ENVIRONMENTAL IMPACT ASSESSMENT SCREENING REPORT FOR A PROPOSED MODULAR HOUSING DEVELOPMENT BACKWESTON, LUCAN, DUBLIN

Report Prepared For

The Commissioners of Public Works in Ireland on behalf of the Department for Children, Equality, Disability, Integration and Youth

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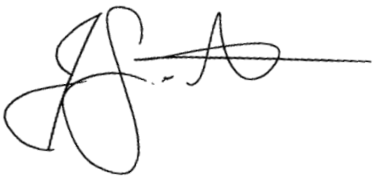
Signature		
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1.0 INTRODUCTION

On behalf of The Commissioners of Public Works in Ireland on behalf of the Department for Children, Equality, Disability, Integration and Youth ('the Applicant'), AWN Consulting Limited ('AWN') has prepared the following Environmental Impact Assessment (EIA) Screening Report as part of a Modular Housing Development Application in relation to the proposed temporary emergency modular housing development located at the junction of the Celbridge Link Road and Tubber Lane, in the townland of Backstown, Lucan, Co. Dublin.

The proposed development will consist of the construction of 132 no. modular housing units to provide emergency temporary accommodation for up to 512 Ukrainian refugees.

The proposed development is to the south of Leixlip town centre and Weston Airport, and to the southwest of the Lucan Golf Club. The development site is bound to the southeast by Tubber Lane, to the northeast by the Celbridge Link Road and a greenfield area to the west. The River Liffey (Leixlip Reservoir) is c. 900m north of the proposed development. The site (hereafter referred to as 'the Site') consists of c. 4.96 ha of agricultural land outlined in red on Figure 1.1. The proposed development is described in further detail in Section 2.

Figure 1.1 *Proposed development site (indicative in red) (Source: Google Earth)*

1.1 REQUIREMENT FOR EMERGENCY HOUSING

The European Union (Planning and Development) (Displaced Persons From Ukraine Temporary Protection) Regulations (S.I. No. 306 of 2022) are made under Section 3 of the European Communities Act 1972 (No. 27 of 1972) for the purpose of giving effect

to Council Directive No 2001/55 EC (the Temporary Protection Directive), and Council Implementing Decision EU 2022/382 of 4 March 2022, to provide immediate protection in EU countries for persons displaced by the Russian invasion of Ukraine, including the need to provide emergency accommodation and support to these displaced persons.

The Regulations relate to the non-application of the Planning and Development Act 2000 to certain classes of development by or on behalf of a State authority, which is defined as a Minister of the Government or the Commissioners of Public Works in Ireland. The provisions of the Planning and Development Act 2000 shall not apply to the specified classes of temporary development in the Schedule only for so long as the regulations are in force. After this time the removal, demolition or alteration of any temporary structure and the discontinuance of any temporary use and, in so far as is practicable, the restoration of the land to its condition prior to the commencement of the development, shall be required, unless the development is permitted, exempted or otherwise regularised by a provision of the Planning and Development Act 2000, or the Regulations thereto. The classes of development listed in the Schedule may include the change of use and repurposing of existing buildings and facilities, and temporary newbuild accommodation and structures to address the urgent need to provide emergency accommodation and support to displaced persons from the conflict in Ukraine.

In accordance with the Temporary Protection Directive 2001/55/EC, the duration of temporary protection activated by European Union Council Decision EU 2022/382 of 4 March 2022 should be for an initial period of one year. Unless terminated under the terms of Article 6(1), point (b), of that Directive, that period should be extended automatically by six monthly periods for a maximum of one year. At any time, the European Commission may propose to the Council to end the temporary protection, based on the fact that the situation in Ukraine is such as to permit the safe and durable return of those granted temporary protection, or propose that the Council extend the temporary protection by up to one year. As such, the maximum extended period for the duration of Temporary Protection Decision EU 2022/382, of 4 March 2022, shall be three years.

1.2 PURPOSE OF THIS REPORT

There is a mandatory requirement for an Environmental Impact Assessment Report (EIAR) to accompany a project for some types of development that meet or exceed the relevant “thresholds” specified in Schedule 5 to the Planning and Development Regulations. In addition to the mandatory requirement, there is a case-by-case assessment necessary for sub-threshold developments as they may be likely to have significant effects on the environment. If a sub-threshold development is determined to be likely to have a significant effect on the environment, then an EIAR will be required.

The proposed development and component parts have been considered, as documented in Section 2, against the thresholds for EIA as outlined in the Planning and Development Regulations 2001 (as amended). The proposed development is a sub-threshold development and is not mandatory for EIA.

The second reason for this report is to document the studies undertaken by the Applicant, and the design team, to consider whether the development would be likely to have significant effects on the environment.

AWN, along with the project team, have undertaken an assessment of the effects on the environment from the proposed development and has concluded that there is no real likely significant environmental effects on the receiving environment for the proposed development, therefore a subthreshold EIA is not required. The assessment is documented in Section 3.0, 4.0 and 5.0 and covers each aspect of the environment in accordance with guidance including Population and Human Health; Biodiversity; Land, Soils, Geology, Hydrogeology, and Hydrology; Air Quality and Climate; Noise and Vibration; Landscape and Visual Impact; Cultural Heritage, and Archaeology; Traffic and Transportation; Material Assets, and Waste.

The information presented in this report will enable the competent authority (OPW) to undertake a screening determination in respect of the need for an EIAR for the proposed development.

1.3 EIA SCREENING LEGISLATION AND GUIDANCE

The legislation and guidance listed below has informed this report and the method to EIA Screening:

- Guidelines on the Information to be contained in Environmental Impact Assessment Reports. (2022). Environmental Protection Agency.
- Environmental Impact Assessment Screening, OPR Practice Note PN02 (Office of the Planning Regulator, 2021).
- European Union (Planning & Development) (Environmental Impact Assessment) Regulations 2018.
- Environmental Impact Assessment of Projects – Guidance on Screening. (2017). European Commission.
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment. (August 2018). Department of Housing, Planning and Local Government.
- European Union (Planning and Development) (Displaced Persons From Ukraine Temporary Protection) Regulations (S.I. No. 306 of 2022)
- European Union Environmental Impact Assessment (EIA) Directive 2011/92/EU as amended by 2014/52/EU.
- Planning and Development Act, 2000 (as amended).
- Planning and Development Regulations 2001 (as amended).

The screening process followed in this report is in accordance with the EIA Directive 2011/92/EU of the European Parliament and of the Council as amended by 2014/52/EU and as transposed by the Act and the Regulations and follows the format as per Section 3.2 of the EPA Guidelines (2022). The potential for significant effects of the proposed Project has been considered against the criteria under Annex II A of the EIA Directive 2011/92/EU as amended by 2014/52/EU and Schedule 7 of the *Planning and Development Regulations, 2001* as amended.

1.4 SCREENING METHODOLOGY

The screening process followed in this report is in accordance with the EIA Directive 2011/92/EU of the European Parliament and of the Council as amended by 2014/52/EU and follows the format as per Section 3.2 of the EPA Guidelines (2022).

The key steps to screen for an EIA is set out in Section 3.2 of the EPA Guidelines are as follows:

1. Is the development a type that that requires EIA?
2. Is it of a type that requires mandatory EIA?
3. Is it above the specified threshold?
4. Is it a type of project that could lead to effects? and/or
5. Is it a sensitive location? and/or
6. Could the effects be significant?

The information required to be submitted by the developer for the Competent Authority to make a determination on EIA Screening is set out in Schedule 7A of the Regulations of 2001 (see also Annex IIA of the EIA Directive).

However, it is important to note that Schedule 7A states '*The compilation of the information at paragraphs 1 to 3* [of Schedule 7A] *shall take into account, where relevant, the criteria set out in Schedule 7*.' Having regard to this for the purposes of compiling the relevant information on the likely effects of the proposed development and in order to address points 4 to 6 above, an evaluation of the characteristics of the project, the sensitivity of the location of the proposed development, and the potential for significant impacts has been made with regard to Schedule 7 of the Regulations.

Schedule 7 of the Regulations of 2001 sets out the criteria for the Competent Authority to determine whether a development would or would not be likely to have significant effects on the environment. The criteria are broadly set out under the three main headings:

1) *Characteristics of proposed development* (Report Section 3.0)
   - *a. the size and design of the whole of the proposed development,*
   - *b. cumulation with other existing development and/or development the subject of a consent for proposed development for the purposes of Section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment,*
   - *c. the nature of any associated demolition works,*
   - *d. the use of natural resources, in particular land, soil, water and biodiversity,*
   - *e. the production of waste,*
   - *f. pollution and nuisances,*
   - *g. 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, and*
   - *h. the risks to human health (for example, due to water contamination or air pollution).*

2) *Location of proposed development* (Report Section 4.0)
   - *a. the existing and approved land use,*
   - *b. the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground,*
   - *c. the absorption capacity of the natural environment, paying particular attention to the following areas:*
     - *i. wetlands, riparian areas, river mouths;*
     - *ii. coastal zones and the marine environment;*
     - *iii. mountain and forest areas;*
     - *iv. nature reserves and parks;*
     - *v. areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive and;*

vi. *areas in which there has already been a failure to meet the environmental quality standards laid down in legislation of the European Union and relevant to the project, or in which it is considered that there is such a failure;*
vii. *densely populated areas;*
viii. *landscapes and sites of historical, cultural or archaeological significance.*

3) *Types and Characteristics of Potential Impacts* (Report Section 5.0)

The likely significant effects on the environment of proposed development in relation to criteria set out under paragraphs 1 and 2, with regard 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 171A of the Act, taking into account—

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,*
c. *the transboundary nature of the impact,*
d. *the intensity and complexity of the impact,*
e. *the probability of the impact,*
f. *the expected onset, duration, frequency and reversibility of the impact,*
g. *the cumulation of the impact with the impact of other existing and/or development the subject of a consent for proposed development for the purposes of Section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment, and*
h. *the possibility of effectively reducing the impact.*

However, it is important to note that Schedule 7A states '*The compilation of the information at paragraphs 1 to 3 [*of Schedule 7A*] shall take into account, where relevant, the criteria set out in Schedule 7*.' The main body of this report (Sections 3.0, 4.0 and 5.0) will cover Schedule 7A fully, but it has been set out to present the information under the headings provided for in Schedule 7 in order to assist in the screening assessment.

1.5 PROJECT TEAM AND CONTRIBUTORS TO THE EIA SCREENING REPORT

This EIA Screening Report and the proposed development has been informed by the accompanying documents submitted with the application (and the relevant listed mitigation measures as included therein). The preparation and co-ordination of this screening report has been completed by AWN and has relied on specialist input from the project design team and applicant, as per Table 1.1.

Table 1.1 *Applicants project team*

Role	Contributor
Applicant	Office of Public Works
Architectural Design	Office of Public Works
Civil Engineering Design	DBFL Consulting Engineers
Population and Human Health; Land, Soils, Geology, Hydrogeology, and Hydrology; Air Quality and Climate; Material Assets; Operational Waste Management; Noise and Vibration	AWN Consulting

Role	Contributor
Appropriate Assessment Screening; and Ecological Impact Assessment	Moore Group
Archaeological Assessment	CRDS
Landscape and Visual Impact Assessment	ModelWorks

Each environmental specialist of the applicants project team was commissioned having regard to their previous experience in EIA; their knowledge of relevant environmental legislation relevant to their topic; familiarity with the relevant standards and criteria for evaluation relevant to their topic; ability to interpret the specialised documentation of the construction sector and to understand and anticipate how their topic will be affected during the construction phase and operational phases of development; ability to arrive at practicable and reliable measure to mitigate or avoid adverse environmental impacts; and to clearly and comprehensively present their findings.

This EIA Screening report was prepared by David Doran and Jonathan Gauntlett. David Doran is a Senior Environmental Consultant with AWN Consulting with over 3 years' experience in the environmental sector. David has a MSc in Environmental and Energy Management (Hons). Recent projects include; project management of commercial and infrastructural EIARs, EIA Screening Reports, various EIAR Chapters, Operational and Resource Waste Management Plans for residential developments, office developments, logistics park developments and other, commercial, and industrial developments. David also works in the area of construction environmental compliance. Jonathan is a Principal Environmental Consultant in AWN Consulting with expertise in impact assessment, licensing, environmental compliance, and project management. Jonathan has a BSocSc (Environmental Planning) and BBA (Economics) from the Waikato University in New Zealand and has experience working in the environmental consultancy, planning, and regulatory fields from Ireland, the UK and New Zealand.

2.0 SCREENING EVALUATION

Schedule 5 of the Planning and Development Regulations 2001, as amended, sets out a number of classes and scales of development that require EIA. In considering the wider context and the component parts of the project the proposed development the thresholds of relevance to the proposal from Part 2 of Schedule 5 are set out below:

Under Part 2 of Schedule 5, in relation to Infrastructure projects, Class 10(b)(i) of Part 2 refers to residential developments as follows:

> *10. Infrastructure projects -*
>
> *(b)(i) Construction of more than 500 dwelling units;*
>
> *iv) Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere;*
>
> *(In this paragraph, 'business district' means a district within a city or town in which the predominant land use is retail or commercial use).*

The total site area for the proposed works is c. 4.96 hectares (ha), and the proposed development comprises 120 no. single storey semi-detached units, and 12 no. two

storey semi-detached units The site location is not within a business district. The proposed development site is not equal to, nor does it exceed the limit, quantity or threshold set out in Class 10(B) (i) and (iv); therefore, an EIA is not mandatory.

Furthermore, an EIA is still required by Schedule 5, Part 2, Class 15 of the Regulations for sub-threshold development which would be likely to have significant effects on the environment, having regard to the 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.*

The following Sections 3.0, 4.0 and 5.0 of this report will provide information on the characteristics of the proposed development; In order to provide information on the 15 the likelihood of the project to have significant effects on the environment from these works, having regard to the criteria set out in Schedule 7.

2.1 CONCLUSION – SUB THRESHOLD DEVELOPMENT

The proposed development is '*of a type set out in Part 2 of Schedule 5 [in the Planning and Development Regulations, 2001 (as amended)] which does not equal or exceed, as the case may be, a quantity, area or other limit specified in that Schedule in respect of the relevant class of development*'. The development is outside the mandatory requirements for EIA and is considered to be sub-threshold for the relevant project type.

An EIAR is still required to be undertaken for sub-threshold development which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7. Therefore, it is also necessary to consider whether an EIAR is required because the development will be likely to have significant effects on the environment, even though it does not meet nor exceed the relevant thresholds in Schedule 5 to the Planning and Development Regulations.

The remainder of this report presents the information required by Schedule 7A and Annex II A of the Directive to demonstrate the likely effects on the environment, having regard to the criteria set out in Schedule 7 and Annex II A of the Directive.

The following Sections 3.0, 4.0 and 5.0 will provide information on the characteristics of the proposed development, the location and context, and its likely impact on the environment. These sub sections also include in accordance with Article 299B(1)(c) a description of any features, if any, of the proposed development and the measures, if any, envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment of the development.

These sections present the information required under Schedule 7A of the Regulations, to ensure that each aspect for consideration is robustly addressed and to enable a screening to be carried out in accordance with the criteria in Schedule 7 to the Regulations.

3.0 CHARACTERISTICS OF PROPOSED DEVELOPMENT

This section addresses the characteristics of proposed development by describing the physical characteristics of the whole proposed development and, where relevant and

a description of the location of the proposed development, with regard to the environmental sensitivity of geographical areas likely to be affected.

3.1 SIZE AND DESIGN OF THE PROPOSED DEVELOPMENT

The development will consist of the installation of 120 no. single storey units, and 12 no. two storey units, 147 no. car parking spaces, bin store, bicycle stores, pavements, public lighting, landscaping, foul water, surface water, and potable water connections, and all ancillary site development works. The total site area for the proposed works is c. 4.96 hectares.

The development includes c. 5,743 m^2 of landscaped open spaces and c. 2,482m^2 of berming and woodland mix is also to be provided across the proposed development. The design of the landscaping proposals include a comprehensive boundary treatment along the sites boundary with the new Celbridge Link Road, which comprises berming and native woodland planting, to further screen and soften the proposed development from the adjacent road corridor and surrounding local receptors.

Vehicular access to the proposed development will be via proposed access way on Celbridge Link Road. The modular houses are high spec bungalows, with a BER rating of A2. Each of the dwellings will have a private rear garden and semi-private front curtilage areas.

The proposed site layout is shown in Figure 3.1 below.

Figure 3.1 *Proposed Site Layout*

3.1.1 Construction Phase

As the proposed development is modular units, the majority of the construction works will occur off site. The estimated duration of onsite construction works is 6 - 8 months, there are no demolition works proposed. Construction staff numbers are anticipated to be between 10 - 30 dependant on stage. Construction traffic will access the site via existing entrances; there will be an average 25 cars / vans, and up to 30 – HGV per day during peak periods.

The proposed construction project involves the establishment of a temporary construction compound to facilitate the construction activities at the designated site within the Site boundary. The compound will consist of a site office, welfare facilities, and storage areas for plant, machinery, and equipment necessary for the construction works. A two-storey stacked cabin arrangement will be utilised to accommodate various essential welfare facilities for the site personnel. These facilities include welfare areas, a drying room, meeting and office spaces, as well as a canteen for the workers.

During construction, contractors will require temporary power for onsite accommodation, and construction equipment /plant. The power requirements will be relatively minor. The power requirements for the construction programme will be met through a combination of a generator and a battery pack system. This setup will provide a reliable and continuous power supply to support the operation of essential equipment and facilities throughout the construction phase.

Water will be required for welfare facilities, dust suppression and general construction activities. Water for the construction site compound will be sourced from tank storage, ensuring an adequate and reliable water supply for various purposes. Additionally, a new water connection will be established to ensure water availability and meet the needs of the site personnel and construction activities.

There will also be foul wastewater requirements associated portable sanitary facilities within the construction compound. To manage foul waste effectively, tanks will be installed beneath the site cabins. These tanks will be used for collecting and storing foul waste generated within the compound. Regular emptying of these tanks will be carried out on a weekly basis or as needed, using a specialised sucker truck to ensure proper waste disposal and maintain a clean and hygienic environment.

There will be a requirement for removal of topsoil, subsoil and stones of c 12,000 m^3 and deliveries of c. 24,000 m^3 imported engineering fill, and other construction materials through the construction phase. Other construction activities will include site storage of cement and concrete materials, fuels for construction vehicles.

Construction works will be immediately adjacent to the drainage ditch along the Celbridge link road. During the construction phase surface water will be managed on site, with discharge of clean stormwater if required to the public stormwater main the Celbridge link road.

For the duration of the proposed infrastructure works the maximum working hours shall be 07:00 to 18:00 Monday to Friday (excluding bank holidays) and 08:00 to 14:00 Saturdays. No working will be allowed on Sundays and Public Holidays.

A Construction and Environmental Management Plan (CEMP) will be prepared by the construction contractor which will set out the construction techniques and methodologies which will be implemented during construction of the proposed development. The CEMP will implement the mitigation measures set out within this -

report to ensure that pollution and nuisances arising from site clearance and construction activities is prevented where possible and managed in accordance with best practice environmental protection. The CEMP will be implemented and adhered to by the construction Contractor and will be overseen, and updated as required if site conditions change, by the Project Manager, Environmental Manager, Resource Manager and Ecological Clerk of Works where relevant. All personnel working on the Site will be trained in the implementation of the procedures.

Table 3.1 *Summary of key construction works*

Activity	Description of Activity
Site Preparation Works and Establishment of Construction Services	The primary activities that will be required during the Site preparation phase for the development will be the establishment of construction fencing and hoarding and site compound. The Site compound will provide office, portable sanitary facilities, equipment storage and parking for contractors for the duration of the works. All areas under construction will be fenced for security and safety purposes and temporary lighting supplied, as necessary. Tree protection areas will be established at an early stage in line with the project arborists recommendations.
Site clearance and earthworks	This phase will include site clearance, vegetation removal, excavations and levelling of the Site to the necessary base level for construction, it is estimated that c 12,000 m^3 of topsoil, subsoil and stones that will need to be removed. Surveying and setting out for structures. All required enabling works and site investigations, surveying and setting out for structures, archaeological investigation (if required) etc. are carried out. Install granular fill for roads and footpaths. Mature trees that will be retained will be fenced and root protection zones established. All spoil retained on site where possible and stockpiled on site. The excavation depth during construction will be c. 1.5 m below ground level.
Installation of Services	New electricity and telecommunications services ducts / infrastructure will be put in place to serve the various dwellings. This will be connections to existing mains and carried out in accordance with the requirements of the various service providers / authorities.
Foundations and Installation of Modular Houses	Foundations will generally be reinforced concrete pad footings incorporated into the concrete strips of pad foundations. The modular homes will be constructed off site in a series of and components and transported to the site. They will be assembled in place by the construction contractor utilizing a variety of plant equipment including lifting crane. The estimated duration of onsite construction works is 6- 8 months.
Landscaping	After the main construction works are completed the hard and soft landscaping and reinstatement works for that phase will be carried out in accordance with the proposed landscaping design.

3.1.2 Operational Phase

The most significant environmental effects are expected to arise during the construction phase, with the potential impacts of the proposed developments operational phase being relatively minor.

The proposed development, when operational, will generate typical anthropogenic impacts associated with the usual operation of a residential development. The main potential impacts are associated with additional traffic (associated air emissions), and surface and foul water emissions, visual impacts, biodiversity, and wastes generation due to changes from the current undeveloped site to a build environment.

Connection to the existing mains that are in close proximity to the site will be established for foul water, potable water. The design of the stormwater drainage network for the proposed development has taken cognisance of the guidelines and requirements set out by the South Dublin County Council (SDCC) Drainage Division,

which requires all new developments to incorporate the principles of Sustainable Urban Drainage Systems (SuDS). The proposed SuDS method of water disposal at the Site will ensure that there are no negative impacts from stormwater leaving the Site. Surface water from the operational development will discharge to the drainage ditch along the Celbridge Link Road adjacent the Site. Surface water runoff from the site's internal road network will be directed to swales and raingardens before entering the surface water network for the site. Surface water runoff from the parking areas will be captured by permeable paving. A petrol interceptor is proposed prior to the surface water outfall.

Foul water connection will be made to the existing foul sewer within the Celbridge Link Road. Potable water connection to the existing water supply on Celbridge Link Road will be utilised. Connections will comply with Local Authority and Uisce Éireann requirements.

Once developed and operational the proposed development will generate regular vehicular trips on the surrounding road network. The proposed development will be accessed via one vehicular access point on Celbridge Link Road. The site benefits from separate pedestrian access points connecting to the footpath on the Celbridge Link Road. Within the development site, the internal layout of the site has been designed in accordance with the Design Manual for Roads and Streets (DMURS). The internal street widths have been minimised to encourage low vehicle speeds. New tactile paving will also be implemented to denote the transitions between the existing segregated cycle / pedestrian facilities and new shared areas at the vehicular access and pedestrian crossing point. Traffic movements would be predominately from the residents themselves, but also from ancillary users such as waste collection, maintenance of private units and communal areas. A total of 147 no. car park spaces are proposed, in addition each of the proposed units will have access to their own secure private garden space.

The proposed development will be served from the variety of public transport options available to visitors and residents at the site. There are pedestrian routes, cycle routes and bus routes within close proximity of the development. The subject site benefits from an excellent level of public transport accessibility. There are a total of 10 bus routes operated by Dublin Bus and Go Ahead. Adamstown is the nearest train station to the subject site within a c. 2.4km walking distance. pedestrian and cyclist facilities are provided on the Celbridge Link Road.

The proposed development is anticipated to result in a range of waste streams during its operational phase, which commences after the project is fully completed and the properties are occupied. To ensure a convenient waste disposal process, each - residential property will have available area within private garden spaces for waste storage. When the time comes for waste collection, a licensed waste contractor will responsibly pick up the waste from these designated areas at curbside for collection of bins, recycling etc.

In the context of the Temporary Protection Decision EU 2022/382 the maximum extended period for the duration of the permitted use *(temporary protection for displaced persons from the Ukraine)* of the units is three years; therefore, the operational effects of the proposed development, in the context of this EIA Screening report are deemed to be Short-term Effects (Effects lasting one to seven years).

3.2 CUMULATION WITH OTHER EXISTING OR PERMITTED DEVELOPMENT

As part of the assessment of the effects of the proposed development, account has been taken of other existing or permitted development (Appendix A) within the surrounding area that have the potential to combine with the proposed development and result in likely significant cumulative effects. Cumulative effects are the effects arising from the addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects.

A preliminary assessment of potential cumulative effects on the environment is facilitated via the Source-Pathway-Receptor (SPR) model which is a multi-step process. The SPR methodology is a tool that ensures the most cautious means of assessment at the preliminary stages of a proposed development. The use of this tool ensures that all possible impacts are identified at a very early stage thus enabling further studies, mitigation measures or ameliorative actions to be put in place. The inherent use of the precautionary principle within the SPR methodology means that all potential for environmental impacts can be identified at a preliminary stage without any need for detailed studies, but rather upon available desktop information.

It is imperative to make clear that not all projects within a study area are capable of combining with the proposed development to result in potential cumulative effects. In order for there to be a potential cumulative effect all three elements of the SPR elements need to be present. If there is no pathway or functional link (direct or indirect) between the proposed development and a receptor, there is no potential for effect. Additionally, if there is no receptor within the area of a potential impact, there is similarly no effect as it does not cause harm to the environment due to the lack of a receptor.

It is acknowledged that projects like the one proposed can have an impact on activity in a larger area that only the Site itself. Generally, the closer to the works, the greater the potential for impacts. The most significant environmental impacts are likely to be confined within 50-150 m of the proposed development. Some effects from the Proposed Development, including air quality and traffic, might have a larger area of effect, and these are addressed in further detail in the corresponding expert assessments submitted with the development consent.

The project being considered, is not expected to have Regional, National or International, or Transboundary impacts. Therefore, a general study area of 500 m from the Site location is included; this distance within an urban area is sufficient to capture any permitted development that may give rise to significant cumulative effects.

The National Planning Application Map was consulted for the previous 5 years to identify notable applications (proposed development), or applications granted permission (permitted development) within that period within 500m of the development site. The National Planning Application Map includes planning application data sourced from the 31 individual local authorities across Ireland. This list of consented development is shown in Appendix A at the end of this report.

The search also showed a significant number of small extensions, agricultural buildings and other minor alterations. These permissions were for established properties within the vicinity of the development and have been considered as a part of the overall project impact. Given their proximity to the proposed development, scale, and extent the majority of developments in Appendix A are not likely to result in any cumulative effect, with the proposed development. The proposed development is capable of combining with these permitted developments and resulting in cumulative effects. The potential for cumulative effects, in respect of traffic, noise, dust, and biodiversity during

the construction and operational phases of the proposed development with these permitted developments, as outlined below, as well as relevant live planning applications, is discussed in further detail in Sections 5.10 of this EIA Screening Report.

The subject site is zoned as “Objective RU” which with the objective “To protect and improve rural amenity and to provide for the development of agriculture” in the current South Dublin County Development Plan (2022-2028). Figure 4.1 below illustrates the general location of the proposed development as defined by the Development Plan. The Adamstown Strategic Development Zone is located directly to the east of the site. Adamstown is a planned urban development of 10,000 residential units with associated transport and community infrastructure.

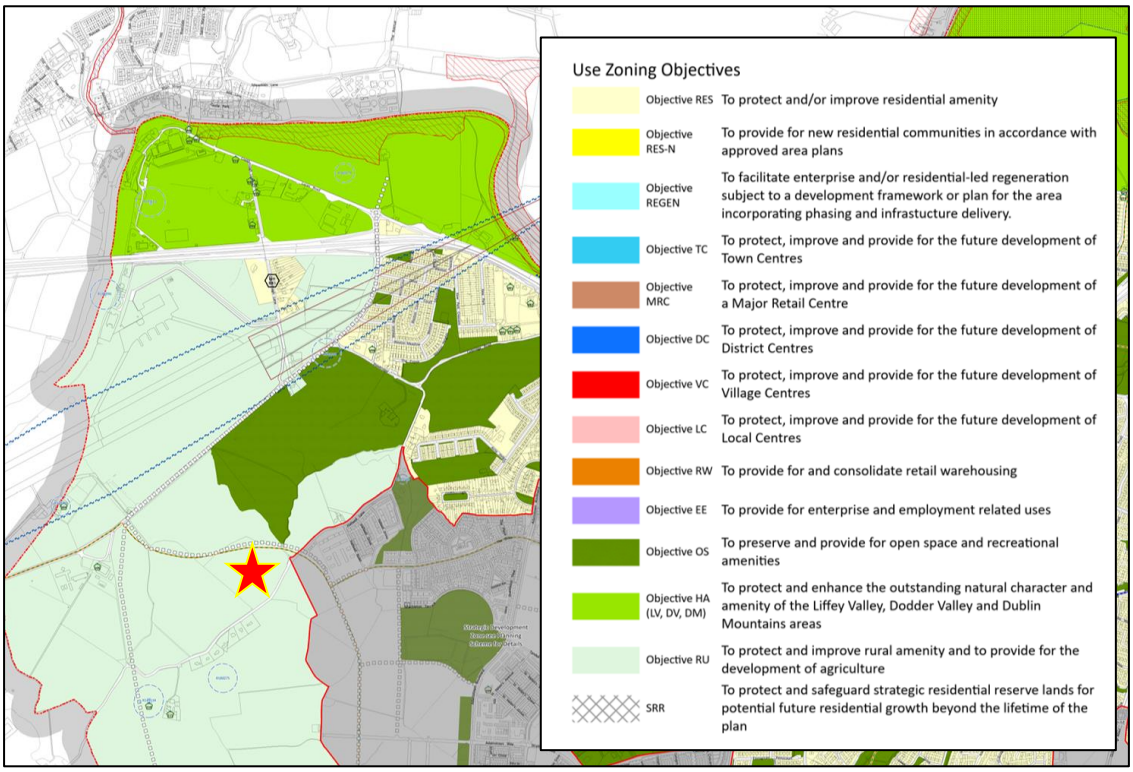

Figure 3.2 *Use Zoning Objectives (Source: South Dublin County Development Plan (2022-2028)). Indicative site identified with red star.*

3.3 NATURE OF ANY ASSOCIATED DEMOLITION WORKS

There are no structural demolition works proposed.

3.4 USE OF NATURAL RESOURCES (LAND, SOIL, WATER, BIODIVERSITY)

This section describes the proposed development in terms of the use of natural resources, in particular land, soil, water, and biodiversity. Other resources used will be construction materials which will be typical raw materials used in construction of residential developments. The scale and quantity of the materials used will not be such that would cause concern in relation to significant effects on the environment.

Land and Soil

The proposed development will require the excavation and disturbance of soils and stone materials for the purposes of levelling, excavation for foundations, landscaping, access and services. It is estimated that c 12,000 m^3 of topsoil, subsoil and stones that will need to be removed.

There will be a requirement for deliveries of imported engineering fill, and other construction materials. Other construction activities will include site storage of cement and concrete materials, fuels for construction vehicles.

Any waste soils prior to being exported off-site, shall be classified as inert, non-hazardous or hazardous in accordance with the EPA's Waste Classification Guidance – List of Waste & Determining if Waste is Hazardous or Non-Hazardous document dated 1st June 2015 to ensure that the waste material is transferred by an appropriately permitted waste collection permit holder and brought to an appropriately permitted or licensed waste facility. Materials that can be reused will be notified to the EPA as a by-product. This ensures that waste and other materials removed from the Site will have no significant effect on the environment.

Water Consumption

The construction and operation of the scheme will not use such a quantity of water to cause concern in relation to significant effects on the environment.

During construction of the scheme, water will be required for offices and welfare facilities, this will be provided by either tanker or temporary connection to the public main by agreement between the Main Contractor and Uisce Éireann. The construction phase will not use such a quantity of water to cause concern in relation to significant effects on the environment.

Once the development is completed and the development is occupied there will be a water primary demand for domestic for usage for showers, toilets and cooking, as well as for commercial consumption.

There is no proposed extraction of groundwater at the Site during the operational phase.

Water Supply is to be provided from the public watermain in the Celbridge Link Road north-east of the site. The proposed development requirements have been calculated by DBFL Consulting Engineers as average water demand of 0.62 l/s, and a post development peak water demand of 3.87 l/s.

Biodiversity

The potential impact from the proposed development on biodiversity with particular attention to species and habitats protected under the Habitats Directive and the Birds Directive has been considered as a part of the Appropriate Assessment (AA) Screening Report (Appendix B) and Ecological Impact Assessment (Appendix C) that have been prepared by Moore Group.

Habitats were surveyed on the 26 April 2023 by conducting a study area walkover covering the main ecological areas identified in the desktop assessment. The survey date is at the beginning of the optimal botanical survey period. Signs of mammals such as badgers and otters were searched for while surveying the study area noting any

sights, signs or any activity in the vicinity especially along adjacent boundaries. Birds were surveyed using standard transect methodology and signs were recorded where encountered during the field walkover surveys.

The proposed development site consists of a field of Arable crops (BC1). No flora or terrestrial fauna species or habitats of national or international conservation importance were noted on site during the survey. There were no invasive species recorded at the proposed development site. There are no water courses on site and drainage is internal and to ground.

The Proposed Development is located within the hydrological catchment of the River Liffey. The northern boundary of the site comprises a truncated section of the original arable field in which the Celbridge Link Road was developed in 2022. This involved rearrangement of the field drainage ditches toward the road drainage and settlement ponds. There is interrupted connectivity thereafter to Leixlip Reservoir. The pathway to the River Liffey is interrupted by these aquatic sinks and the European sites located in Dublin Bay are considered to be outside the zone of influence of the Proposed Development.

3.5 PRODUCTION OF WASTE

Construction Phase

During the construction phase, waste will be produced from surplus materials such as broken or off-cuts of timber, plasterboard, concrete, tiles, bricks, etc. Waste from packaging (cardboard, plastic, timber) and oversupply of materials may also be generated. The construction contractor will be required to ensure that oversupply of materials is kept to a minimum and opportunities for reuse of suitable materials is maximised.

Waste will also be generated from construction workers e.g., organic/food waste, dry mixed recyclables (wastepaper, newspaper, plastic bottles, packaging, aluminium cans, tins and Tetra Pak cartons), mixed non-recyclables and potentially sewage sludge from temporary welfare facilities provided onsite during the construction phase. Waste printer/toner cartridges, waste electrical and electronic equipment (WEEE) and waste batteries may also be generated infrequently from site offices.

If material is removed off-site, it could be reused as a by-product (and not as a waste). If this is done, it will be done in accordance with Regulation 27 (By-products) (Previously Article 27 and referred to as Article 27 in this report) of S.I. No. 323/2020 - European Union (Waste Directive) Regulations 2020, which requires that certain conditions are met and that by-product notifications are made to the EPA via their online notification form. Excavated material should not be removed from site until approval from the EPA has been received. The potential to reuse material as a by-product will be confirmed during the course of the excavation works, with the objective of eliminating any unnecessary disposal of material.

If any soils/stones are imported onto the Site from another construction site as a by-product, this will also be done in accordance with Article 27. Article 27 will be investigated to see if the material can be imported onto this site for beneficial reuse instead of using virgin materials.

It should be noted that until final materials and detailed construction methodologies have been confirmed it is difficult to predict with a high level of accuracy the construction waste that will be generated from the construction of the proposed

development as the exact materials and quantities may be subject to some degree of change and variation during the construction process.

Operational Phase

The proposed development will give rise to a variety of everyday waste and recycling from the development during the operational phase, i.e., when the project is completed, and fully operational. The typical non-hazardous and hazardous wastes that will be generated at the proposed development will include the following:

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

In addition to the typical waste materials that will be generated at the development on a daily basis, there will be some additional waste types generated less frequently / in smaller quantities which will need to be managed separately including:

- Green / garden waste may be generated from external landscaping;
- Batteries (both hazardous and non-hazardous);
- WEEE (both hazardous and non-hazardous);
- Printer cartridges / toners;
- Chemicals (paints, adhesives, resins, detergents, etc.);
- Light bulbs;
- Textiles;
- Waste cooking oil (if any generated by the residents, crèche tenants, commercial tenants or work studio tenants);
- Furniture (and, from time to time, other bulky wastes); and
- Abandoned bicycles.

Wastes should be segregated into the above waste types to ensure compliance with waste legislation and guidance while maximising the re-use, recycling and recovery of waste with diversion from landfill wherever possible.

Table 3.2 sets out the estimated waste generation for the proposed development for the main waste types.

Table 3.2 *Estimated waste generation for the proposed development for the main waste types*

Waste type	**Total Volume m^3/annually**
Organic Waste	116.48
Mixed Dry Recyclables	796.48
Glass	22.54
Mixed Municipal Waste	463.05
Total	1398.55

All waste contractors collecting waste from the Site must hold a valid collection permit to transport waste must be held by each waste contractor which is issued by the

National Waste Collection Permit Office (NWCPO) and waste will only be brought to suitably registered/permitted/licenced facilities. It is essential that all waste materials are dealt with in accordance with regional and national legislation, as outlined previously, and that time and resources are dedicated to ensuring efficient waste management practices.

These measures will ensure the waste arising from the development is dealt with in compliance with the provisions of the *Waste Management Act 1996*, as amended, associated Regulations, the *Litter Pollution Act 1997*, the *EMR Waste Management Plan (2015 – 2021)* and the draft *National Waste Management Plan for a Circular Economy (2023)*. It will also ensure optimum levels of waste reduction, reuse, recycling and recovery are achieved.

3.6 POLLUTION AND NUISANCES

There are potential short-term nuisances such as dust, noise, as well as the potential for pollution of groundwater associated with construction activities. The construction activities shall only take place in accordance with standard construction times. No activity, which would reasonably be expected to cause annoyance to residents in the vicinity, will take place outside of these hours. If there is any occasion when work must be complete outside these hours advance notice will be provided to the local authority, businesses and residents in the vicinity.

A CEMP will be prepared by the construction contractor to include the measures set out within this EIA Screening report and accompanying appendices, as well as best practice construction measures for the mitigation and management of air quality control (dust), noise and vibration, surface water runoff, dewatering of excavations, traffic, spills and leaks and sediment control that will be undertaken during the construction phase. All mitigation measures outlined therein will be implemented.

This CEMP will be maintained by the contractors during the construction and operational phases and covers all potentially polluting activities and include an emergency response procedure. All personnel working on the Site will be trained in the implementation of the procedures.

3.7 RISK OF MAJOR ACCIDENTS AND/OR DISASTERS

Landslides, Seismic Activity and Volcanic Activity

There have been no recorded landslide events at the Site. Due to the local topography and the underlying strata, there is a negligible risk of a landslide event occurring at the Site. There is a very low risk of seismic activity to the proposed development site. There are no active volcanoes in Ireland so there is no risk from volcanic activity.

Flooding/Sea Level Rise

The potential risk of flooding on the Site was reviewed with regard to incidences of historical, regional and local flooding relevant to the area of the subject site. Flood maps and CFRAM maps provided by Floodinfo.ie were consulted to assess the potential risk of flooding on the site.

The record of historic flood events in the vicinity of the proposed site was extracted from the National Flood Hazard Mapping Website www.floodmaps.ie. It is observed

from OPW Flood Map Report for the Area that there have been no recorded historic flood events on the proposed site.

The review concludes that the development type is classed as a highly vulnerable development defined by *The Planning System and Flood Risk Management – Guidelines for Planning Authorities* and the overall development site is located on lands classified to Flood Zone C (low probability). The latest Flood Zone mapping from OPW floodinfo.ie is shown on Figure 3.2. The proposed site falls outside of the River Liffey's Present Day Flood Extents of 10%, 1% and 0.1% Annual Exceedance Probability (AEP). The site is located inland and is not affected by coastal flooding.

The Proposed Development has been designed so that all residential units remain outside any of the Flood Zone designations located on the site. Therefore, avoiding all areas that are risk of flooding. The Proposed Development is acceptable for this location in accordance with *The Planning System and Flood Risk Management – Guidelines for Planning Authorities.* A single occurring flood event was recorded by OPW, approximately 1.74km northwest of the site. There is no indication that the development site was affected by this flood event.

Figure 3.3 *Floodinfo.ie National Indicative Fluvial Flood Extents*

Major Accidents/Hazards

The proposed development is not within the consultation distance of any Seveso Site, nor is the proposed development a Seveso/COMAH facility.

The closest Seveso site to the proposed development is Intel Ireland Limited, an Upper Tier establishment located c. 3.3 km northwest of the development site. The proposed development is not within the consultation distance of the site therefore due to the

separation distance there is no interaction with the proposed development at this location.

The proposed development has been designed in accordance with the Safety, Health and Welfare at Work Act 2005 (S.I. 10 of 2005) as amended and the Safety, Health and Welfare at Work (General Application) Regulations 2007 to 2016 (S.I. 299 of 2007, S.I. 445 of 2012, S.I. 36 of 2016) as amended and associated regulations.

Minor Accidents/Leaks

There is a potential impact on the receiving environment as a result of minor accidents/leaks of fuel/oils during the construction. However, the implementation of the mitigation measures set out in this report (Section 5, below) and the CEMP accompanying the application will ensure that the residual effect on the environment is imperceptible.

3.8 RISKS TO HUMAN HEALTH

The EPA Guidance (2022) explains that the scope of population and human health is project dependant but should consider significant impacts likely to affect aspects such as: convenience (expanded range of transport options); nuisance/ disturbance from lighting; displaced settlement patterns (residential); employment opportunities; settlement patterns; land use patterns; access for tourism, amenity, health impacts and/or nuisance due to noise, dust or water pollution; and health and safety.

The characteristics of the proposed development, in terms of the risks to human health (for example, due to water contamination or air pollution) have been considered. The primary potential impacts of the proposed development on human health would be the potential for increased air pollution, noise, or pollution of groundwater/watercourses as a result of the proposed development during the construction phase. Once the proposed development is operational there are potential impacts in respect of visual impact and traffic are also potential but perhaps lesser significant impacts (based on the location and the nature of the proposed development).

The CEMP will include the measures set out within this EIA Screening report and accompanying appendices, as well as best practice construction measures for the mitigation and management for the control of dust generation, traffic and noise, as well as the management of impacts on groundwater or the existing drainage ditches during the construction phase. Any impacts associated with construction dust generation, traffic, and noise will be temporary.

The proposed development is small in scale and mass, by way of a considered architectural approach, combined with due regard to the zoning of the Site, and the surrounding residential properties, will have an insignificant impact on the local landscape amenity.

There will be no significant negative impact on local parks. It is not anticipated that the proposed development will have a significant negative on local tourism or shopping amenities.

Geological Survey of Ireland (GSI) data indicates that the Site does not lie within a drinking water protection area. The area is serviced by mains water supply therefore it is unlikely that any wells are used for potable water supply. The proposed mitigation measures during the construction phase, including the implementation of a CEMP will ensure that there are no impacts on groundwater or the stormwater mains.

The proposed development design includes an appropriately designed stormwater network that will ensure that during the operational phase the risk from diesel spills through the carparks or unloading areas is minimised.

Foul wastewater from the proposed development will be of domestic origin and will connect to mains supplies that will be treated off-site. Foul drainage requirements post development have been calculated by DBFL Consulting Engineers as average is a discharge of 0.68 l/s, and post development peak discharge of 4.09 l/s. Consultation has taken place with UÉ to confirm capacity, and Uisce Éireann have confirmed the WWTP has capacity to deal with the additional demand.

The proposed development does not pose any significant risk to human health, given its nature, scale and location. The potential impacts likely to affect population and human health have been considered in Section 5.1 below.

4.0 LOCATION AND CONTEXT OF THE PROPOSED DEVELOPMENT

4.1 EXISTING AND APPROVED LAND USE

The proposed development site to the south of Leixlip town centre and the Weston Airport, to the southwest of the Lucan Golf Club. The development site is bound to the southeast by Tubber Lane, to the northeast by the Celbridge Link Road and a greenfield area to the west. The River Liffey (Leixlip Reservoir) is c. 900m north of the proposed development.

The site under consideration currently exists as a greenfield area situated off Tubber Lane, and it is presently vacant agricultural or arable land. The proposed development aims to transform this space into a vibrant residential area with excellent accessibility. Residents and visitors to the development will benefit from a diverse range of public transport options available at their doorstep. Notably, pedestrian pathways, cycle routes, and bus routes are conveniently accessible.

Moreover, the development's advantageous location offers nearby recreational facilities, ensuring a well-rounded and enjoyable lifestyle for its future residents. Within a radius of less than 1.5 kilometres from the site, residents will have access to various public parks, fostering opportunities for outdoor activities and leisure. The array of recreational options includes the Adamstown community centre, Adamstown cricket club, Tandy's Lane Playground, Lucan Golf Club, Lucan United Football Club, and Adamstown GAA Club.

4.2 RELATIVE ABUNDANCE, AVAILABILITY, QUALITY AND REGENERATIVE CAPACITY OF NATURAL RESOURCES IN THE AREA AND ITS UNDERGROUND

4.2.1 Hydrogeology

Presently, from the GSI (2023) National Bedrock Aquifer Map, the GSI classifies the bedrock aquifer beneath the subject site as a ‘Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones’. The proposed development is within the ‘Dublin’ groundwater body (EPA Code: IE_EA_G_008). The most recent WFD groundwater status for this water body (2016-2021) is ‘Good’ with a current WFD risk score under review (Figure 4.1).

Figure 4.1 Aquifer Classification

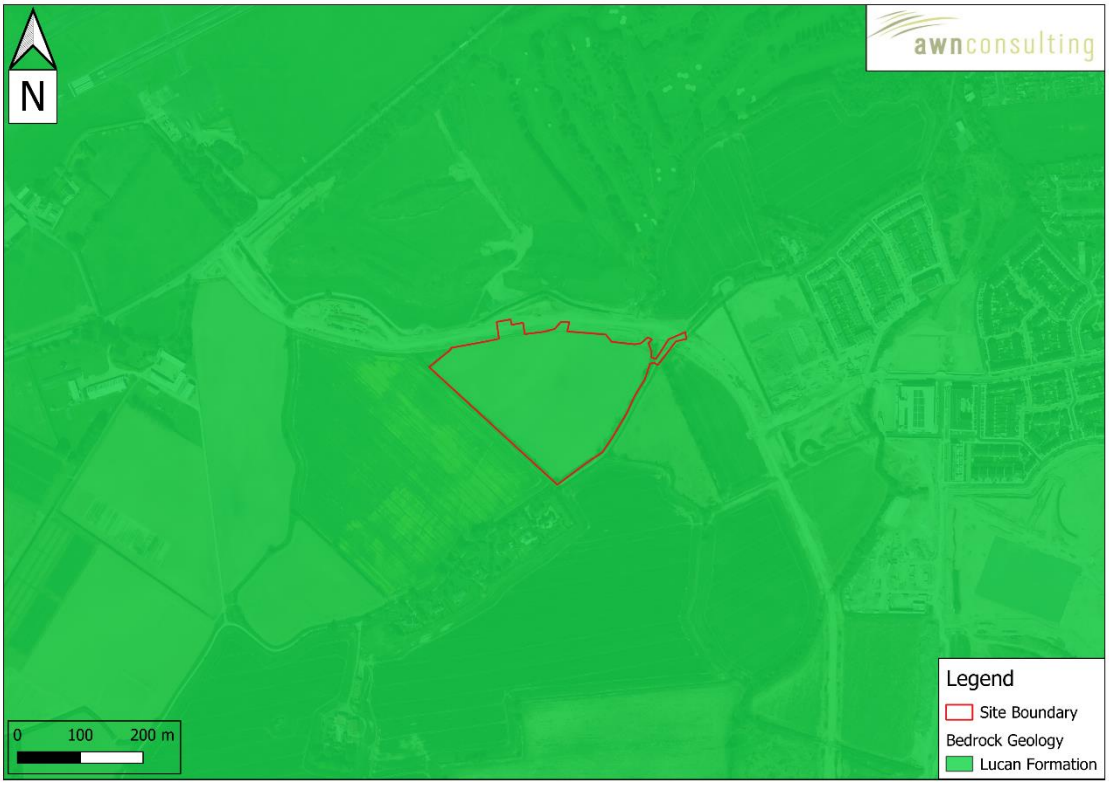

Figure 4.2 Bedrock Geology

Mapping from the Geological Society of Ireland (GSI, 2022) indicates the bedrock underlying the site is part of the Lucan Formation (code CDLUCN) and made up of dark limestone and shale (Calp) see Figure 4.2.

Figure 4.3 GSI Well Card Index Map

The GSI Well Card Index is a record of wells drilled in Ireland, water supply and site investigation boreholes. It is noted that this record is not comprehensive as licensing of wells is not currently a requirement in the Republic of Ireland. This current index does not show any wells drilled or springs at the Site, there are a number of wells in the general area (See Figure 4.3). The area is serviced by Local Authority mains therefore it is unlikely that any wells are used for potable supply.

The site is not located near any public groundwater supplies or group schemes. There are no groundwater source protection zones in the immediate vicinity of the Site.

There are no sensitive soil receptors, no identified areas of geological heritage or groundwater supplies in the vicinity of the Site boundary.

4.2.2 Hydrology

The proposed development site lies within the Liffey and Dublin Bay Catchment (Hydrometric Area 09) (WFD name: Liffey-170) (EPA, 2023). There are 2 no. drainage ditches located along the eastern and northern boundary of the proposed site. These ditches culminate at a headwall in the northeast corner of the site. This headwall culverts the water flow under the adjacent Celbridge Link Road ultimately outfalling to the River Liffey. There is interrupted connectivity between the subject site and the Leixlip Reservoir. The pathway to the River Liffey is interrupted by these aquatic sinks and the European sites located in Dublin Bay are considered to be outside the zone of influence of the Proposed Development.

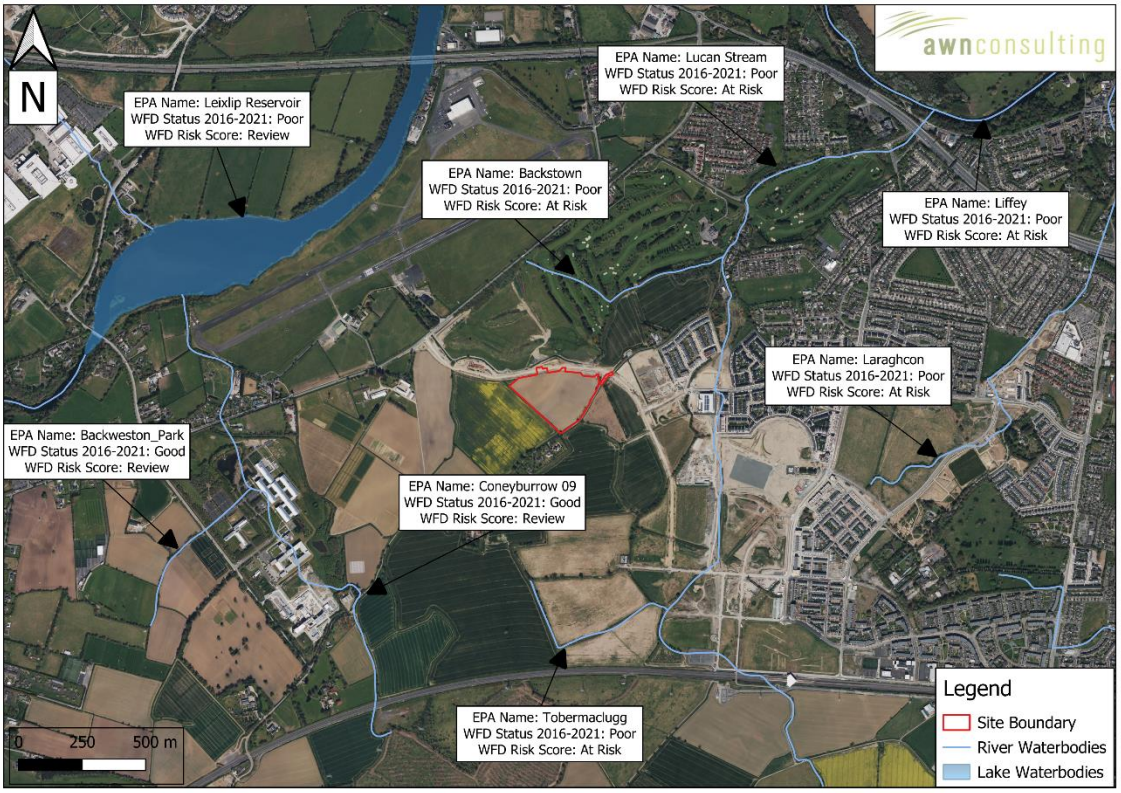

Figure 4.4 Regional Hydrology (Source: EPA Rivers)

The closest named surface water feature borders the development to the North named Backstown Stream (Figure 4.5). The Backstown Stream flows for approximately 1.57 km before discharging into the River Liffey, which in turn discharges to Dublin Bay.

The Environmental Protection Agency (EPA, 2023) on-line mapping presents the available water quality status information for water bodies in Ireland. The Backstown River has a 2013-2018 WFD status of poor and belongs to the Liffey_170 WFD surface waterbody which has a 'Poor' Status (EPA, 2023). The nearest downstream Water quality monitoring station to the proposed development is Lucan Golfclub located c. 920m downstream from the development site (ID: RS09L080100).

The foul water during operational phase will be pumped to the local foul sewer and will be treated off site to EPA Licence standards. Initial consultation has taken place with UÉ to confirm capacity and Uisce Éireann have confirmed capacity to deal with the additional demand.

4.2.3 Biodiversity and Areas of Conservation

The potential impact from the proposed development on biodiversity with particular attention to species and habitats protected under the Habitats Directive and the Birds Directive has been considered as a part of the Appropriate Assessment (AA) Screening Report (Appendix B) and Ecological Impact Assessment (Appendix C) that have been prepared by Moore Group.

The nearest European site is the Rye Water Valley/Carton SAC (Site code 001398) located 1.8 km to the north and upstream on the River Liffey. However, there is no direct connectivity with this site or any European sites within the zone of influence to the Proposed Development. The AA Screening Report (Moore Group, 2022) (Appendix B) has assessed the potential for significant effects of the construction phase and

operational phases of the proposed development on Natura 2000 sites and habitat loss/alteration, habitat/species fragmentation, disturbance and/or displacement of species, change in population density and changes in water quality. It has been objectively concluded by Moore Group Environmental Services that:

1. The Proposed Development is not directly connected with, or necessary to the conservation management of the European sites considered in this assessment.
2. The Proposed Development is not likely to either directly or indirectly significantly affect the Qualifying interests or Conservation Objectives of the European sites considered in this assessment.
3. The Proposed Development, either alone or in combination with other plans or projects, is not likely to have significant effects on a European site.
4. It is possible to conclude that significant effects can be excluded at the screening stage.

It can be *excluded*, on the basis of objective information, that the Proposed Development, individually or in combination with other plans or projects, will have a significant effect on a European site.

4.3 ABSORPTION CAPACITY OF THE NATURAL ENVIRONMENT

The proposed development due to its size and localised nature will not have any significant negative effect on wetlands, riparian areas, river mouths, coastal zones and the marine environment, mountain and forest areas, nature reserves and parks, or densely populated areas.

EPA maps (https://gis.epa.ie/EPAMaps/default) confirm that the development site is not located within or adjoining an Architectural or General Conservation Area; is not located within or adjoining a Native Woodland Trust; and is not covered by protected views, scenic routes or viewpoints.

5.0 TYPES AND CHARACTERISTICS OF POTENTIAL IMPACTS

This section sets out the likely significant effects on the environment of proposed development in relation to criteria set out under paragraphs 1 and 2 (as set out in Sections 4 and 5 above), with regard 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 171A of the Act (as amended).

The quality, magnitude and duration of potential impacts are defined in accordance with the criteria provided in the *Guidelines on Information to be Contained in Environmental Impact Assessment Reports* (EPA 2022) this criteria is duplicated in Table 5.1.

Table 5.1 *Schedule of Impacts following EPA Guidelines*

Characteristic	Term	Description
Quality of Effects	Positive	A change which improves the quality of the environment
	Neutral	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
	Negative/Adverse	A change which reduces the quality of the environment
	Imperceptible	An effect capable of measurement but without significant consequences

Describing the Significance of Effects	Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences
	Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
	Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends
	Significant Effects	An effect, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
	Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
	Profound Effects	An effect which obliterates sensitive characteristics
Describing the Extent and Context of Effects	Extent	Describe the size of the area, the number of sites, and the proportion of a population affected by an effect.
	Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)
Describing the Probability of Effects	Likely Effects	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
	Unlikely Effects	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.
Describing the Duration and Frequency of Effects	Momentary Effects	Effects lasting from seconds to minutes
	Brief Effects	Effects lasting less than a day
	Temporary Effects	Effects lasting less than a year
	Short-term Effects	Effects lasting one to seven years.
	Medium-term Effects	Effects lasting seven to fifteen years
	Long-term Effects	Effects lasting fifteen to sixty years
	Permanent Effects	Effects lasting over sixty years
	Reversible Effects	Effects that can be undone, for example through remediation or restoration
	Frequency of Effects	Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)
Describing the Type of Effects	Indirect Effects (a.k.a secondary or Off-site effects)	Effects on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
	Cumulative Effects	The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects.
	'Do Nothing Effects	The environment as it would be in the future should the subject project not be carried out
	`Worst case' Effects	The effects arising from a project in the case where mitigation measures substantially fail
	Indeterminable Effects	When the full consequences of a change in the environment cannot be described
	Irreversible Effects	When the character, distinctiveness, diversity, or reproductive capacity of an environment is permanently lost
	Residual Effects	The degree of environmental change that will occur after the proposed mitigation measures have taken effect

	Synergistic Effects	Where the resultant effect is of greater significance than the sum of its constituents (e.g. combination of Sox and Nox to produce smog)

5.1 POPULATION AND HUMAN HEALTH

5.1.1 Construction phase

The potential impacts of the proposed development on population human health and populations would be nuisances such as increased air pollution (dust), noise, traffic, and visual impact of the construction and demolition phases. The likely potential impact of the proposed development with respect to population and human health during the demolition and construction phase can be considered to be ***negative, not significant*** and ***temporary.***

These potential temporary impacts during the construction will be mitigated in accordance with the CEMP, and through implementation of binding hours of construction.

There is no significant risk of pollution of soil, groundwater or watercourses associated with the proposed development. The demolition and construction phase of the proposed development will provide for the temporary employment of construction workers which will provide benefits for local businesses providing retail or other services to construction workers and potential additional employment in the area.

The construction contractor will develop a CEMP that will implement the mitigation measures set out in this report; in the form of requirements and standards in relation to construction noise, traffic, and dust generation that must be met during the construction phase. All mitigation measures outlined therein will be implemented The development will be undertaken in accordance with current European and British industrial standards, with all mitigation and safety measures put in place to ensure a responsibly managed construction process.

The residual impact of the proposed development with respect to population human health during the demolition and construction phase after the implementation of mitigation measures set out in this report, is ***negative***, ***not significant***, and ***temporary***.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of population and human health impacts during the demolition and construction phase. Therefore, a requirement for subthreshold EIA does not arise.

5.1.2 Operational Phase

The residential development will generate no emissions to air, ensuring a negligible impact on air quality and maintaining a healthy living environment for both residents and surrounding communities, see Section 5.5 for further detail. Noise can have adverse effects on human health, including stress, sleep disturbance, and even more severe issues like hearing loss if exposure is prolonged and excessive. The sources of noise of the proposed residential units are inherently low, will not generate significant noise that may affect human health or populations beyond the site boundaries.

Additionally, there are no planned direct discharges to water or land; however, measures are proposed to prevent accidental discharge to surface water during the

operational phase (as detailed in Section 5.2). The design of the proposed development takes into account the sensitivity of the surroundings, ensuring that it will not adversely impact local populations. Landscape and visual impacts are also considered (see Section 5.6).

The residual impact of the proposed development with respect to populations and human health during the operational phase is ***positive***, ***not significant*** and ***short-term***.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of population and human health impacts during the operational phase. Therefore, a requirement for subthreshold EIA does not arise.

5.2 LAND, SOILS, GEOLOGY, HYDROGEOLOGY, HYDROLOGY

5.2.1 Construction phase

Potential for increased sediment and runoff from excavation, soil handling, removal and compaction

Land clearing, earthworks and excavations will be required construction phase operations to facilitate site clearance, construction of new buildings, foundations and installation of services. This will include site levelling, construction, and building foundation excavation, and will necessitate the removal of vegetation cover and the excavation of soil and subsoils.

The gradual introduction of impermeable surfaces and the compaction of soils across the construction site will reduce the infiltration capacity and increase the rate and volume of direct surface run-off. The potential impact of this is a possible increase in surface water run-off and sediment loading, which could potentially impact local drainage if not adequately mitigated.

Movement of material will be minimised to reduce the degradation of soil structure and generation of dust. Excavations will remain open for as little time as possible before the placement of fill. This will help to minimise the potential for water ingress into excavations. Soil from works will be stored away from existing drainage features to avoid any potential impact.

The site preparation, excavations and levelling works required to facilitate construction of foundations, access roads and the installation of services will require excavation of soil, stones, made ground and bedrock (if encountered). Excavated soil will arise during the construction period and will be stored (if required) on site prior to being removed by a specialist contractor. Any material, which is exported from site, if not correctly managed or handled, could impact negatively on human beings (onsite and offsite) as well as water and soil environments.

All excavated materials will be visually assessed for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of possible contaminants in order to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be disposed of by a licensed waste disposal contractor.

Stockpiles of soil and construction aggregate can have the potential to cause negative impacts on air and water quality. The effects of soil stripping and stockpiling will be mitigated against through the implementation of appropriate earthworks handling protocol during construction.

In respect of the foregoing, the residual impact as a result of the potential for increased sediment and runoff from excavation works on, land, soils, geology, hydrogeology, and hydrology during construction phase is considered to be ***negative, imperceptible*** and ***temporary***.

Potential for contamination from Accidental Spills and Leaks

There is potential for water (rainfall and/or discontinuous perched groundwater) to become contaminated with pollutants associated with construction activity. Contaminated water which arises from construction sites can pose a significant short-term risk to water quality for the duration of the construction if contaminated water is allowed percolate to the aquifer or accidental discharges into surface water.

Machinery activities on site during the construction phase may result in run off of contaminated waters into surface water networks or ground water. Potential impacts could arise from accidental spillage of fuels, oils, paints, cement, etc. which could impact surface water if allowed to runoff into surface water systems and/or receiving watercourses or groundwaters.

The potential impacts during the construction phase are required to be mitigated by ensuring best practice construction with respect to storage of any hazardous substances (fuels, chemicals and other construction materials that may pose a risk to the environment).

In respect of the foregoing, the residual impact in respect of the potential for impacts related to contamination from accidental spills on, soils, geology, hydrogeology, and hydrology during construction phase is considered to be ***negative, imperceptible*** and ***temporary.***

Dewatering, Run-off and Sediment Loading

There is the potential for contaminated surface water run-off from site preparation, levelling, landscape contouring and excavations during the construction phase may contain increased silt levels or become polluted from construction activities. Silt water can arise from excavations, exposed ground, stockpiles, and access roads.

Construction water containing large amounts of silt or other contaminants such as hydrocarbons has the potential to cause negative, and short-term impacts receiving surface water bodies, or surface water networks, if not adequately mitigated.

A Construction Surface Water Management Plan (SWMP) will be prepared by the construction contractor. This SWMP will ensure that management of surface water during construction does not lead to contamination as a result of construction activities including as a result of:

- Suspended solids: arising from ground disturbance and excavation;
- Hydrocarbons: accidental spillage from construction plant and storage depots;
- Faecal Coliforms: contamination from coliforms can arise if there is inadequate containment and treatment of onsite toilet and washing facilities; and
- Concrete /cementitious products: arising from construction materials.

Where dewatering is required during the construction phase, dirty water will be fully and appropriately attenuated being appropriately discharged. No silty or contaminated water from the construction works will be discharged to any stormwater network or to the drainage ditches to the north of the site.

The northern boundary of the site comprises a truncated section of the original arable field in which the Celbridge Link Road was developed in 2022. This involved rearrangement of the field drainage ditches toward the road drainage and settlement ponds. There is interrupted connectivity thereafter to Leixlip Reservoir. The pathway to the River Liffey is interrupted by these aquatic sinks and the European sites located in Dublin Bay are considered to be outside the zone of influence of the Proposed Development.

In line with good practice, appropriate and effective mitigation measures will be included in the construction design, management of construction programme and during the operational phase of the proposed development. With regard the construction phase, adequate mitigation measures are incorporated in the CEMP. these specific measures will provide protection to the receiving soil and water environments.

In respect of the foregoing, the residual impact in respect of the potential for impacts related to dewatering on, soils, geology, hydrogeology, and hydrology during construction phase is considered to be ***negative, imperceptible*** and ***temporary.***

Foul Water During Construction

Welfare facilities will be provided for the contractors on site during the construction works. During construction, portable sanitary facilities will be provided with waste collected and disposed of appropriately. There are no predicted adverse impacts on wastewater during construction.

No silty or contaminated water from the construction works will be discharged to any stormwater network but should any discharge of contaminated construction water be required during the construction phase; the discharge will be to foul sewer following agreement with Uisce Éireann.

With due consideration to the characteristics of the proposed development and the Site location, there are no likely potential significant impacts of the proposed development in relation to foul water during construction, under the environmental factor of land, soils, geology, hydrogeology, and hydrology.

Conclusions

Having regard to the foregoing, there is no real likelihood of significant effects on the environment arising from the proposed development in respect of land, soils, geology, hydrogeology and hydrology impacts during the construction phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.2.2 Operational Phase

Storm Wastewater Discharges

The design of the stormwater drainage network for the proposed development has taken cognisance of the guidelines and requirements set out by the South Dublin County Council (SDCC) Drainage Division, which requires all new developments to

incorporate the principles of Sustainable Urban Drainage Systems (SuDS). The proposed SuDS method of water disposal at the Site will ensure that there are no negative impacts from stormwater leaving the Site. Surface water from the operational development will discharge to the drainage ditch directly to the south of the Celbridge Link Road, which in turn enters a culvert passing below the road continuing to the north of the Link Road. Surface water runoff from the site's internal road network will be directed to swales and raingardens before entering the surface water network for the site. Surface water runoff from the parking areas will be captured by permeable paving. A petrol interceptor is proposed prior to the surface water outfall.

The implementation of the SuDS are best practice stormwater management system are and not relied upon for the protection of downstream European sites.

The surface water from the Site will ultimately discharge to the land drain to the north of the site via proposed SuDS measures. The residual impact on land, soils, geology, hydrogeology, and hydrology during operation is considered to be ***neutral, imperceptible*** and ***short-term.***

Foul Wastewater Discharges

Foul wastewater from the proposed development will be of domestic origin and will connect to mains supplies that will be treated off-site at Leixlip Wastewater Treatment Plant (WWTP). Foul drainage requirements post development have been calculated by DBFL Consulting Engineers as average is a discharge of 0.68 l/s, and post development peak discharge of 4.09 l/s.

The proposed development design includes an appropriately designed stormwater network that will ensure that during the operational phase the risk from diesel spills through the carparks or unloading areas is minimised.

The residual impact on land, soils, geology, hydrogeology, and hydrology during operation is considered to be ***neutral, imperceptible*** and ***short-term.***

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of land, soils, geology, hydrogeology, and hydrology during the operational phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.3 BIODIVERSITY

5.3.1 Construction phase

The potential impact from the proposed development on biodiversity with particular attention to species and habitats protected under the Habitats Directive and the Birds Directive has been considered as a part of the Appropriate Assessment (AA) Screening Report (Appendix B) and Ecological Impact Assessment (Appendix C) that have been prepared by Moore Group.

The Ecological Impact Assessment (Appendix C) provides information on ecological features if present within the potential Zone of Influence of the Proposed Development, of particular significance, primarily designated habitats and species, including habitats/species listed in Annex I, II and IV of the EU Habitats Directive, rare flora listed in the Flora Protection Order along with other semi-natural habitats of conservational value.

The Proposed Development site is not located adjacent or within a European site, therefore there is no risk of habitat loss or fragmentation or any effects on QI habitats or species directly or ex-situ. There are no significant effects predicted from the proposed development on habitats, flora, fauna or biodiversity.

The measures associated with the construction phase required to avoid or reduce any potential harmful effects on biodiversity are set out below These measures are not included as mitigation to protect European Sites. The Site manager shall ensure that all personnel working on-site are trained and aware of the mitigation measures detailed below:

- If protected or notable species are encountered during operations at the Site the ECoW or NPWS will be contacted for advice.
- Trees that are to be retained, both within and adjacent to the proposed development boundary (where the root protection area of the tree extends into the proposed development boundary), will be fenced off at the outset of works and for the duration of construction to avoid structural damage to the trunk, branches or root systems of the trees. Temporary fencing will be erected at a sufficient distance from the tree so as to enclose the Root Protection Area (RPA) of the tree. The RPA will be defined based upon the recommendation of a qualified arborist.
- Where fencing is not feasible due to insufficient space, protection for the tree/hedgerow will be afforded by wrapping hessian sacking (or suitable equivalent) around the trunk of the tree and strapping stout buffer timbers around it;
- The area within the RPA will not be used for vehicle parking or the storage of materials (including soils, oils and chemicals). The storage of hazardous materials (e.g. hydrocarbons) or concrete washout areas will not be undertaken within 10 m of any retained trees, hedgerows and treelines.
- Ideally and where feasible, vegetation (*e.g.,* hedgerows, trees, scrub and grassland) will not be removed, between the 1st March and the 31st August, to avoid direct impacts on nesting birds. Where the construction programme does not allow this seasonal restriction to be observed, then these areas will be inspected by a suitably qualified ecologist for the presence of breeding birds prior to clearance. Areas found not to contain nests may be cleared within 3 days of the nest survey, otherwise repeat surveys will be required.

As described in Section 5.2.1 once the proposed development during construction, the hydrological pathway to the River Liffey will remain is interrupted aquatic sinks and the European sites located in Dublin Bay are considered to be outside the zone of influence of the Proposed Development.

Based on the foregoing, and with regard to the evidence set out within the Ecological Impact Assessment and AA Screening Report, the potential effects on local biodiversity and ecology are ***neutral***, ***imperceptible***, and ***temporary*** for the construction phase.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of biodiversity during the construction phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.3.2 Operational Phase

The proposed development will result in small areas of habitat loss within the proposed development boundary. Considering the relatively small areas of habitat lost and the

proposed retention of trees and proposed rear garden spaces, this will not be significant at any geographic scale.

The relevant mitigation measures which will be incorporated and adhered to during the operational phase of the proposed development include:

- Any light spill affecting habitats outside of the proposed development boundary will be minimised as far as is practically possible. Public lighting design in circulation and car parking areas will be designed in accordance with EN13201-2 and Local Authority requirements. Light overspill will be minimised using appropriate siting, column height and choice of luminaires.
- The proposed landscape design will ensure that the biodiversity value of the habitats to be retained and created as part of the proposed development are maximised in order to compensate for any habitat loss.

As described in Section 5.2.2 once the proposed development is operational, the hydrological pathway to the River Liffey will remain is interrupted aquatic sinks and the European sites located in Dublin Bay are considered to be outside the zone of influence of the Proposed Development.

Based on the above and with regard to the evidence set out within the Ecological Impact Assessment and AA Screening Report, the potential effects on local biodiversity and ecology are ***neutral***, ***slight***, and ***short-term*** for the operational phase.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of biodiversity during the operational phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.4 AIR QUALITY AND CLIMATE

5.4.1 Construction phase

Construction stage traffic is expected to be the dominant source of greenhouse gas emissions because of the construction phase of the development. Construction vehicles, generators etc., may give rise to some CO_2 and N_2O emissions. However, due to short-term nature of these works, the impact on climate will be ***not significant***, and ***temporary***.

Nevertheless, some site-specific mitigation measures will be implemented during the construction phase of the proposed development to ensure emissions are reduced further. In particular the prevention of on-site or delivery vehicles from leaving engines idling, even over short periods. Minimising waste of materials due to poor timing or over ordering on site will aid to minimise the embodied carbon footprint of the Site.

The greatest potential impact on air quality during the construction phase of the proposed development is from construction dust emissions and the potential for nuisance dust and PM10/PM2.5 emissions. While construction dust tends to be deposited within 350 m of a construction site, the majority of the deposition occurs within the first 50 m based on Transport Infrastructure Ireland (TII) guidance (2011).

The scheme has limited potential for dust impacts during construction due to the separation distance between the Site and the nearest sensitive receptors. The key sensitive receptors are the residences on Tubber Lane to the south of the site and residences located in Hallwell estate on the eastern boundary of the site. Therefore, during construction, there is limited potential for dust impacts on these sensitive

receptors which would be considered in the absence of mitigation ***negative, moderate*** and ***temporary.***

In summary the measures which will be implemented will include:

- A speed restriction of 20 km/hr shall be applied as an effective control measure for dust for on-site vehicles using unpaved haul roads.
- Construction access to the Site will be directly from the Tubber Lane to the east of the Site.
- Bowsers or suitable watering equipment will be available during periods of dry weather throughout the construction period.
- Hard surface roads will be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic.
- Any road that has the potential to give rise to fugitive dust must be regularly watered, as appropriate, during dry and/or windy conditions.
- During periods of very high winds (gales), construction activities likely to generate significant dust emissions should be postponed until the gale has subsided.
- Overburden material will be protected from exposure to wind by storing the material in sheltered regions of the Site. Where possible storage piles should be located downwind of sensitive receptors
- Where feasible, hoarding will be erected around site boundaries. This will have the benefit of reducing the impact of larger particles on nearby sensitive receptors.
- Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays will be used as required if particularly dusty activities such as rock blasting or earthworks are necessary during dry or windy periods.
- Vehicles exiting the Site will be adequately inspected and will make use of a wheel wash facility where appropriate, prior to entering onto public roads.
- Vehicles delivering or collecting material with potential for dust emissions shall be enclosed or covered with tarpaulin at all times when practicable to restrict the escape of dust.
- Public roads outside the Site shall be regularly inspected for cleanliness, as a minimum on a daily basis, and cleaned as necessary.

At all times, these procedures will be strictly monitored and assessed. In the event of dust nuisance occurring outside the Site boundary, movements of materials likely to raise dust would be curtailed and satisfactory procedures implemented to rectify the problem before the resumption of construction operations.

During construction, the proposed development will give rise to dust in the short term. Mitigation measures proposed in the accompanying CEMP will ensure dust suppression techniques so as to remain within acceptable levels. These include road sweeping, wheel washing and covered vehicles.

The residual effects on air quality and climate will be ***negative, slight,*** and ***temporary*** during the construction phase.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of air quality impacts during the construction phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.4.2 Operational Phase

In relation to the operational phase of the proposed development, the proposed development will not result in any significant emissions of air quality pollutants or greenhouse gases once operational. Therefore, the potential impact to air quality from the operational phase of the proposed development is expected to be insignificant. Therefore, no site specific mitigation measures are required.

Current EPA guidance states that a development may have an influence on global climate where it represents "a significant proportion of the national contribution to greenhouse gases" (EPA, 2003). The "*Guidelines On The Information To Be Contained In Environmental Impact Assessment Reports*" (EPA 2022) states that impacts relevant to adaptation to climate change should be assessed and that projects should be assessed in terms of their vulnerability to climate change Therefore, the impact to climate from the operational phase of the proposed Project is expected to be imperceptible in terms of national CO_2 emissions and Ireland's agreed limit under the Kyoto Protocol (Framework Convention on Climate Change, 1997, 1999) and the EU Effort Sharing Agreement ("20-20-20" Targets). The proposed Project will not result in any impacts relevant to adaptation therefore the project will not be vulnerable to climate change.

On the basis of the above the potential effects on Air Quality are ***neutral***, ***imperceptible,*** and ***short-term*** for the operational phase. Therefore, the residual impact of the proposed project on ambient air quality is deemed to be ***imperceptible***.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of air quality impacts during the operational phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.5 NOISE AND VIBRATION

5.5.1 Construction phase

During construction phase it is expected that there will be some temporary impact on the nearest residential nearest residential receptors, such as residences on Tubber Lane to the south of the site, due to noise emissions from the plant equipment required for construction.

The magnitude of noise generated will be dependent on a number of factors including the proximity of noise sensitive receptors, construction methods employed, the selection of plant and the construction programming. A variety of items of construction methods and plant items will be required during the various phases of the construction project. Noise will be generated primarily from the onsite construction activity however noise can be generated during haulage of construction and waste materials to and from site.

There is no published statutory Irish guidance relating to the maximum permissible noise level that may be generated during the construction phase of a project.

The application of avoidance measures, such as binding hours of construction, along with implementation of appropriate noise and vibration control measures, will ensure that noise and vibration impact will not be excessively intrusive. Any impacts will be short term in duration for the construction phase. The CEMP prepared by the

construction contractor will include minimisation measures to ensure nuisance noise arising from, site clearance and construction activities is prevented where possible and managed in accordance with best practice.

The relevant measures include the following that will be adhered to, and set out in the contractors CEMP:

- No plant used on site will be permitted to cause an ongoing public nuisance due to noise.
- All vehicles and mechanical plant will be fitted with effective exhaust silencers and maintained in good working order for the duration of the contract.
- All site access roads will be kept even to mitigate the potential for noise and vibration from lorries.
- Compressors will be attenuated models fitted with properly lined and sealed acoustic covers which will be kept closed whenever the machines are in use and all ancillary pneumatic tools shall be fitted with suitable silencers.
- Machinery that is used intermittently will be shut down or throttled back to a minimum during periods when not in use.
- Noise and vibration during the construction phase will be controlled with reference to the best practice control measures within BS 5228 (2009 +A1 2014) Code of Practice for Noise and Vibration Control on Construction and Open Sites Parts 1 and 2. The contractor will ensure that all best practice noise and vibration control methods will be used as necessary in order to ensure impacts to nearby residential noise sensitive locations are not significant. This will be particularly important during site preparation works and piling works.
- Limiting the hours during which site activities which are likely to create high levels of noise or vibration are permitted.
- Monitoring levels of noise and vibration during critical periods and at sensitive locations.
- Establishing channels of communication between the contractor/ developer, and residents so that receptors are aware of the likely duration of activities likely to generate higher noise or vibration.
- The Contractor appointing a Site Environmental Manager (SEM) responsible for matters relating to noise and vibration.

Noise and vibration effects on the environment following the implementation of standard construction mitigation measures, the residual impact can be characterised as ***negative***, ***slight to moderate,*** and ***temporary*** for the construction phase. Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of noise and vibration impacts during the construction phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.5.2 Operational Phase

The operation of the proposed development will remain consistent with the residential area and activity of the surrounding area. The proposed development will give rise to additional road traffic on public roads; this additional traffic from residential developments can give rise to ***imperceptible*** impacts in respect of noise to residential receptors. There is no likelihood of potential significant effects, and therefore no mitigation measures are proposed during the operational phase for noise and vibration.

The residual effects on noise and vibration are considered to be ***neutral***, ***imperceptible***, and ***short term*** for the operational phase. Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from

the proposed development in respect of noise and vibration impacts during the operational phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.6 LANDSCAPE AND VISUAL IMPACT

5.6.1 Construction phase

The change of use of the Site from its existing use to that of a construction site will give rise to short term and substantially localised effects on landscape character. The initial construction operations created by the clearance of the Site and the construction of the modular buildings will give rise to short-term impacts on the landscape character, through the introduction of new structures, machinery, ancillary works etc. There will also be a change to the landscape character as a result of a land-use change.

It is likely that construction equipment will be visible from the Site during construction. This will have a temporary slight negative impact.

The residual impact on landscape and visual impact during demolition and construction will be ***neutral to negative, moderate,*** and ***temporary*** in duration.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of landscape and visual impacts during the construction phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.6.2 Operational Phase

Appendix E to this report includes the Landscape and Visual Impact Assessment (LVIA) undertaken by ModelWorks (2023) this concludes that the overall proposed residential development will result in some landscape impacts at a localised scale to the site and its immediate surrounding landscape. Landscape impacts beyond the immediate context of the site are heavily diminished by the relatively contained nature of the development, which will only be visible from its immediate surrounding landscape. Furthermore, whilst the proposed development will result in a distinct visual change in this per-urban/hinterland context, it does not appear incongruous and will likely be viewed as an extension to the evolving Adamstown neighbourhood, which it is located immediately adjacent to. Thus, it is considered that in this robust and heavily modified landscape context, the proposed development will not result in significant landscape and visual impacts.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of landscape and visual impacts during the operational phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.7 CULTURAL HERITAGE AND ARCHAEOLOGY

5.7.1 Construction phase

The Archaeological, Architectural and Cultural Heritage Preliminary Appraisal prepared by CRDS (2023) (Appendix D to this Report), has outlined a number of recommendations to mitigate the impact of the proposed development on any underlying archaeological layers.

The proposed development will include the excavation of topsoil from the site for the digging of pad foundations and services, up to a depth of c. 1.5m. As the site has not been developed in the past the following mitigation measures are recommended. Due to the possibility of impacting on previously unrecorded archaeological features the potential impact on cultural heritage and archaeological are considered to be ***negative, moderate,*** and ***permanent.***

In order to mitigate against the archaeological risks of developing this site, the following is recommended:

- The appointment of a suitably qualified archaeological consultant to oversee the project at construction phase.
- The archaeological consultant should consult with the National Monuments Service and the design team, and implement a monitoring strategy, if required, in areas that have not been subjected to significant disturbance in the recent past.
- Any archaeological features identified during monitoring in areas where they will be impacted on by the development, will require permission from the National Monuments Service for the excavation (preservation by record) of these remains.

The residual impact on cultural heritage and archaeological are considered to be ***neutral, imperceptible*** and ***permanent.*** Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of cultural heritage and archaeology during the construction phase. The residual effect is not significant, and therefore a requirement for sub-threshold EIA does not arise.

5.7.2 Operational Phase

The operational phase of the proposed development is not predicted to have any impact on archaeological, architectural and cultural heritage.

In this regard any impacts upon cultural heritage and archaeological are considered to be ***neutral, imperceptible*** and ***short-term*** in nature.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of cultural heritage and archaeology impacts during the operational phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.8 MATERIAL ASSETS

5.8.1 Construction phase

Utilities: Foul Sewer, Stormwater and Potable Water

The proposed development will have an impact upon other material assets and 'built services and infrastructure' (set out in the EPA Guidelines 2022) such as electricity, telecommunications and water supply.

During construction, contractors will require temporary power for onsite accommodation, and construction equipment /plant. The power requirements will be relatively minor. The power requirements for the construction programme will be met

through a combination of a generator and a battery pack system. This setup will provide a reliable and continuous power supply to support the operation of essential equipment and facilities throughout the construction phase.

Water will be required for welfare facilities, dust suppression and general construction activities. Water for the construction site compound will be sourced from tank storage, ensuring an adequate and reliable water supply for various purposes. Additionally, a new water connection will be established to ensure water availability and meet the needs of the site personnel and construction activities.

There will also be foul wastewater requirements associated portable sanitary facilities within the construction compound. To manage foul waste effectively, tanks will be installed beneath the site cabins. These tanks will be used for collecting and storing foul waste generated within the compound. Regular emptying of these tanks will be carried out on a weekly basis or as needed, using a specialised sucker truck to ensure proper waste disposal and maintain a clean and hygienic environment.

Electrical connections will be made by suitably qualified personnel following consultation with the relevant authorities and will be cognisant of subsequent construction works. High voltage connections will be established for heavy duty equipment and site facilities, as required. All electrical works, including connection to the ESB network will be carried out by a suitably qualified contractor. The power and electrical supply requirements during construction phase are relatively minor, and there is no potential impact anticipated on existing users.

In respect of the foregoing, the predicted impacts upon foul sewer, stormwater and potable water are considered to be ***neutral, imperceptible*** and ***temporary***.

Traffic and Transportation

During the construction phase of the proposed development, there will be additional traffic movements to/from the Site from construction personnel, security staff, professional staff (i.e. design team, utility companies), excavation plant, dumper trucks and deliveries/removal of materials (waste/spoil).

The frequency of vehicles accessing the Site will vary throughout the construction phase. A site-specific Construction Traffic Management Plan will be prepared by the contractor.

Following the implementation of a Construction Traffic Management Plan the potential impacts on Traffic and Transportation are ***negative*****,** ***moderate*****,** and ***short term*** for the construction phase.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of traffic and transportation impacts during the construction phase. Therefore, a requirement for sub-threshold EIA does not arise.

Waste and Waste Management

There will be some waste materials produced in the construction of the proposed scheme which will be disposed of using licensed waste disposal facilities and contractors. The scale of the waste production in conjunction with the use of licensed waste disposal facilities and contractors does not cause concern for likely significant effects on the environment.

The construction contractor will prepare a Construction and Demolition Waste Management Plan also known as a Resource Waste Management Plan (RWMP) in accordance with EPA guidance this will detail the methodologies employed for the control, management, monitoring and disposal of waste from the Site. The RWMP will be prepared in line with the *'Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects'* published by the EPA in 2021.

Other than waste generated from materials necessary for the construction of the building the proposed development will not produce significant volumes of waste.

All waste arising during the construction phase will be managed and disposed of in a way that ensures the provisions of the Waste Management Act 1996 as amended and associated amendments and regulations and the Waste Management Plan. In the event, there is excess material with no defined purpose, it will be transported to an authorised soil recovery site or notified to the EPA as a by-product when it will be beneficially used.

It is considered that the proposed development will not have any significant impact in terms of resources or waste generation.

A carefully planned approach to waste management will ensure that the impact on the environment will be ***neutral***, ***imperceptible,*** *and* ***temporary.***

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of material assets impacts during the construction phase. Therefore, a requirement for sub-threshold EIA does not arise.

5.8.2 Operational Phase

Utilities: Foul Sewer, Stormwater and Potable Water

The proposed development will have an impact upon other material assets such as 'built services and infrastructure' (set out in the EPA Guidelines 2022) such as electricity, telecommunications, gas and water supply.

The proposal will have an impact on servicing and utilities infrastructure in the area, requiring connections to water and electricity, as well as connecting to the existing road network.

Foul drainage requirements post development have been calculated by DBFL Consulting Engineers as average is a discharge of 0.68 l/s, and post development peak discharge of 4.09 l/s

Water Supply is to be provided from the public watermain in the Celbridge Link Road north-east of the site. The proposed development requirements have been calculated by DBFL Consulting Engineers as average water demand of 0.62 l/s, and a post development peak water demand of 3.87 l/s.

Surface water from the operational development will discharge to the drainage ditch directly to the south of the Celbridge Link Road, which in turn enters a culvert passing below the road continuing to the north of the Link Road. Surface water runoff from the site's internal road network will be directed to swales and raingardens before entering the surface water network for the site. Surface water runoff from the parking areas will

be captured by permeable paving. Allowable greenfield runoff (QBAR) is 13 l/s. A petrol interceptor is proposed just before the surface water outfall.

In respect of the foregoing, the predicted impacts upon foul sewer, stormwater and potable water are considered to be ***neutral, imperceptible*** and ***short-term***.

Traffic and Transportation

Upon consideration of the findings of the analysis summarised within the Transport Statement (Appendix F); DBFL have demonstrated that (i) the site benefits from good accessibility characteristics to a range of facilities and (ii) that the scale of impact on the surrounding road network, as a result of the proposed development will have a minimal increase of vehicle flows across the local road network in the peak hour periods and which will have a negligible impact upon the operational capacity of the local transport system.

Accordingly, DBFL conclude that the subject proposals will not materially impact the operational performance of the local road network whilst existing road safety levels should not be adversely impacted. Accordingly, it is concluded that the modular housing proposal will not result in a material deterioration of road conditions and as a result there are no significant traffic or transportation related reasons that should prevent the implementation of the proposed development.

On the basis of the above the potential effects on Traffic and Transportation are ***neutral***, ***imperceptible***, and ***short term*** for the operational phase.

Having regard to the foregoing, there is no likelihood of significant effects on the environment arising from the proposed development in respect of traffic and transport impacts during the operational phase. Therefore, a requirement for sub-threshold EIA does not arise.

Waste and Waste Management

The proposed development will give rise to a variety of waste streams during the operational phase, i.e., when the project is completed, and fully operational. The majority of waste will be generated from packaging for equipment deliveries to the facility which is likely to be at its peak in the early months of operation.

During the operational phase, a structured approach to waste management will promote resource efficiency and waste minimisation. Provided the mitigation measures are implemented and a high rate of waste prevention, reuse, recycling and recovery is achieved, the predicted impact of the operational phase on the environment will be ***short-term, neutral*** and ***imperceptible***.

5.9 ASSESSMENT OF POTENTIAL IMPACTS FROM INTERACTIONS

This section discusses the potential interactions and inter-relationships between the environmental factors discussed in the preceding sections. This section covers both the construction phase and operational phases of the proposed development.

In accordance with the guidance not only are the individual significant impacts required to be considered when assessing the impact of a development on the environment, but so must the interrelationships between these factors be identified and assessed.

The majority of the interactions that are considered to have a neutral effect (i.e., no effects or effects that are imperceptible, within the normal bounds of variation or within the margin of forecasting error).

The interaction of the foregoing impacts, described above, would not give rise to any significant negative impacts on the environment. The principal cumulative effect with other existing or approved development will be during the construction phase.

There is a potential interaction between land, soil geology, hydrogeology and hydrology through poorly managed surface water run-off during the construction phase of the proposed development. There is a potential for the construction activity in terms of air quality and of dust generated to impact on human health and biodiversity. There is a potential impact of noise and vibration on human health.

However, these potential interactions are short-term and associated with the construction phase. The CEMP will outline mitigations measures to ensure that pollution and nuisances arising from site clearance and construction activities is prevented where possible and managed in accordance with best practice and any subsequent conditions relevant to the proposed development.

It is considered that there will be no likely significant interactions which would warrant preparation of an EIAR.

5.10 ASSESSMENT OF POTENTIAL FOR CUMULATIVE IMPACTS

As part of the assessment of the proposed development, the likelihood of potential cumulative impact of the proposed development has been considered with any future development (as far as practically possible) and the cumulative impacts with developments in the locality (including planned and permitted developments).

As outlined in Section 3.2, above, a list of notable consented developments located in close proximity to the development site is included in Appendix A of this report.

Cumulative impacts are those impacts that relate to incremental / additive impacts of the planned development in addition to historical, present or foreseeable future actions. Cumulative impacts can be thought of as occurring through two main pathways: first, through persistent additions or losses of the same materials or resource, and second, through the compounding effects because of the coming together of two or more effects.

Mitigation is included in the project design to minimise impacts on the receiving environment. Each project currently permitted in the wider area is subject to planning conditions which include appropriate mitigation measures to minimise environmental impacts. Provided that mitigation measures for other developments are implemented as permitted, there will be no significant cumulative effects.

Any future development will be required to incorporate appropriate mitigation measures (e.g., noise management, dust management, traffic management, management of water quality in run-off water, landscape) during the construction phase as such any cumulative development will not have a significant effect on human health, material assets, land, soils, geology, hydrogeology, and hydrology.

Any future development proposed on the surrounding lands should be cognisant with the zoning and will be subject to EIA and/or planning conditions which include appropriate mitigation measures to minimise environmental impacts.

Based on the assessment of the environmental sensitivities in the existing environment and consideration of potential cumulative impacts, it is concluded that there are no likely cumulative environmental impacts which would warrant preparation of an EIAR.

6.0 FINDINGS AND CONCLUSIONS

On the basis of the evaluation set out in Section 2.0 an EIA for the proposed Project is not mandatory. The proposed project is considered to be a sub-threshold development and therefore it is required to assess whether the proposed development is likely to have significant effects on the environment in order to determine whether the submission of an EIAR is required. The information necessary to enable this screening assessment has been provided in this report and the methodology used has been informed by the available guidance, legislation and directives.

It is concluded having regard to the nature, scale and location of the subject site, there is no real likelihood of significant effects on the environment arising from the proposed development on the environment (direct, indirect or cumulatively with other development) and therefore it is considered that the requirement for sub-threshold EIA does not arise.

The EIA Screening prepared by AWN Consulting has been reviewed and based on the information provided in this report the Commissioners of Public Works in Ireland, as the competent authority, have determined that EIA is not required for the Proposed Development.

7.0 REFERENCES

European Union. Environmental Impact Assessment of Projects Guidance on Screening. EU Luxembourg: 2017.

European Union. Guidance on the preparation of the Environmental Impact Assessment Report. EU Luxembourg: 2017.

Department of Housing, Planning and Local Government. Guidelines for Planning Authorities and An Bord Pleanala on carrying out Environmental Impact Assessment. DHPLG: 2018.

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

Environmental Protection Agency. Guidelines on the Information to be contained in Environmental Impact Assessment Reports. EPA 2022.

Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes. Transport Infrastructure Ireland (2011).