plan has identified 190 'priority areas for action' which will form the focus of resource allocation for the 2018-2021 period. A number of tributaries of the Liffey are among these areas, including the Lyreen and the Morrell.

3.2 Site Survey

Aerial photography from the OSI and historic mapping shows that these lands are were agricultural use until relatively recently, however there has been some land use change in this vicinity with new construction of housing and road links. The lands are located in a semi-urbanised landscape, close to built development on the periphery of Naas town as well as important transport links.

3.2.1 Flora

The lands were formerly entirely in agricultural production and the northern field, are part of which is within the application boundary, remains **improved agricultural grassland – GA1** and are grazed by horses. Grasses are predominantly Perennial Rye *Lolium perenne* and Cock's-foot *Dactylis glomerata* while Creeping Buttercup *Ranunculus repens* and Nettle *Urtica dioica* are also present.

The main field is not grazed by animals and are either **spoil and bare ground – ED2** or **dry meadow – GS2**. Vegetation is sparse and ruderal on bare areas while meadows include Cock's-foot, Dandelions *Taraxacum sp.,* Ribwort Plantain *Plantago lanceolata,* Creeping Buttercup and Cleavers *Galium aparine.*

Figure 2 – view of the proposed development site looking east.

Traditional field boundaries remain and include **hedgerow – WL1** and **treelines – WL2**. Species composition in these linear habitats can be similar while treelines are distinguished by the dominance of trees over 5m in height. These include Ash *Fraxinus excelsior,* Beech *Fagus sylvatica,* Crack Willow *Salix fragilis,* and Hawthorn *Crataegus monogyna.* Ground vegetation includes Cow Parsley *Anthriscus sylvestris,* Yarrow *Achillea millefolium,* Creeping Cinquefoil *Potentilla repens,* Hart's-tongue *Asplenium scolopendrium*, Vetches *Vicia sp.,* Hogweed *Heracleum sphondylium* and Cowslip *Primula veris.*

Following guidance from the Heritage Council, all of the treelines are classified as 'higher significance' due to their structure, age and species diversity. This includes a short stretch of the north-western boundary which is a townland boundary (Foulkes et al., 2013). The hedgerow running east-west is 'lower significance' due to low species diversity and poor structure. It has been cut to a short, box shape and includes large gaps. To the east this boundary line is a **stone wall – BL1** with Brambles *Rubus fruticosus agg.*

Drainage ditches – FW4 run across the site and are highly modified water bodies. They drain to the River Liffey and are not directly hydrologically connected with the Grand Canal. The River Liffey is not subject to any nature conservation designations in this vicinity.

No plant species were found which is listed as alien invasive under Schedule 3 of S.I. 477 of 2011. No rare or threatened plant species was recorded. There are no habitats which are examples of those listed in Annex I of the Habitats Directive while there is no evidence that species listed in Annex II of that Directive are present.

3.2.2 Fauna

The site survey included incidental sightings or proxy signs (prints, scats etc.) of faunal activity, while the presence of certain species can be concluded where there is suitable habitat within the known range of that species. Table 3 details those mammals that are protected under national or international legislation in Ireland. Cells are greyed out where suitable habitat is not present or species are outside the range of the study area.

Table 6 – Protected mammals in Ireland and their known status within the zone of influence[4]. Those that are greyed out indicate either that suitable habitat is not present or that there are no records of the species from the National Biodiversity Date Centre.

Species	Level of Protection	Habitat[5]
Otter *Lutra lutra*	Annex II & IV Habitats Directive; Wildlife (Amendment) Act, 2000	Rivers and wetlands
Lesser horseshoe bat *Rhinolophus hipposideros*		Disused, undisturbed old buildings, caves and mines
Grey seal *Halichoerus grypus*	Annex II & V Habitats Directive; Wildlife (Amendment) Act, 2000	Coastal habitats
Common seal *Phocaena phocaena*		
Whiskered bat *Myotis mystacinus*	Annex IV Habitats Directive; Wildlife (Amendment) Act, 2000	Gardens, parks and riparian habitats
Natterer's bat *Myotis nattereri*		Woodland
Leisler's bat *Nyctalus leisleri*		Open areas roosting in attics
Brown long-eared bat *Plecotus auritus*		Woodland
Common pipistrelle *Pipistrellus pipistrellus*		Farmland, woodland and urban areas
Soprano pipistrelle *Pipistrellus pygmaeus*		Rivers, lakes & riparian woodland

[4] From the National Biodiversity Data Centre, excludes marine cetaceans
[5] Harris & Yalden, 2008

Daubenton's bat *Myotis daubentonii*		Woodlands and bridges associated with open water
Nathusius' pipistrelle *Pipistrellus nathusii*		Parkland, mixed and pine forests, riparian habitats
Irish hare *Lepus timidus hibernicus*	Annex V Habitats Directive; Wildlife (Amendment) Act, 2000	Wide range of habitats
Pine Marten *Martes martes*		Broad-leaved and coniferous forest
Hedgehog *Erinaceus europaeus*	Wildlife (Amendment) Act, 2000	Woodlands and hedgerows
Pygmy shrew *Sorex minutus*		Woodlands, heathland, and wetlands
Red squirrel *Sciurus vulgaris*		Woodlands
Irish stoat *Mustela erminea hibernica*		Wide range of habitats
Badger *Meles meles*		Farmland, woodland and urban areas
Red deer *Cervus elaphus*		Woodland and open moorland
Fallow deer *Dama dama*		Mixed woodland but feeding in open habitat
Sika deer *Cervus nippon*		Coniferous woodland and adjacent heaths

No direct evidence of any wild mammal species was recorded.

No Badger setts were found and there is no evidence that Badgers are using the lands. February is within the optimal season for Badger survey and access to field boundaries was not problematic.

Suitable habitat is not present for Pine Marten or Red Squirrel. Irish Stoat, Hedgehog, Pygmy Shrew and Irish Hare are considered widespread (Lysaght & Marnell, 2016). There was no evidence that deer are using the site. The drainage ditches on the site are too small and modified for use by Otter and it is sub-optimal habitat.

Dedicated bat surveys were carried out by Brian Keeley of Wildlife Surveys Ireland between June 2020 and September 2022, well within the optimal flight period. No bat roosts were recorded while five species were noted feeding or foraging: Common Pipistrelle, Soprano Pipistrelle, Leisler's Bat, Daubenton's Bat (along the canal) and a Myotis sp. The report states:

The most frequently encountered bat species in the latest bat activity survey within the site was the common pipistrelle. Soprano pipistrelles were similar in activity levels but lsightly less than common pipistrelles This species has a strong association with water and wet areas and its presence would be expected. Common pipistrelles were widespread within the site and are roosting close to the site based on the late presence of the species prior to sunrise. While there were lesser signals of soprano pipistrelles at this time (prior to sunrise), the latest pipistrelle signals were of this species, and they are likely to be roosting in close proximity to the site also. Observations between 2020 and 2022 suggest the possibility for the presence of these species in the buildings adjoining the site.

In 2022, a Leisler's bat was noted heading north away from the site at 04.56 hours and in 2020, a Leisler's bat was noted heading north away from the site at 04.32 hours and these were the last bats noted in the active surveys in these two years. This species was roosting north of the site in both of these years and feeding and commuting through the site.

Daubenton's bats were noted along the Canal throughout the post-dusk survey period of the active survey but was only noted once by the static monitor away from the Canal. Thus, this species was clearly not roosting anywhere near the buildings adjoining the site.

In 2020, a Myotis bat was noted along the northeastern edge of the site at 23.05 to 23.06 hours. This was potentially a whiskered or Natterer's bat.

Non-protected mammals which are likely to be present include Wood Mouse *Apodemus sylvaticus,* House Mouse *Mus domesticus,* and Brown Rat *Rattus norvegicus.* Fox *Vulpes vulpes* and Rabbits *Oryctolagus cuniculus* are likely to be present also.

The site was surveyed for breeding birds (May 2020, June 2021, May 2022) and wintering birds (February 2020, 2021 & 2022) in accordance with methodology from the NRA (NRA, 2009).

Winter species noted were: Hooded Crow *Corvus corone*, Rook *C. frugilegus*, Magpie *Pica pica*, Dunnock *Prunella vulgaris*, Great Tit *Parus major*, Goldfinch *Carduelis carduelils*, Pheasant *Phasianus cholchicus*, Blackbird *Turdus merula*, Robin *Erithacus rubecula*, Mallard *Anas platyrhynchos*, Goldcrest *Regulus regulus*, Wood Pigeon *Columba palumbus* and Wren *Troglodyes troglodytes*. These are all species which are listed by BirdWatch Ireland as 'low conservation concern' (Gilbert et al., 2021).

The breeding survey was undertaken in May 2020, June 2021 and May 2022 and recorded: Wood Pigeon, Song Thrush *T. phillomelos,* Goldfinch, Robin, Hooded Crow, Starling *Sturnus vulgaris,* Blackbird, Wren, House Sparrow *Passer domesticus,* Blue Tit *Parus caeruleus,* Great Tit *P. major* and Bullfinch *Pyrrhula pyrrhula*. These are all species of 'low conservation concern' with the exception of Starling, which is 'medium conservation concern'.

Drainage ditches provide suitable habitat for spawning Common Frog *Rana temporaria* however no spawn was located during any of the winter surveys. There is no suitable habitat for Smooth Newt *Lissotriton vulgaris*. Common Lizard *Lacerta vivipara* is considered common and widespread.

The fisheries status of the streams entering the Liffey, i.e. the Castlesize Stream and Naas Stream is not known. The River Liffey meanwhile is of salmonid status. Fish survey data from Inland Fisheries Ireland (2019) recorded Brown Trout *Salmo trutta* and Salmon *S. salar*, as well as European Eel *Anguilla anguilla,* Lamprey *Lampetra sp.,* Minnow, Pike *Esox lucius*, Stone Loach *Neomacheilus barbatulus* and Three-spined Stickleback *Gasterosteus aculeatus*.

Most habitats, even highly altered ones, are likely to harbour a wide diversity of invertebrates. In Ireland only one insect is protected by law, the Marsh Fritillary butterfly *Euphydryas aurinia,* and this is not to be found in intensive agricultural grassland. Other protected invertebrates are confined to freshwater and wetland habitats and are not present on this site.

Figure 3 – Habitat map of the subject lands (from **www.google.com**)

3.5 Overall Evaluation of the Context, Character, Significance and Sensitivity of the Proposed Development Site

In summary it has been seen that the development site is within an area of former and current agricultural land with traditional field boundaries but also areas of cleared ground. There are no examples of habitats listed on Annex I of the Habitats Directive or records of rare or protected plants. There are no plant species listed as alien invasive. Field boundaries provide habitat for a variety of plant and animal species including breeding birds and foraging bats. The site is adjacent to the Grand Canal pNHA, a feature of national value for biodiversity.

Significance criteria are available from guidance published by the National Roads Authority (NRA, 2009). From this an evaluation of the various habitats and ecological features on the site has been made and this is shown in table 7.

Table 7 Evaluation of the importance of habitats and species on the subject site

Higher significance' treelines – WL1	High local value
'Lower significance' Hedgerows – WL1 including drainage ditches – FW4 Dry meadow – GS2 Improved agricultural grassland – GA1	Low local value
Spoil and bare ground – ED2	Negligible ecological value

4 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

The proposed development will consist of the construction of 134 no. apartments (comprising a mixture of 70 no. 2 storey apartments and 64 no. apartments - 22 no. 1 bedroom apartments, 77 no. 2 bedroom apartments, and 35 no. 3 bedroom apartments) with private open space provided in the form of balconies/terraces as follows:

A) Block A (4 storey apartment block) comprising 26 no. apartments (6 no. 1 bed units, 16 no. 2 bed units & 4 no. 3 bed units); Block B (part 4 part 5 storey apartment block) comprising 66 no. apartments (10 no. 1 bed units, 33 no. 2 bed units and 23 no. 3 bed units), with a commercial/ health/medical unit (c. 247.6 sq. m) at ground floor; Block C (part 4 part 5 storey apartment block) comprising 42 no. apartments (6 no. 1 bed, 28 no. 2 bed units and 8 no. 3 bed units);

B) Vehicular/pedestrian and cyclist access from the Old Caragh Road (in new arrangement) along with the provision of 201 no. undercroft and surface car parking spaces as well as 388 no. undercroft and surface cycle parking spaces; internal road and shared surface networks including pedestrian and cycle paths;

C) Public Open space including central communal (courtyard) open space including outdoor playground area;

Provision of foul and surface water drainage, including relocation of existing foul main in northern part of site as well as green roofs; linear greenway path, bin stores; plant rooms; public lighting and all associated landscaping and boundary treatment works, site development and infrastructural works, ESB substations, and all ancillary works necessary to facilitate the development.

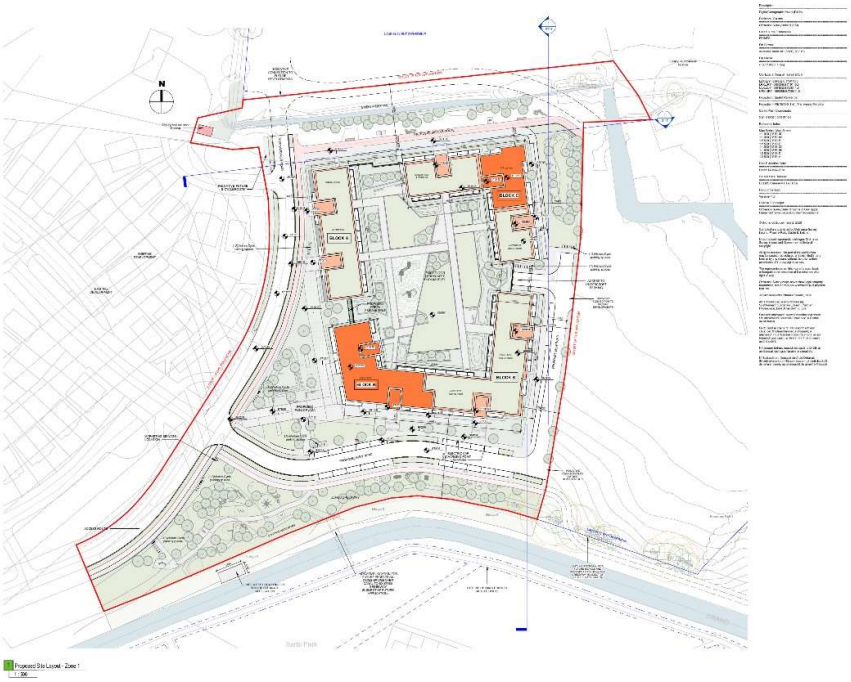


Figure 3 – Development overview

5 POTENTIAL IMPACT OF THE PROPOSED DEVELOPMENT

This section provides a description of the potential impacts that the proposed development may have biodiversity in the absence of mitigation. Methodology for determining the significance of an impact has been published by the NRA. This is reproduced in table 8 and is based on the valuation of the ecological feature in question (table 7) and the scale of the predicted impact. In this way it is possible to assign an impact significance in a transparent and objective way. Table 9 summaries the nature of the predicted impacts.

5.1 Construction Phase

The following potential impacts are likely to occur during the construction phase in the absence of mitigation:

1. The removal of habitats including dry meadow, improved agricultural grassland, spoil and sections of internal field boundary. Sections of external hedgerows and treelines are to be retained. Tree loss is confined to eight (8) specimens which were assessed by the arborist as 'category U' and so are unsuitable for retention in a residential scheme. This is shown in figure 4. Associated drainage ditches are to be retained in their open state except where they will pass under a road. A wide margin of vegetation along the Grand Canal (c.20m) is to be retained.

   There will consequently be very little loss of habitat and impacts to biodiversity will be minor negative.

Figure 4 – Trees to be removed (pink) and those to be retained (green)

2. The direct mortality of species during site clearance. This impact is most acute during the bird breeding season which can be assumed to last from March to August inclusive. Trees, hedgerows and rough vegetation (particularly with Brambles) provide suitable nesting habitat and mitigation will be required during the construction phase as all birds' nests and eggs are protected under the Wildlife Act. Tree felling can impact upon bats which may be roosting in small spaces. The bat survey did not identify any roosts however it cautioned that felling of mature trees could result in roost loss.

3. Pollution of water courses through the ingress of silt, oils and other toxic substances. The site is close to drainage pathways which reach the River Liffey and the ingress of silt, in particular, can result in degradation of fish habitat. While this is a low risk site (there are no habitats of high fisheries value in this immediate vicinity) best practice site management should be followed to ensure pollution does not occur. This impact is predicted to be minor negative at worst.

4. Impact to trees and hedgerows to be retained. The compaction of soil within the root zones of trees, through the movement of machinery or the storage of construction materials, can result in permanent damage to trees. Without proper safeguards, this could affect all of the trees and linear woodlands to be retained.

Operation Phase

The following potential impacts are likely to occur during the operation phase in the absence of mitigation:

5. The subject development will result in additional volumes of foul wastewater. Wastewater from the development will be treated at the Osberstown wastewater treatment plant. This is licenced by the EPA to discharge treated effluent to the River Liffey (licence no. D0002-01). The plant is licenced to discharge treated effluent to the River Liffey by the EPA. It has a capacity to treat wastewater for a population equivalent (P.E.) of 130,000. The Annual Environmental Report (AER) for 2020 shows that the average loading was within this capacity while the standard of effluent was fully compliant with emission limit values set under the Urban Wastewater Treatment Directive. Monitoring of the receiving water (i.e. the River Liffey) takes place at points upstream and downstream of the discharge point. The AER states that "the discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status." This development will increase demand on the treatment plant however this is not likely to result in pollution effect to receiving waters. The effect to biodiversity is therefore neutral.

6. Surface water run-off from will discharge to a surface water sewer via attenuation and SUDS measures. The design and management of surface water for the proposed development will comply with the policies and guidelines outlined in the Greater Dublin Strategic Drainage Study (GDSDS) and

with the requirements of Kildare Co. Co. The proposed drainage proposal includes attenuation storage and discharge at a controlled rate. Additional SUDS measures include the use of permeable paving, infiltration trenches and blue roofs which will ensure that run-off quality and quantity will be retained at a 'greenfield' rate.

7. Artificial lighting. Artificial lighting can affect areas beyond the site boundary. The bat report has identified the potential of this effect to result in the loss of feeding for bats. Without mitigation this is a potential moderate negative impact.

8. No impacts are predicted to occur to Natura 2000 sites (SACs or SPAs), principally due to the separation distance between the site and these areas. A full assessment of potential effects to these areas is contained within a separate Screening Report for Appropriate Assessment. Works will take place close to the Grand Canal pNHA however existing trees and riparian vegetation are to be retained. No direct disturbance to habitats at the canal will arise. There will be an increase in human traffic however this must be seen in the context of the existing urbanised environment. The canal in this location is already a valuable amenity for the people of Naas. No negative impacts will arise to the biodiversity of the canal from this development.

Table 8: Determination of significance matrix taken from NRA guidance Appendix 4 (2006)

Impact Level	***Site category***				
	A	***B***	***C***	***D***	***E***
Severe negative	Any permanent impact	Permanent impact to a large part of the site			
Major negative	Temporary impact to a large part of the site	Permanent impact to a small part of the site	Permanent impact to a large part of the site		
Moderate negative	Temporary impact to a small part of the site	Temporary impact to a large part of the site	Permanent impact to a small part of the site	Permanent impact to a large part of the site	
Minor negative		Temporary impact to a small part of the site	Temporary impact to a large part of the site	Permanent impact to a small part of the site	Permanent impact to a large part of the site
Neutral (Negligible)	No impact	No impact	No impact	No impact	Permanent impact to a small part of the site
Minor positive				Permanent beneficial impact to a small part of the site	Permanent beneficial impact to a large part of the site

Moderate positive			Permanent beneficial impact to a small part of the site	Permanent beneficial impact to a large part of the site	
Major positive		Permanent beneficial impact to a small part of the site	Permanent beneficial impact to a large part of the site		

Table 9: Significance level of likely impacts in the absence of mitigation

Impact		Significance
Construction phase		
1	Loss of habitat	Minor negative
2	Mortality to animals during construction	Moderate negative – permanent impacts to species of high local value/or species with legal protection
3	Pollution of water during construction phase	Minor negative
4	Damage to trees to be retained	Moderate negative
Operation phase		
5	Wastewater pollution	Neutral
6	Surface water pollution	Neutral
7	Artificial lighting	Moderate negative
8	Impacts to areas protected for nature conservation	Neutral

Overall it can be seen that three potentially moderate negative impacts are predicted to occur as a result of this project in the absence of mitigation.

5.2 Cumulative impacts

A number of the identified impacts can also act cumulatively with other impacts from similar developments in the Naas area. These primarily arise through the urbanisation of the town's hinterland as provided for by land use zoning and include: loss of habitats, particularly hedgerows and treelines, artificial lighting, pollution from surface water run-off and pollution from wastewater generation.

A cumulative loss of wildlife value however will be experienced as land use changes in this area from open agricultural to suburban. This is offset somewhat as open green spaces and private gardens mature over time. It is considered that the species which are already present in this area will not suffer

long term consequences arising from this land use change. The development lands are zoned for residential development under the Naas Development Plan 2021-2027. This plan was subject to AA Screening by the planning authority and this concluded that its implementation would not result in significant negative effects to Natura 2000 sites.

Under the second River Basin Management Plan of the WFD, published in 2018, the number of tributaries of the Liffey are identified as among the 190 'priority areas for action' where resources are to be focussed over the 2018-2021 period.

6 AVOIDANCE, REMEDIAL AND MITIGATION MEASURES

This report has identified three impacts that were assessed as 'moderate negative' and therefore mitigation is needed to reduce the severity of these potential effects. Where impacts can be avoided totally, even where the impact is predicted to be minor negative, mitigation is also recommended.

6.1 Mitigation Measures Proposed

The following mitigation measures are proposed for the development

Construction Phase

1: Disturbance of birds' nests

Deliberate disturbance of a bird's nest is prohibited unless under licence from the National Parks and Wildlife Service. The removal of vegetation and demolition of buildings should be undertaken outside the nesting period (March to August inclusive). Where this is not possible, vegetation must be inspected for the presence of nests. If no nest is found, vegetation can be removed within 48 hours. Where a nest is found, vegetation can only be removed after young birds have fledged, or under licence.

2: Disturbance to roosting bats.

The following is taken from the bat report:

Trees must be felled or undergo surgery at a period when birds and bats are unlikely to be breeding or for bats, hibernating. The ideal time for felling is September to early November (or late October if weather conditions are set to be cold). If trees are to be felled at other times, intensive efforts to determine if bats and birds are present must be undertaken (e.g. fibrescope examinations from a height access e.g. MEWP).

All trees must be examined for the presence of bats prior to felling / surgery. This must be carried out by a bat specialist with appropriate experience of tree assessments. If bats are discovered, it will be necessary to acquire a licence to derogate from the Department of Housing, Local Government and

Heritage through the National Parks and Wildlife Service. All work to exclude bats must be done according to the conditions of the licence and by a licensed bat specialist. (It is an offence to disturb or destroy a bat roost without written approval and under the guidance of a specialist). This may require further mitigation measures including all measures necessary to prevent injury to bats.
This would reduce the impact to a long-term slight negative impact.

It is proposed that 15 bat boxes will be attached to the mature trees within the site. The boxes proposed are 15 x 2F Schwegler woodcrete bat boxes with Double front panels or equivalent designs. These must be erected no less than 3 metres from the ground in an uncluttered area, away from lighting and not directly over a busy road.

Two boxes in each group of three should face south or southerly and the remaining one may be in any direction.
This reduces the impact to a medium to long-term slight negative impact.

3. Pollution during construction

Although the risk of pollution to fisheries habitat from this development is low, it is recommended that best practice site management be followed at all times.

A Construction Method Statement should be prepared, and which should include pollution prevention measured in accordance with best practice guidelines from Inland Fisheries Ireland (2016). This should identify the location of the site compound, storage areas for potentially polluting substances, and specific measures to prevent the loss of silt-laden water to any water course. It should include the installation of suitably designed silt traps, so that any discharge is only of clean, silt-free water.

Operation Phase

4. Tree damage – mitigation by avoidance

To avoid damage to trees the developer should follow the guidance from the National Roads `Authority in establishing root protection areas (RPA) along hedgerows to be retained.

The NRA gives the following equation for calculating the root protection area (RPA) (NRA, unknown year):

RPA(m2) = π(stem diameter mm 12)/1,000) x2

The RPA gives the area around which there should be no disturbance or compaction of soil. This will be calculated for the largest tree within each hedgerow. Prior to construction this area will be clearly labelled ‘sensitive ecological zone’, fenced off with durable materials and instruction given to construction personnel not to disturb this buffer zone. As a rule of thumb this buffer zone should extend at least to the canopy of the trees concerned.

5. Artificial lighting.

The following is taken from the bat report:

Lighting shall be controlled to avoid light pollution of green areas and should be targeted to areas of human activity and for priority security areas. Motion-activated sensor lighting is preferable to reduce light pollution. None of the remaining mature trees or trees proposed for planting shall be illuminated.
• DARK SKIES areas shall be designated where no lighting shall be permitted to provide bat movement through, within and around the site
• Dark corridor for movement of bats along the grounds of the site. Lighting should be directed downwards away from the treetops.
• All luminaires shall lack UV elements when manufactured and shall be LED
• A warm white spectrum (ideally <2700 Kelvin) shall be adopted to reduce blue light component
• Luminaires shall feature peak wavelengths higher than 550 nm
• Tree crowns shall remain unilluminated

7 PREDICTED IMPACTS OF THE PROPOSED DEVELOPMENT

This section allows for a qualitative description of the resultant specific direct, indirect, secondary, cumulative, short, medium and long-term permanent, temporary, positive and negative effects as well as impact interactions which the proposed development may have, assuming all mitigation measures are fully and successfully applied.

With mitigation, the majority of the impacts can be reduced so that no moderate negative impact remains.

8 MONITORING

Monitoring is required where the success of mitigation measures is uncertain or where residual impacts may in themselves be significant. After mitigation, no significant effects are likely to arise as a result of this development to biodiversity and so monitoring is not required.

9 REFERENCES

Bullock C., Kretch C. & Candon E. 2008. *The Economic and Social Aspects of Biodiversity*. Stationary Office.

Colhoun K. & Cummins S. 2013. *Birds of Conservation Concern in Ireland 2014 – 2019.* Irish Birds. Volume 9 Number 4 pg523-541.

Cooney R. & Dickson B. 2005. *Biodiversity and the Precautionary Principle.* Earthscan.

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

Council Directive 97/11/EEC of 3rd March 1997 amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment

Council Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy – more commonly known as the Water Framework Directive

Curtis T.G.F.& McGough H.N. 1988. *The Irish Red Data Book 1: Vascular Plants.* Stationary Office.

Department of Arts, Heritage and the Gaeltacht. 2011. *Actions for Biodiversity 2011 – 2016. Ireland's National Biodiversity Plan.*

DG Environment. 2010. *Natura 2000 European Commission Nature and Biodiversity Newsletter.* Number 28. June 2010. ISSN: 1026-6151.

Fitter R., Fitter A. & Farrer A. 1984. *Grasses, sedges, rushes and ferns of Britain and Northern Europe.* Collins.

Fossitt J. 2000. *A Guide to Habitats in Ireland*. Heritage Council.

Gilbert G., Stanbury A. & Lewis L. 2021. *Birds of Conservation Concern in Ireland 4: 2020-2026.* Irish Birds. No 43.1-22.

Harris S. & Yalden D.W. 2008. *Mammals of the British Isles: Handbook, 4th Edition.* The Mammal Society.

Hill M.O., Blackstock T.H., Long D.G. and Rothero G.P 2008. *A Checklist and Census Catalogue of British and Irish Bryophytes.* British Bryological Society.

Hundt L. 2012. *Bat Surveys: Good Practice Guidelines. 2nd Edition.* Bat Conservation Trust.

IEEM. 2006. *Guidelines for Ecological Impact Assessment in the United Kingdom.* Institute of Ecology and Environmental Management.

Institute of Environmental Assessment, 1995. *Guidelines for Baseline Ecological Assessment*'

Johnson O. & More D., 2004. *Tree Guide*', Collins

Lysaght L. & Marnell F. 2016. *Atlas of Mammals in Ireland 2010-2015.* National Biodiversity Date Centre.

Mason C.F. 1996. *Biology of Freshwater Pollution.* Longman.

NRA. 2009. *Guidelines for Assessment of Ecological Impacts of National Road Schemes.* National Roads Authority.

Parnell J. & Curtis T. 2012. *Webb's An Irish Flora.* Cork University Press.

Preston C.D., Pearman D.A. & Dines T.D. 2002. *New Atlas of the British & Irish Flora*. Oxford University Press.

Rich C. & Longcore T. Editors. 2006. *Ecological Consequences of Artificial Night Lighting.* Island Press.

Sargent G. & Morris P. 2003. *How to Find & Identify Mammals.* The Mammal Society.

Smith G. F., O'Donoghue P., O'Hora K. and Delaney E. 2010. *Best Practice Guidance for Habitat Survey and Mapping.* Heritage Council.

Stace C. 2010. *New Flora of the British Isles.* Cambridge University Press

Statutory Instrument No. 94 of 1999. Flora (Protection) Order

Treweek J., 1999. *Ecological Impact Assessment*', Blackwell Science.

United Nations. 1992. *Convention on Biological Diversity*