

Appropriate Assessment Screening Report

Proposed Residential Development Drishane Rd., Millstreet, Co. Cork



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1. Introduction

This report comprises information in support of screening for Appropriate Assessment (AA) in line with the requirements of Article 6[3] of the EU Habitats Directive (EC 92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora; the Planning and Development (Amendment) Act 2010; and the European Union (Birds and Natural Habitats) Regulations 2011 as amended.

The proposed works by Cork County Council involve the development of a site to the south of Millstreet town centre, for residential use which will include the building of 26 houses. The site will be accessed via Drishane Road, which also serves the existing Old Coach development.

This screening exercise aims to determine whether the proposed works have the potential to significantly impact upon the conservation objectives and overall integrity of any Natura 2000 sites. This assessment is based upon a desk study and field work carried out by suitably qualified ecologists. Also included is a general assessment of the ecological status of the site and the potential impacts of the proposed works on the ecology of the surrounding area, including Designated Sites.

The Competent Authority is obliged to examine the likely significant effects individually or in combination, of the proposed development on European Designated Sites in light of their specific qualifying interests and conservation objectives. If AA screening determines that there is likely to be significant effects on one of these sites, then full AA must be carried out for the proposed works, including the compilation of a Natura Impact Statement to inform the decision making.



2. Regulations

The methodology for this screening statement is set out in a document prepared for the Environment DG of the European Commission entitled 'Assessment of plans and projects significantly affecting Natura2000 sites: Methodological guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC' (European Commission, 2019). This report and any contributory fieldwork were carried out in accordance with guidelines given by the Department of Environment, Heritage and Local Government (2009, amended 2010).

The process is given in Articles 6(3) and 6(4) of the Habitats Directive and is commonly referred to as 'Appropriate Assessments' (which in fact refers to Stage 2 in the sequence under the Habitats Directive Article 6 assessment). Article 6 of the Habitats Directive sets out provisions which govern the conservation and management of Natura 2000 sites. Article 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment:

"Any plan or project not directly connected with or necessary to the management of the (Natura2000) site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implication 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."

Article 6(4) of the same directive states:

"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of the Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

It is the responsibility of the proponent of the plan or project to provide the relevant information (ecological surveys, research, analysis etc.) for submission to the 'competent national authority'. Having satisfied itself that the information is complete and objective, the competent authority will use this information to screen the project, i.e. to determine if an AA is required and to carry out the AA, if one is deemed necessary. The competent authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned. The appropriate assessment process has four stages. Each stage determines whether a further stage in the process is required. If, for example, the conclusions at the end of Stage One are that there will be no significant impacts on the Natura 2000 site, there is no requirement to proceed further. The four stages are:



- 1. Screening to determine if an appropriate assessment is required.
- 2. Appropriate assessment.
- 3. Consideration of alternative solutions.
- 4. Imperative Reasons of Overriding Public Interest/Derogation.

Stage 1: Screening for AA

The aim of screening is to assess firstly if the plan or project is directly connected with or necessary to the management of Designated Site(s); or in view of best scientific knowledge, if the plan or project, individually or in combination with other plans or projects, is likely to have a significant effect on a Designated Site. This is done by examining the proposed plan or project and the conservation objectives of any Designated Sites that might potentially be affected. If screening determines that there is potential for significant effects or there is uncertainty regarding the significance of effects, then it will be recommended that the plan or project is brought forward to the next stage of the AA process.

Stage 2: Appropriate Assessment

The aim of stage 2 of the AA process is to identify any adverse impacts that the plan or project might have on the integrity of relevant Designated Sites. As part of the assessment, a key consideration is 'in combination' effects with other plans or projects. Where adverse impacts are identified, mitigation measures can be proposed that would avoid, reduce or remedy any such negative impacts and the plan or project should then be amended accordingly, thereby avoiding the need to progress to Stage 3.

Stage 3: Assessment of Alternative Solutions

If it is not possible during Stage 2 of the AA process to conclude that there will be no adverse effects on site integrity, Stage 3 of the process must be undertaken which is to objectively assess whether alternative solutions exist by which the objectives of the plan or project can be achieved. Explicitly, this means alternative solutions that do not have adverse impacts on the integrity of a Designated Site. It should also be noted that EU guidance on this stage of the process states that, 'other assessment criteria, such as economic criteria, cannot be seen as overruling ecological criteria' (EC, 2002). In other words, if alternative solutions exist that do not have adverse impacts on Designated Sites; they should be adopted regardless of economic considerations. This stage of the AA process should result in the identification of the least damaging options for the plan or project.

Stage 4: Imperative Reasons of Overriding Public Interest (IROPI)/Derogation

This stage of the AA process is undertaken when it has been determined that a plan or project will have adverse effects on the integrity of a Designated Site, but that no alternatives exist. At this stage of the AA process, it is the characteristics of the plan or project itself that will determine whether or not the competent authority can allow it to progress. This is the determination of 'overriding public interest'. It is important to note that in the case of Designated Sites that include in their qualifying features 'priority' habitats or species, as defined in Annex I and II of the Directive, the demonstration of 'overriding public interest' is not sufficient and it must be demonstrated that the plan or project is necessary for 'human health or safety considerations'. Where plans or projects meet these criteria, they can be allowed, provided adequate compensatory measures are proposed. Stage 4 of the process defines and describes these compensation measures.



Appropriate Assessment Screening Report

This report provides stage one: screening for appropriate assessment. It aims to establish whether a plan or project is likely to have any significant effects on any Natura 2000 sites. The study is based on a preliminary impact assessment using both publicly available data and data collected during site visits and ecological surveys. This is followed by a determination of whether there is a risk that the effects identified could significantly impact any Natura 2000 sites, and if so an AA is required. The need to apply the precautionary principle in making any key decisions in relation to the tests of AA has been confirmed by European Court of Justice case law. Therefore, where significant effects are likely, possible or uncertain at screening stage, AA will be required.



2.1 Reference Documents

Name / Number	Description
Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities	National guidance on Appropriate Assessment 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	Circulars issued by the Department of Environment, Heritage and Local Government with guidance relating to Appropriate Assessment. Circular NPWS 1/10 & PSSP 2/10 (2010).
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 guidance within this document provides a non-mandatory methodology for carrying out assessments required under Article 6(3) and (4) of the Habitats Directive European Commission Environment Directorate-General, (2001 and updates April 2015 and September 2021).
Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC	Publication to the Member States with an interpretation of certain concepts in Article 6 of the Habitats Directive. EC Environment Directorate-General (2018).
Communication from the Commission on the precautionary principle.	Publication relating to the use of the precautionary principle. European Commission (2000).
Appropriate Assessment Screening for Development Management. Practice Note PN01.	Publication from the Office of the Planning Regulator relating to screening for Appropriate Assessment. OPR (March 2021).
Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities	National guidance on Appropriate Assessment 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	Circulars issued by the Department of Environment, Heritage and Local Government with guidance relating to Appropriate Assessment. Circular NPWS 1/10 & PSSP 2/10 (2010).
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 guidance within this document provides a non-mandatory methodology for carrying out assessments required under Article 6(3) and (4) of the Habitats Directive. European Commission Environment Directorate-General, (2001 and updates April 2015 and September 2021).
Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC Communication from the	Publication to the Member States with an interpretation of certain concepts in Article 6 of the Habitats Directive. EC Environment Directorate-General (2018).
Communication from the Commission on the precautionary principle.	Publication relating to the use of the precautionary principle. European Commission (2000).



3. Methodology

3.1 Desk Study

A desktop study was carried out as part of this screening process. This included a review of available literature on the site and its immediate environs. Sources of information included the National Parks and Wildlife Service databases on protected sites and species data, and from the Environmental Protection Agency on watercourses and groundwater.

3.2 Data Used to Carry Out the Assessment

The following sources of data were employed:

- Environmental Protection Agency (EPA) Appropriate Assessment Tool.
- EPA Maps (to identify watercourses, hydrology, and Natura 2000 site boundaries).
- NPWS protected species database and online mapping.
- National Biodiversity Data Centre.
- Inland Fisheries Ireland.
- An Bord Pleanála's online database.
- Geological survey Ireland's online database.

3.3 SPR Model

This assessment was carried out with regard to the source-pathway-receptor (SPR) approach, a standard tool in environmental assessment. The SPR concept in ecological impact assessment relates to the idea that for the risk of an impact to occur, a source is needed (a development site); an environmental receptor is present (a lake); and finally, there must be a pathway between the source and the receptor (a watercourse linking the development site to the lake). Even though there might be a risk of an impact occurring, that does not necessarily mean that it will occur, and even if it does occur, it may not be significant. Identification of a risk means that there is a possibility of ecological or environmental damage occurring, with the level and significance of the impact depending upon the nature and exposure to the risk and the characteristics of the receptor.

In this instance, the most relevant receptors are any relevant Natura 2000 sites with connectivity of the proposed works. These were considered during the desktop study stage of this screening assessment in order to assess the potential for significant effects upon their Qualifying Interests (QIs), Sites of Community Importance (SCIs) and Conservation Objectives (COs). This stage of the process is used to determine whether any of the Natura sites may be 'screened out'. That is, that they can be regarded as not being relevant to the process, having no potential to be significantly affected or impacted upon.



4. Screening of Designated Sites

4.1 Site Location

This project involves the construction of a residential estate at Páirc Chatháin, Drishane Road, Millstreet, Co. Cork. Proposed works will take place at grid reference 52.056317, -9.054638.

The closest European site is the Blackwater River (Cork/Waterford) SAC) which is situated approx. 560m to the west of the proposed site for development. The Millstreet Stream is located 220m to the east of the site. The Blackwater River (Cork/Waterford) SAC) is located approx. 2.5km downstream. The Mullaghanish to Musheramore Mountains SPA is located 4.8km to the south. The Killarney National Park, Macgillycuddys Reeks and Caragh River Catchment SAC is located to the south-west. However, due to large distance (5.2km) and lack of connectivity, this Natura 2000 site is not considered any further in this screening report.

The Blackwater River lies within the Blackwater (Munster)_120 WFD River Sub Basin, Blackwater (Munster_SC_090 WFD Sub Catchment, Blackwater (Munster) WFD Catchment and Blackwater (Munster) (18) Hydrometric Area.



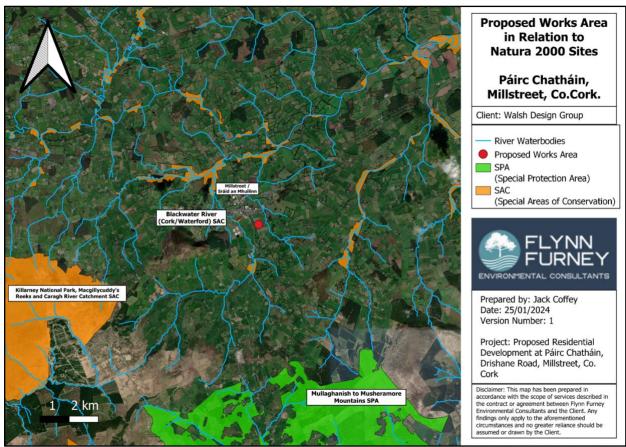


Figure 1: Proposed works area in relation to nearby designated sites.



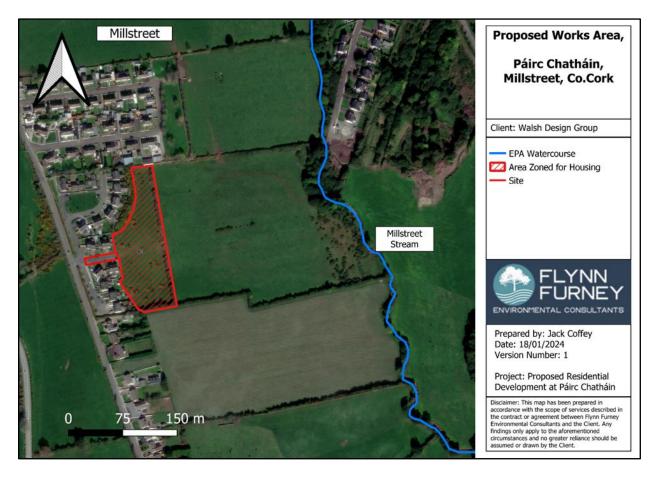


Figure 2: Proposed works area. Note the hedge on the eastern boundary can screen proposed lighting to protect the Millstreet stream habitat



4.2 Description of Works

The proposed development on the site will consist of 26 dwelling units including 8 No. 1 bedroom apartments, 16 No. 2 bedroom townhouses and 2 No. 3 bedroom semi-detached units as well as associated green areas, estate roads, boundary treatments, services and all other infrastructure required to develop a housing project.

Earthworks will consist of moving fill from the higher ground at the east to the lower ground to the west. Material will be excavated by 360° excavators and transported to the deposition area by articulated dumpers. The fill will then be placed by dozers and compacted using vibratory rollers. A testing regime will be implemented to ensure the acceptability of the fill and that the degree of compaction is sufficient. Fill will be brought to the required level across the site to allow construction of roads and foundations. An overall earthworks balance has been targeted i.e., no imported fill will be required for the bulk earthworks and no soil will be removed from the site.

Estate roads will be constructed to provide circulation routes around the development. Roads will consist of bituminous surfacing on granular capping and subbase layers. Concrete footpaths will be provided. Services such as foul and surface water drainage, water, electricity, public lighting, and telecommunications will be run under or next to the roads.

Surface water run-off during the operational phase will be allowed to percolate into the ground via infiltration trenches, 1 no. retention basin and back garden raingardens. Site investigations for infiltration rates have confirmed this proposed system to be adequate. A hydrocarbon interceptor will also be included within the drainage system.



4.3 Receiving Environment

4.3.1 Habitat Overview

The proposed works are due to occur in a green field site which is classified as improved agricultural grassland (**GA1**). This is dominated by perennial ryegrass (*Lolium perenne*), dandelion (*Taraxacum officinale*), ribwort plantain (*Plantago lanceolata*) and creeping buttercup (*Ranunculus repens*). Other species present include annual bluegrass (*Poa annua*), tansy ragwort (*Senecio jacobaea*), mouse eared chickweed (*Cerastium fontanum*), sorrel (*Rumex acetosa*) and bull thistle (*Cirsium vulgare*). Other dominant habitats within the proposed working environs include:

- Hedgerow (WL1) which is dominated by hawthorn (*Crataegus monogyna*). Holly (*Ilex aquifolium*), sycamore (*Acer pseudoplatanus*), furze (*Ulex europaeus*), hazel (*Corylus avellana*), bramble (*Rubus fructicosus*) and bracken (*Pteridium aquilinum*) are also present.
- Buildings & artificial surfaces (**BL3**) The access road to the site is within a residential housing area.
- Scrub (**WS1**), composed of furze (*Ulex europaeus*), bramble (*Rubus fructicosus*) and nettle (*Urtica dioica*), is present within the site proposed for development. It is located in small patches within the field and also borders the north-western area, adjacent to an existing residential housing estate.
- Riparian Woodland (**WN5**) is present to the east of the site, along the Millstreet Stream. It contains hazel (*Corylus avellana*), oak (*Quercus spp.*), alder (*Alnus glutinosa*), ash (*Fraxinus excelsior*) and beech (*Fagus sylvatica*).
- Eroding/upland river (**FW1**) Habitat features, such as boulders and tree roots, occur within the Millstreet Stream, indicating suitable habitat is present for crayfish. A trout (*Salmo trutta*) redd was confirmed.



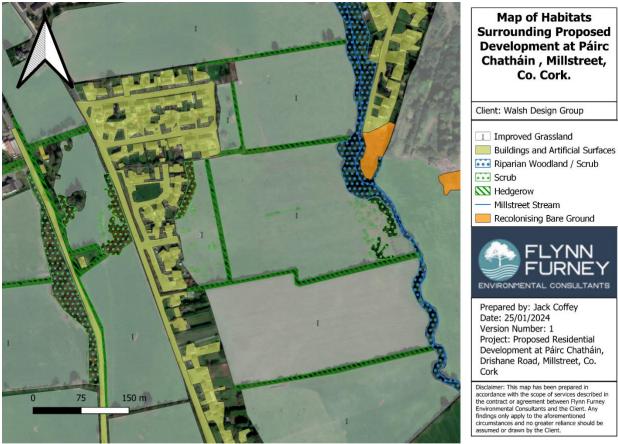


Figure 3: Habitat Map of the Area Surrounding the Proposed Development Site. Note that the woodland at the top right of the image has since been felled and converted to improved grassland, indicated by the grey colour.

4.3.2 Surface Water

Watercourses such as rivers, stream or drains were not recorded within the proposed works area.

The Millstreet Stream is located 220m to the east of the site zoned for housing development. The Blackwater River (Cork/Waterford) SAC) is located approx. 2.5km downstream. The main channel Blackwater River is located 3km downstream.

Surface water run-off during the operational phase will be allowed to percolate into the ground via infiltration trenches, 1 no. retention basin and back garden raingardens. Site investigations for infiltration rates have confirmed this proposed system to be adequate. A hydrocarbon interceptor will also be included within the drainage system.

The site is c.20m above the water level of the Millstreet Stream and is not subject to flooding.



4.3.3 Breeding Birds

All species of wild birds that occur naturally in Ireland are fully protected at all times by the Wildlife Act and relevant amending legislation. Similarly, all birds naturally occurring in the wild state are afforded a measure of protection by the EU Birds Directive, but derogations may reduce protection for specific reasons. As such, any vegetation clearance must be carried out outside of the bird nesting season (March 1st to August 31st).

Nesting birds were not recorded during the survey. However, nesting habitat is present within vegetation due to be cleared for the development. Vegetation which will be cleared includes furze and bramble scrub only. <u>Hedgerows are to remain</u>. Bird species recorded onsite included wren (*Troglodytes troglodytes*), rook (*Corvus frugilegus*) and starling (*Sturnus vulgaris*). Bird species are not a Qualifying Interest (QI) of the Blackwater River (Cork/Waterford) SAC. The closest SPA is the Mullaghanish to Musheramore Mountains SPA, which is 4.8km away from the proposed site of works. Hen harrier (*Circus cyaneus*) is a QI species for this Natura 2000 site. Vegetation which may require removal did not present any suitable nesting habitat for this species.

4.3.4 Amphibians

An amphibian survey was not carried out as part of this project, due to the lack of suitable habitat for spawning common frog (*Rana temporaria*) or smooth newt (*Lissotriton vulgaris*) within the proposed works area.

4.3.5 Mammals

Badger (*Meles meles*) droppings were recorded within the broadleaved woodland next to the Millstreet Stream. Rabbit (*Oryctolagus cuniculus*) burrows were also present within hedgerows and the woodland.

An otter (*Lutra lutra*) survey was conducted along the stream for a distance of 150m either side of the proposed works area. No signs of otter activity were recorded. It is considered that this section of stream may only be occasionally used by foraging otter, due to its size and likely low prey biomass.

No other signs of mammal activity, such as holes, holts, burrows, setts or spraint were found during the course of the survey conducted.

4.3.6 Aquatic Species

Fisheries potential of the Millstreet Stream was assessed. The section of stream adjacent to the proposed works area is of a medium gradient, with some limited salmonid spawning potential. This was confirmed by the presence of 1 no. trout (*Salmo trutta*) redd.

Downstream of the works area, a higher gradient is present with cascade features formed by bedrock and boulders present. This habitat is most suited to the juvenile stage of salmonids and



is a good nursery, with spawning substrates mostly absent. There is low potential for the presence of salmon (*Salmo salar*) due to its size and geographic location. A salmon fry survey conducted by Inland Fisheries Ireland (Holmes et al., 2018) in 2016, recorded no salmon fry on this stream in Millstreet town, downstream of the proposed development.

It is considered that there is low potential for lamprey (*Lampetra spp.*) due to the absence of depositing substrates. Juvenile sea lamprey (*Petromyzon marinus*), juvenile river lamprey (*Lampetra fluviatilis*) and brook lamprey (Lampetra planeri) have been recorded downstream in the Finnow River (King & Linnane, 2004), which the Millstreet Stream flows into, approx. 3km downstream of the site proposed for development.

Due to the relatively high gradient, cascade type habitat and lack of salmonid spawning areas, it is considered this stream is unsuitable for freshwater pearl mussel (*Margaritifera margaritifera*). According to a map provided with the conservation objectives of this Natura 2000 site, mussels are present within the main channel River Blackwater 3.6km downstream. The EPA do not monitor the Millstreet Stream and their closest site is downstream of its confluence with the Finnow River. In 2020, this site attained a Q4 score, which is satisfactory according to the Water Framework Directive.

No records are available to indicate the presence of white-clawed crayfish (*Austropotamobius pallipes*) in the Millstreet Stream. Geology is dominated by sandstone in this area. However, limestone is present in the lower section of this stream at its confluence with the Finnow River and crayfish are present within the Finnow River at this location (Gammell et al., 2017). Habitat features, such as boulders and tree roots, occur within the Millstreet Stream, indicating suitable habitat is present for crayfish.

Water-crowfoot (*Ranunculus spp.*), an aquatic plant, is absent from this section of stream. This is likely due to its relatively high average gradient, stream configuration and lack of light penetration due to shading from woodland.

4.3.7 Invasive Plant Species

No invasive alien plant species were recorded within the survey area.



4.4 Proposed Works

The proposed development on the site will consist of 26 dwelling units including 8 No. 1 Bed Apartments, 16 No. 2 Bedroom townhouses and 2 No. 3 Bed semi-detached units as well as associated green areas, estate roads, boundary treatments, services and all other infrastructure required to develop a housing project.

4.5 Risks to the Environment

The primary risk posed from the project relates to surface water discharge from the site during the construction phase that may impact on the water quality of the receiving environment, leading to likely significant effects (LSE) to any Qualifying Interests (QIs) of adjacent Natura 2000 sites.

This effect will be negated due to characteristics of the works area including significant distance between the works site and surface water bodies, as well as the lack of any direct hydrological connectivity, since watercourses are absent from the proposed site. From an operational point of view, foul and storm water systems have been reviewed. It is considered these will also not lead to any LSE to QIs of the Blackwater River (Cork/Waterford) SAC. Rationale is detailed in Table 1 below.

A construction environmental management plan (CEMP) will be prepared for this project. The purpose of this CEMP is to outline best practice construction methods which are to be applied onsite during the construction of this dwelling house and all associated works. These are not required to avoid or reduce effects on the Blackwater River (Cork/Waterford) SAC and are not relied upon to reach a conclusion of no LSE on the Blackwater River (Cork/Waterford) SAC.

Taking the operational phase into consideration, an Annual Environmental Report for the Millstreet wastewater treatment plant (WWTP) was reviewed. The most recent report available is for 2022 and was signed off in May 2023. It has a plant capacity PE of 3220 and the treatment type is 3P – Tertiary P removal. The WWTP is compliant with Emission Limit Values (ELV's) set in the Wastewater Discharge License. There are two Ambient Monitoring Points, upstream and downstream of the WWTP discharge point. Results show discharge form the WWTP does not have an observable impact on water quality or the Water Framework Directive Status.



4.6 Nearby Designated Sites

The closest European site is the Blackwater River (Cork/Waterford) SAC) which is situated approx. 560m to the west of the proposed site for development. The Millstreet Stream is located 220m to the east of the site and the Blackwater River (Cork/Waterford) SAC) is located approx. 2.5km downstream, to the north. The Mullaghanish to Musheramore Mountains SPA is located 4.8km to the south. For the purposes of this report, only the Blackwater River (Cork/Waterford) SAC will be considered.

Table 1: Designated Sites near the proposed works.

Conservation Objectives Blackwater River (Cork/Waterford) SAC Site code 002170	To maintain the favourable conservation condition of the qualifying interest habitats in the Blackwater River (Cork/Waterford) SAC, as measured by the following targets		
Qualifying Interest	Conservation Objective Targets	Discussion of Source-Pathway-Receptor Link	Mitigation measures required?
Estuaries [1130]	 The permanent habitat area is stable or increasing, subject to natural processes. Maintain the extent of the <i>Mytilus edulis</i>-dominated community, subject to natural processes. Conserve the high quality of the <i>Mytilus edulis</i>-dominated community, subject to natural processes. Conserve the following community types in a natural condition: Intertidal estuarine sandy mud community complex; Subtidal estuarine fine sand with <i>Bathyporeia</i> spp. community complex; Sand and mixed sediment with polychaetes and crustaceans community complex; Coarse sediment community complex. 	 Proposed works are due to take place in a green field site outside of the Natura 2000 site. This is a marine habitat with no significant connectivity to the works area as instream works are not proposed. 	No
Mudflats & Sandflats not covered by seawater at low tide [1140]	 The permanent habitat area is stable or increasing, subject to natural processes. Maintain the extent of the <i>Zostera-</i> and <i>Mytilus edulis-</i> dominated communities, subject to natural processes. 	 Proposed works are due to take place in a green field site outside of the Natura 2000 site. This is a marine habitat with no significant connectivity to the works area as instream works are 	No



	 Conserve the high quality of the <i>Zostera</i>-dominated community, subject to natural processes. Conserve the high quality of the <i>Mytilus edulis</i>-dominated community, subject to natural processes. The following community types should be conserved in a natural condition: Intertidal estuarine sandy mud community complex and Sand and mixed sediment with polychaetes and crustaceans community complex. 	not proposed.	
Perennial vegetation of stony banks [1220]	 Area stable or increasing, subject to natural processes, including erosion and succession. No decline, or change in habitat distribution, subject to natural processes. Maintain the natural circulation of sediment and organic matter, without any physical obstructions. Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession. Maintain the typical vegetated shingle flora including the range of subcommunities within the different zones. Negative indicator species (including non-natives) to represent less than 5% cover. 	 Proposed works are due to take place in a green field site outside of the Natura 2000 site. This is a marine habitat with no significant connectivity to the works area as instream works are not proposed. 	No
Salicornia & other annuals [1310]	 Area stable or increasing, subject to natural processes, including erosion and succession. No decline, or change in habitat distribution, subject to natural processes. Maintain natural circulation of sediments and organic matter, without any physical obstructions. Maintain creek and pan structure, subject to natural processes, including erosion and succession. Maintain natural tidal regime. Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion. Maintain structural variation within sward. Maintain more than 90% of area outside creeks vegetated. Maintain the presence of species-poor communities with typical species listed in saltmarsh Monitoring Project (McCorry and Ryle, 2009). No significant expansion of common cordgrass (<i>Spartina anglica</i>), with an annual spread of less than 1%. 	 Proposed works are due to take place in a green field site outside of the Natura 2000 site. This is a marine habitat with no significant connectivity to the works area as instream works are not proposed. 	No
Atlantic Salt Meadows [1330]	• Maintain range of sub- communities with typical species listed in Saltmarsh Monitoring Project (McCorry and Ryle, 2009).	• Proposed works are due to take place in a green field site outside of the Natura 2000 site.	No



	• No significant expansion of common cordgrass (<i>Spartina anglica</i>), with an annual spread of less than 1%.	 This is a marine habitat with no significant connectivity to the works area as instream works are not proposed.
Mediterranean salt meadows [1410]	 Area stable or increasing, subject to natural processes, including erosion and succession. No decline, or change in habitat distribution, subject to natural processes. See map 6 for known distribution. Maintain natural circulation of sediments and organic matter, without any physical obstructions. Maintain creek and pan structure, subject to natural processes, including erosion and succession. Maintain natural tidal regime. Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession. Maintain structural variation within sward. Maintain more than 90% of area outside creeks vegetated. Maintain range of sub- communities with typical species listed in Saltmarsh Monitoring Project (McCorry and Ryle, 2009). No significant expansion of common cordgrass (<i>Sparting anglica</i>), with an annual spread of less than 1%. 	 Proposed works are due to take place in a green field site outside of the Natura 2000 site. This is a marine habitat with no significant connectivity to the works area as instream works are not proposed.
Killarney fern [1421]	 No decline. Two locations known within the SAC. Maintain size and extent of existing colonies, including sporophyte frond counts and number of gametophyte patches. No loss of suitable habitat, such as shaded rock crevices, caves or gullies in, or near to, known colonies. No loss of woodland canopy at or near to known locations. Maintain hydrological conditions at the locations so that all colonies are in dripping or damp seeping habitats, and water is visible at all locations. No increase in humidity. Presence of dessicated sporophyte fronds or gametophyte mats indicates conditions are unsuitable. No changes in light levels due to anthropogenic impacts. 	 Proposed works are due to take place in a green field site outside of the Natura 2000 site. This species was not recorded onsite and has not been recorded within the area previously. No works are proposed which may lead to the spread of invasive species into the Natura 2000 site as a result of this project.



Old sessile oak woods with <i>llex</i> and <i>Blechnum</i> in Britain and Ireland [91A0]Habitat area stable or increasing, subject to natural processes, at least 263.7ha for sub-sites surveyed.Proposed works are due to take place in a green field site outside of the Natura 2000 site.NoBritain and Ireland [91A0]No decline in habitat distribution.This habitat is not present within the site proposedNo	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho- Batrachion</i> vegetation [3260]	 No decline in habitat distribution, subject to natural processes. Habitat area stable or increasing, subject to natural processes. Maintain appropriate hydrological regimes. Maintain natural tidal regime. The substratum should be dominated by the particle size ranges, appropriate to the habitat sub-type (typically sands, gravels and cobbles). The concentration of nutrients in the water column should be sufficiently low to prevent changes in species composition or habitat condition. Typical species of the relevant habitat sub-type should be present and in good condition. The area of active floodplain at and upstream of the habitat should be maintained. 	Millstreet Stream and is not subject to flooding.	



	 Woodland size stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size. Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi- mature trees and shrubs; and well-developed herb layer. Maintain diversity and extent of community types. Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy. At least 30m3/ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter. No decline in veteran trees No decline in native tree cover. Native tree cover not less than 95%. A variety of typical native species present, depending on woodland type, including sessile oak (Quercus petraea) and birch (Betula pubescens). Negative indicator species, particularly non-native invasive species, absent or under control. 	for works.
*Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno- Padion, Alnion incanae, Salicion albae) [91E0]	 Habitat area stable or increasing, subject to natural processes, at least 19.2ha for sites surveyed. No decline in habitat distribution. Woodland size stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size Cover and height have diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi- mature trees and shrubs; and well-developed herb layer. Maintain diversity and extent of community types. Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy. Appropriate hydrological regime necessary for maintenance of alluvial vegetation. 	 Proposed works are due to take place in a green field site outside of the Natura 2000 site. This habitat is not present within the site proposed for works.



	 At least 30m3/ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter (greater than 20cm diameter in the case of alder). No decline in veteran trees. No decline in indicators of local distinctiveness. No decline in native tree composition. Native tree cover not less than 95%. A variety of typical native species present, depending on woodland type, including alder (Alnus glutinosa), willows (Salix spp) and, locally, oak (Quercus robur) and ash (Fraxinus excelsior). Negative indicator species, particularly non-native invasive species, absent or under control. 		
* <i>Taxus baccata</i> woods of Britain and Ireland [91J0]	• The status of <i>Taxus baccata</i> woods of Britain and Ireland as a qualifying Annex I habitat for the Blackwater River (Cork/Waterford) SAC is currently under review. The outcome of this review will determine whether a site-specific conservation objective is set for this habitat.	 Proposed works are due to take place in a green field site outside of the Natura 2000 site. This habitat is not present within the site proposed for works. 	No
Otter Lutra lutra [1355]	 No significant decline in distribution. No significant decline in terrestrial habitat. Area mapped and calculated as 103ha above high water mark (HWM); 1165.7ha along river banks/ around ponds. No significant decline in marine habitat. Area mapped and calculated as 647.2ha. No significant decline in freshwater (river) habitat. Length mapped and calculated as 599.54km. No significant decline in freshwater (lake) habitat. Area mapped and calculated as 25.06ha. No significant decline in couching sites and holts. No significant decline in fish biomass available. No significant increase in barriers to connectivity. 	 Proposed works are due to take place in a green field site outside of the Natura 2000 site. There is no direct hydrological connectivity as watercourses are absent within the site. The red line boundary, within which works will take place, is set back 220m from the Millstreet Stream. The proposed site is 20m above the water level of the Millstreet Stream and is not subject to flooding. The site proposed for development slopes downwards from an east to west direction, away from the Millstreet Stream which is situated 220m to the east. Irish Water (Uisce Eireann) have indicated 45m of water network upgrades will be required to provide additional network capacity and 105m of wastewater network upgrades will be required to provide 	No



		additional network capacity. These works are
		required on the local road network immediately
		adjacent to the site proposed for development.
		• Signs of otter were not recorded along the Millstreet
		Stream a this location.
		• It is considered that proposed lighting will be
		screened by retaining the existing hedgerow on the
		eastern side of the site proposed for the housing
		development. Existing woodland along the Millstreet
		Stream, along with an elevation differentiation of
		20m, indicates there will likely be no effects on this
		stream from proposed lighting for this development.
		• Surface water run-off during the operational phase
		will be allowed to percolate into the ground via
		infiltration trenches, 1 no. retention basin and back
		garden raingardens. Site investigations for infiltration
		rates have confirmed this proposed system to be
		adequate. A hydrocarbon interceptor will also be
		included within the drainage system.
Freshwater pearl mussel	• Maintain distribution at 161km.	Proposed works are due to take place in a green field No
Margaritifera	• Restore to 35,000 adult mussels.	site outside of the Natura 2000 site.
margaritifera	• Restore recruitment to least 20% of population no more than 65mm in	• There is no direct hydrological connectivity as
	length; and at least 5% of population no more than 30mm in length.	watercourses are absent within the site.
[1029]	• No more than 5% decline from previous number of live adults counted;	• The red line boundary, within which works will take
	dead shells less than 1% of the adult population and scattered in	place, is set back 220m from the Millstreet Stream.
	distribution.	• The proposed site is 20m above the water level of the
	• Restore suitable habitat in more than 35km and any additional stretches	Millstreet Stream and is not subject to flooding.
	necessary for salmonid spawning.	• The site proposed for development slopes
	• Restore water quality- macroinvertebrates: EQR greater than 0.90;	downwards from an east to west direction, away
	phytobenthos: EQR greater than 0.93.	from the Millstreet Stream which is situated 220m to
	• Restore substratum quality- filamentous algae: absent or trace (<5%);	the east.
	macrophytes: absent or trace (<5%).	• Irish Water (Uisce Eireann) have indicated 45m of



	 Restore substratum quality- stable cobble and gravel substrate with very little fine material; no artificially elevated levels of fine sediment. Restore oxygen availability to no more than 20% decline from water column to 5cm depth in substrate. Restore appropriate hydrological regimes. Maintain sufficient juvenile salmonids to host glochidial larvae. 	 water network upgrades will be required to provide additional network capacity and 105m of wastewater network upgrades will be required to provide additional network capacity. These works are required on the local road network immediately adjacent to the site proposed for development. Surface water run-off during the operational phase will be allowed to percolate into the ground via infiltration trenches, 1 no. retention basin and back garden raingardens. Site investigations for infiltration rates have confirmed this proposed system to be adequate. A hydrocarbon interceptor will also be included within the drainage system. No works are proposed which may lead to the spread of invasive species into the Natura 2000 site as a result of this project. 	
White-clawed Crayfish <i>Austropotamobius</i> <i>pallipes</i> [1092]	 No reduction in distribution from baseline. Juveniles and/or females with eggs in at least 50% of positive samples. No alien crayfish species. No instances of disease. At least Q3-4 at all sites sampled by EPA. No decline in heterogeneity or habitat quality. 	 Proposed works are due to take place in a green field site outside of the Natura 2000 site. There is no direct hydrological connectivity as watercourses are absent within the site. The red line boundary, within which works will take place, is set back 220m from the Millstreet Stream. The proposed site is 20m above the water level of the Millstreet Stream and is not subject to flooding. The site proposed for development slopes downwards from an east to west direction, away from the Millstreet Stream which is situated 220m to the east. Irish Water (Uisce Eireann) have indicated 45m of water network upgrades will be required to provide additional network capacity and 105m of wastewater network upgrades will be required to provide 	



		 additional network capacity. These works are required on the local road network immediately adjacent to the site proposed for development. Surface water run-off during the operational phase will be allowed to percolate into the ground via infiltration trenches, 1 no. retention basin and back garden raingardens. Site investigations for infiltration rates have confirmed this proposed system to be adequate. A hydrocarbon interceptor will also be included within the drainage system. No works are proposed which may lead to the spread of invasive species into the Natura 2000 site as a result of this project.
Sea Lamprey <i>Petromyzon</i> <i>marinus</i> [1095]	 Greater than 75% of main stem length of rivers accessible from estuary. At least three age/size groups present. Juvenile density at least 1/m2. No decline in extent and distribution of spawning beds. More than 50% of sample sites positive. 	 Proposed works are due to take place in a green field site outside of the Natura 2000 site. There is no direct hydrological connectivity as watercourses are absent within the site. The red line boundary, within which works will take place, is set back 220m from the Millstreet Stream. The proposed site is 20m above the water level of the Millstreet Stream and is not subject to flooding. The site proposed for development slopes downwards from an east to west direction, away from the Millstreet Stream which is situated 220m to the east. Irish Water (Uisce Eireann) have indicated 45m of water network upgrades will be required to provide additional network capacity. These works are required on the local road network immediately adjacent to the site proposed for development.



		 Surface water run-off during the operational phase will be allowed to percolate into the ground via infiltration trenches, 1 no. retention basin and back garden raingardens. Site investigations for infiltration rates have confirmed this proposed system to be adequate. A hydrocarbon interceptor will also be included within the drainage system. No works are proposed which may lead to the spread of invasive species into the Natura 2000 site as a result of this project. 	
Brook Lamprey <i>Lampetra</i> <i>planeri</i> [1096]	 Access to all water courses down to first order streams. At least three age/size groups of brook/river lamprey present. Mean catchment juvenile density of brook/river lamprey at least 2/m2. No decline in extent and distribution of spawning beds. More than 50% of sample sites positive. 	 Proposed works are due to take place in a green field site outside of the Natura 2000 site. There is no direct hydrological connectivity as watercourses are absent within the site. The red line boundary, within which works will take place, is set back 220m from the Millstreet Stream. The proposed site is 20m above the water level of the Millstreet Stream and is not subject to flooding. The site proposed for development slopes downwards from an east to west direction, away from the Millstreet Stream which is situated 220m to the east. Irish Water (Uisce Eireann) have indicated 45m of water network upgrades will be required to provide additional network capacity and 105m of wastewater network upgrades will be required to provide additional network capacity. These works are required on the local road network immediately adjacent to the site proposed for development. Surface water run-off during the operational phase will be allowed to percolate into the ground via infiltration trenches, 1 no. retention basin and back 	



		 garden raingardens. Site investigations for infiltration rates have confirmed this proposed system to be adequate. A hydrocarbon interceptor will also be included within the drainage system. No works are proposed which may lead to the spread of invasive species into the Natura 2000 site as a result of this project.
River Lamprey Lampetra fluviatilis [1099]	 Access to all water courses down to first order streams. At least three age/size groups of river/brook lamprey present. Mean catchment juvenile density of brook/river lamprey at least 2/m2. No decline in extent and distribution of spawning beds. More than 50% of sample sites positive. 	 Proposed works are due to take place in a green field site outside of the Natura 2000 site. There is no direct hydrological connectivity as watercourses are absent within the site. The red line boundary, within which works will take place, is set back 220m from the Millstreet Stream. The proposed site is 20m above the water level of the Millstreet Stream and is not subject to flooding. The site proposed for development slopes downwards from an east to west direction, away from the Millstreet Stream which is situated 220m to the east. Irish Water (Uisce Eireann) have indicated 45m of water network upgrades will be required to provide additional network capacity and 105m of wastewater network upgrades will be required to provide additional network capacity. These works are required on the local road network immediately adjacent to the site proposed for development. Surface water run-off during the operational phase will be allowed to percolate into the ground via infiltration trenches, 1 no. retention basin and back garden raingardens. Site investigations for infiltration rates have confirmed this proposed system to be adequate. A hydrocarbon interceptor will also be



		 included within the drainage system. No works are proposed which may lead to the spread of invasive species into the Natura 2000 site as a result of this project.
Twaite Shad <i>Alosa fallax</i> 1103	 Greater than 75% of main stem length of rivers accessible from estuary. More than one age class present. No decline in extent and distribution of spawning habitats. No oxygen levels lower than 5mg/l. Maintain stable gravel substrate with very little fine material, free of filamentous algal (macroalgae) growth and macrophyte (rooted higher plant) growth. 	 Proposed works are due to take place in a green field site outside of the Natura 2000 site. There is no direct hydrological connectivity as watercourses are absent within the site. The red line boundary, within which works will take place, is set back 220m from the Millstreet Stream. The proposed site is 20m above the water level of the Millstreet Stream and is not subject to flooding. The site proposed for development slopes downwards from an east to west direction, away from the Millstreet Stream which is situated 220m to the east. Irish Water (Uisce Eireann) have indicated 45m of water network upgrades will be required to provide additional network capacity and 105m of wastewater network upgrades will be required to provide additional network capacity. These works are required on the local road network immediately adjacent to the site proposed for development. Surface water run-off during the operational phase will be allowed to percolate into the ground via infiltration trenches, 1 no. retention basin and back garden raingardens. Site investigations for infiltration rates have confirmed this proposed system to be adequate. A hydrocarbon interceptor will also be included within the drainage system. No works are proposed which may lead to the spread of invasive species into the Natura 2000 site as a



		result of this project.	
Atlantic Salmon Salmo salar 1106	 100% of river channels down to second order accessible from estuary. Conservation Limit (CL) for each system consistently exceeded. Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling. No significant decline in out-migrating smolt abundance. No decline in number and distribution of spawning redds due to anthropogenic causes. At least Q4 at all sites sampled by EPA. 	 Proposed works are due to take place in a green field site outside of the Natura 2000 site. There is no direct hydrological connectivity as watercourses are absent within the site. The red line boundary, within which works will take place, is set back 220m from the Millstreet Stream. The proposed site is 20m above the water level of the Millstreet Stream and is not subject to flooding. The site proposed for development slopes downwards from an east to west direction, away from the Millstreet Stream which is situated 220m to the east. Irish Water (Uisce Eireann) have indicated 45m of water network upgrades will be required to provide additional network capacity and 105m of wastewater network upgrades will be required to provide additional network capacity. These works are required on the local road network immediately adjacent to the site proposed for development. Surface water run-off during the operational phase will be allowed to percolate into the ground via infiltration trenches, 1 no. retention basin and back garden raingardens. Site investigations for infiltration rates have confirmed this proposed system to be adequate. A hydrocarbon interceptor will also be included within the drainage system. No works are proposed which may lead to the spread of invasive species into the Natura 2000 site as a result of this project. 	No



5. Assessment Criteria

5.1 Is the Project Necessary to the Development of the Designated Site(s)?

The proposed project is not necessary to or connected with the management of any Designated Sites.

5.2 Direct, Indirect or Secondary Impacts

Applying the concept of the source-pathway-receptor model, there is no potential for significant negative impacts on Designated Natura 2000 Sites adjacent to the proposed works areas.

5.2.1 Water Quality and Pollution Control

It is considered that run-off from site during the construction phase does not have the potential to cause significant negative effects on the Blackwater River (Cork/Waterford) SAC.

During the operational phase, the development's wastewater will be discharged to local Irish Water (Uisce Eireann) infrastructure, which has the capacity to facilitate this development. Surface water run-off during the operational phase will be allowed to percolate into the ground via infiltration trenches, 1 no. retention basin and back garden raingardens. Site investigations for infiltration rates have confirmed this proposed system to be adequate. A hydrocarbon interceptor will also be included within the drainage system.

5.3 Cumulative and in Combination Impacts

Due to the distance between the site and receptor and the physical barriers between the proposed works area and Natura 2000 sites along with no hydrological connectivity, it is considered there will be no impact of these works, or no impact of any cumulative or in combination effects of this project with other projects or plans, on any surrounding Natura site.

Two other projects were taken into consideration which are also both residential developments.

No.	Planning Ref.	Description	Location	Distance from site	Status
1	19/4070	Construction of 14 residential units with vehicular entrance. An NIS was submitted with the application.	Mountleader, Millstreet	0.66km	Granted 17/01/2020
2	20/4722	Conversion of existing convent into 7 2- bed residential units and construction of 3 new 2-bed units. An NIS was submitted with the application.	Comlogane	1.4km	Granted 08/20/2021

Table3: Nearby planning applications

Both of these developments have been submitted with a Natura Impact Statement (NIS). This was required for planning ref. 19/4070 as the northern boundary of the site was along the River



Finnow. An NIS was also required for planning ref. 20/4722 due to its close proximity to the Blackwater River (Cork/Waterford) SAC, which is 185m from the closest point.

As both of these projects must comply with the site specific mitigation prescribed within these NIS documents, it is considered that these projects will not have any significant negative impacts upon the Blackwater River (Cork/Waterford) SAC in combination with the project currently being screened by this report.

5.4 Likely Changes to the Designated Sites

The project is not expected to lead to any LSE to any nearby Designated Sites due to the following:

- Proposed works are due to take place in a green field site outside of the Natura 2000 site.
- There are no habitats within the project site which has value to Qualifying Interests of this Natura 2000 site.
- Agricultural related activity regularly occurs on the land situated between the proposed project site and Blackwater River.
- Signs of otter activity was not recorded.
- There is no direct hydrological connectivity as watercourses are absent within the site.
- The red line boundary, within which works will take place, is set back 220m from the Millstreet Stream.
- The site proposed for development slopes downwards from an east to west direction, away from the Millstreet Stream which is situated 220m to the east.
- Proposed water supply is via mains.
- The site is 20m above the water level of the Millstreet Stream and is not subject to flooding.
- Irish Water (Uisce Eireann) have indicated 45m of water network upgrades will be required to provide additional network capacity and 105m of wastewater network upgrades will be required to provide additional network capacity. These works are required on the local road network immediately adjacent to the site proposed for development.
- Proposed lighting will be screened by the retention of the existing hedgerow on the eastern side of the proposed housing development.
- Surface water run-off during the operational phase will be allowed to percolate into the ground via infiltration trenches, 1 no. retention basin and back garden raingardens. Site investigations for infiltration rates have confirmed this proposed system to be adequate. A hydrocarbon interceptor will also be included within the drainage system.
- No works are proposed which may lead to the spread of invasive species into the Natura 2000 site.



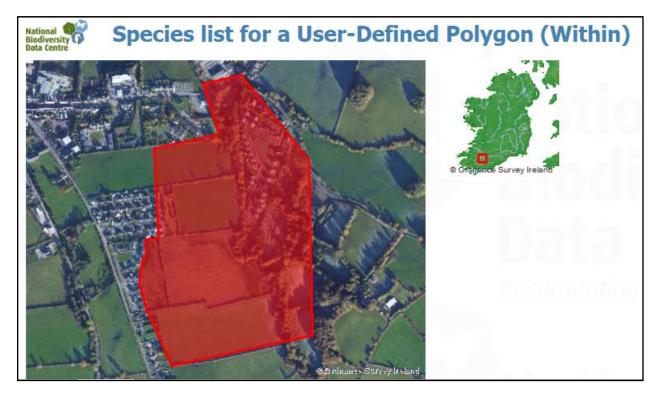
6. Screening Conclusions

In our professional opinion and in view of the best scientific knowledge and in view of the conservation objectives of the European sites reviewed in the screening exercise, the proposed development individually/in combination with other plans and projects (either directly or indirectly) are not likely to have any significant effects on any of the European sites.

Therefore, Appropriate Assessment is not required.



7. NBDC Record



No species were recorded in the designated area.



8. References

- 1. Chartered Institute of Ecology and Environmental Management (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland.
- 2. CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal 2nd Edition. The Chartered Institute of Ecology and Environmental Management, Winchester.
- 3. Collins, J. ed. (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). The Bat Conservation Trust. London. ISBN 13 978-1-87-2745-96-1
- 4. Curtis, T.G.F. and MacGough, H.N., 1988. *The Irish red data book.* Wildlife Service Ireland.
- Cutts, N., Phelps, A. and Burdon, D. (2009). Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance. Report to Huber INCA. Institute of Estuarine and Coastal Studies, University of Hull.
- 6. EPA (2015a). The EPA's Advice Notes on Preparing Environmental Impact Statements Draft.
- 7. EPA (2015b). The EPA's Draft Revised Guidelines on Information to be Contained in Environmental Impact Statements.
- 8. European Commission (2007) Interpretation manual of European Union habitats EUR27.
- 9. Fossitt, J.A. (2000) A Guide to Habitats in Ireland. The Heritage Council, Kilkenny.
- 10. Gilbert, G, Stanbury, A and Lewis L (2021) Birds of Conservation Concern in Ireland 2020-2026. Irish Birds, **9**: 523—544.
- 11. Holmes, T., Roche, W., Gargan, P. (2018). Report on Salmon Monitoring Programmes (June 2016 June 2017) funded under the Salmon Conservation Fund. Inland Fisheries Ireland.
- 12. Inland Fisheries Ireland (2016). Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters. Available online at <u>https://www.fisheriesireland.ie/documents/624-guidelines-on</u>
- 13. Invasive Species Ireland (2008). Best Practice Management Guidelines: Giant Hogweed Heracleum mantegazzianum.
- 14. Invasive Species Ireland (2012). Horticulture Code of Good Practice To Prevent the Introduction and Spread of Invasive Non-native Species. Written by John Kelly March 2012. Available online at EnviroCentre Report (invasivespeciesireland.com) [Accessed 21/03/2022].
- Joint Nature Conservation Committee (JNCC) (2010) .Handbook for Phase 1 Habitat Survey

 a technique for environmental audit. Joint Nature Conservation Committee, Peterborough (UK).
- Kelleher, C. & Marnell, F. (2006) Bat Mitigation Guidelines for Ireland. Irish Wildlife Manuals, No. 25. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.
- 17. King, J.L., Marnell, F., Kingston, N., Rosell, R., Boylan, P., Caffrey, J.M., FitzPatrick, Ú., Gargan, P.G., Kelly, F.L., O'Grady, M.F., Poole, R., Roche, W.K. & Cassidy, D. (2011) Ireland Red List No. 5: Amphibians, Reptiles & Freshwater Fish. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.
- Lewis, L. J., Coombes, D., Burke, B., O'Halloran, J., Walsh, A., Tierney, T. D. & Cummins, S. (2019) Countryside Bird Survey: Status and trends of common and widespread breeding birds 1998-2016. Irish Wildlife Manuals, No. 115. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.
- 19. Lysaght, L. and Marnell, F. (Eds) (2016) Atlas of Mammals in Ireland 2010 2015, National Biodiversity Data Centre, Waterford.
- 20. National Roads Authority (2005). Guidelines for the Treatment of Bats Prior to the Construction of National Roads Schemes. NRA, Dublin
- 21. National Roads Authority (2006). Guidelines for the Treatment of Badgers Prior to the Construction of National Roads Schemes. NRA, Dublin.



- 22. National Roads Authority (2009). Guidelines For The Assessment Of Ecological Impacts Of National Road Schemes. NRA, Dublin.
- 23. NPWS (2012) Conservation Objectives: Blackwater River (Cork/Waterford) SAC 002170. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- 24. NRA (2009) Guidelines for Assessment of Ecological Impacts of National Road Schemes. National Roads Authority (now Transport Infrastructure Ireland) Dublin.
- 25. O'Neill, F.H., Marten, J.R., Devaney, F.M. & Perrin, P.M. (2013). The Irish semi-natural grasslands survey 2007-2012. Irish Wildlife Manuals, No. 78. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Ireland
- 26. Smith, G. F., O'Donoghue, P., O'Hora, K., & Delaney, E. (2011) *Best Practice Guidance for Habitat Survey and Mapping*. The Heritage Council, Kilkenny.
- 27. Wyse Jackson, M., FitzPatrick, Ú., Cole, E., Jebb, M., McFerran, D., Sheehy Skeffington, M.
 & Wright, M. (2016). Ireland Red List No. 10: Vascular Plants. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, Dublin, Ireland.
- 28. Annual Environmental Report 2022. Millstreet & Environs. Uisce Eireann. https://www.water.ie/docs/aers/2022/D0332-02_2022_AER.pd