

Screening Report for Appropriate Assessment for proposed residential development, Donohill, Co. Tipperary

prepared by OPENFIELD Ecological Services
for Tipperary County Council

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1.0 Introduction

Biodiversity is a contraction of the words 'biological diversity' and describes the enormous variability in species, habitats and genes that exist on Earth. It provides food, building materials, fuel and clothing while maintaining clean air, water, soil fertility and the pollination of crops. A study by the Department of Environment, Heritage and Local Government placed the economic value of biodiversity to Ireland at €2.6 billion annually (Bullock et al., 2008) for these 'ecosystem services'.

All life depends on biodiversity and its current global decline is a major challenge facing humanity. In 1992, at the Rio Earth Summit, this challenge was recognised by the United Nations through the Convention on Biological Diversity which has since been ratified by 193 countries, including Ireland. Its goal to significantly slow down the rate of biodiversity loss on Earth has been echoed by the European Union, which set a target date of 2010 for *halting* the decline. This target was not met but in 2010 in Nagoya, Japan, governments from around the world set about redoubling their efforts and issued a strategy for 2020 called 'Living in Harmony with Nature'. In 2011 the Irish Government incorporated the goals set out in this strategy, along with its commitments to the conservation of biodiversity under national and EU law, in the second national biodiversity action plan (Dept. of Arts, Heritage and the Gaeltacht, 2011). A third plan was published in 2017.

The main legislation for conserving biodiversity in Ireland have been the Directive 2009/147//EC of the European Parliament and of the Council of November 2009 on the conservation of wild birds (Birds Directive) and Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive). Among other things, these require member states to designate areas of their territory that contain important bird populations in the case of the former; or a representative sample of important or endangered habitats and species in the case of the latter. These areas are known as Special Protection Areas (SPA) and Special Areas of Conservation (SAC) respectively. Collectively they form a network of sites across the European Union known as Natura 2000. The Birds and Habitats Directives have been transposed into Irish legislation by the European Communities (Birds and Natural Habitats) Regulations 2011-2015. A report into the economic benefits of the Natura 2000 network concluded that "there is a new evidence base that conserving and investing in our biodiversity makes sense for climate challenges, for saving money, for jobs, for food, water and physical security, for cultural identity, health, science and learning, and of course for biodiversity itself" (EU, 2013).

Unlike traditional nature reserves or national parks, Natura 2000 sites are not 'fenced-off' from human activity and are frequently in private ownership. It is the responsibility of the competent national authority to ensure that 'good conservation status' exists for their SPAs and SACs and specifically that Article 6(3) of the Habitats Directive is met. Article 6(3) states:

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.

Sections 177U and 177V of the Planning and Development Act 2000 sets out the purpose of AA Screening is as follows:

A screening for appropriate assessment shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site.

The test at stage 1 AA Screening is that:

The competent authority shall determine that an appropriate assessment of a proposed development is required if it cannot be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site.

The test at stage 2 (Appropriate Assessment) is:

Whether or not the proposed development, individually or in-combination with other plans or projects would adversely affect the integrity of a European site.

However, where this is not the case, a preliminary screening must first be carried out to determine whether or not a full AA is required. This screening is carried out by Tipperary County Council.

OPENFIELD Ecological Services is headed by Pádraic Fogarty who has worked for over 20 years in the environmental field and in 2007 was awarded an MSc from Sligo Institute of Technology for research into Ecological Impact Assessment (EclA) in Ireland. Since its inception in 2007 OPENFIELD has carried out numerous EclAs for Environmental Impact Assessment (EIA), Appropriate Assessment in accordance with the EU Habitats Directive, as well as individual planning applications. Pádraic is a full member of the Institute of Environmental Management and Assessment (IEMA).

2.0 The Purpose of this document

This document provides an assessment of a proposed residential development on a site in Donohill, Co. Tipperary, and its potential effects in relation to Natura 2000 sites (SACs and SPAs). Under the Planning and Development Act 2000 (as amended), and the Birds and Natural Habitats Regulations 2011, the planning authority cannot grant planning permission where significant effects may arise to a Natura 2000 site. In order to make that decision the development must first be screened for AA.

It should be noted that under Article 42(1) of the aforementioned legislation it is the relevant competent authority, in this case Tipperary County Council, which carries out any AA or screening for AA, stating:

A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site.

While paragraph (2) states:

A public authority shall carry out a screening for Appropriate Assessment under paragraph (1) before consent for a plan or project is given, or a decision to undertake or adopt a plan or project is taken.

This document therefore aids in the decision-making process.

3.0 Methodology

The methodology for this screening statement is clearly set out in a document prepared for the Environment DG of the European Commission entitled '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' (Oxford Brookes University, 2001). Chapter 3, part 1, of the aforementioned document deals specifically with screening while Annex 2 provides the template for the screening/finding of no significant effects report matrices to be used.

In accordance with this guidance, the following methodology has been used to produce this screening statement:

Step 1: Management of the Natura 2000 site

This determines whether the project is necessary for the conservation management of the site in question.

Step 2: Description of the Project

This step describes the aspects of the project that may have an impact on the Natura 2000 site.

Step 3: Characteristics of the Natura Site

This process identifies the conservation objectives of the site and determines whether significance effects to Natura 2000 sites will arise as a result of the plan. This is done through a literature survey and consultation with relevant stakeholders – particularly the National Parks and Wildlife Service (NPWS). All potential effects are identified including those that may act alone or in combination with other projects or plans.

Using the precautionary principle, and through consultation and a review of published data, it is normally possible to conclude at this point whether potential impacts are likely. Deficiencies in available data are also highlighted at this stage.

Step 4: Assessment of Significance

Assessing whether an effect is significant must be made in light of the conservation objectives for that SAC or SPA.

A full AA of a proposed development is required if it cannot be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site.

The steps are compiled into a screening matrix, a template of which is provided in Appendix II of the EU methodology.

Reference is also made to guidelines for Local Authorities from the Department of the Environment, Heritage and Local Government (DoEHLG, 2009).

A full list of literature sources that have been consulted for this study is given in the References section to this report while individual references are cited within the text where relevant.

Screening Template as per Annex 2 of EU methodology:

This plan is not necessary for the management of any Natura 2000 site and so Step 1 as outlined above is not relevant.

4.0 Brief description of the project

Planning permission is being sought for a new social housing development of 8 houses on a 0.27 hectare site at Donohill, Co. Tipperary. The development will consist of 1 no. single storey, three bedroom house & 7 no. two storey, three bedroom houses. The single storey dwelling has been included to specifically address the special need of one of the existing families on the estate.

The site is not located within or directly adjacent to any Natura 2000 site (SAC or SPA). The lands drain to the Holy Well Donohill Stream, which flows northward to join the River Cauteen, approximately 700m to the north. The River Cauteen flows westward and joins the Dead River which, at this point, lies within the Lower River Shannon SAC. The surroundings of the development site are predominantly rural in nature although there are also urban land uses nearby. The Holy Well Donohill Stream rises in low hills north of Tipperary Town and flows approximately 165m to the south of the site. Mapping from the Environmental Protection Agency (EPA) shows no water courses in the immediate vicinity of the site itself.

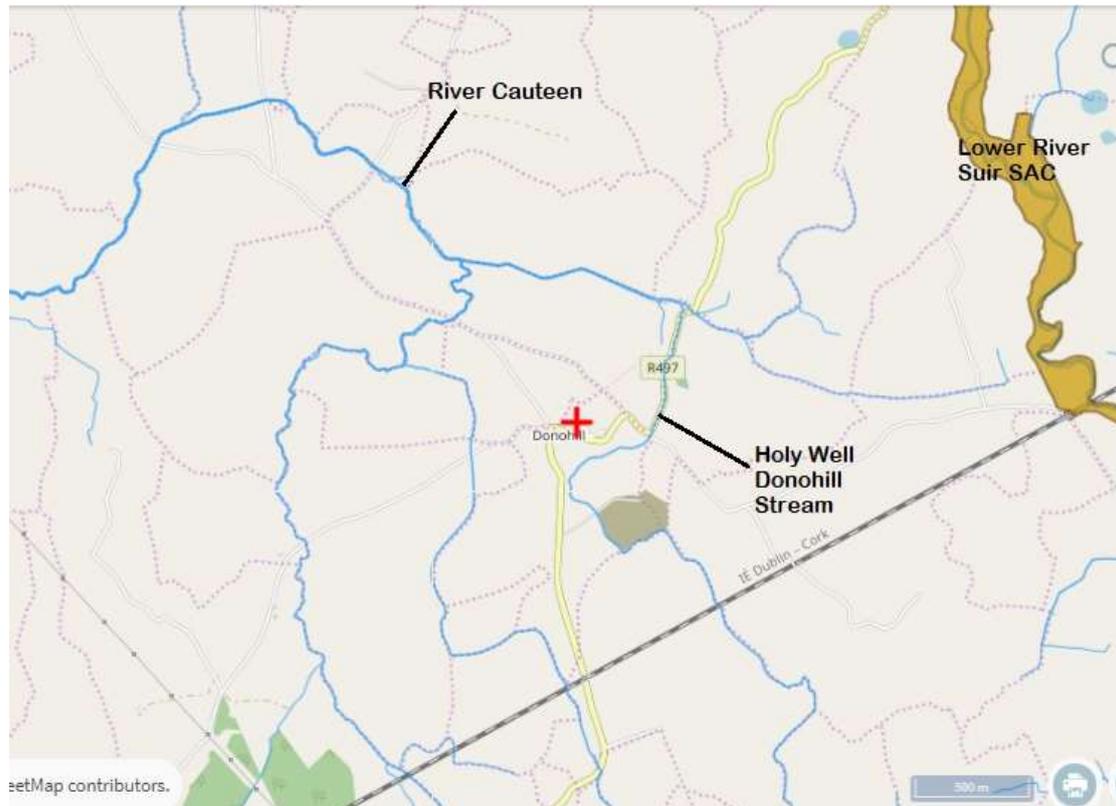


Figure 1 – Site location (red cross) showing local water courses. The boundary of the Lower River Suir SAC is shown in tan (from www.epa.ie).

This site was surveyed as part of this study on January 30th 2020. This is outside the optimal season for general habitat survey (Smith et al., 2010) but for a study of this nature it is essential that pathways between the site and the SAC or SPA can be identified and evaluated. In this regard it is considered that no constraints were encountered during this survey due to timing etc. Habitats are classified in accordance with standard methodology (Fossitt, 2000).

The subject land is composed of a **dry meadow – GS2** grassland with Cock's-foot *Dactylis glomerata* and some Cow Parsley *Anthriscus sylvestris*. Remnant field boundaries can be found to the north and west. Along the west there is a line of Bramble *Rubus fruticosus* agg. **scrub – WS1** while to the north there is a stretch of **hedgerow – WL1** with Hawthorn *Crataegus monogyna*, Cow Parsley, Elder *Sambucus nigra*, Ivy *Hedera helix*, and Brambles.

There are no plant species which are listed as alien invasive as per Schedule 3 of SI No. 477 of 2011 (notwithstanding the timing of the study, canes of Japanese Knotweed *Fallopia japonica* remain visible throughout the year). There are records of Japanese Knotweed from this vicinity on the database of the National Biodiversity Data Centre but not from this particular site (www.biodiversity.ie).

There are no water courses on the land, no bodies of open water and no habitats which can be classified as wetlands.

The proposed project will see site clearance and a construction phase using standard materials.

Surface water run-off will drain to an existing storm water sewer. Surface water will discharge to this sewer via areas of permeable paving which is expected to absorb much of the run-off into the ground.

Freshwater supply will be from a public mains connection.

The development will increase the volume of wastewater entering the public foul sewer. Wastewater discharges to the municipal wastewater treatment plant for Donohill. This small plant is run by Irish Water and is licenced by the Environmental Protection Agency (EPA) to discharge treated effluent to the Cauten River (licence number: A0514-01).

The site location is presented in figure 2 while the proposed site layout is given in figure 3.



Figure 2 – Site boundary



Figure 3 – proposed site layout

5.0 Brief description of Natura 2000 sites

In assessing the zone of influence of this project upon Natura 2000 areas the following factors must be considered:

- Potential impacts arising from the development
- The location and nature of Natura 2000 sites
- Pathways between the development and the Natura 2000 network

There is no prescribed distance to determine which Natura sites should be studied and this depends upon the zone of influence of the project. It has already been stated that the site is not located within or adjacent to any Natura 2000 site but is within the catchment of the Lower River Shannon SAC. The Lower River Suir SAC can be found approximately 2km to the east however there is no hydrological connection between the development site and this SAC. A direct hydrological connection exists between the Cauteen River and on to the Dead River (Lower River Shannon SAC) and wastewater/surface water run-off from the development site. It is considered that there are no other Natura 2000 sites within the zone of influence of this project as there are no pathways to link the site to any other such areas.

The **Lower River Shannon SAC (site code: 2165)** is a very large SAC that stretches from Killaloe to Loop head/Kerry head and is over 720 km² in area. The reasons why this area falls under the SAC designation are set out in its qualifying interests. They are either habitat types listed in Annex I or species listed in Annex II of the Habitats Directive. This information is provided by the National Parks and Wildlife Service (NPWS) and is shown in table 1 below along with the status of the feature at a national level (NPWS, 2019). This status refers to the most recent reporting period to the European Commission under Article 17 of the Habitats Directive.

Table 1 – Qualifying interests for the Lower River Shannon SAC (from NPWS)

Code	Habitats	Status
1130	Estuaries	Inadequate
1140	Mudflats and sandflats not covered by seawater at low tide	Inadequate
1150	Coastal lagoons	Bad
1230	Vegetated sea cliffs of the Atlantic and Baltic coasts	Inadequate
1310	Salicornia and other annuals colonizing mud and sand	Favourable
1330	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)	Inadequate
1410	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)	Inadequate
3260	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	Inadequate
1110	Sandbanks which are slightly covered by sea water all the time	Favourable
1160	Large shallow inlets and bays	Bad
1170	Reefs	Bad

1220	Perennial vegetation of stony banks	Inadequate
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	Bad
91E0	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)	Bad
1099	<i>Lampetra fluviatilis</i> River lamprey	Unknown
1096	<i>Lampetra planeri</i> Brook lamprey	Good
1095	<i>Petromyzon marinus</i> Sea lamprey	Bad
1106	<i>Salmo salar</i> Atlantic salmon	Inadequate
1349	<i>Tursiops truncatus</i> Bottle-nosed dolphin	Good
1355	<i>Lutra lutra</i> Otter	Good
1029	<i>Margaritifera margaritifera</i> Freshwater pearl mussel	Bad

- **Sandbanks (1110):** These are marine habitats composed of banks or ridges of soft sediment in less than 20m of water. They are highly dynamic habitats, being subject to continuous wave and tidal actions, and can be home to a diverse assemblage of marine species.
- **Estuary (1130):** This is the portion of a river that is influenced by the tide but retaining a significant freshwater influence. Substrates can range from rocks and boulders, to expanses of fine mud and sand. They are an important resource for birds and other fauna and many estuaries have twin designations (i.e. both SAC and SPA). It considered that the majority of estuary habitat is in good condition however approximately a quarter is negatively affected by excess nutrient input and damaging fishing practices.
- **Tidal mudflats (1140).** This is an intertidal habitat characterised by fine silt and sediment. Most of the area in Ireland is of favourable status however water quality and fishing activity, including aquaculture, are negatively affecting some areas.
- **Coastal lagoons (1150)** (and a priority habitat) are brackish water bodies typically separated from the sea by a tidal barrier and with limited tidal range. In Ireland they are defined by their biological communities rather than their morphology. The greatest threat to their integrity is considered to be from nutrient pollution causing eutrophication.
- **Large shallow inlets and bays (1160):** These are marine or intertidal habitats that have reduced freshwater influence (in contrast to estuaries). They can occur in association with a number of other Annex I habitat types and are of value to marine biodiversity including mammals and seabirds.
- **Vegetated sea cliffs (1230)** These coastal habitats can be composed of hard or soft material which in turn influences the rate at which erosion occurs. Vegetation can be sparse but composed of a variety of specially adapted species.
- **Salicornia mudflats (1310):** This is a pioneer saltmarsh community and so is associated with intertidal areas. It is dependant upon a supply of fresh, bare mud and can be promoted by damage to other salt marsh habitats. It is chiefly threatened by the advance of the alien invasive Cordgrass *Spartina anglica*. Erosion can be destructive but in many cases this is a natural process.

- **Atlantic and Mediterranean salt meadows (1330 & 1410):** these are intertidal habitats that differ somewhat in their vegetation composition. They are dynamic habitats that depend upon processes of erosion, sedimentation and colonisation by a typical suite of salt-tolerant organisms. The main pressures are invasion by the non-native *Spartina anglica* and overgrazing by cattle and sheep.
- **Floating river vegetation (3260):** There is currently no satisfactory definition of this habitat type in Ireland and it is considered broad, encompassing all rivers. The NPWS says that “the main problems for river habitats in Ireland are damage through eutrophication and other processes linked to water pollution, rather than direct habitat loss and destruction.”
- **Molinea meadows (6410)** *Molinea caerulea*, the Purple Moorgrass, is typically associated with upland peatland habitats but this habit type occurs on lowland sites associated with traditional agricultural practices. The main threats that it faces are associated with changes in land use, e.g. land abandonment or intensification.
- **Alluvial Wet Woodland (91E0):** This is a native woodland type that occurs on heavy soils, periodically inundated by river water but which are otherwise well drained and aerated. The main pressures are identified as alien invasive species, undergrazing and overgrazing. Pollution from agricultural land may also be significant.
- **Freshwater pearl mussel (1029)** This is one of the most threatened species in Ireland and one of a small number that is listed on the International Union for the Conservation of Nature’s (IUCN) red list. Although it is long-lived, its populations have not reproduced in many years. This has been due to over-extractions for their pearls and more recently by dramatic deteriorations in water quality. Freshwater pearl mussels need exceptionally high quality water for breeding and depend upon another threatened species, the Atlantic salmon, for part of its life cycle.
- **Sea lamprey (1095)** This is an anadromous species of jawless fish. Their population densities are considered low in many catchments and are negatively affected by barriers to migration, such as weirs, dams etc. Pollution and drainage works are also identified as threats to its conservation status.
- **Brook and river lamprey (1096 & 1099):** These species are similar to the sea lamprey although they spend their entire life cycle in freshwater and are considerably smaller. As juveniles they are indistinguishable at the species level and are only differentiated by their size at adults. Since surveys are carried out on the juvenile life stage the two species are jointly assessed. Although threatened by pollution, along with all aquatic life, they are assessed as being of ‘good’ status.
- **Atlantic salmon (1106)** This once abundant fish has suffered a dramatic decline in recent decades. On land they are threatened by pollution and barriers to migration while at sea mortality may occur through industrial fisheries, parasites from aquaculture operations and climate change. The Habitats Directive only protects the salmon in its freshwater habitat and here specific conservation objectives have been set for water quality. Salmon will only spawn in clean, sediment-free beds of gravel.

- **Otter (1355)** This aquatic mammal lives its entire life in and close to wet places, including rivers, lakes and coastal areas. They will feed on a wide variety of prey items. Despite local threats from severe pollution incidents and illegal fishing, its population is considered stable and healthy, and so is assessed as being of 'good' status.
- **Bottle-nosed dolphin (1349)**. These well recognised mid-sized cetaceans are found through tropical and temperate seas and are well recorded in the waters around Ireland. They can be transient although some populations, such as that in the Shannon estuary, are considered resident.

Lower River Suir SAC (site code: 2137)

The Lower River Suir is a large SAC that stretches from south of Thurlas, Co. Tipperary, to the river's estuary at Cheekpoint, Co. Waterford. While the importance of the SAC is centred around the main channel of the river and its associated species, there are a number of terrestrial habitats that are also of conservation value.

The reasons why the Lower River Suir is an SAC are set out in the site's 'qualifying interests' and these are given in table 2.

Table 2 – Conservation aspects of the Lower River Suir SAC

Aspect	National status
Alluvial wet woodland (code: 91E0)	Bad
Old oak woodlands (code: 91A0)	Bad
Yew woodland (91J0)	Bad
Atlantic salt meadows (code: 1330)	Inadequate
Mediterranean salt meadows (code: 1410)	Inadequate
Eutrophic tall herbs (code: 6430)	Bad
Floating river vegetation (code: 3260)	Inadequate
Sea Lamprey <i>Petromyzon marinus</i> (Code: 1095)	Bad
Brook Lamprey <i>Lampetra planeri</i> (Code: 1099)	Favourable
River Lamprey <i>Lampetra fluviatilis</i> (Code: 1096)	Favourable
Freshwater Pearl Mussel <i>Margaritifera margaritifera</i> (Code: 1029)	Bad
Freshwater Crayfish <i>Austropotamobius pallipes</i> (Code: 1092)	Inadequate
Twaite Shad <i>Alosa fallax fallax</i> (Code: 1103)	Bad
Atlantic Salmon <i>Salmo salar</i> (Code: 1106)	Inadequate

Otter <i>Lutra lutra</i> (Code: 1355)	Favourable
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- **Atlantic and Mediterranean salt meadows (1330 & 1410):** these are intertidal habitats that differ somewhat in their vegetation composition. They are dynamic habitats that depend upon processes of erosion, sedimentation and colonisation by a typical suite of salt-tolerant organisms. The main pressures are invasion by the non-native *Spartina anglica* and overgrazing by cattle and sheep.
- **Floating river vegetation (3260):** There is currently no satisfactory definition of this habitat type in Ireland and it is considered broad, encompassing all rivers. The NPWS says that “the main problems for river habitats in Ireland are damage through eutrophication and other processes linked to water pollution, rather than direct habitat loss and destruction.”
- **Alluvial Wet Woodland (91E0 – priority habitat):** This is a native woodland type that occurs on heavy soils, periodically inundated by river water but which are otherwise well drained and aerated. The main pressures are identified as alien invasive species, undergrazing and overgrazing. Pollution from agricultural land may also be significant.
- **Old Oak Woodlands (91A0):** This native woodland type is typified by Sessile Oak *Quercus patrea*, Holly *Ilex aquifolium* and Hard Fern *Blechnum spicant*. Its range is much reduced from historic levels while the principle threats are alien invasive species and overgrazing by deer but also cattle, goats and sheep.
- **Hydrophilous tall herbs (6430):** This is a wetland type associated with river floodplains in lowlands, although a different community applies to this classification in the uplands. It is the lowland community that is likely to be represented in the River Barrow and River Nore SAC. The main pressures listed for this habitat are grazing by cattle, invasion by the alien Himalayan Balsam *Impatiens glandulifera*, and nitrogen pollution (via both water and air deposition).
- **Yew Woodland (91J0 – priority habitat):** This is a highly restricted woodland type and occurs at only a handful of sites in Ireland. It is predominantly associated with yew dominated woodland on very thin soils. The heavy shading of these evergreen trees severely limits the development of understory plants.
- **Freshwater pearl mussel (1029)** This is one of the most threatened species in Ireland and one of a small number that is listed on the International Union for the Conservation of Nature’s (IUCN) red list. Although it is long-lived, its populations have not reproduced in many years. This has been due to over-extraction for their pearls and, more recently, by dramatic deteriorations in water quality. Freshwater pearl mussels need exceptionally high quality water for breeding and depend upon another threatened species, the Atlantic salmon, for part of its life cycle.
- **White-clawed crayfish (1092)** This crustacean is Ireland’s largest species of non-marine invertebrate and is found throughout limestone river, canal and lake catchments. The greatest threats to its conservation status arise from the non-native invasive species and disease (especially associated with the American Signal crayfish which has yet to be recorded in Ireland).

- **Sea lamprey (1095)** This is an anadromous species of jawless fish. Their population densities are considered low in many catchments and are negatively affected by barriers to migration, such as weirs, dams etc. Pollution and drainage works are also identified as threats to its conservation status.
- **Brook and river lamprey (1096 & 1099):** These species are similar to the sea lamprey although are considerably smaller while the Brook Lamprey spends its entire life cycle in freshwater. As juveniles they are indistinguishable at the species level and are only differentiated by their size at adults. Since surveys are carried out on the juvenile life stage the two species are jointly assessed. Although threatened by pollution, along with all aquatic life, they are assessed as being of 'good' status.
- **Twaite shad (1103).** This is a localised fish species in Ireland, breeding at the upper tidal reaches of rivers in the south-east. They are threatened by non-native invasive species such as Dace and the Asian clam, which are now established in the tidal reaches of the Nore/Barrow. They spend their adult life at sea and here they are susceptible to capture by industrial fisheries.
- **Atlantic salmon (1106)** This once abundant fish has suffered a dramatic decline in recent decades. On land they are threatened by pollution and barriers to migration while at sea mortality may occur through industrial fisheries, parasites from aquaculture operations and climate change. The Habitats Directive only protects the salmon in its freshwater habitat and here specific conservation objectives have been set for water quality. Salmon will only spawn in clean, sediment-free beds of gravel.
- **Otter (1355)** This aquatic mammal lives its entire life in and close to wet places, including rivers, lakes and coastal areas. They will feed on a wide variety of prey items. Despite local threats from severe pollution incidents and illegal fishing, its population is considered stable and healthy, and so is assessed as being of 'good' status.

Determining if significant effects are likely to occur to the SAC must be measured against its 'conservation objectives' (NPWS, 2012 & 2017). It is not considered necessary to reproduce these in their entirety, but they will be referred to further in this report where relevant.

6.0 Data collected to carry out the assessment

Describe the individual elements of the plan (either alone or in combination with other plans or projects) likely to give rise to impacts on the SAC:

The River Cauteen joins the Dead River and the distance to the SAC boundary is approximately 10km to the west as the crow flies. The EU's Water Framework Directive (WFD) stipulates that all water bodies were to have attained 'good ecological status' by 2015. In 2010 the first River Basin Management Plan (RBMP) was published to address ecological issues and this included a 'programme of measures' which was to be completed. The Dead River has most recently been assessed as 'good' throughout its length. This classification indicates that water quality is of a sufficient standard to meet the requirements

of the WFD. The River Cauteen however is predominantly assessed as 'moderate'.

A second RBMP was published in 2018 and this included 190 'priority areas for action' where resources are to be focussed over the 2018-2021 period.

The development site is located within the Dead sub-catchment of the Shannon (Dead-SC-010). The sub-catchment plan from www.catchments.ie indicates that 11 out of 25 water bodies (44%) are achieving good status. Nevertheless, only two water bodies are deemed to be not 'at risk'.

There are only hydrological pathways from the development site to the Lower River Shannon SAC. The Dead River is home to Otter, Atlantic Salmon and Lampreys however Freshwater Pearl Mussels are not present downstream of the development site in Donohill. Other habitats and species are coastal/intertidal in nature and are connected to the project via hydrological pathways, however no water quality objectives are set for any of these features of interest. Relevant conservation objective for these species are summarised as:

Sea/River/Brook Lamprey

Maintain river accessibility (no artificial barriers); healthy population structure; healthy density of juveniles; no decline in extent or distribution of spawning beds; >50% of sampling sites positive.

Atlantic Salmon

Maintain river accessibility (no artificial barriers); size of stock measures as 'conservation limit' consistently exceeded; maintain abundance of salmon fry; no significant decline in out-migrating smolt abundance; no decline in the number of spawning beds (redds); water quality at least Q4 at all sites.

Otter

No significant decline in distribution; no significant decline in terrestrial/estuarine/freshwater/lake habitat; no significant decline in couching sites or holts; no decline in available fish biomass.

Estuaries (code: 1130)

Permanent habitat area stable or increasing (estimated at 24,273 hectares); Conserve the following community types in a natural condition: Intertidal sand to mixed sediment with polychaetes, molluscs and crustaceans community complex; Estuarine subtidal muddy sand to mixed sediment with gammarids community complex; Subtidal sand to mixed sediment with *Nucula nucleus* community complex; Subtidal sand to mixed sediment with *Nephtys* spp. community complex; Furoid-dominated intertidal reef community complex; Faunal turf-dominated subtidal reef community; and Anemone-dominated subtidal reef community.

Mudflats (code 1140)

Permanent habitat area stable or increasing (estimated at 8,808 hectares); Conserve the following community types in a natural condition: Intertidal sand with *Scolelepis squamata* and *Pontocrates* spp. community; and Intertidal sand to mixed sediment with polychaetes, molluscs and crustaceans community complex.

Large shallow inlets and bays (code: 1160)

The permanent habitat area and distribution of the habitat are stable or increasing; Conserve the following community types in a natural condition: Intertidal sand with *Scolelepis squamata* and *Pontocrates* spp. community; Intertidal sand to mixed sediment with polychaetes, molluscs and crustaceans community complex; Subtidal sand to mixed sediment with *Nucula nucleus* community complex; Subtidal sand to mixed sediment with *Nephtys* spp. community complex; Furoid-dominated intertidal reef community complex; Mixed subtidal reef community complex; Faunal turf-dominated subtidal reef community; Anemone- dominated subtidal reef community; and Laminaria-dominated community complex.

Reefs (code: 1170)

The permanent habitat area and distribution of the habitat are stable or increasing; the biological composition is conserved.

Perennial vegetation of stony bank (code: 1220)

Habitat areas stable or increasing subject to natural variation; no decline in habitat distribution; maintain physical and vegetation structure without any physical obstructions, maintain vegetation structure and composition subject to natural variations.

Salicornia mudflats (1310)

Maintain habitat area and distribution including physical structure (sediment supply, creeks and pans, flooding regime). Maintain vegetation structure as measured by vegetation height, vegetation cover, typical species and sub-communities. Absences of the invasive *Spartina anglica*.

Atlantic/Mediterranean Salt Meadows (1330/1410)

Maintain habitat area and distribution including physical structure (sediment supply, creeks and pans, flooding regime). Maintain vegetation structure as measured by vegetation height, vegetation cover, typical species and sub-communities. Absences of the invasive *Spartina anglica*.

7.0 The Assessment of Significance of Effects

Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site.

In order for an effect to occur there must be a pathway between the source (the development site) and the receptor (the SAC). Where a pathway does not exist an impact cannot occur.

The proposed development site is located within the catchment of the Lower River Suir SAC, the only Natura 2000 site considered to fall within the zone of influence of this project. The site layout is given in figure 3.

Habitat loss

At its closest point the construction zone is approximately 10km from the Lower River Shannon SAC boundary and 2km from the Lower River Suir SAC. This distance is too far for any direct loss of habitat to occur.

This project will result in no loss of habitat within the SAC boundary and so this effect is not significant.

Habitat disturbance during construction

There is no likelihood that construction material or machinery will disturb areas within any SAC due to the significant separation distances. This effect is not significant.

Pollution during construction

During the site construction phase there will be some earth works that will expose soil and sediment to the elements. It is well documented that the ingress of silt to water courses is one of the chief threats to Atlantic Salmon as it can directly clog their gills. However there are no water courses on the site itself and so no direct pathway for silt laden water to enter the Holy Well Donohill Stream. For this reason, effects during this temporary phase of the project are considered to be not significant.

Pollution during operation

During the operation phase of this project there are potentially two pollution sources:

1. Surface water run-off can entrain sediment washing off hard surfaces. The installation of Sustainable Drainage System (SUDS) will ensure that pollutants such as sediment cannot enter water courses. These are standard measures which are included in all development projects and are not included here to prevent or avoid any effect to a Natura 2000 site. They are consequently not considered to be mitigation in an AA context.
2. Wastewater from the development will be treated at the municipal licenced treatment works for Donohill. This plant is not required to publish an Annual Environmental Report due to its small size. There is no evidence that this plant is resulting in pollution issues and Irish Water have indicated that a connection

for the proposed development is acceptable. No significant effects to Natura 2000 sites will occur from this source.

Disturbance during operation

Artificial light or noise could disturb species living along the river corridor, including species for which the SAC is designated, i.e. Otter. However the development is too far from the river for this effect to occur.

Abstraction

Abstraction is not identified as a pressure in the Dead sub-catchment. Evidence therefore suggests that no negative effects to the conservation objectives of the Lower River Shannon SAC is arising due to abstraction.

Abstraction effects therefore are **not significant**.

Are there other projects or plans that together with the project or plan being assessed could affect the site?

Implementation of the WFD will ensure that efforts to improve water quality along the Rivers Shannon, Suir and their tributaries are maintained.

Other activities that contribute to water quality issues throughout the catchments of the Rivers Shannon and Suir include diffuse sources of pollution such as malfunctioning septic tanks and agricultural run-off.

This development project cannot act in combination in with other plans and projects as there are no effects which can arise and which could result in significant effects to Natura 2000 sites.

List of agencies consulted

Because of the relatively low ecological sensitivity of the subject site, third party observations were not sought.

8.0 Conclusion and Finding of No Significant Effects

This project has been screened for AA under the appropriate methodology. It has found that significant effects to the Natura 2000 network are not likely to arise, either alone or in combination with other plans or projects. No mitigation measures are relied on to arrive at this assessment.

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