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Appropriate Assessment Screening Report

PRESENTED TO

Kildare County Council Architectural Services
Proposed Halting Site Development at Fortbarrington Road, Ardrew, Athy, Co Kildare

October 24

Environmental Consultancy Services

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1 INTRODUCTION

1.1 Background

Enviroguide Consulting was commissioned by Kildare County Council Architectural Services to prepare an Appropriate Assessment Screening Report for a Proposed Residential Development, entitled 'Proposed Halting Site Development' at Fortbarrington Road, Ardrew, Athy, Co Kildare, hereafter referred to as 'Proposed Development' or 'Site', when referring to the application Site area. This report contains information to enable the Competent Authority to undertake Stage 1 Appropriate Assessment (AA) screening in respect of the Proposed Development.

1.2 Quality Assurance and Competence

Enviroguide Consulting is multi-disciplinary consultancy specialising in the areas of the Environment, Waste Management and Planning. All Enviroguide consultants carry scientific or engineering qualifications and have a wealth of experience working within the Environmental Consultancy sectors, having undergone extensive training and continued professional development.

Enviroguide Consulting as a company remains fully briefed in European and Irish environmental policy and legislation. Enviroguide staff members are highly qualified in their field. Professional memberships include the Chartered Institution of Wastes Management (CIWM), the Irish Environmental Law Association and Chartered Institute of Ecology and Environmental Management (CIEEM).

All surveying and reporting have been carried out by qualified and experienced ecologists and environmental consultants. BT, Ecologist with Enviroguide undertook the Preliminary Ecological Assessment (PEA) walkover survey. WMC, Ecologist with Enviroguide, undertook the desktop research and authored this report.

BT has a B.Sc. in Environmental Biology (Hons) and a PhD in Marine Ecology from University College Dublin, and a wealth of experience in desktop research, literature scoping-review, and report writing, as well as practical field experience (Habitat mapping surveys, intertidal surveys, vantage point surveys, winter bird surveys, fresh water macro-invertebrate identification etc.). BT has experience in compiling Biodiversity Chapters of Environmental Impact Assessment Reports (EIARs), AA screening and NIS reports, and in the overall assessment of potential effects to ecological receptors from a range of developments.

WMC has a B.Sc. in Applied Freshwater and Marine Biology from Galway-Mayo Institute of Technology. WMC has four years of experience in ecological surveying and in this time, he has covered a wide range of ecological topics including ornithological surveying, bat surveying, badger surveying/exclusions, otter surveying, macroinvertebrate surveying and habitat surveying among others. WMC has also completed the field and report work of numerous planning surveys including Preliminary Ecological Appraisals (PEA), Appropriate Assessment (AA) and Ecological Clerk of Works (ECoW) surveys.

1.3 Description of Proposed Development

1.3.1 Site Location

The Proposed Development Site is located at Ardrew, Athy, Co. Kildare (see Figure 1). The area surrounding the Proposed Development Site is made up predominantly of agricultural land to the north and west, as well as housing estates to the south and east. The Bennetsbridge Stream (EU Code: IE_SE_14B011900) is located approximately 0.41km southwest of the Site. The Bennetsbridge Stream meets the larger River Barrow (IE_SE_14B011900) approximately 0.64km southeast of the Site. The Site is served by the Fortbarrington road, which is situated at the east of the Site and runs in a north-west to south-east direction.

1.3.2 Proposed Development Description

The Proposed Development will consist of the following (see Figure 2):

- The construction of 5 no. two storey houses featuring 4 no. five bedroom houses and 1 no. three bedroom house.
- The demolition of the existing single storey caretaker unit and the construction of 1 no. new single storey caretaker unit.
- The conversion of four existing semi-detached day houses and gardens into two detached day houses with gardens.
- Boundary improvement works including:
    - Removal of part of the boundary to the northeast of the existing Site.
    - Removal of existing evergreen trees at the eastern boundary.
    - Removal of existing boundary railings which run parallel to the Fortbarrington road and construction of new Site boundary consisting of rendered masonry walls as well as railings.
    - Removal of existing vehicular and pedestrian entrance walls and construction of new vehicular and pedestrian walls.
- Site works will include:
    - Undergrounding of existing services.
    - New nature-based surface water drainage with surface water attenuation.
    - New foul water drainage which will integrate with existing drainage.
    - Extension of water, telecoms and electrical infrastructure.
    - New street lighting.
    - New Site landscaping.
    - New boundary walls to enclose Proposed extended Site.
    - Extension and upgrade of the existing access road to accommodate the Proposed new dwellings.

- All associated Site works.

1.3.3 Drainage and Water Supply

1.3.3.1 Surface water

1.3.3.1.1 Existing Surface Water Drainage

The existing surface water drainage network on Site is made up of gullies at the centre (north, south and east of the existing amenity grassland in the centre of the Site), southwest and east of the Site, which drain via 100cm and 150cm pipes to the Athy surface water network. Surface water drainage exits the Site beneath the existing railings at the southeast of the Site (see Figure 3).

1.3.3.1.2 Proposed Surface Water Drainage

It is proposed that surface water pipes within the Proposed Site run from the far west of the Site where water is drained from various Sustainable Drainage Systems (SuDS) features such as swales and bioretention tree-pits to an oversized surface water pipe. This surface water pipe exits the Site beneath the main vehicular/pedestrian entrance where it joins with the existing surface water network via a weir (only during an exceptional 1 in 100-year rainfall event where SuDS features and attenuation tank are overloaded).

Beginning at the west, the surface water pipe heads in an easterly direction where it drains 4 no. lined permeable paving parking spaces, which drain to the main surface water pipe from the north. The surface water pipe is joined from the south by surface water arising from 1 no. dry swale, followed by 2 no. permeable paving pathways. Continuing from the aforementioned drainage features, the main surface water pipe is joined from the south by an additional branch of the main surface water drainage system. After this confluence of the surface water system, the main surface water pipe continuing in an eastern direction drains a further 2 SuDS features from the north which comprise 2 no. lined permeable paving parking spaces. The main drainage pipe then takes a 90 degree turn where it briefly heads in a southern direction draining a further 2 no. permeable parking paving spaces and a swale before turning towards the southeast at a 4-way junction of the Site's surface water drainage pipes and eventually exiting the Site where it joins the wider Athy surface water drainage network at the Fortbarrington road. It should be noted that water will only exit the Site under exceptional rainfall conditions where the SuDS features and attenuation tank are overloaded. Where previously mentioned that the main pipe turns toward the southeast at the 4-way junction prior to exiting the Site, it is joined here by another branch of the Site's surface water drainage system which drains 2 no. permeable parking paving spaces and 2 no. swales from the south. Finally, at the same 4-way junction as mentioned above, the Site's drainage network is joined from the west by another pipe. This branch of the surface water drainage system features an attenuation tank with a petrol interceptor between the tank and the aforementioned 4-way junction. The attenuation tank is rated to hold stormwater from a 30% above baseline exceptional climate change rainfall event. The volume of the tank is 1094m^3 where the volume required is 286m^3. There is a soakaway situated above the attenuation tank allowing

water to be absorbed naturally to the landscape without the need to utilize and unnecessarily occupy the existing surface water network (see Figure 4).

1.3.3.1.2.1 SUDS

Following is a list of the SuDS features within the Proposed Site:

- SuDS 1 – Lined permeable paving – The driveways of the houses on Site are made up of this SuDS feature. 2 no. pathways on Site are also made up of lined permeable paving.
- SuDS 2 – Swales – There are 3 no. swales located across the Proposed Site with one being located towards the west of the Site. The two remaining swales are located in the centre of the Site atop the surface water attenuation tank.
- SuDS 3 – Bio-retention tree pit – There are two bio-retention tree pits located in the western half of the Proposed Site next to the road.
- SuDS 4 – Lined Grasscrete – The road traversing the Site is made up of lined grasscrete.
- SuDS 5 – Soakaway – There is a large soakaway situated in the centre of the Site above the attenuation tank (see Figure 4).

1.3.3.2 Foul Drainage

1.3.3.2.1 Existing Foul Drainage

The dwellings on Site are connected to the wider foul drainage network via 6 no. manholes (four north of the amenity grassland in the centre of the Site, with two south of this). Another foul drainage branch connects to the previously mentioned foul drainage pipe nearby to the vehicular/pedestrian entrance of the Site before exiting the Site and joining the wider Athy foul sewage network. Similarly to the existing surface water drainage network, foul drainage travels through 100cm and 150cm pipes as it traverses the Site (see Figure 3).

1.3.3.2.2 Proposed Foul Drainage

The layout of the Proposed foul sewage pipes on Site mirrors the location of the surface water drainage pipes for the most part. One of the two main branches of foul sewage lines onsite begins in the far west of the Site, where it travels towards the east beneath the road to the north of the attenuation tank in the centre of the Site, turns towards the southeast and merges with the second sewage pipe at a manhole nearby to the vehicular/pedestrian entrance of the Site. This first foul sewage line is joined by 14 no. connections arising from the buildings to the north of the Site. The second proposed sewage pipe on Site begins at a manhole southwest of the attenuation tank in the centre of the Site where it travels in an eastern direction, merges with the aforementioned first foul sewage line at a manhole nearby to the vehicular/pedestrian entrance of the Site and continues beyond the bounds of the Site beneath the main entrance where it merges with the Athy foul water sewage system. This second foul sewage line is joined from the south by 6 no. connections arising from the buildings to the south of the Site. All of the main sewage pipes on Site have a 150cm diameter. Foul waters arising within the Proposed Development will drain to the nearby Athy WwTP where they are treated before being released to the nearby River Barrow (see Figure 4).

FIGURE 1. SITE LOCATION.

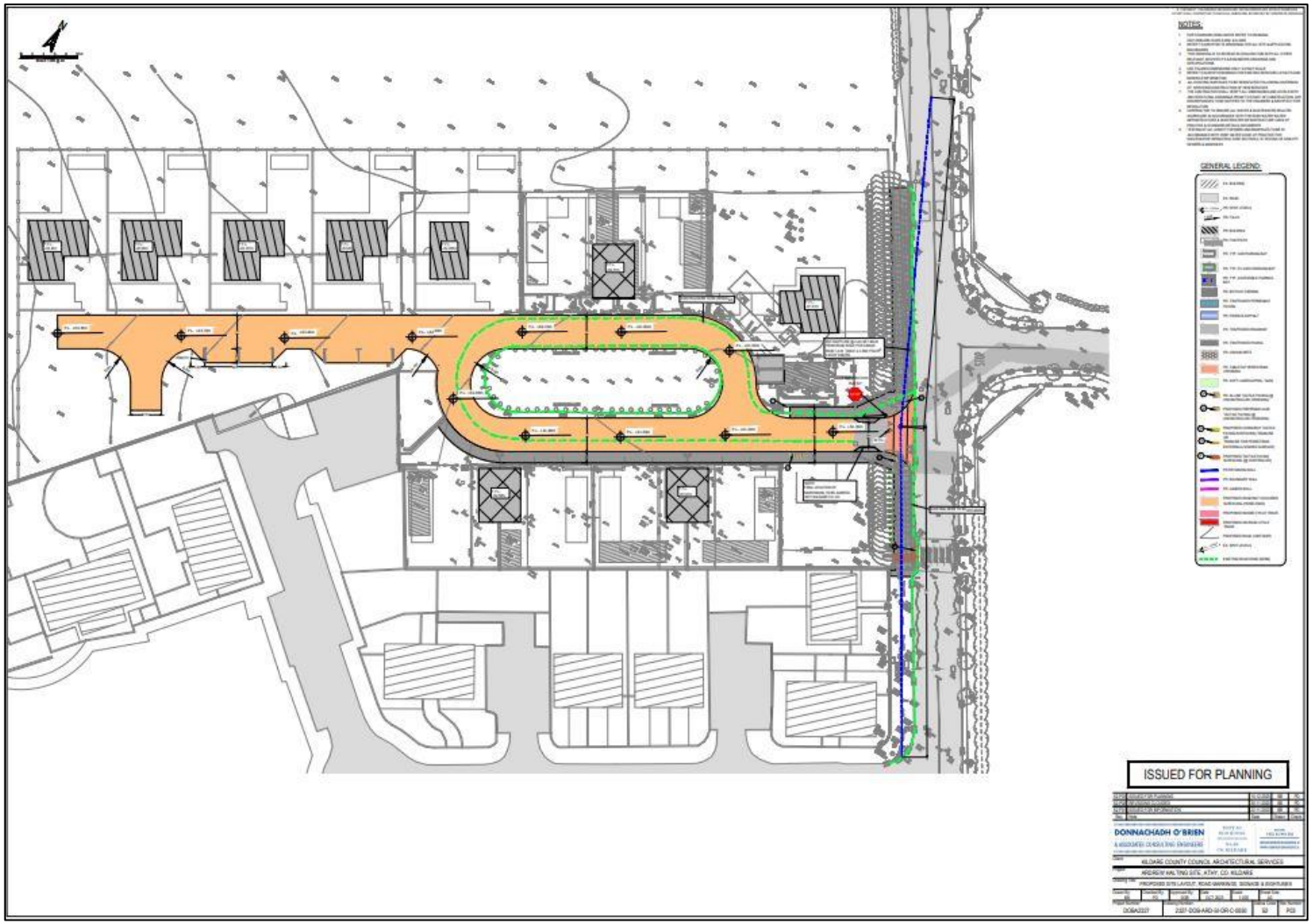

FIGURE 2. PROPOSED SITE LAYOUT (DRG NO. 2327-DOB-ARD-SI-DR-C-0050, DOBA 2023).

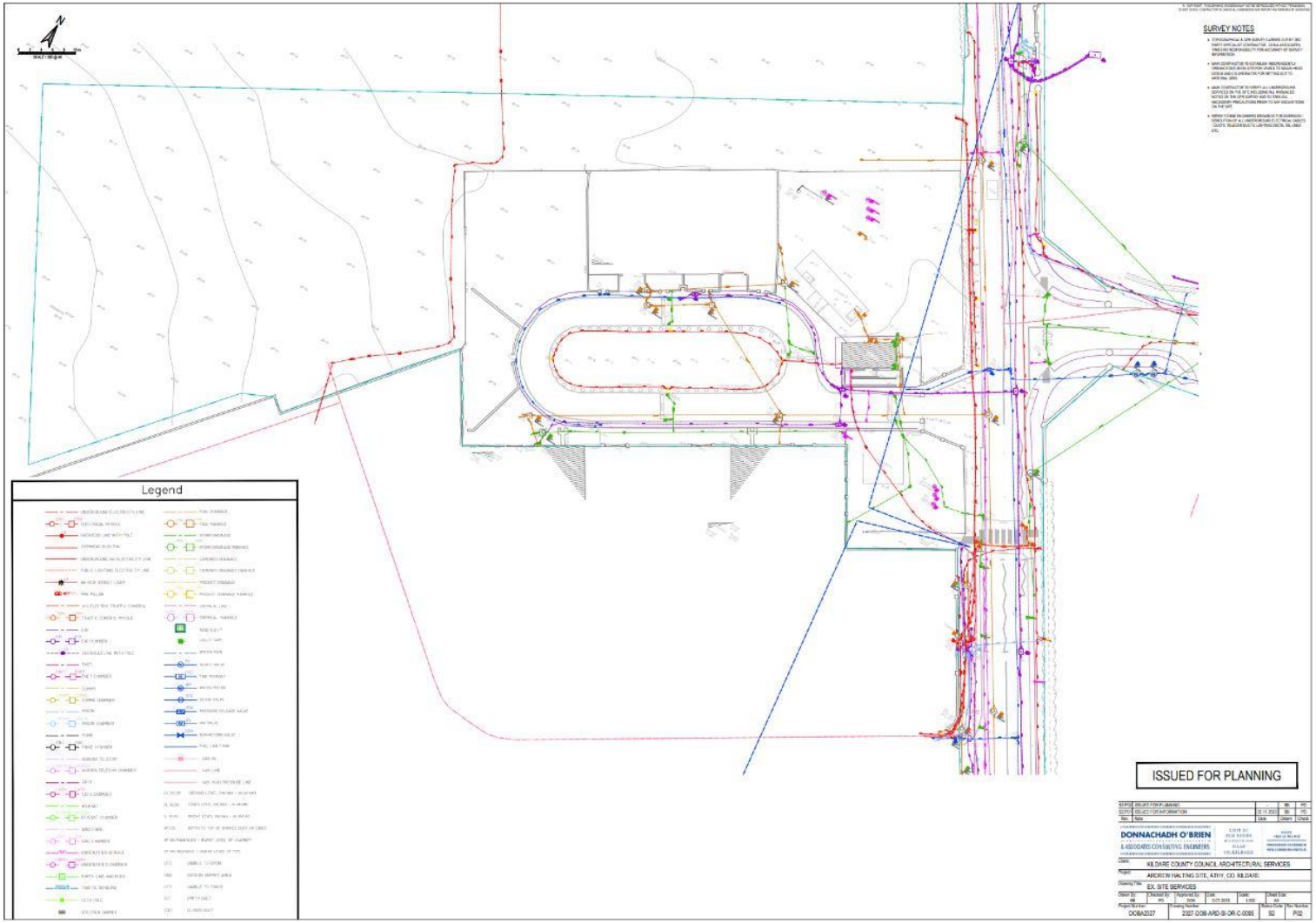

FIGURE 3. EXISTING SITE SERVICES (INC. SURFACE AND FOUL DRAINAGE) (DRG NO. 2327-DOB-ARD-SI-DR-C-0005, DOBA 2023)

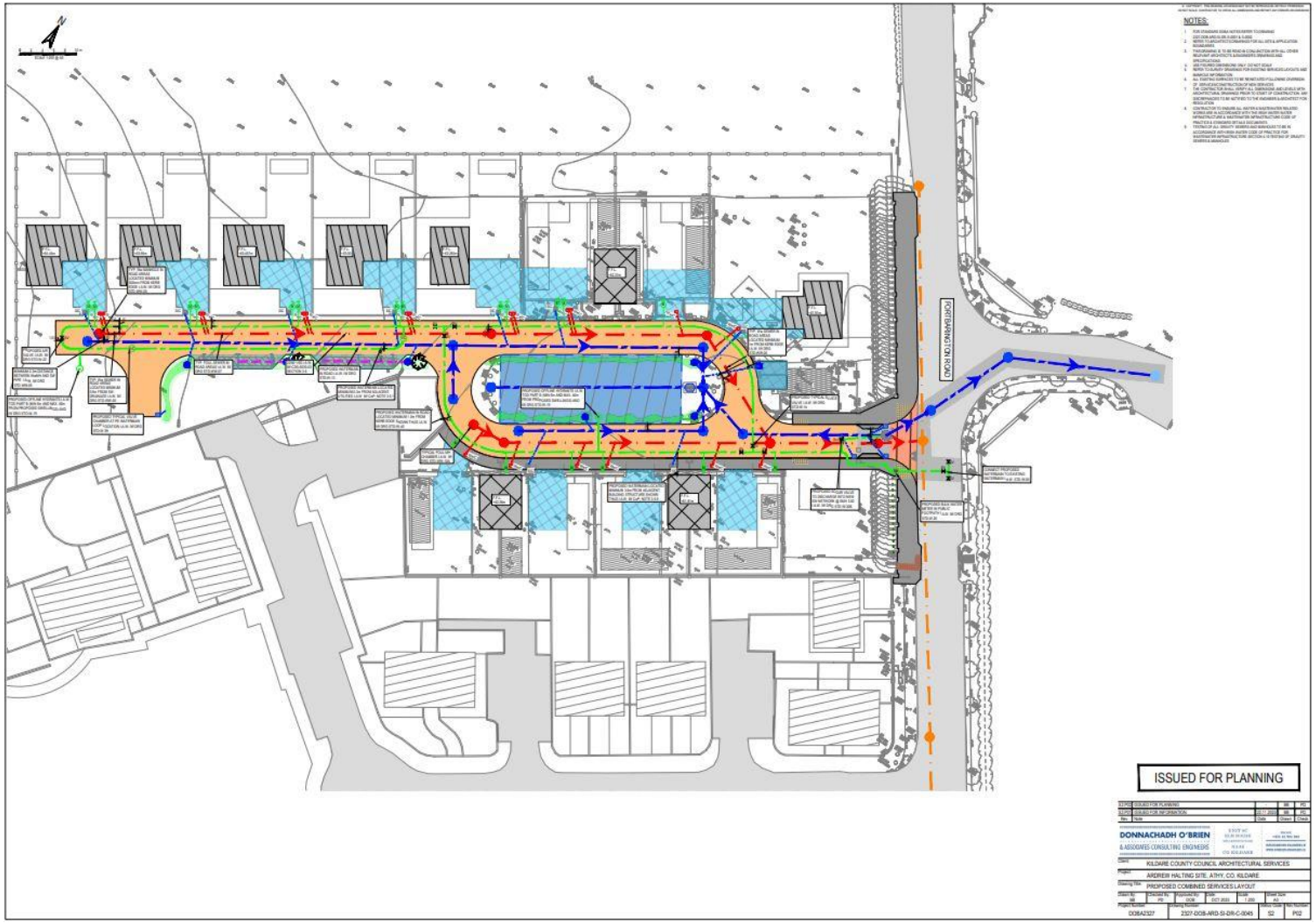

FIGURE 4. PROPOSED SITE SERVICES (INC. SURFACE AND FOUL DRAINAGE) (DRG NO. 2327-DOB-ARD-SI-DR-C-0045)

2 LEGISLATIVE AND POLICY CONTEXT

2.1 Legislative Background

The Habitats Directive (92/43/EEC) seeks to conserve natural habitats and wild fauna and flora by the designation of Special Areas of Conservation (SACs) and the Birds Directive (2009/147/EC) seeks to protect birds of special importance by the designation of Special Protection Areas (SPAs). The Habitats Directive has been transposed into Irish law through the EC (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011).

It is the responsibility of each Member State to designate SPAs and SACs, both of which will form part of the Natura 2000 Network, a network of protected sites throughout the European Community. These designated sites are referred to as "Natura 2000 sites" or "European sites". SACs are selected for the conservation of Annex I habitats (including priority types which are in danger of disappearance) and Annex II species (other than birds). SPAs are selected for the conservation of Annex I birds and other regularly occurring migratory birds and their habitats. The annexed habitats and species for which each site is selected correspond to the Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of the sites; from these the conservation objectives of the site are derived.

An AA is a required assessment to determine the likelihood of significant effects, based on best scientific knowledge, of any plans or projects on European sites. A screening for AA determines whether a plan or project, either alone or in combination with other plans and projects, is likely to have significant effects on a European site, in view of its conservation objectives.

This AA Screening has been undertaken to determine the potential for significant effects on relevant European sites. The purpose of this assessment is to determine, the appropriateness, or otherwise, of the Proposed Development in the context of the conservation objectives of such sites.

2.1.1 Legislative Context

The obligations in relation to Appropriate Assessment have been implemented in Ireland under Part XAB of the Planning and Development Act 2000, as amended ("the 2000 Act"), and in particular Section 177U and Section 177V thereof. The relevant provisions of Section 177U in relation to AA screening have been set out below:

"***177U.—*** *(1) A screening for appropriate assessment of a draft Land use plan or application for consent for proposed development shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site.*

(2)…

(3)…

(4) The competent authority shall determine that an appropriate assessment of a draft Land use plan or a proposed development, as the case may be, is required if it cannot be excluded, on the basis of objective information, that the draft Land use plan or proposed development,

individually or in combination with other plans or projects, will have a significant effect on a European site.

(5) The competent authority shall determine that an appropriate assessment of a draft Land use plan or a proposed development, as the case may be, is not required if it can be excluded, on the basis of objective information, that the draft Land use plan or proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site."

An Appropriate Assessment is required under Article 6 of the Habitats Directive where a project or plan may give rise to significant effects upon a European site. Paragraph 3 states that:

"*6(3) Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site, in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."*

2.2 Policy Context

2.2.1 Kildare County Development Plan 2023 – 2029

Policies, objectives and actions of the Kildare County Development Plan 2023 – 2029 that are of relevance to this Screening Report are outlined below:

- Policy 2: Seek to contribute to maintaining or restoring the conservation status of all sites designated for nature conservation or proposed for designation in accordance with European and national legislation and agreements. These include Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Natural Heritage Areas (NHAs), Ramsar Sites and Statutory Nature Reserves.
- Objective 6: Apply the precautionary principle in relation to proposed developments in environmentally sensitive areas to ensure that all potential adverse impacts on a designated NHA or Natura 2000 Site arising from any proposed development or land use activity are avoided, remedied, or mitigated.
- Objective 8: Support the implementation of the National Raised Bog Special Areas of Conservation Management Plan 2017-2022.
- Objective 9: Avoid development that would adversely affect the integrity of any Natura 2000 site and promote favourable conservation status of habitats and protected species including those listed under the Birds Directive, the Wildlife Acts and the Habitats Directive, to support the conservation and enhancement of Natura 2000 Sites including any additional sites that may be proposed for designation during the period of this Plan and protect the Natura 2000 network from any plans and projects that are likely to have a significant effect on the coherence or integrity of a Natura 2000 Site.
- Objective 10: Ensure an Appropriate Assessment Screening, in accordance with Article 6(3) and Article 6(4) of the Habitats Directive, Section 177A of the Planning and

Development Act (2001-2022) or any superseding legislation and with DEHLG guidance (2009), is carried out in respect of any plan or project not directly connected with or necessary to the management of a Natura 2000 site to determine the likelihood of the plan or project having a significant effect on a Natura 2000 site, either individually or in combination with other plans or projects and to ensure that projects which may give rise to significant cumulative, direct, indirect or secondary impacts on Natura 2000 sites will not be permitted (either individually or in combination with other plans or projects) unless for reasons of overriding public interest.

- Objective 11: Support the establishment of conservation measures and the preparation and implementation of management plans for the conservation of Natura 2000 sites by NPWS, as required by Article 6(1) of the Habitats Directive.Action 7: Identify and provide appropriate buffer zones between Designated Sites and areas zoned for development.
- Action 8: Work with the National Parks and Wildlife Service to identify an appropriate buffer surrounding Pollardstown Fen, based on best available scientific information, in order to protect the ecological integrity of the Fen as a pNHA and SAC and to prevent urban encroachment and environmental degradation of the site in order to support the qualifying interests of the site.

2.2.2 Kildare County Biodiversity Action Plan 2009-2014

Kildare County Biodiversity Action Plan is set out to protect and improve biodiversity through the following objectives:

- To facilitate the collection and dissemination of heritage information.
- To raise public awareness, understanding and appreciation of County Kildare's heritage.
- To promote best practice in heritage conservation and management.
- To inform policy and provide advice to Kildare local authorities.

2.3 Stages of Appropriate Assessment

This AA Screening Report (the 'Screening Report') has been prepared by Enviroguide Consulting. It considers whether the Proposed Development is likely to have a significant effect on a European site and whether a Stage 2 AA is required.

The AA process is a four-stage process. Each stage requires different considerations, assessments and tests to ultimately arrive at the relevant conclusion for each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

The four stages of an AA, can be summarised as follows:

- **Stage 1: *Screening*.** The Screening for AA considers whether a plan or project is directly connected to or necessary for the management of a European site, or whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a European site in view of its conservation objectives.

- **Stage 2: *Natura Impact Statement (NIS).*** Where Stage 1 determines that significant effects are likely, uncertain or unknown, the preparation of a NIS is required. The NIS must include a scientific examination of evidence and data to classify potential impacts

on any European site(s) in view of their conservation objectives in the absence of mitigation. The NIS will identify appropriate mitigation to remove the potential for likely significant adverse effects on any European site(s). If the competent authority determines that the plan or project would have an adverse effect on the integrity of any European site(s) despite mitigation, it can only grant consent after proceeding through stages 3 and 4.

- **Stage 3: *Assessment of alternative solutions***. If the outcome of Stage 2 is negative i.e., adverse impacts to the sites cannot be scientifically ruled out, despite mitigation, the plan or project should proceed to Stage 3 or be abandoned. This stage examines alternative solutions to the proposal.
- **Stage 4: *Assessment where no alternative solutions exist and where adverse impacts remain***. The final stage is the main derogation process examining whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project to adversely affect a European site, where no less damaging solution exists.

The Habitats Directive promotes a hierarchy of avoidance, mitigation, and compensatory measures. First the project should aim to avoid any negative effects on European sites by identifying possible effects early in the planning stage and designing the project to avoid such effects. Second, mitigation measures should be applied, if necessary, during the AA process to the point where no adverse impacts on the site(s) remain. If the project is still likely to result in adverse effects, and no further practicable mitigation is possible, a refusal for planning permission may be recommended. In this case, the project will generally only be considered where no alternative solutions are identified and the project is required for IROPI, or, in the case of priority habitats, considerations of health or safety, or beneficial consequences of primary importance for the environment or to other IROPI. Then compensation measures are required for any remaining adverse effects.

3 AA SCREENING METHODOLOGY

3.1 Guidance

This Screening Report has been undertaken in accordance with the following guidance:

- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities.* (Department of Environment, Heritage and Local Government, 2010 revision);
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities.* Circular NPW 1/10 & PSSP 2/10;
- *Communication from the Commission on the precautionary principle* (European Commission, 2000);
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (European Commission, 2019);
- *Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC* Brussels, 28.9.2021 C (European Commission, 2021); and
- *Appropriate Assessment Screening for Development Management, OPR Practice Note PN01, Office of the Planning Regulator March 2021.*

3.2 Screening Steps

Screening for AA involves the following steps:

- Establish whether the plan or project is directly connected with or necessary for the management of a European site;
- Description of the baseline existing environment at the Site of the Proposed Development;
- Identification of relevant European site(s) potentially affected;
- Identification and description of potential effects on the relevant European site(s);
- Assessment of the likely significance of the effects identified on the relevant European site(s);
- Description and characterisation of other projects or plans that in combination with the Proposed Development have the potential for having significant effects on the European site; and
- Exclusion of sites where it can be objectively concluded that there will be no significant effects.

It should be noted that any mitigation measures and/or measures intended or included for the purposes of avoiding adverse effects arising as a result of the Proposed Development on any European site **have not been considered** as part of this Screening Report. This includes best practice measures and development requirements, such as Sustainable Urban Drainage

Systems (SUDS), where they have been included primarily to prevent significant impacts on a European site.

3.3 Desk Study

A desktop study was carried out in January to collate and review available information, datasets and documentation sources relevant for the completion of this Screening Report. The desktop study relied on the following sources:

- Information on the network of European Sites, boundaries, QIs and conservation objectives, obtained from the National Parks and Wildlife Service (NPWS) at *www.npws.ie*;
- Text summaries of the relevant European sites taken from the respective Standard Data Forms (available at *https://natura2000.eea.europa.eu/*) and Site Synopses (available at *www.npws.ie*);
- Information on waterbodies, catchment areas and hydrological connections obtained from the Environmental Protection Agency (EPA) at www.*gis.epa.ie*;
- Information on bedrock, groundwater, aquifers and their statuses, obtained from Geological Survey Ireland (GSI) at *www.gsi.ie*;
- Satellite imagery and mapping obtained from various sources and dates including Google, Digital Globe, Bing and Ordnance Survey Ireland; and
- Information on the existence of permitted developments, or developments awaiting decision, in the vicinity of the Proposed Development from the Kildare County Council online planning database (Kildarecoco.ie) and the National Planning Database (DHLGH, 2024).

For a complete list of the documents consulted as part of this assessment, see *Section 6 References*.

3.4 Field surveys

A range of field surveys have been carried out at the Site to date. These are summarised in Table 1.

TABLE 1. FIELD SURVEYS UNDERTAKEN AT THE PROPOSED DEVELOPMENT SITE.

Survey	Surveyor	Dates
Habitat mapping to level 3 (Fossitt 2000)	Enviroguide Consulting (BT)	1st November 2023
Bird Scoping Survey	Enviroguide Consulting (BT)	1st November 2023
Invasive Flora Survey	Enviroguide Consulting (BT)	1st November 2023
Rare and protected Flora Survey	Enviroguide Consulting (BT)	1st November 2023
A search for signs of protected fauna (e.g., mammals, reptiles, amphibians)	Enviroguide Consulting (BT)	1st November 2023

3.5 Identification of Relevant European sites

The Zone of Influence (ZOI) for a project is the area over which ecological features may be affected by changes as a result of a development and associated activities. This is likely to extend beyond the development site, for example where there are ecological or hydrological links beyond the site boundaries (CIEEM, 2018). Furthermore, ZOI in relation to European sites is described as follows in the 'OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management' (OPR, 2021):

> "*The zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established on a case-by-case basis using the Source-Pathway-Receptor framework and not by arbitrary distances (such as 15 km).*"

Thus, to identify the European sites that potentially lie within the ZOI of the Proposed Development, a Source-Path-Receptor (S-P-R) method was adopted, as described in OPR PN01 (OPR 2021). This note was published to provide guidance on screening for AA during the planning process, and although it focuses on the approach a planning authority should take in screening for AA, the methodology is also readily applied in the preparation of Screening Reports such as this.

The relevant European sites were identified based on the following:

- Identification of potential sources of effects based on the Proposed Development description and details, including changes to potentially suitable ex-situ habitats at the Site (i.e., habitats utilised by SCI bird species outside of their designated SPAs);
- Use of up-to-date GIS spatial datasets for European designated sites and water catchments – downloaded from the NPWS website (*www.npws.ie*) and the EPA website (*www.epa.ie*) to identify European sites which could potentially be affected by the Proposed Development; and
- Identification of potential pathways between the Site of the Proposed Development and any European sites within the ZOI of any of the identified sources of effects.
    - The catchment data were used to establish or discount potential hydrological connectivity between the Proposed Development and any European sites.
    - Groundwater and bedrock information used to establish or discount potential hydrogeological connectivity between the Proposed Development and any European sites.
    - Air and land connectivity assessed based on Proposed Development details and proximity to European sites.
    - Consideration of potential indirect pathways, e.g., impacts to flight paths, *ex-situ* habitats, etc.
- Defining the likely ZOI based on the identified sources of effects and potential pathways between the Proposed Development and any European sites.

3.6 Assessment of Significant Effects

The conservation objectives of the European sites identified to lie within the ZOI were reviewed and assessed in order to establish whether the construction and operation of the Proposed Development has the potential to have a negative impact on any of the QIs and/or conservation objectives listed for the site.

The assessment framework is taken from the best practice guidelines issued by the European Commission, i.e., "*Assessment of plans and projects significantly affecting Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*".

The potential for significant effects that may arise from the Proposed Development was considered through the use of key indicators:

- Habitat loss or alteration.
- Habitat/species fragmentation.
- Disturbance and/or displacement of species.
- Changes in population density.
- Changes in water quality and resource.

In addition, information pertaining to the conservation objectives of the European sites, the ecology of the designated habitats and species and known or perceived sensitivities of the habitats and species were considered.

3.7 Limitations

The walkover survey was undertaken on the 1st of November 2023, outside of optimal botanical surveying conditions (April-September) and breeding bird season (March-August).

Due to this, it is unknown if the treeline next to the entrance of the Site is used by birds for nesting within the breeding season. However, the scale of this treeline is quite limited and is unlikely to support a large amount of breeding birds. Birds using this treeline for nesting are likely to be common green listed birds due to the suburban non-priority habitat in which the treeline sits. There is a future pre-commencement bird survey proposed prior to the cutting of this treeline.

Surveys were undertaken outside of the optimal survey period for botanical identification of IAS species (April to September, inclusive). However, due to the small size of the Site and the limited habitats present in which IAS plant species have the potential to become established, it has been determined that there were no limitations faced as a result of the Invasive flora survey.

4 STAGE 1 SCREENING ASSESSMENT

4.1 Existing Environment

4.1.1 Desk Study Results

4.1.1.1 Hydrology, Geology and Hydrogeology

The Site is located in the Barrow Catchment (Catchment I.D 14) and in the Barrow_SC_070 Sub-catchment (Sub-catchment I.D 14_12) (EPA, 2024.

The Bennetsbridge stream (EU Code: IE_SE_14B011900) is located approximately 410m southwest of the Site, at its closest point. This stream flows in an easterly direction until it meets the larger river Barrow (IE_SE_14B011600), a distance of 0.64km from the Site. The river Barrow flows in a southerly direction where it reaches the Upper Barrow estuary transitional waterbody (IE_SE_100_0300) 53km away as the crow flies. This watercourse continues in a southern direction via the Barrow Nore estuary upper (IE_SE_100_0250), New Ross port (IE_SE_100_0200), and the Barrow Suir Nore estuary (IE_SE_100_0100), before emptying into the Waterford harbour coastal waterbody (IE_SE_100_0000) some 88km away as the crow flies and finally the eastern Celtic sea (IE_SE_050_0000) (EPA, 2024).

There are no Q-values available from the Bennetsbridge stream due to a lack of monitoring stations which measure this specific parameter. The closest Q-value monitoring stations to the Site are located upstream and downstream on the river Barrow but the data from these couldn't be used due to it being outdated (most recent results were taken in 1994). The Water Framework Directive (WFD) status (2016-2021) of the nearby Bennetsbridge stream and river Barrow are classed as 'poor'. The EPA data indicates that there is a downward trend in Total Ammonia and Ortho-phosphate (as P) for the Bennetsbridge stream as well as the river Barrow downstream for the 2013-2018 period (EPA, 2024).

The EPA water quality monitoring data for the stations located closest to the Site are summarised in Table 2, with the most recent data being from 2003.

TABLE 2. EPA MONITORING STATIONS AND ASSIGNED Q VALUES

EPA Monitoring Station name	Station Code	Location from Site	Distance from Site	Assigned Q value
0.4km u/s Athy Br LHS	RS14B011590	North upstream	1.56km	3-4 "Moderate"

The Site of the Proposed Development is situated on the Athy-Bagnelstown Gravels (IE_SE_G_160) groundwater body. The bedrock aquifer identified beneath the Site is mapped as "Regionally Important Aquifer - Karstified (diffuse)" (GSI, 2024).

The Groundwater Vulnerability Rating assigned to groundwater beneath the Site is mapped as "*High"* (GSI, 2024).

The soil beneath the Site is mapped as "Fine loamy drift with limestones" (GSI, 2024).

The quaternary sediments beneath the majority of the Site are mapped as "Gravels derived from Limestones" (GSI, 2024).

The Waterbody Status for river, groundwater, transitional and coastal water bodies relevant to the Site as recorded by the EPA (2022) in accordance with European Communities (Water Policy) Regulations 2003 (SI no. 722/2003) are provided in Table 3.

TABLE 3. WFD RISK AND WATER BODY STATUS

Waterbody Name	Water body; EU code	Location from Site	Distance from Site (km)	WFD water body status (2016-2021)	WFD 3rd cycle Risk Status	Hydraulic Connection to the Site
Surface Water Bodies						
Bennetsbridge Stream	IE_SE_14B011900	South-west	0.41	Poor	At risk	Adjacent to the Site
River Barrow	IE_SE_14B011900	East	0.57	Poor	At risk	Downstream of the Site
Transitional Water Bodies						
Upper Barrow Estuary	IE_SE_100_0300	South	53	Moderate	At risk	Downstream of the Site
Barrow Nore Estuary Upper	IE_SE_100_0250	South	63	Moderate	At risk	Downstream of the Site
New Ross Port	IE_SE_100_0200	South	66	Moderate	At risk	Downstream of the Site
Barrow Suir Nore Estuary	IE_SE_100_0100	South	78	Moderate	At risk	Downstream of the Site
Coastal Water Bodies						
Waterford Harbour	IE_SE_100_0000	South	88	Moderate	At risk	Downstream of the Site
Eastern Celtic Sea	IE_SE_050_0000	South	96	High	Not at risk	Downstream of the Site
Groundwater Bodies						
Athy-Bagnelstown Gravels Groundwater Body	IE_SE_G_160	N/A	N/A	Poor	At risk	Underlying groundwater-body

4.1.2 Relevant Field Survey results

4.1.2.1 Habitats & Flora

The following text is extracted from the PEA (Enviroguide, 2024) which accompanies this report. The PEA report was compiled based on the walkover survey which took place on the 1st of November 2023:

4.1.2.1.1 Habitats

The habitats present within the Site, as recorded during the field survey, are described in this section, and summarised below.

There are 6 different types of habitat located within the Ardrew Site. These include:

- BL3 – Buildings and artificial surfaces
- GS2 – Dry meadows and grassy verges
- GS2/WS1 – Dry meadows and grassy verges/scrub mosaic
- WL2 – Treeline
- BC1 – Arable crops

- GA2 – Amenity grassland

4.1.2.1.2 Flora

No rare or protected plant species were recorded on Site during ecological walkovers. No non-native plant species were recorded throughout the Site.

4.1.2.2 Fauna

The following bullet points describe the fauna which was recorded during the walkover survey on the 1st of November 2023. This information was extracted from the PEA which accompanies this screening report (for full information on surveys and results see the accompanying PEA report):

- Bats – Concluding the Site walkover, it was found that the disused buildings and coniferous trees located at the eastern boundary of the Site had negligible bat roost potential and potential roost features respectively.
- Mammals – No signs of mammal were located during the Site walkover. There were dogs located within the Site which would potentially deter mammals from commuting/foraging within the bounds of the Site. The high walls which enclosed much of the Site would also act to deter species of foraging/commuting mammals.
- Birds – Robin (*Erithacus rubecula*) and starling (*Sturnus vulgaris*) were noted during the Site walkover. The trees which form the boundary of much of the eastern boundary of the Site have the potential to provide nesting/roosting habitat for bird species.
- Amphibians/reptiles – No evidence of amphibians/reptiles was noted during the Site walkover. There were no habitats on Site suitable for amphibians or reptiles.

4.2 Identification of Relevant European Sites

4.2.1 Potential Sources of Impacts

The Proposed Development is not directly connected with or necessary to the management of European sites. However, the following elements of the Proposed Development were identified and assessed for their potential to cause likely significant effects on European sites.

Construction Phase (*Estimated duration:* Approx 59 weeks)

- Uncontrolled releases of silt, sediments and/or other pollutants to air due to earthworks;
- Surface water run-off containing silt, sediments and/or other pollutants into nearby waterbodies or surface water network;
- Surface water run-off containing silt, sediments and/or other pollutants into the local groundwater;
- Increased noise, dust and/or vibrations as a result of construction activity;
- Increased dust and air emissions from construction traffic;
- Increased human presence and activity as a result of construction activity.

Operational Phase *(Estimated duration: Indefinite)*

- Surface water drainage from the Site of the Proposed Development;
- Foul water from the Proposed Development;

- Increased lighting at the Site and in the vicinity emitted from the Proposed Development; and
- Increased human presence and activity at the Site and in the vicinity as a result of the Proposed Development.

4.2.2 Potential Pathways to European Sites

For the above listed potential sources of effects to have the potential to cause likely significant effects on any European site, a pathway between the source of potential effects (i.e., the Site of the Proposed Development) and the receptor is required. Potential impact pathways are discussed in the following sections in the context of the identified impact sources as identified in section 4.2.1.

4.2.2.1 Direct Pathways

4.2.2.1.1 Hydrological pathways

During Construction phase, there are multiple proposals outlined within the Proposed Development description. These include the demolition of the existing caretaker's unit and the construction of a new unit, the construction of 5 no. houses, the renovation of 4 no. existing houses into 2 larger new houses and the landscaping of the Site.

The above proposals have the potential to produce source pollution within a hydrological source-pathway-receptor model.

Pollution onsite has the potential to arise through various activities. One of the major contributions to potential hydrological pollution onsite will be works carried out when performing groundworks for the new landscaping features as well as the proposed buildings to be constructed onsite.

When machinery moves onsite, in particular on ground which has been stripped of surface soil in preparation for construction/landscaping, it becomes prone to siltation. During a rainfall event, siltation may be washed from Site to the surface water drainage network where its movement may terminate at the **River Barrow and River Nore SAC (002162)** approximately 468m from Site due to the nearest local surface water network outfall being located here.

Concluding the above points, it has been determined that the Proposed Development may have a hydrological pathway to the nearby **River Barrow and River Nore SAC (002162)** during Construction phase.

During Operational Phase, there will be a number of measures installed to inhibit the hydrological surface water run-off from exiting the Site. These include SuDS measures such as lined permeable paving, swales, bio-retention tree pits, lined grasscrete as well as a soakaway located in the centre of the Site above the attenuation tank. The aforementioned attenuation tank will serve to prevent water from exiting the Site by retaining water during an exceptional rainfall event. (According to the EU ruling regarding the interpretation of Article 6(3) of Directive 92/43; "*standardised embedded mitigation (such as the use of Sustainable Drainage Systems (SuDS) in large-scale residential developments), that are incorporated into the design of a proposal or project and which may result in a reduction of effects impacting European sites, but where the primary reason of the embedded mitigation is not to protect a European site, are permitted for consideration during the undertaking of AA*").

A weir will be installed at the outflow of the Site's surface water network to prevent water from exiting the Site. Water will only be able to bypass the weir during an exceptional rainfall event where all other surface water attenuation measures have been overloaded.

In exceptional circumstances, where surface water drains from the Site due to the SuDS features and the attenuation tank being overloaded, this water will be pollution free due to the lack of pollution sources present during the Operational phase of the Proposed Development and will not have a significant on the nearby **River Barrow and River Nore SAC (002162)**.

Any foul water exiting the Site will be treated at the local Athy WwTP and will not have any detrimental effects on the nearby **River Barrow and River Nore SAC (002162)**.

4.2.2.1.2 Hydrogeological pathways

During Construction phase, there are Proposed groundworks to be carried out in order to prepare the substrate for the installation of the new buildings/foundations onsite as well as for the Proposed Site landscaping/installation of the aforementioned SuDS features.

The surface soil buffer will be removed when carrying out various construction tasks onsite including the digging of the swales, the installation of the lined grasscrete on the road, the installation of the permeable paving driveways/pathways, the installation of the attenuation tank and the groundworks involved with the construction of the new buildings onsite. This will leave the subsoil vulnerable to the absorption of pollution due to the lack of a surface buffer.

As mentioned in the Hydrological pathways section above, machinery onsite has the potential to produce siltation which provides a source within the source-pathway-receptor model.

The ground beneath the Site is rated as having a "high" groundwater vulnerability, indicating that the ground beneath the Site is highly prone to the absorption of surface water and pollution sources.

The "*Bagenalstown GWB: Summary of Initial Characterisation – Groundwater flow paths*" is extracted as follows "*There is hydraulic continuity between the Barrow Valley sands and gravels and the underlying aquifer. Under natural non-pumping conditions the flow regime in the aquifer is severely restricted, as there is no natural discharge down-dip. Hence the aquifer will be full of water and circulation will be limited to the near surface zone. Under pumping conditions leakage will occur from the sands and gravels into the aquifer*."

This indicates that there is very limited movement within the local groundwater body and although the groundwater vulnerability at the Site's location is "high", it is unlikely that groundwater pollution will be transferred from Site due to lack of movement within the underlying GWB. Therefore, it has been determined that the Site during Construction phase will have no significant effects on the **River Barrow and River Nore SAC (002162)** by way of a hydrogeological pathway.

During Operational phase, the overlying soil will be reinstated providing a buffer between the surface and the underlying Athy-Bagnelstown groundwater body. Due to this statement and the statements made in the first paragraphs of this section, it has been determined that the Site during Operational phase will not have an effect on the nearby **River Barrow and River Nore SAC (002162)** via a hydrogeological pathway.

There are no other groundwater sensitive Natura 2000 sites within the Bagenalstown GWB which may be affected by the Proposed Development.

4.2.2.1.3 Air and land pathways

During Construction phase of the Proposed Development, a number of sources or air and land pathways have the potential to materialise. Sources of air pollution arising from the Proposed Development include exhaust fumes emanating from the machinery onsite, the dust released by machinery traversing across dry bare ground, as well as earth piles during dry weather spells becoming dusty and being lifted into the atmosphere by winds.

According to the Institute of Air Quality Management (2016) *"95% of dust particles from mineral workings have a relatively high mass and generally deposit within 100m of the point of release, with the remainder being deposited within 200 – 500 m of source*". The nearest European Site, namely the **River Barrow and River Nore SAC (002162)**, is located 0.46km from the Proposed Site at its closest point. Although 460m is within the 200-500m threshold as mentioned in the above statement, it is near the upper limit of this scale. Due to the limited scale of the Proposed Development, the suburban buffer between the Site and the **River Barrow and River Nore SAC (002162)**, as well as the limited sources of exhaust fumes and dust, the Site will not have a significant effect on the **River Barrow and River Nore SAC (002162)** by air pollution arising from Site.

Works being carried out onsite, including groundworks and construction works, are likely to cause an increase in noise and vibration levels due to the increase in anthropogenic impacts and the use of machinery. Construction-related disturbance and displacement of fauna species could potentially occur within the vicinity of the Proposed Development. For mammal species such as Otter (*Lutra lutra*), disturbance effects would not be expected to extend beyond 150m[1]. For birds, disturbance effects would not be expected to extend beyond a distance of *c.* 300m, as noise levels associated with general construction activities would attenuate to close to background levels at that distance[2]. There are no European sites within the disturbance ZoI; the nearest European site to the Proposed Development is approximately 0.46km away. This distance is deemed sufficient to exclude any potential for impacts from increased noise, light and anthropogenic disturbance on QI and SCI species.

During Operational Phase, there are no foreseen air impacts that may occur within the Site due to a soil buffer being reinstated to any ground which may have been bare during works within the Construction phase of the Development.

There will be an increase in lighting and human activity disturbances as a result of the new Proposed Development, however, as stated in the above paragraphs, the new lighting and occurrence of human activity are at a great enough remove from the **River Barrow and River Nore SAC (002162)**, as to not have any significant effects on the Natura 2000 site.

[1] This is consistent with Transport Infrastructure Ireland (TII) guidance (Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes (2006) and Guidelines for the Treatment of Badgers prior to the Construction of National Road Schemes (2005)) documents. This is a precautionary distance, and likely to be moderated by the screening effect provided by surrounding vegetation and buildings, with the actual ZoI of construction related disturbance likely to be much less in reality.

[2] This is based on the relationship between the noise levels generated by general construction traffic/works (BS 5228:2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1 Noise) and the proximity of those noise levels to birds – as assessed in Cutts, N. Phelps, A. & Burdon, D. (2009) *Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance*, and Wright, M., Goodman, P & Cameron, T. (2010) Exploring Behavioural Responses of Shorebirds to Impulsive Noise. *Wildfowl* (2010) 60: 150–167. At 300m, noise levels are below 60dB or, in most cases, are approaching the 50dB threshold below which no disturbance or displacement effects would arise.

4.2.2.2 Indirect Pathways

No indirect pathways (e.g., disruptions to migratory paths) were identified. There are no ex-situ habitats linked with the nearby **River Barrow and River Nore SAC (002162)** located within or adjacent to the boundary of the Proposed Site.

4.2.3 Relevant European sites

A European site will only be at risk from likely significant effects where a S-P-R link exists between the Proposed Development Site and the European site. The European site considered under the S-P-R method is listed in Table 4; only one European site was identified to have a S-P-R link of note to the Proposed Development Site, namely the **River Barrow and River Nore SAC (002162)**. This site is highlighted in green in the below.

TABLE 4. EUROPEAN SITES CONSIDERED WITH THE SOURCE-PATHWAY-RECEPTOR (S-P-R) METHOD TO ESTABLISH NOTABLE LINKS BETWEEN THE SOURCES OF EFFECTS ARISING FROM THE PROPOSED DEVELOPMENT, AND ANY RELEVANT EUROPEAN SITES. THOSE SITES WITH NOTABLE S-P-R LINKS ARE HIGHLIGHTED IN GREEN (IF ANY). QUALIFYING INTERESTS (QIS) TAKEN FROM THE RELEVANT CONSERVATION OBJECTIVES DOCUMENTS (AS REFERENCED) AND/OR THE STANDARD DATA FORMS (EEA, 2023)[3].

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Potential Pathways
Special Areas of Conservation (SAC)		
River Barrow and River Nore SAC (002162) Linear Distance to Proposed Development: approx. 0.46 km E	**Conservation Objectives Version 1 (NPWS, 2011a)** • Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Reefs [1170] • Salicornia and other annuals colonising mud and sand [1310] • Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] • Mediterranean salt meadows (*Juncetalia maritimi*) [1410] • Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] • European dry heaths [4030] • Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] • Petrifying springs with tufa formation (Cratoneurion) [7220] • Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0] • *Vertigo moulinsiana* (Desmoulin's Whorl Snail) [1016] • *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029]	Potential hydrological pathway during Construction phase.

[3] The full species list included in this table is as per the latest updated information as indicated, so either the Conservation Objectives (CO) document for the site, or the latest Standard Data Form (SDF) (EEA, 2023). For SDF updates, CO are not yet available for the newly added species but are assumed, for the purposes of assessment, to follow the same format as for other feature species.

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Potential Pathways
	• *Austropotamobius pallipes* (White-clawed Crayfish) [1092] • *Petromyzon marinus* (Sea Lamprey) [1095] • *Lampetra planeri* (Brook Lamprey) [1096] • *Lampetra fluviatilis* (River Lamprey) [1099] • *Alosa fallax fallax* (Twaite Shad) [1103] • *Salmo salar* (Salmon) [1106] • *Lutra lutra* (Otter) [1355] • *Trichomanes speciosum* (Killarney Fern) [1421] • *Margaritifera durrovensis* (Nore Pearl Mussel) [1990]	
Ballyprior Grassland SAC (002256) Linear Distance to Proposed Development: approx. 9.12 km W	**Conservation Objectives Version 1 (NPWS, 2021)** • Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210]	No pathways between the Proposed Development and this site due to distance.

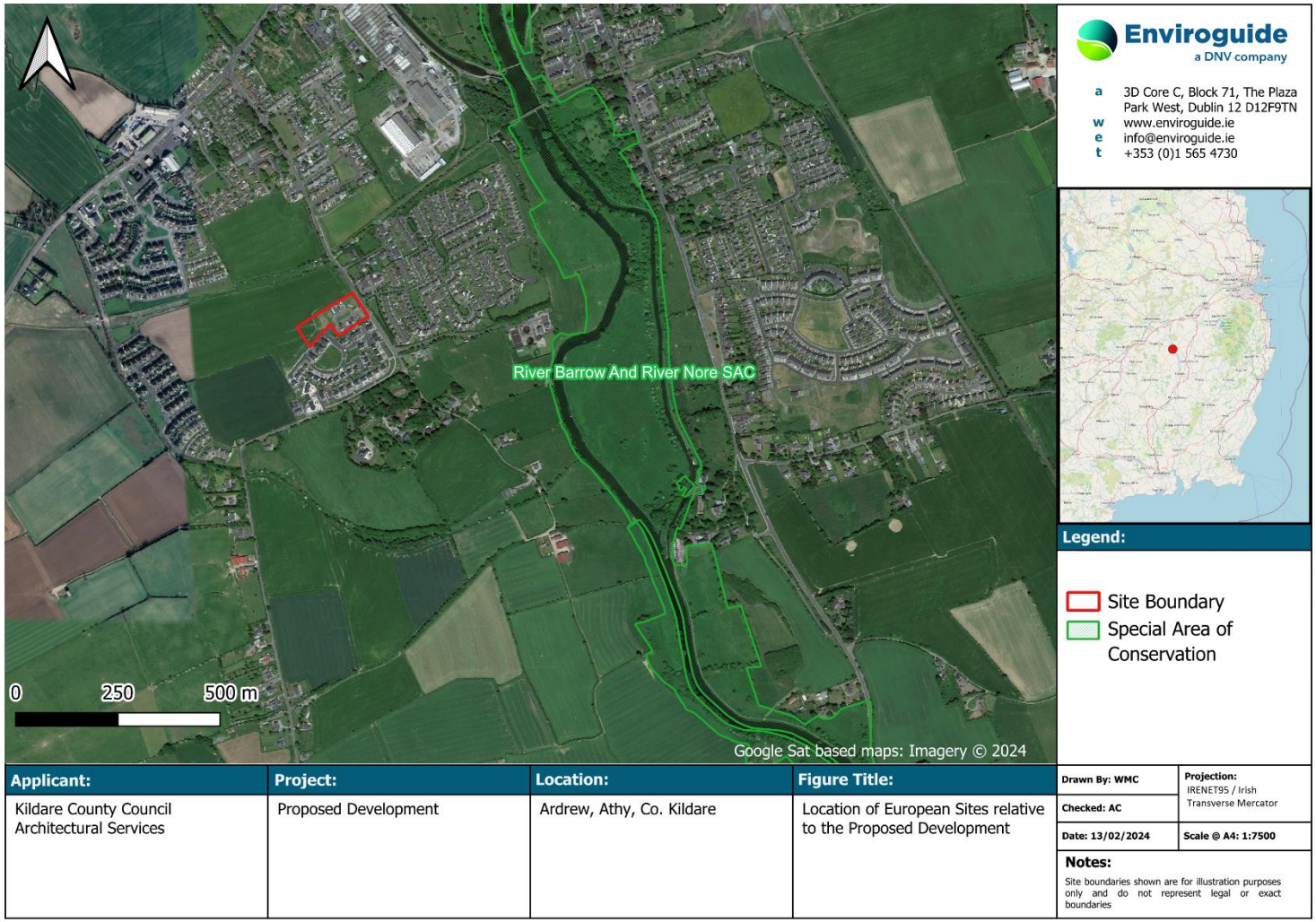

FIGURE 5. LOCATION OF EUROPEAN SITES RELATIVE TO THE PROPOSED DEVELOPMENT.

4.2.3.1 River Barrow and River Nore SAC

The following descriptions of the River Barrow and River Nore SAC are extracted from the Site Synopsis (NPWS 2016a) for the site:

> "*This site consists of the freshwater stretches of the Barrow and Nore River catchments as far upstream as the Slieve Bloom Mountains, and it also includes the tidal elements and estuary as far downstream as Creadun Head in Waterford. The site passes through eight counties – Offaly, Kildare, Laois, Carlow, Kilkenny, Tipperary, Wexford and Waterford. Major towns along the edge of the site include Mountmellick, Portarlington, Monasterevin, Stradbally, Athy, Carlow, Leighlinbridge, Graiguenamanagh, New Ross, Inistioge, Thomastown, Callan, Bennettsbridge, Kilkenny and Durrow. The larger of the many tributaries include the Lerr, Fushoge, Mountain, Aughavaud, Owenass, Boherbaun and Stradbally Rivers of the Barrow, and the Delour, Dinin, Erkina, Owveg, Munster, Arrigle and King's Rivers on the Nore.*
>
> *Both rivers rise in the Old Red Sandstone of the Slieve Bloom Mountains before passing through a band of Carboniferous shales and sandstones. The Nore, for a large part of its course, traverses limestone plains and then Old Red Sandstone for a short stretch below Thomastown. Before joining the Barrow it runs over intrusive rocks poor in silica. The upper reaches of the Barrow also run through limestone. The middle reaches and many of the eastern tributaries, sourced in the Blackstairs Mountains, run through Leinster Granite. The southern end, like the Nore runs over intrusive rocks poor in silica. Waterford Harbour is a deep valley excavated by glacial floodwaters when the sea level was lower than today. The coast shelves quite rapidly along much of the shore."*

The following description of the Site is extracted from the Conservation Objectives Supporting Document (NPWS 2011b) for the site:

> "*Periodic flooding is essential for the maintenance of alluvial woodland. Past drainage of the rivers has led to the decline of alluvial woodland and substitution with species more characteristic of drier sites. This is not seen as a major threat today, although clearance of fallen trees in some sites prevents natural impediments to the flow. Castledurrow wood (site 282) on the Erkina, a tributary of the Nore, has recently been cleared of conifers and drainage channels blocked to restore more natural conditions. A vigorous and very species-rich woodland is developing*."

4.2.3.2 Qualifying Interests and Conservation Objectives

The QIs/SCIs and their respective conservation objectives for each of the relevant European site(s) are detailed in Table 5 below and Figure 6.

TABLE 5. QUALIFYING INTERESTS (QIS) / SPECIAL CONSERVATION INTERESTS (SCIS) AND THEIR CONSERVATION OBJECTIVES FOR THE RELEVANT EUROPEAN SITES. THE CONSERVATION STATUS OF EACH QI / SCI WAS SOURCED FROM THE RELEVANT STANDARD DATA FORM(S) (SOURCE: EEA (2023).

QI / SCI (* = priority habitat)	Conservation Status	Conservation Objective

River Barrow and River Nore SAC (002162)		
Estuaries [1130]	Good	To maintain the favourable conservation condition of this QI in River Barrow and River Nore SAC.
Mudflats and sandflats not covered by seawater at low tide [1140]	Good	
Reefs [1170]	Excellent	N/A
Salicornia and other annuals colonising mud and sand [1310]	Good	To maintain the favourable conservation condition of this QI in River Barrow and River Nore SAC.
Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]	Excellent	To restore the favourable conservation condition of this QI in River Barrow and River Nore SAC.
Mediterranean salt meadows (*Juncetalia maritimi*) [1410]	Excellent	
Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]	Good	To maintain the favourable conservation condition of this QI in River Barrow and River Nore SAC.
European dry heaths [4030]	Good	To maintain the favourable conservation condition of this QI in River Barrow and River Nore SAC.
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]	Good	
Petrifying springs with tufa formation (*Cratoneurion*) [7220]	Good	
Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0]	Good	To restore the favourable conservation condition of this QI in River Barrow and River Nore SAC.
Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0]	Excellent	
Vertigo moulinsiana (Desmoulin's Whorl Snail) [1016]	Good	To maintain the favourable conservation condition of this QI in River Barrow and River Nore SAC.
Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]	Good	Under review
Austropotamobius pallipes (White-clawed Crayfish) [1092]	Excellent	To maintain the favourable conservation condition of this QI in River Barrow and River Nore SAC.
Petromyzon marinus (Sea Lamprey) [1095]	Good	To restore the favourable conservation condition of this QI in River Barrow and River Nore SAC.

Lampetra planeri (Brook Lamprey) [1096]	Good	To restore the favourable conservation condition of this QI in River Barrow and River Nore SAC.
Lampetra fluviatilis (River Lamprey) [1099]	Good	
Alosa fallax fallax (Twaite Shad) [1103]	Good	
Salmo salar (Salmon) [1106]	Good	
Lutra lutra (Otter) [1355]	Excellent	
Trichomanes speciosum (Killarney Fern) [1421]	N/A	To maintain the favourable conservation condition of this QI in River Barrow and River Nore SAC.
Margaritifera durrovensis (Nore Pearl Mussel) [1990]	Poor	

Legend:

Site Boundary
1355 Otter
1092 White-clawed crayfish

EPA River Network (Stream Order)
1
2
3
5

Enviroguide a DNV company	**Applicant:** Kildare County Council Architectural Services	**Figure Title:** River Barrow and River Nore SAC QI Species in the vicinity of the Proposed Site	**Drawn By:** WMC **Checked:** SO'B **Date:** 15/02/2024 **Projection:** IRENET95 / Irish Transverse Mercator
a 3D Core C, Block 71, The Plaza Park West, Dublin 12 D12F9TN w www.enviroguide.ie e info@enviroguide.ie t +353 (0)1 565 4730	**Project:** Proposed Halting Site Development	**Location:** Ardrew, Athy, Co. Kildare	**Scale @ A4:** 1:21726 **Notes:** Site boundaries shown are for illustration purposes only and do not represent legal or exact boundaries.

FIGURE 6. RIVER BARROW AND RIVER NORE SAC SPECIES/HABITATS IN VICINITY OF THE PROPOSED DEVELOPMENT.

4.3 Assessment of Likely Significant Effects

The following sections discuss the potential for likely significant effects on the relevant European site(s), taking into consideration the QIs, SCIs and SSCOs (where available), and assesses whether the Proposed Development has the capacity to adversely affect the integrity of this European site. The potential for significant effects that may arise from the Proposed Development was considered through the use of key indicators as detailed in section 3.6.

4.3.1 Habitat Loss and/or Alteration

There are no foreseen impacts on habitat loss and/or alteration of the nearby **River Barrow and River Nore SAC (002162)** as a result of surface water run-off arising from the Proposed Development. This is due to the lack of nearby habitats which are listed as being threatened by changes in water quality and siltation in particular. The limited scale of the Proposed Development as well as the limited time in which siltation could arise from the Site (during rainfall events only) also act to diminish the effects the Site may have on the nearby **River Barrow and River Nore SAC (002162)**.

4.3.2 Habitat/species Fragmentation

There are no foreseen effects potentially arising from the Proposed Site which may cause habitat/species fragmentation within the nearby **River Barrow and River Nore SAC (002162)**. This is due to the limited size of the Site as well as the limited time in which siltation could arise from the Site (during rainfall events only) which indicate that the site will have a negligible effect on habitat/species fragmentation of the **River Barrow and River Nore SAC (002162)**.

4.3.3 Changes in Population Density

There are no foreseen changes in population density as a result of the Proposed Development. Due to the limited size of the Site and the limited time in which siltation could arise from the Site (during rainfall events only), it has been determined that the Proposed Site will have no significant effects on changes in population density within the nearby **River Barrow and River Nore SAC (002162)**.

4.3.4 Changes in Water Quality and Resource

As outlined in the above Hydrological pathways section, the source-pathway-receptor mechanism has the potential of being completed by surface water run-off on Site during Construction phase exiting the Site and being transferred to the nearby **River Barrow and River Nore SAC (002162)** via the Athy surface water network. This surface water run-off may have the potential to cause changes in water quality and resource of the **River Barrow and River Nore SAC (002162)**, which may in turn have an effect on QI habitats and species associated with this Natura 2000 site, which will be further explained below.

All habitats and species listed as Qis have been examined with the majority being ruled out due to distance, lack of hydrological pathway and not being affected by surface water run-off and siltation in particular. In relation to the freshwater pearl mussel (*Margaritifera margaritifera*), only tributaries of the River Barrow hold this species while

the main channel of the River Barrow does not hold freshwater pearl mussel therefore ruling this species out of potentially being impacted by the Proposed Site (OPW, 2007). Species and habitats listed as QIs of the **River Barrow and River Nore SAC (002162)** which are located in the vicinity of the Proposed Site, and which may be affected by the Proposed Site include:

- **Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation** [3260] – The **River Barrow and River Nore SAC (002162)** is located within the geographical range of this habitat. Threats listed on this habitat feature which are relevant to the Proposed Site include siltation (NPWS, 2019a) due to this habitat preferring a clean gravel substrate to anchor itself. Siltation creates a substrate which allows low-biodiversity stream water crowfoot (*Ranunculus penicillatus*) to establish itself amongst this diverse Ranunculion fluitantis and Callitricho-Batrachion vegetation habitat. Stream water crowfoot generally out competes Ranunculion fluitantis and Callitricho-Batrachion vegetation and eventually turns the habitat into a monocultural low value habitat.
- ***Salmo salar* (Salmon) [1106]** – Salmon are known to travel up the River Barrow in order to spawn. This species is known to occur in the River Barrow in the locality of the Site and at substantial distance upstream of the Site also. Salmon typically spawn in relatively clean, shallow, gravelly and well oxygenated areas of the river bed where they will excavate nests or 'redds' to lay and fertilize their eggs. Salmon are under threat from a number of factors but siltation would be the relative threat faced by salmon in relation to the potential surface water run-off which may be produced by the Proposed Site during Construction phase.
  Siltation has the potential to affect salmon mainly during breeding season (November to March, inclusive) where silt will effectively have the potential to 'smother' eggs, alevins and fry within salmon breeding habitats.

However, due to the limited size of the Proposed Development and the limited timeframe during which silt has the potential to emanate from the Site (during rainfall events only), the Site is unlikely to cause any changes in water quality and resource through siltation on the nearby **River Barrow and River Nore SAC (002162)**.

4.3.5 Disturbance and / or Displacement of Species

The Proposed Site during Construction phase has the potential to emit silty surface water run-off which may be transferred to the nearby **River Barrow and River Nore SAC (002162)** via the local Athy surface water drainage network.

This run-off may have the potential to affect a number of QI species within the **River Barrow and River Nore SAC (002162)**. These are listed below:

- ***Salmo salar* (Salmon) [1106]** – Salmon are known to use the gravelly riffles within the River Barrow in order to spawn. Salmon in adult and juvenile stages may also be present in deeper pools on the river outside of shallow riffle habitats. However, should the Site during Construction phase happen to be emitting silt via surface water run-off, salmon may be displaced to a section of the river with less silt due to disturbance to the species. This may also have an

effect on another QI species listed within the **River Barrow and River Nore SAC (002162)** namely the otter, which will be detailed in the next paragraph as otters are known to use salmon as a source of prey.

- ***Lutra lutra* (Otter) [1355]** – Although siltation does not commonly directly affect otters, they may indirectly be affected by silty run-off from the Proposed Site due to their prey being displaced by surface water pollution and therefore causing disturbance and displacement in otters due to them having to venture to other areas in search for other sources of prey, fish species in particular. As stated in the above paragraph, otters are known to feed on salmon and the displacement of salmon within the River Barrow may have an indirect affect on otters within the locality.

However, due to the limited size of the Proposed Development and the limited timeframe during which silt has the potential to emanate from the Site (during rainfall events only), the Site is unlikely to cause any disturbance and/or displacement of species through siltation on the nearby **River Barrow and River Nore SAC (002162)**.

4.3.6 Potential for In-combination Effects

4.3.6.1 Existing Planning Permissions

A search of planning applications located within a 300m radius of the Site of the Proposed Development was conducted using online planning resources such as the National Planning Application Database (NPAD) (MyPlan.ie) and Kildare County Council Planning Applications online map. Any planning applications listed as granted or decision pending from within the last five years were assessed for their potential to act in-combination with the Proposed Development and cause likely significant effects on the relevant European sites. Long-term developments granted outside of this time period were also considered where applicable.

It is noted that the majority of the few developments within the vicinity of the Site of the Proposed Development are applications granted for residential developments. The larger developments in the vicinity of the Proposed Development are outlined in Table 6:

TABLE 6. GRANTED AND PENDING DEVELOPMENT APPLICATIONS WITHIN 300 M OF THE PROPOSED DEVELOPMENT. LOCATION AND DISTANCE GIVEN IS RELATIVE TO THE PROPOSED DEVELOPMENT.

Planning Reference	Planning Authority	Status	Location
23656	Kildare CoCo	Finalised	Ballyparks, Athy, Co. Kildare (295m North of Proposed Site)
Development Description A Large Scale Residential Development at a site of c.4.21ha. The development lands are located to the north of the Athy Distributor Road (under construction), east of Branswood residential estate and south of Tonlegee Lawns and Holm Croft residential estates and west of Fortbarrington Road. The proposed development will comprise of 132 no. residential units along with a two storey creche (c.188.5 sq.m floor area). The residential units will comprise: 102 no. two storey, semi-detached/terraced houses (2 no. 2-beds, 77 no. 3 beds, 23 no. 4-beds). 30 no. three storey duplexes/apartments (15 no. 1-bed, 15 no. 2-bed) within 2 no. blocks. All residential units will be provided with associated private gardens/balconies/terraces facing to the north/south/east/west. New vehicular (and pedestrian/cyclist) accesses via Fortbarrington Road and Tonlegee Lawns, with additional pedestrian access via Tonlegee Lawns, Branswood and the Athy Distributor Road (under construction) and including associated upgrade works. The application includes an amendment to the Athy Distributor Road permission (Reg. Ref.			

HA09.HA0050) as a result, to facilitate the new pedestrian accesses. All associated site development works, including cycle and car parking spaces, open spaces, landscaping, SuDs features, boundary treatments, waste management areas/bin stores, and services provision (including ESB substations) are also proposed.

Potential for In-combination effects

There is no potential for in-combination effects between the Proposed Site and the site listed above due to the accompanying screening stating that this development will have no significant effects on the nearby **River Barrow and River Nore SAC (002162)**.

4.3.6.2 Relevant Policies and Plans

The local policies and plans detailed in section 2.2 above were reviewed and considered for possible in-combination effects with the Proposed Development. Each of these plans has undergone AA, and where potential for likely significant effects has been identified (e.g., in the case of the Kildare County Development Plan), an NIS has been prepared which identifies appropriate mitigation. As such, it is considered that the plans and policies listed will not result in in-combination effects with the Proposed Development. The Kildare County Development Plan 2023-2029 has directly addressed the protection of European sites and biodiversity through specific objectives. The above listed plans are not being relied upon to rule out potential significant effects on European sites.

TABLE 7. SUMMARY OF IMPACT ASSESSMENT ON EUROPEAN SITES AS A RESULT OF THE PROPOSED DEVELOPMENT.

Site	Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	In-combination effects	Stage 2 AA Required
SAC							
River Barrow and River Nore SAC (002162)	No	No	No	None	None	None	NO

5 APPROPRIATE ASSESSMENT SCREENING CONCLUSION

The Proposed Development at Fortbarrington Road, Ardrew, Athy, Co. Kildare has been assessed taking into account:

- The nature, size and location of the proposed works and possible impacts arising from the construction works.
- The QIs and conservation objectives of the European sites
- The potential for in-combination effects arising from other plans and projects.

In conclusion, upon the examination, analysis and evaluation of the relevant information and applying the precautionary principle, it is concluded by the authors of this report that the possibility **may be excluded** that the Proposed Development will have a significant effect on any of the European sites listed below:

- River Barrow and River Nore SAC (002162)

In carrying out this AA screening, mitigation measures have not been taken into account. Standard best practice construction measures which could have the effect of mitigating any effects on any European Sites have similarly not been taken into account.

On the basis of the screening exercise carried out above, it can be concluded, on the basis of the best scientific knowledge available and objective information, that the possibility of any significant effects on the above listed European sites, whether arising from the project itself or in combination with other plans and projects, can be excluded in light of the above listed European sites' conversation objectives. Thus, there is no requirement to proceed to Stage 2 of the Appropriate Assessment process; and the preparation of a NIS is not required.

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