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APPROPRIATE ASSESSMENT SCREENING REPORT

**COURT PLACE,
CARLOW,
CO. CARLOW**

2026

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1.0 INTRODUCTION

Panther Ecology Ltd was commissioned by Carlow County Council to prepare an Appropriate Assessment Screening Report regarding a proposed refurbishment and extension of the Former Bank of Ireland at Court Place, Co. Carlow.

The principal aim of this study is to assess whether significant effects to European sites (the Natura 2000 network) are likely to occur as a result of this project in accordance with Article 6(3) of the Habitats Directive and the Planning and Development (Amendment) Act, 2001, as amended. This report has been prepared with regards to the European Communities (Natural Habitats) Regulations 1997 (S.I. No. 94 of 1997), and the later amendment regulations (S.I. No. 233 of 1998; S.I. No. 237 of 2005; S.I. No. 477 of 2011).

A study was undertaken by Ms Soraia Branco who has a MSc in Management and Conservation of Nature from Azores University and a BSc in Biology from Coimbra University, with significant experience in wildlife surveys. This report was reviewed by Martin O’Looney who has a BSc Degree in Environmental Science and Technology from Atlantic Technological University Sligo (formerly IT Sligo) and over 10 years of experience in environmental consultancy and environmental impact assessment. This comprised a review of the development site, a site visit on 3rd October 2024 to examine the ecological context of the development site, a desk study of the information on European sites within the potential zone of influence of the site and an analysis of the information in the context of the guidance to determine if a Natura Impact Statement is required.

2. LEGISLATIVE CONTEXT

The EU Habitats Directive (92/43/EEC) on the conservation of natural habitats and of wild fauna and flora, as amended by council directive 97/62/EC, 2006/105/EC, and Regulation EC1882/2003 of September 2003, as transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/11), provides the framework for legal protection for habitats and species of European importance. The Natura 2000 network provides an ecological infrastructure for the protection of sites that are of particular importance for rare, endangered or vulnerable habitats and species within the EU. The Natura 2000 network in Ireland is made up of European Sites which include:

- Special Areas of Conservation (SACs)
- Special Protection Areas (SPAs)

Article 6(3) of the Habitats Directive establishes the requirement for appropriate assessment when planning new developments that might affect a Natura 2000 site. Article 6(3) of the Habitats Directive 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

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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.”

3. SCREENING FOR APPROPRIATE ASSESSMENT

Screening is the first stage in the Appropriate Assessment process and is carried out to determine whether a Stage 2 Appropriate Assessment and a Natura Impact Statement (NIS) is required. Screening addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3);

1. Whether a plan or project is directly connected to or necessary for the management of the European (Natura 2000) site; and
2. Whether a plan or project, alone or in combination with other plans or projects, is likely to have significant effects on a European (Natura 2000) site, in view of its conservation objectives.

Screening should be undertaken without the inclusion of mitigation measures. If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2 AA and an NIS.

The findings and conclusions of the screening process should be documented, with the necessary supporting evidence and objective criteria. This is of particular importance in the cases where the Appropriate Assessment process ends at the screening stage because the conclusion is that no significant effects are likely.

Screening for Appropriate Assessment involves:

- Description of the project and area characteristics (existing environment);
- Identification and description of Natura 2000 sites that could potentially be affected, and compilation of information on their qualifying interests and conservation objectives;
- Assessment of likely effects – direct, indirect and cumulative, undertaken on the basis of availability of objective information as necessary;
- Screening statement with conclusions.

3.1 METHODOLOGY GUIDELINES

This Appropriate Assessment has been carried with reference to the following guidelines:

- *Appropriate Assessment of Plans and Projects in Ireland. Guidelines for Planning Authorities.* DoEHLG, 2010.

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- Circular NPWS 1/10 & PSSP 2/10 Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities
- *Managing Natura 2000 sites – The Provisions of Article 6 of The Habitats Directive 92/43/EEC*. European Commission, 2000.
- Circular L8/08 Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments 2 September 2008
- *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*. European Commission, 2021.
- Commission Notice “Managing Natura 2000 sites The provisions of Article 6 of the Habitats Directive 92/43/EEC. European Commission, 21.11.2018
- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester.

3.2 DESKTOP RESEARCH

Desktop research was carried out to gather information on the ecology of the site and surrounding areas. The locations of the Natura 2000 sites within the potential zone of influence of the Former Bank of Ireland, Court Place, Co. Carlow were identified from National Parks and Wildlife Service (NPWS) online map viewer. Other Natura sites beyond 15km were also reviewed and considered for the potential for the project to have a negative effect.

Water quality data from the EPA was reviewed for the assessment of biological and environmental data collected on waterbodies in Ireland as per the Water Framework Directive (WFD) Monitoring Programme of River Ecology Monitoring Results (assessed January 2026).

Information on the characteristics of the Natura 2000 sites within the potential zone of influence was reviewed from the conservation objectives documents, site synopses and Standard Natura 2000 data forms available on the NPWS website.

3.3 SITE SURVEY

A site characterisation assessment was undertaken on the 3rd October 2024 to examine the ecological context of the development site, by systematically walking the site and boundaries and determining the habitats present. The habitat survey was undertaken in accordance with the standard methodology outlined in Fossitt’s “*A Guide to Habitats in Ireland*”, a hierarchical classification scheme based upon the characteristics of vegetation present. The Fossitt system also indicates when there are potential links with Annex I habitats of the E.U. Habitats Directive (92/43/EEC). Cognisance was also taken of the Heritage Council guidelines, “*Best Practice Guidance for Habitat Survey and Mapping*”, (Smith *et al.*, 2011).

Bird species and signs of fauna activity were also noted. Particular attention was given to the possible presence of habitats and/or species, which are legally protected under Irish and

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European legislation and to assessing any potential ecological connectivity with Natura 2000 sites or supplementary or stepping-stone habitats of relevance to Natura 2000 sites.

4.0 DESCRIPTION OF PROPOSED DEVELOPMENT AND EXISTING SITE

4.1 PROPOSED DEVELOPMENT

The proposed development will consist of the refurbishment and extension of the Former Bank of Ireland at Court Place, Co. Carlow (ITM Coordinates: 672004.11, 677043.58) as shown in the location map Figure 4.1. The total area of the proposed development site is 2.8ha.

The proposal for the renovation, refurbishment, and adaptive reuse of the Former Bank of Ireland premises at Court Place, Carlow (R93XF57), aims to breathe new life into an iconic yet currently vacant heritage building, which holds historical and architectural value. The building, a protected structure, sits within Carlow's Cultural Quarter, as identified in Project Carlow 2040, and is featured in the Heritage Led Regeneration Plan for Carlow Town. The project is an essential step towards revitalising this important town centre location, with the intended outcome of providing additional office accommodation for Carlow County Council staff, meeting places for community use while ensuring the building and its setting contribute positively to the cultural and architectural landscape of the town. This proposal seeks funding under Strand 2 – Call 2 of the THRIVE Town Centre First Heritage Revival Scheme, which will allow for the sensitive renovation of the building, and deep retrofit of non-historic recent additions, while fully respecting the building's heritage significance.

The development will require demolition of some existing interior partitions also. Where possible, recycled materials will be re-purposed onsite. All remaining demolition waste will be treated appropriately and transferred by licensed contractors.

No changes will be made to the existing foul water drainage infrastructure. The existing foul water drainage network is connected to the existing combined sewer on the public road to the east and foul water is ultimately directed to the Carlow Waste Water Treatment Plant (D0028). This WWTP currently has available capacity according to the County Carlow WWTP Capacity Register (assessed January 2026).

Surface water comprised of rainwater run-off from roofs and hardcore surfaces will be accommodated onsite via SuDS features facilitating ground infiltration. Proposed SuDS features will include retention basin/swales, green roof, permeable paving and bioretention features such as raingardens. The retrofit of the extension will be designed with a green roof, a living wall, rainwater harvesting and SuDS solutions to manage surface water onsite. Nature based solutions will be prioritised contributing to flood resilience. Overflow during periods of heavy rain will be directed to the existing main drainage network at greenfield run-off rates.

Drinking water is currently supplied to the existing building by mains. The proposed development will use the existing mains connection.

Energy efficiency will be a key component of the development in line with the new European Bauhaus principles. It will include the installation of modern insulation, energy efficient

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windows, passive solar design, PV and Solar Thermal panels to improve the BER rating to A3 BER. The proposed heating system for the development will be air-to-water heat pumps.

The estimated construction timeframe for the proposed development is from May 2027 to November 2028. Construction works will be confined to the proposed development footprint and will not necessitate any works within a watercourse or drainage ditch. The proposed development will mostly follow the existing ground contours with minimal ground levelling required. The site will not require the importation of material other than the typical construction materials. During excavation works, soils would be temporarily stored onsite. Any excess soils would be used for landscaping and reinstatement works where possible.

Materials containing Asbestos have been found onsite, mostly consisting of Chrysotile. These materials are to be removed by a licensed contractor. According to the report prepared by Celtic Asbestos Consultancy Ltd., *“all work with asbestos will be carried out in accordance with SI no. 386 of the Safety, Health & Welfare at Work (Exposure to Asbestos) Regulations 2006 & amended version 2010 & Guidelines issued by the Health & Safety Authority in Ireland”*.

No landscape plan has been proposed for the development at this stage however, as noted above, the development will include a new green roof and living wall. The aim is to increase biodiversity planting and green spaces onsite. Soft landscaping will include new native tree and shrub planting and pollinator friendly planting. Sustainable landscaping techniques will be used, such as rain gardens, permeable paving, and other features that manage stormwater and reduce the urban heat island effect. The proposed planting schedule will encompass native species as specified within table 16.1 of the Carlow County Development Plan 2022-2028.

New public lighting will be installed to improve visibility and safety. Lighting will be energy efficient using LED lights and will be designed to avoid night time light pollution. There will be no direct lighting towards the River Barrow and River Nore SAC.

The closest Natura 2000 site is the River Barrow and River Nore SAC (Site Code: 002162) located approximately 137m to the west of the proposed development as shown in Figure 4.2 below.

The following project elements of the proposed development have been examined for relevance to possible effects on the Natura 2000 sites:

- Earthworks & Excavation
- Sediment & Hydrocarbon Runoff
- Stormwater & Waste Water
- Disturbance to Protected Species
- Impact on Protected Habitats
- Dust and Noise
- Invasive Species

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Figure 4.1: Location of Site at Court Place, Co. Carlow

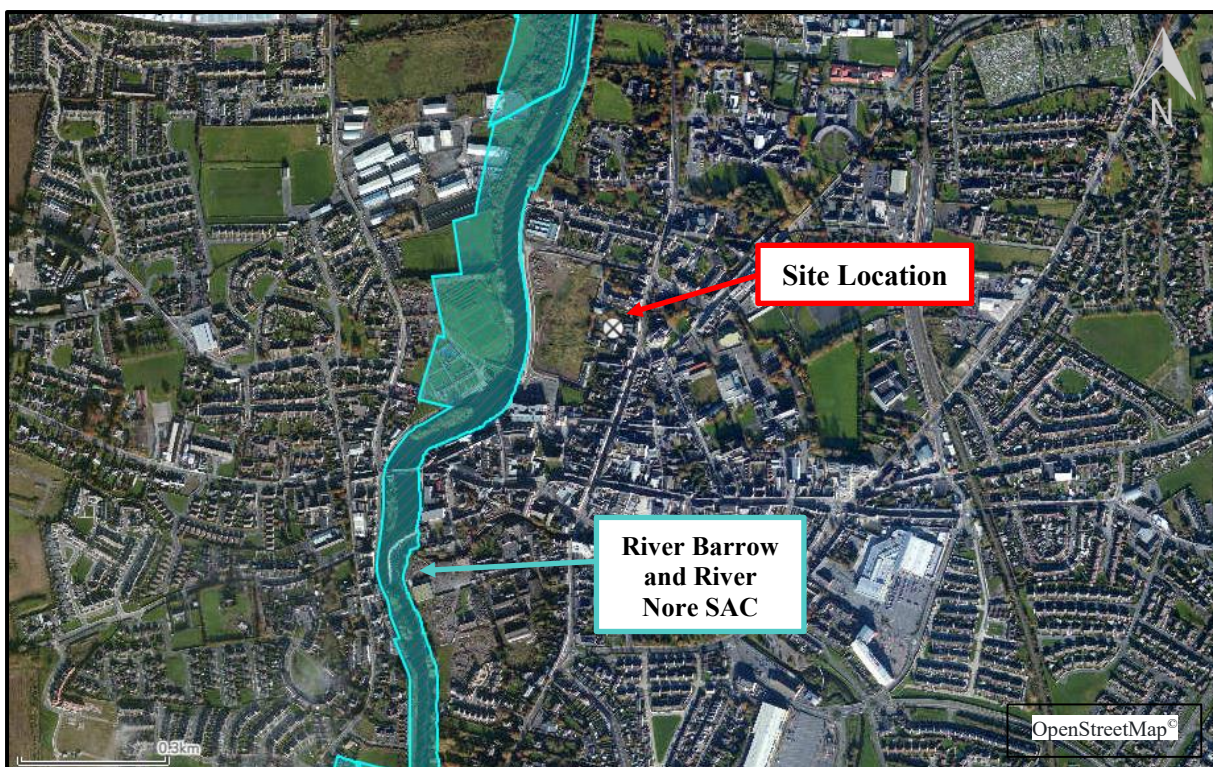


Figure 4.2: Location of Development and Natura 2000 Sites

5.0 ECOLOGICAL BASELINE

5.1. DESKTOP RECORDS

5.1.1 NBDC RECORDS

Flora and fauna records were reviewed on the National Biodiversity Data Centre (NBDC) website for the proposed development site and vicinity. No protected plant species under the Flora (Protection) Order, 2022 (S.I. No. 235 of 2022) were recorded within the 10km square (Tetrad – S77) in which the proposed development site is located.

Near threatened flora recorded within the tetrad are: Pale Flax (*Linum bienne*) and Slender Thistle (*Carduus tenuiflorus*). None of these protected plant species have been found on site.

Six invasive plant species listed in the Third Schedule of the European Communities Birds and Natural Habitats Regulations 2011 (S.I. No. 477 of 2011) as amended 2015 (S.I. No. 355 of 2015) were recorded within the 10km square (Tetrad – S77): Water Fern (*Azolla filiculoides*), Giant Hogweed (*Heracleum mantegazzianum*), Indian Balsam (*Impatiens glandulifera*), Japanese Knotweed (*Fallopia japonica*), Nuttall's Waterweed (*Elodea nuttallii*) and Three-cornered Garlic (*Allium triquetrum*). None of these invasive plant species have been found on site.

Protected fauna species of note recorded within the NBDC 10km square ((Tetrad – S77) include the protected species, Common Frog (*Rana temporaria*), Smooth Newt (*Lissotriton vulgaris*), Freshwater White-clawed Crayfish (*Austropotamobius pallipes*), Common Lizard (*Zootoca vivipara*), Brown Long-eared Bat (*Plecotus auritus*), Daubenton's Bat (*Myotis daubentonii*), Badger (*Meles meles*), Pygmy Shrew (*Sorex minutus*), Red Squirrel (*Sciurus vulgaris*), European Otter (*Lutra lutra*), Lesser Noctule (*Nyctalus leisleri*), Natterer's Bat (*Myotis nattereri*), Pine Marten (*Martes martes*), Pipistrelle (*Pipistrellus pipistrellus sensu lato*), Red Deer (*Cervus elaphus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Canada Goose (*Branta canadensis*) and European Hedgehog (*Erinaceus europaeus*).

High impact invasive species listed in the Third Schedule of the European Communities Birds and Natural Habitats Regulations 2011 (S.I. No. 477 of 2011) include American Mink (*Mustela vison*), Grey Squirrel (*Sciurus carolinensis*), Sika Deer (*Cervus nippon*) and the Brown Rat (*Rattus norvegicus*).

Bird species of note include Barn Owl (*Tyto alba*), Swallow (*Hirundo rustica*), Black-headed Gull (*Larus ridibundus*), Canada Goose (*Branta canadensis*), Coot (*Fulica atra*), Kestrel (*Falco tinnunculus*), Kingfisher (*Alcedo atthis*), Linnet (*Carduelis cannabina*), Pheasant (*Phasianus colchicus*), Pochard (*Aythya ferina*), Common Sandpiper (*Actitis hypoleucos*), Snipe (*Gallinago gallinago*), Starling (*Sturnus vulgaris*), Swift (*Apus apus*), Wood Pigeon (*Columba palumbus*), Curlew (*Numenius arquata*), Eurasian Teal (*Anas crecca*), Tree Sparrow (*Passer montanus*), Corn Crake (*Crex crex*), Woodcock (*Scolopax rusticola*), Golden Plover (*Pluvialis apricaria*), Gadwall (*Anas strepera*), Great Black-backed Gull (*Larus marinus*), Great Cormorant (*Phalacrocorax carbo*), House Martin (*Delichon urbicum*), House Sparrow (*Passer domesticus*), Lesser Black-backed Gull (*Larus fuscus*), Little Egret (*Egretta garzetta*), Little Grebe (*Tachybaptus ruficollis*), Mallard (*Anas platyrhynchos*), Mute Swan (*Cygnus olor*), Northern Lapwing (*Vanellus vanellus*), Rock Pigeon (*Columba livia*), Sand Martin

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(*Riparia riparia*), Sky Lark (*Alauda arvensis*), Spotted Flycatcher (*Muscicapa striata*), Pigeon (*Columba oenas*), Tufted Duck (*Aythya fuligula*), Water Rail (*Rallus aquaticus*), Whooper Swan (*Cygnus cygnus*) and the Yellowhammer (*Emberiza citrinella*)

5.1.2 WATER ENVIRONMENT

Surface Water

The development is located within the Barrow Catchment (ID 14), Sub Catchment Barrow_SC_090 (ID: 14_13). The nearest mapped watercourse to the proposed development site is the River Barrow (EPA Code: 14B01– Order 5) located approximately 123m to the west of the development site. This watercourse flows in a southerly direction until it discharges into the sea to the southeast of Waterford.

The River Barrow at its closest to the development site is designated as part of the River Barrow and River Nore SAC (Site Code: 002162). The Conservation Objectives document for the SAC shows that water quality objectives have been set for White-clawed Crayfish (*Austropotamobius pallipes*) and Atlantic Salmon (*Salmo salar*), with a Q3-4 (moderate status) and Q4 (good status) values set as objectives in freshwater. Water quality objectives have also been set for Twaite Shad, with a target of oxygen levels no lower than 5mg/l.

Other watercourses of note in the area include the River Burren (EPA Code: 14B05 – Order 4) located approximately 396m to the south of the development site. The Knocknagee stream (EPA Code: 14K61 – Order 1) joins the River Burren approximately 779m to the southeast of the development site. The PO Carlow stream (EPA Code: 14P32 – Order 1) is located approximately 308m to the west of the development site.

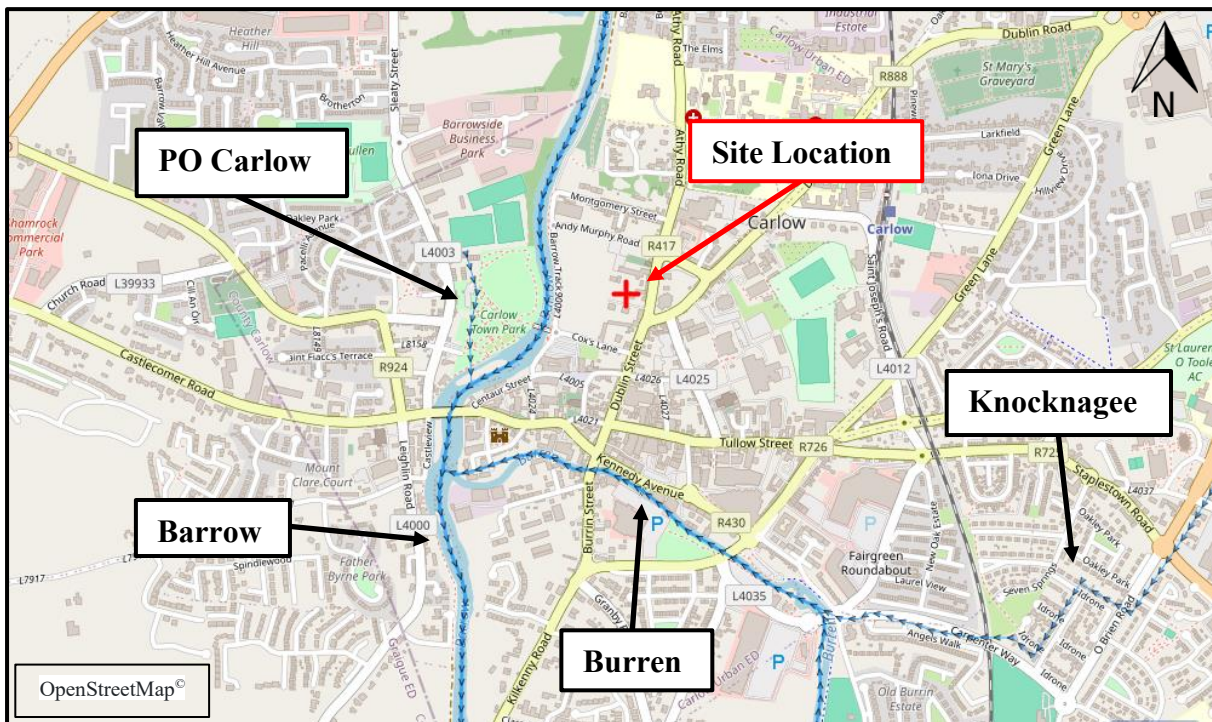


Figure 5.1: Mapped watercourses close to the development site.

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The Environmental Protection Agency (EPA) undertakes surface water monitoring along the River Barrow. The results for the nearest monitoring stations with available information (as per Table 5.1) for the period 2006 – 2023 are summarised in Figure 5.2 below for indicative purposes. As can be seen in Figure 5.2 below, both rivers are mainly achieving a water quality status of between Q3-4 (Moderate) and Q4 (Good) in recent years.

EPA comments on the most recent monitoring results for the River Barrow are as follows: “A total of twenty two stations were surveyed on the River Barrow in 2023, only six of the twenty two stations were deemed to be in a satisfactory ecological condition based on their macroinvertebrate fauna. The uppermost stations (0050, 0100, 0200, 0300, 0500, 0700, 0780) remained unchanged, with the top three sites at High quality, before dropping to Good at 0300. Improvements at stations 0740 and 0850 to Moderate were noted. Stations 0900, 1000, 1300 all remained unchanged in 2023. Station 1500 declined to Moderate while 1900 improved from Poor to Moderate. Conditions remain unsatisfactory at all stations monitored in the middle and lower reaches of the Barrow. Eight stations from 2200 (upstream of Carlow town) to 3500 (Graigenamanagh) maintained their Moderate ecological quality”.

Table 5.1: River Barrow Monitoring Stations within the vicinity of the development

| STATION NO. | STATION LOCATION | EASTING | NORTHING | APPROX. LOCATION RELATIVE TO DEVELOPMENT SITE |
|-------------|--------------------------|-----------|-----------|---|
| RS14B012200 | New Br 1km u/s Carlow Br | 272007.35 | 177778.69 | 767m upstream |
| RS14B012600 | Milford Br | 269975 | 170430 | 7.8km downstream |
| RS14B012680 | Cardinal Moran Br | 269489.39 | 166360.77 | 12.3km downstream |

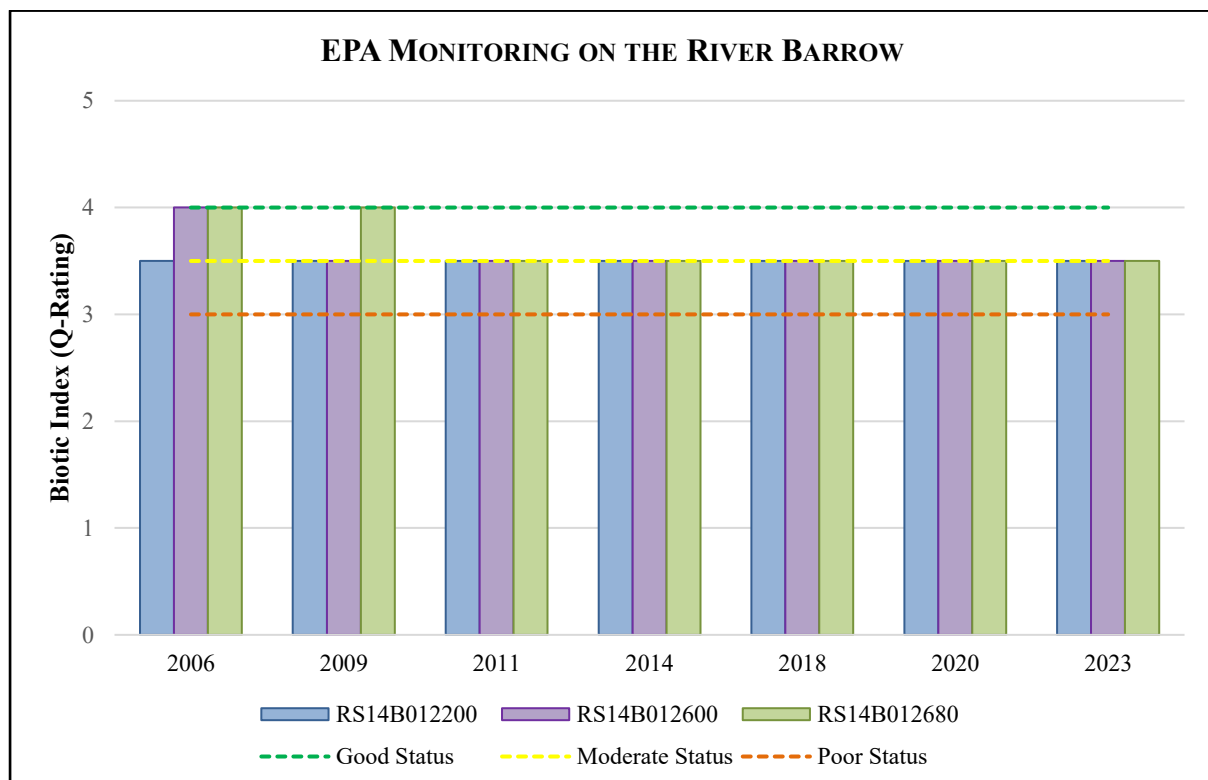


Figure 5.2: EPA Ecological Monitoring of the River Barrow from 2006 – 2023

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Groundwater

The proposed development sits within a groundwater body that is considered a regionally important gravel aquifer with an extensive sand and gravel body. The groundwater that the site is located upon is described as having high vulnerability. The subsoil is described as urban. According to the GSI groundwater data viewer maps (Assessed January 2026), there are no karst features that have been identified within the immediate vicinity of the proposed development. According to the most recent available data (2019-2024) from the online EPA maps, the groundwater quality at the proposed development has a status of Good.

5.1.3 PRELIMINARY FLOOD RISK ASSESSMENT (PFRA)

According to the Preliminary Flood Risk Assessment (PFRA) Mapping tool by the OPW, the development site is not located within an area of fluvial or pluvial flooding, indicative of 10% AEP (10-yr) event, 1% AEP (100-yr) event or 0.1% AEP (1000-yr) event. However, it should be noted that this map is based on broad-scale simple analysis and may not be accurate for a specific location. There is no history of flooding at the development site, the nearest flooding event was approximately 129m southwest of the site's boundary.

5.2 SITE SURVEYS

Land use in the surrounding areas of the development site are mostly comprised of residential areas and services to the north, east and south, with a greenfield bordering the site to the west. The development site is mostly comprised of modified habitats.

5.2.1 HABITATS

Buildings and artificial surfaces (BL3) occupies most of the site area and is comprised of the existing buildings, vehicle access, boundary walls and yards. Plant species present within this habitat include Ivy-leaved Toadflax (*Cymbalaria muralis*), Moss (Bryophyta), Ivy (*Hedera* spp.), Rosebay Willowherb (*Chamaenerion angustifolium*), Dandelion (*Taraxacum* agg.), Willowherb (*Epilobium* spp.), Butterfly Bush (*Buddleja davidii*), Wall lettuce (*Lactuca muralis*), Canadian Fleabane (*Conyza canadensis*), Petty Spurge (*Euphorbia peplus*), Herb Robert (*Geranium robertianum*), Shining Crane's Bill (*Geranium lucidum*), Spreading Pellitory (*Parietaria judaica*), Polypody (*Polypodium* spp.), Honeysuckle (*Lonicera* sp.), Yorkshire Fog (*Holcus lanatus*), Bramble (*Rubus fruticosus*), Ragwort (*Senecio jacobaea*) and Annual Meadow Grass (*Poa annua*).

Spoil and bare ground (ED2) habitat comprises areas of bare ground where vegetation cover is currently less than 50%. The species composition includes Ivy (*Hedera* spp.) and Bramble (*Rubus fruticosus* agg.).

The **Recolonising bare ground (ED3)** habitat comprises areas of spoil and bare ground that currently have over 50% of vegetation cover. Plant species present within this habitat include Bramble (*Rubus fruticosus* agg.), Moss (Bryophyta), Ivy (*Hedera* spp.), Fescue (*Festuca* spp.), Common Nettle (*Urtica dioica*), False Oat-grass (*Arrhenatherum elatius*), Shining Crane's Bill (*Geranium lucidum*) and Yarrow (*Achillea millefolium*).

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A **Treeline (WL2)** borders the west and north boundaries of the site. Tree species present within this habitat include Birch (*Betula* spp.), Cherry (*Prunus* spp.) and Cypress (*Chamaecyparis* spp.). The understorey includes Firethorn (*Pyracantha coccinea*), Ivy (*Hedera* spp.), Bramble (*Rubus fruticosus* agg.) and Traveler’s Joy (*Clematis vitalba*).

Ornamental/non-native shrub (WS3) habitat is present in a small area to the rear of the existing building and borders part of the treeline to the north. The species composition includes *Hebe* sp., Rock Cotoneaster (*Cotoneaster horizontalis*), Firethorn (*Pyracantha coccinea*), Japanese Barberry (*Berberis thunbergii*), Cypress (*Thuja* sp.), Japanese Spindle (*Euonymus japonicus*) and *Viburnum tinus*, with Ivy (*Hedera* spp.), Bramble (*Rubus fruticosus* agg.), Fescue (*Festuca* spp.) and Dandelion (*Taraxacum* agg.) also present.

Scattered trees and parkland (WD5) comprise young trees either alone or in small clusters to the rear of the existing building. Tree species present within this habitat include Sycamore (*Acer pseudoplatanus*), Cherry (*Prunus* spp.) and Birch (*Betula* spp.). The understorey includes Bramble (*Rubus fruticosus*), Spindle (*Euonymus fortunei*), Rose (*Rosa* spp.), Ivy (*Hedera* spp.) and Canadian Fleabane (*Conyza canadensis*).

No Third Schedule invasive or protected flora were noted during the site assessment. No habitats associated with the River Barrow and River Nore Sac occur within the boundary or adjacent the proposed development.

See Table 5.3 for summary for habitats located at and adjacent the proposed development. See Appendix D for photo log of the site.

Table 5.3: Summary of Habitats Identified at and Adjacent the Development Site

| HABITAT CLASSIFICATION HIERARCHY | | |
|---------------------------------------|--|--|
| LEVEL 1 | LEVEL 2 | LEVEL 3 |
| B – Cultivated and built land | BL – Built Land | BL3 – Buildings and artificial surfaces |
| | WD – Highly modified/ non-native woodland | WD5 – Scattered trees and parkland |
| | WL – Linear woodland/ scrub | WL2 - Treeline |
| W – Woodland and scrub | WS – Scrub/ transitional woodland | WS3 – Ornamental/non-native species |
| | E – Exposed rock and disturbed ground | ED – Disturbed ground |
| ED3 – Recolonising bare ground | | |

5.2.1 FAUNA

Bird species noted during the site walkover included Rook (*Corvus frugilegus*), Woodpigeon (*Columba palumbus*), Pied Wagtail (*Motacilla alba*), Starling (*Sturnus vulgaris*), Hooded Crow (*Corvus cornix*), Robin (*Erythacus rubecula*), Jackdaw (*Coloeus monedula*), Collared Dove (*Streptopelia decaocto*), Magpie (*Pica pica*), Feral Pigeon (*Columba livia domestica*).

None of the species recorded is red listed under the BoCCI classification. Starling is amber listed. None of the bird species recorded are listed under Annex I of the E.U. Birds Directive.

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The site would not offer suitable nesting or foraging habitat for Kingfisher (*Alcedo atthis*) due to the lack of riverine habitats onsite and in the vicinity.

No obvious animal tracks/paths were observed during the site walkover. The site would be of limited value to foraging protected mammals such as Badger and Otter since it is comprised of modified habitats. There is no tall vegetation onsite that could be suitable for Otter couches. The development site would not offer suitable habitat for Otter holts. No evidence of Badger such as setts, latrines, snuffle marks and footprints were found at the site.

Fauna typical of that found throughout the rest of Ireland, which would be expected to be found in the area include Bat species, Badger (*Meles meles*), Fox (*Vulpes vulpes*), Otter (*Lutra lutra*), Wood Mouse (*Apodemus sylvaticus*), Pine Marten (*Martes martes*), Stoat (*Mustela erminea hibernica*), American Mink (*Mustela vison*), Deer, Irish Hare (*Lepus timidus hibernicus*), Hedgehog (*Erinus europaeus*), Red Squirrel (*Sciurus vulgaris*) and Grey Squirrel (*Sciurus carolinensis*).

6.0 EUROPEAN SITES (NATURA 2000 SITES) WITHIN ZONE OF INFLUENCE

In assessing the zone of influence of this project upon European sites, the following factors must be considered:

- Potential impacts arising from the project;
- The location and nature of European sites;
- Pathways between the development and European sites.

The project impact sources, environmental pathways and protected site characteristics were screened to identify European sites potentially within the zone of influence of the project.

No Special Protection Areas (SPA) occur within the potential zone of influence of the development. Two Special Areas of Conservation (SAC) occur within the potential zone of influence of the proposed development site and are shown in the following table:

Table 6.1. Special Protection Areas and Special Areas of Conservation potentially within the zone of influence of the proposed development.

| SITE NAME | DESIGNATION | SITE CODE | DISTANCE |
|-----------------------------|-------------|-----------|-------------|
| River Barrow and River Nore | SAC | 002162 | 137m West |
| Slaney River Valley | SAC | 000781 | 10.7km East |

Maps detailing European sites potentially within the zone of influence of the site are included as Appendix C below. For this assessment, the site considered to be within the zone of influence of the proposed development was the River Barrow and River Nore SAC (Site Code: 002162), due to the close proximity of the site to a mapped watercourse with hydrological connection to the SAC.

The proposed development is not hydrologically connected to the Slaney River Valley SAC (Site Code: 000781) nor does the site contain any of the aquatic habitats and species that this SAC has been designated for. Therefore, in the absence of a source-pathway-receptor

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relationship, lack of hydrological connection, the distance from the development and the lack of associated habitats, the Slaney River Valley SAC has been screened out.

6.1 RIVER BARROW AND RIVER NORE SAC (SITE CODE: 002162)

This site consists of most of the freshwater stretches of the Barrow/Nore River catchments. The Barrow is tidal as far upriver as Graiguenamanagh while the Nore is tidal as far upriver as Inistioge. The site also includes the extreme lower reaches of the River Suir and all of the estuarine component of Waterford Harbour extending to Creadan Head. The larger of the many tributaries include the Lerr, Fushoge, Mountain, Aughavaud, Owenass, Boherbaun and Stradbally Rivers of the Barrow and the Delour, Dinin, Erkina, Owveg, Munster, Arrigle and King's Rivers on the Nore. The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive:

| TABLE 6.2: ANNEX I HABITATS | |
|------------------------------------|--|
| CODE | DESCRIPTION |
| 1130 | Estuaries |
| 1140 | Tidal Mudflats and Sandflats |
| 1170 | Reefs |
| 1310 | <i>Salicornia</i> Mud |
| 1330 | Atlantic Salt Meadows (<i>Glauco-Puccinellietalia maritimae</i>) |
| 1410 | Mediterranean salt meadows (<i>Juncetalia maritimi</i>) |
| 3260 | Floating River Vegetation |
| 4030 | Dry Heath |
| 6430 | Hydrophilous Tall Herb Communities |
| 7220 | Petrifying Springs* |
| 91A0 | Old Oak Woodlands |
| 91E0 | Alluvial Forests* |

* denotes a priority habitat

| TABLE 6.3: ANNEX II SPECIES | | |
|------------------------------------|-------------------------|------------------------------------|
| CODE | COMMON NAME | SCIENTIFIC NAME |
| 1016 | Desmoulin's Whorl Snail | <i>Vertigo moulinsiana</i> |
| 1029 | Freshwater Pearl Mussel | <i>Margaritifera margaritifera</i> |
| 1092 | White-clawed Crayfish | <i>Austropotamobius pallipes</i> |
| 1095 | Sea Lamprey | <i>Petromyzon marinus</i> |
| 1096 | Brook Lamprey | <i>Lampetra planeri</i> |
| 1099 | River Lamprey | <i>Lampetra fluviatilis</i> |
| 1103 | Twaite Shad | <i>Alosa fallax</i> |
| 1106 | Atlantic Salmon | <i>Salmo salar</i> |
| 1355 | Otter | <i>Lutra lutra</i> |
| 1421 | Killarney Fern | <i>Trichomanes speciosum</i> |

An excerpt from the site synopsis for River Barrow and River Nore SAC (2024) is included below.

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This site consists of the freshwater stretches of the Barrow and Nore River catchments as far upstream as the Slieve Bloom Mountains. The larger of the many tributaries include the Lerr, Fushoge, Mountain, Aughavaud, Owenass, Boherbaun and Stradbally Rivers of the Barrow, and the Delour, Dinin, Erkina, Owveg, Munster, Arrigle and King's Rivers on the Nore. Both rivers rise in the Old Red Sandstone of the Slieve Bloom Mountains before passing through a band of Carboniferous shales and sandstones. The upper reaches of the Barrow runs through limestone, with the middle reaches and many of the eastern tributaries running through Leinster Granite. The southern end runs over intrusive rocks poor in silica. Good examples of alluvial forest are seen at Rathsnagadan, Murphy's of the River and along other shorter stretches of both the tidal and freshwater elements of the site. Typical species include Almond Willow (*Salix triandra*), White Willow (*S. alba*), Rusty Willow (*S. cinerea* subsp. *oleifolia*), Crack Willow (*S. fragilis*) and Osier (*S. viminalis*), along with Iris (*Iris pseudacorus*), Hemlock Water-dropwort (*Oenanthe crocata*), Thin-spiked Wood-sedge (*Carex strigosa*), Pendulous Sedge (*C. pendula*), Meadowsweet (*Filipendula ulmaria*) and the Red Data Book species Nettle-leaved Bellflower (*Campanula trachelium*).

Good examples of old oak woodlands include those at Cloghristic Wood, Drummond Wood and Borris Demesne. Borris Demesne contains a very good example of a semi-natural broadleaved woodland in very good condition, with a high degree of natural regeneration of oak and ash. Drummond Wood consists of three blocks of deciduous woods situated on steep slopes. The deciduous trees are mostly oak species. The woods have a well-established understorey of Holly, and the herb layer is varied. Eutrophic tall herb vegetation occurs within various areas of alluvial forest and where the river floodplain is intact. Characteristic species include Meadowsweet, Purple Loosestrife (*Lythrum salicaria*), Marsh Ragwort (*Senecio aquaticus*) and Hedge Bindweed (*Calystegia sepium*). The invasive Indian Balsam (*Impatiens glandulifera*) is abundant in places. Floating river vegetation is well represented in the Barrow and many of its tributaries. Species include water-starworts (*Callitriche* spp.), Bulbous Rush (*Juncus bulbosus*), water-milfoils (*Myriophyllum* spp.), pondweeds (*Potamogeton* spp.) and crowfoots (*Ranunculus* spp.).

Dry heath occurs in pockets along the steep valley sides of the rivers. Dry heath vegetation consists of Bracken and Gorse (*Ulex europaeus*) with patches of acidic grassland vegetation. Additional typical species include Heath Bedstraw (*Galium saxatile*), Foxglove (*Digitalis purpurea*), Common Sorrel (*Rumex acetosa*) and Creeping Bent (*Agrostis stolonifera*). Dry heath generally grades into wet woodland or wet swamp vegetation lower down the slopes on the riverbank. In the foothills associated with the Aughnabrisky, Aughavaud and Mountain Rivers there are wet heath areas dominated by Purple Moor-grass (*Molinia caerulea*) with Heather (*Calluna vulgaris*) and Bell Heather (*Erica cinerea*). Salt meadows occur at the site's southern section. In the larger salt meadow areas, the Atlantic and Mediterranean sub types are generally intermixed. At the salt meadow's upper edge, the legally protected Borrer's Saltmarsh-grass (*Puccinellia fasciculata*), Meadow Barley (*Hordeum secalinum*) and Divided Sedge (*Carex divisa*) are found. Other flora present includes Sea Rush (*Juncus maritimus*), Sea Aster (*Aster tripolium*), Thrift (*Armeria maritima*), Sea Couch (*Elymus pycnanthus*), Spear-leaved Orache (*Atriplex prostrata*), Lesser Sea-spurrey (*Spergularia marina*) and Sea Arrowgrass (*Triglochin maritima*). Glassworts (*Salicornia* spp.) and other annuals colonising mud / sand are found in the saltmarsh creeks and at seaward edges.

The site is of ornithological importance for a number of E.U. Birds Directive Annex I species, including Greenland White-fronted Goose, Whooper Swan, Bewick's Swan, Bar-tailed Godwit, Peregrine and Kingfisher. Nationally important numbers of Golden Plover and Bar-

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tailed Godwit are found during the winter. Wintering flocks of migratory birds are seen in Shanahoe Marsh, the Curragh, Goul Marsh and along the Barrow Estuary in Waterford Harbour. There is also an extensive autumnal roosting site in the reedbeds of the Barrow Estuary used by Swallows before they leave the country.

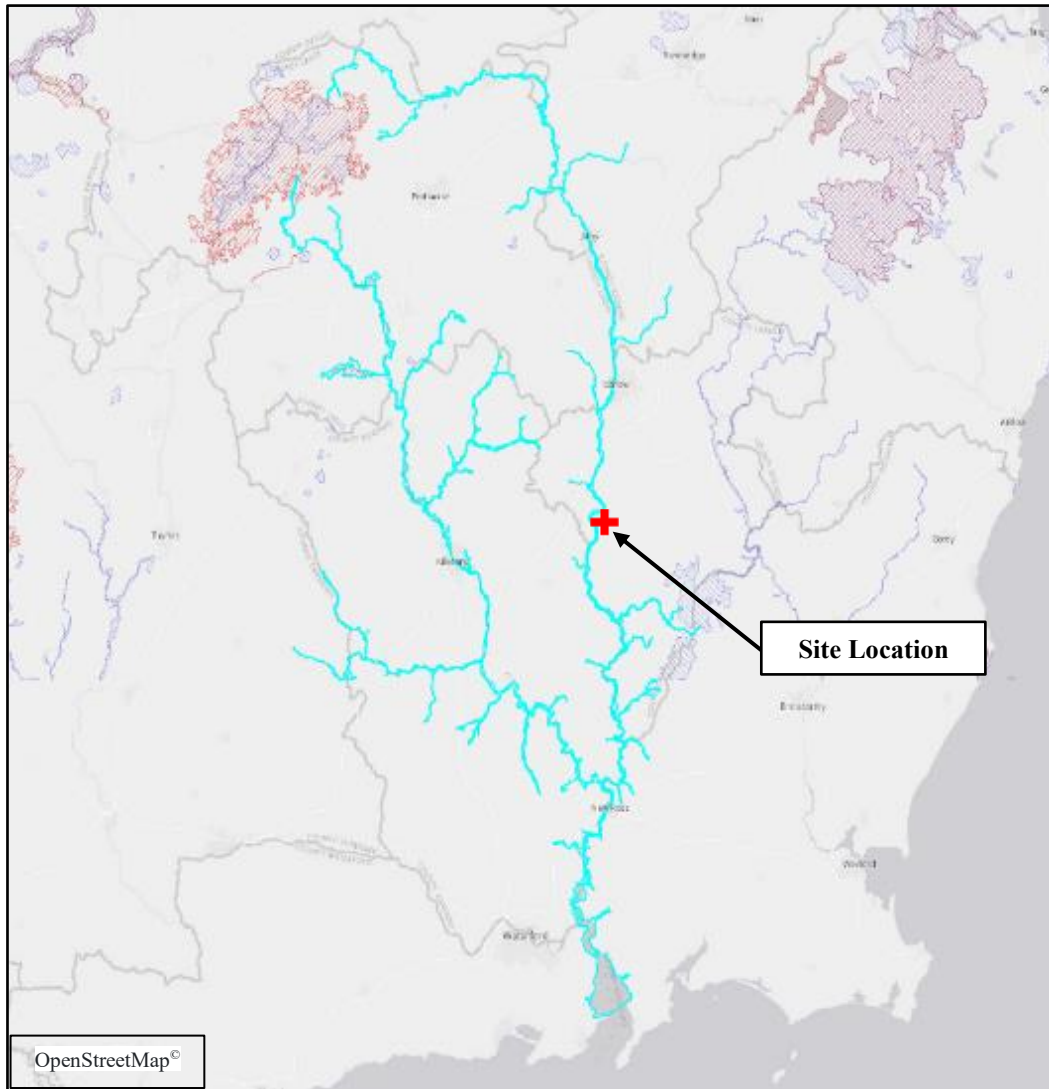


Figure 6.1: River Barrow and River Nore SAC

The conservation objectives for the SAC site are to maintain or restore the favourable conservation condition of the qualifying interests. Site specific conservation objectives (SSCOs) for the qualifying interests of the River Barrow and River Nore SAC are provided in the table below, where available from the NPWS document “Conservation Objectives: River Barrow and River Nore SAC 002162” (NPWS, 2025).

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|--|---------------------------|--|---|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| [1130] Estuaries | | | |
| Habitat area | Hectares | The permanent habitat area is stable or increasing, subject to natural processes | Habitat area was estimated using OSI data and the defined Transitional Water Body area under the Water Framework Directive as 3,856ha |
| Community distribution | Hectares | The following sediment communities should be maintained in a natural condition: Muddy estuarine community complex; Sand to muddy fine sand community complex; Fine sand with <i>Fabulina fabula</i> community. | |
| Community structure: extent | Hectares and distribution | Conserve the extent of Sabellaria alveolata reef community, subject to natural processes. | |
| Community structure: quality | Honeycomb reef structure | Conserve the high quality of the Sabellaria alveolata reef community, subject to natural processes. | |
| [1140] Tidal Mudflats and Sandflats | | | |
| Habitat area | Hectares | The permanent habitat area is stable or increasing, subject to natural processes. | Habitat area was estimated using OSI data as 926ha |
| Community distribution | Hectares | The following sediment communities should be maintained in a natural condition: Muddy estuarine community complex; Sand to muddy fine sand community complex | |
| [1170] Reefs | | | |
| Habitat Area | Hectares | The permanent area is stable or increasing, subject to natural processes. | Habitat area estimated as 17.20ha based on information from site-specific survey in February 2024 (NPWS internal files) and orthophotography. |
| Distribution | Occurrence | The permanent area is stable or increasing, subject to natural processes. | |
| Community Extent | Hectares | Conserve the following community type in a natural condition: Sheltered to moderately exposed intertidal reef community complex in a natural condition, subject to natural processes. | |
| Community structure: extent | Hectares and distribution | Conserve the extent of Sabellaria alveolata reef community, subject to natural processes. | |

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|---|---|---|---|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| Community structure: quality | Honeycomb reef structure | Conserve the high quality of the Sabellaria alveolata reef community, subject to natural processes. | |
| [1310] Salicornia Mud | | | |
| Habitat area | Hectares | Area stable or increasing, subject to natural processes, including erosion and succession. | The Ringville sub-site was mapped and no additional areas of potential Salicornia mudflat were identified from an examination of aerial photographs, giving a total estimated area of 0.03ha. Note further unsurveyed areas maybe present within the site |
| Habitat distribution | Occurrence | No decline, subject to natural processes | |
| Physical structure: sediment supply | Presence/absence of physical barriers | Maintain or where necessary restore natural circulation of sediments and organic matter, without any physical obstructions | |
| Physical structure: flooding regime | Hectares flooded; frequency | Maintain natural tidal regime | |
| Physical structure: creeks and pans | Occurrence | Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession | |
| Vegetation structure: zonation | Occurrence | Maintain range of saltmarsh habitat zonations including transitional zones, subject to natural processes including erosion and succession | |
| Vegetation structure: vegetation height | Centimetres | Maintain structural variation within sward | |
| Vegetation structure: vegetation cover | Percentage cover at a representative sample of monitoring stops | Maintain more than 90% of area outside creeks vegetated. | |
| Vegetation composition: typical species and sub-communities | Percentage cover at a representative sample of monitoring stops | Maintain range of sub- communities with typical species listed in Saltmarsh Monitoring Project | |
| Vegetation structure: negative indicator species: <i>Spartina anglica</i> | Hectares | No significant expansion of <i>Spartina</i> . No new sites for this species and an annual spread of less than 1% where it is already known to occur | |
| [1330] Atlantic Salt Meadows | | | |
| Habitat area | Hectares | Area stable or increasing, subject to natural processes, including erosion and succession | Four sub-sites were mapped and additional areas of potential saltmarsh were identified from an examination of |
| Habitat distribution | Occurrence | No decline, subject to natural processes | |

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|---|---|---|---|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| Physical structure: sediment supply | Presence/absence of physical barriers | Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions | aerial photographs, giving a total estimated area of Atlantic salt meadow of 35.07ha. Note further unsurveyed areas maybe present within the site |
| Physical structure: flooding regime | Hectares flooded; frequency | Maintain natural tidal regime | |
| Physical structure: creeks and pans | Occurrence | Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession | |
| Vegetation structure: zonation | Occurrence | Maintain range of saltmarsh habitat zonation including transitional zones, subject to natural processes including erosion and succession. | |
| Vegetation structure: vegetation height | Centimetres | Maintain structural variation within sward | |
| Vegetation structure: vegetation cover | Percentage cover at a representative sample of monitoring stops | Maintain more than 90% of area outside creeks vegetated | |
| Vegetation composition: typical species and sub-communities | Percentage cover at a representative sample of monitoring stops | Maintain range of sub- communities with typical species listed in Saltmarsh Monitoring Project | |
| Vegetation structure: negative indicator species: <i>Spartina anglica</i> | Hectares | No significant expansion of <i>Spartina</i> . No new sites for this species and an annual spread of less than 1% where it is already known to occur | |
| [1410] Mediterranean Salt Meadows | | | |
| Habitat area | Hectares | Area stable or increasing, subject to natural processes, including erosion and succession. For sub-sites mapped: Dunbrody Abbey - 0.08ha, Rochestown - 0.04ha, Ringville - 6.70ha | |
| Habitat distribution | Occurrence | No decline, subject to natural processes | |
| Physical structure: sediment supply | Presence/absence of physical barriers | Maintain or where necessary restore natural circulation of sediments and organic matter, without any physical obstructions | |
| Physical structure: flooding regime | Hectares flooded; frequency | Maintain natural tidal regime | |

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|---|--|---|---|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| Physical structure: creeks and pans | Occurrence | Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession | |
| Vegetation structure: zonation | Occurrence | Maintain range of saltmarsh habitat zonations including transitional zones, subject to natural processes including erosion and succession | |
| Vegetation structure: vegetation height | Centimetres | Maintain structural variation within sward | |
| Vegetation structure: vegetation cover | % cover at a representative sample of monitoring stops | Maintain more than 90% of area outside creeks vegetated. | |
| Vegetation composition: typical species and sub-communities | % cover at a representative sample of monitoring stops | Maintain range of sub- communities with typical species listed in Saltmarsh Monitoring Project | |
| Vegetation structure: negative indicator species: <i>Spartina anglica</i> | Hectares | No significant expansion of <i>Spartina</i> . No new sites for this species and an annual spread of less than 1% where it is already known to occur | |
| [3260] Floating River Vegetation | | | |
| Habitat distribution | Occurrence | No decline, subject to natural processes | <p>The full distribution of this habitat and its sub-types in this site is currently unknown. The basis of the selection of the SAC for the habitat is the presence of an excellent example of the vegetation assemblage associated with tidal reaches of large rivers between Enniscorthy and Polladerg townland.</p> <p>Due to regular disturbance (through variations in flow), river macrophytes rarely reach a climax condition but frequently occur as transient communities. A natural (relatively unmodified) flow regime is required for</p> |
| Habitat area | Kilometres | Area stable or increasing, subject to natural processes | |
| Hydrological regime: river flow | Metres per second | Maintain appropriate hydrological regimes | |
| Hydrological regime: groundwater discharge | Metres per second | The groundwater flow to the habitat should be permanent and sufficient to maintain tufa formation | |
| Substratum composition: particle size range | Millimetres | The substratum should be dominated by large particles and free from fine sediments | |
| Water chemistry: minerals | Milligrammes per litre | The groundwater and surface water should have sufficient concentrations of minerals to allow deposition and persistence of tufa deposits | |
| Water quality: suspended sediment | Milligrammes per litre | The concentration of suspended solids in the water column should be sufficiently low to prevent excessive deposition of fine sediments | |

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|---|------------------------|--|--|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| Water quality: nutrients | Milligrammes per litre | The concentration of nutrients in the water column should be sufficiently low to prevent changes in species composition or habitat condition | both plant communities and channel geomorphology to be in favourable condition, exhibiting typical dynamics for the river type |
| Vegetation composition: typical species | Occurrence | Typical species of the relevant habitat sub-type should be present and in good condition | |
| Floodplain connectivity | Area | The area of active floodplain at and upstream of the habitat should be maintained | |
| [4030] Dry Heath | | | |
| Habitat distribution | Occurrence | No decline from current habitat distribution, subject to natural processes | <p>Spatial extent currently unmapped but indicated as occurring on the steep, free-draining, river valley sides especially the Barrow and tributaries in the foothills of the Blackstairs Mountains.</p> <p>Dry heath in this SAC occurs on free-draining nutrient poor soils and is often characterised by gorse and open acid grassland areas. And locally bilberry and woodrush.</p> <p>Bracken appears to be quite dense in places and before any management action is considered its rate of spread needs to be established as well as its threat, if any, to other dry heath species and its potential value to important fauna (e.g. Twite).</p> <p>Broomrape is dependent on gorse at this site as it is parasitic on gorse roots. It is recorded as occurring on steep slopes above New Ross. A small area of excellent dry coastal heath at Ballyhack is</p> |
| Habitat area | Hectares | Area stable or increasing, subject to natural processes. Habitat area is not known but estimated as less than 400ha of the area of the SAC, occurring in dispersed locations | |
| Physical structure: free-draining, acid, low nutrient soil; rock outcrops | Occurrence | No significant change in soil nutrient status, subject to natural processes. No increase or decrease in area of natural rock outcrop | |
| Vegetation structure: sub- shrub indicator species | Percentage cover | Cover of characteristic sub- shrub indicator species at least 25%: gorse (<i>Ulex europaeus</i>) and where rocky outcrops occur bilberry (<i>Vaccinium myrtillus</i>) and woodrush (<i>Luzula sylvatica</i>). Some rock outcrops support English stonecrop (<i>Sedum anglicum</i>), sheep's bit (<i>Jasione montana</i>) and wild madder (<i>Rubia peregrina</i>) as well as important moss and lichen assemblages | |
| Vegetation structure: senescent gorse | Percentage cover | Cover of senescent gorse less than 50% | |
| Vegetation structure: browsing | Percentage cover | Long shoots of bilberry with signs of browsing collectively less than 33% | |
| Vegetation structure: native trees and shrubs | Percentage cover | Cover of scattered native trees and shrub less than 20% | |
| Vegetation composition: positive indicator species | Number | Number of positive indicator species at least 2 e.g. gorse and associated dry heath/ acid grassland flora | |

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|---|---------------------------|--|---|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| Vegetation structure: positive indicator species | Percentage cover | Cover of positive indicator species at least 60%. This should include plant species characteristic of dry heath in this SAC including gorse, bilberry and associated acid grassland flora | interspersed with patches rock and of dry lowland grassland and has a high species diversity. Notably there is an excellent range of Clover (<i>Trifolium</i>) species including the legally protected clustered clover, a species known only from one other site in Ireland. Also <i>T. ornithopodiodes</i> , <i>T. striatum</i> and <i>Torilus nodosa</i> . |
| Vegetation composition: bryophyte and non-crustose lichen species | Number | Number of bryophyte or non- crustose lichen species present at least 2 | |
| Vegetation composition: bracken (<i>Pteridium aquilinum</i>) | Percentage cover | Cover of bracken less than 10% | |
| Vegetation structure: weedy negative indicator species | Percentage cover | Cover of agricultural weed species (negative indicator species) less than 1% | |
| Vegetation composition: non-native species | Percentage cover | Cover of non-native species less than 1%. | |
| Vegetation composition: rare/scarce heath species | Location, area and number | No decline in distribution or population sizes of rare, threatened or scarce species, including Greater Broomrape (<i>Orobanche rapum-genistae</i>) and the legally protected clustered clover (<i>Trifolium glomeratum</i>) | |
| Vegetation structure: disturbed bare ground | Percentage cover | Cover of disturbed bare ground less than 10% (but if peat soil less than 5%) | |
| Vegetation structure: burning | Occurrence | No signs of burning within sensitive areas | |
| [6430] Hydrophilous Tall Herb Communities | | | |
| Habitat distribution | Occurrence | No decline, subject to natural processes | |
| Habitat area | Hectares | Area stable or increasing, subject to natural processes | |
| Hydrological regime: Flooding depth/height of water table | Metres | Maintain appropriate hydrological regimes | |
| Vegetation structure: sward height | Centimetres | 30-70% of sward is between 40 and 150cm in height | |
| Vegetation composition: broadleaf herb: grass ratio | Percentage | Broadleaf herb component of vegetation between 40 and 90% | |

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|---|---------------------------|---|--|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| Vegetation composition: typical species | Number | At least 5 positive indicator species present | nutrient-rich sediment. |
| Vegetation composition: negative indicator species | Occurrence | Negative indicator species, particularly non-native invasive species, absent or under control- NB Indian balsam (<i>Impatiens glandulifera</i>), monkeyflower (<i>Mimulus guttatus</i>), Japanese knotweed (<i>Fallopia japonica</i>) and giant hogweed (<i>Heracleum mantegazzianum</i>) | Bare ground, due to natural inundation processes may often be present. Attribute and target based on the Irish Semi-natural Grassland Survey (O'Neill et al., 2010) |
| [7220] Petrifying Springs | | | |
| Habitat area | Square metres | Area stable or increasing, subject to natural processes | Full distribution of this habitat in this site is currently unknown. It has been described in woodlands at Dysart, between Thomastown and Inistioge. Current hydrological regimes are unknown. Petrifying springs rely on permanent irrigation, usually from upwelling groundwater sources or seepage sources. Water chemistry is currently unknown. Water supply to petrifying springs is characteristically oligotrophic and calcareous The bryophytes <i>Cratoneuron commutatum</i> and <i>Eucladium verticillatum</i> are diagnostic of this habitat. |
| Habitat distribution | Occurrence | No decline | |
| Hydrological regime: height of water table; water flow | Metres; metres per second | Maintain appropriate hydrological regimes | |
| Water quality | Water chemistry measures | Maintain oligotrophic and calcareous conditions | |
| Vegetation composition: typical species | Occurrence | Maintain typical species | |
| [91A0] Old Oak Woodlands | | | |
| Habitat area | Hectares | Area stable or increasing, subject to natural processes, at least 85.08ha for sub-sites surveyed | The sizes of at least some of the existing woodlands need to be increased in order |

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|---|--|--|---|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| Habitat distribution | Occurrence | No decline. | <p>to reduce habitat fragmentation and benefit those species requiring ‘deep’ woodland conditions.</p> <p>Oak regenerates poorly. In suitable sites ash can regenerate in large numbers although few seedlings reach pole size.</p> <p>Mature and veteran trees are important habitats for bryophytes, lichens, saproxylic organisms and some bird species. Their retention is important to ensure continuity of habitats/niches and propagule sources.</p> <p>Dead wood is a valuable resource and an integral part of a healthy, functioning woodland ecosystem.</p> <p>The following are the most common invasive species in this woodland type: Beech (<i>Fagus sylvatica</i>), Rhododendron (<i>Rhododendron ponticum</i>), Cherry laurel (<i>Prunus laurocerasus</i>)</p> |
| Woodland size | Hectares | Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size | |
| Woodland structure: cover and height | Percentage and metres | Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi- mature trees and shrubs; and well-developed herb layer | |
| Woodland structure: community diversity and extent | Hectares | Maintain diversity and extent of community types | |
| Woodland structure: natural regeneration | Seedling:sapling:pole ratio | Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy | |
| Woodland structure: dead wood | m ³ per hectare; number per hectare | At least 30m ³ /ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter | |
| Woodland structure: veteran trees | Number per hectare | No decline | |
| Woodland structure: indicators of local distinctiveness | Occurrence | No decline | |
| Vegetation composition: native tree cover | Percentage | No decline. Native tree cover not less than 95% | |
| Vegetation composition: typical species | Occurrence | A variety of typical native species present, depending on woodland type, including oak (<i>Quercus petraea</i>) and birch (<i>Betula pubescens</i>) | |
| Vegetation composition: negative indicator species | Occurrence | Negative indicator species, particularly non-native invasive species, absent or under control | |
| [91E0] Alluvial Forests | | | |
| Habitat area | Hectares | Area stable or increasing, subject to natural processes, at least 181.54ha for sites surveyed | The sizes of at least some of the existing woodlands need to be increased in order to reduce habitat fragmentation and |
| Habitat distribution | Occurrence | No decline. | |

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|---|--|--|--|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| Woodland size | Hectares | Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size | benefit those species requiring 'deep' woodland conditions. |
| Woodland structure: cover and height | Percentage and metres | Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi-mature trees and shrubs; and well-developed herb layer | Alder and oak regenerate poorly. Ash often regenerates in large numbers although few seedlings reach pole size. |
| Woodland structure: community diversity and extent | Hectares | Maintain diversity and extent of community types | Dead wood is a valuable resource and an integral part of a healthy, functioning woodland ecosystem. |
| Woodland structure: natural regeneration | Seedling:sapling:pole ratio | Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy | Mature and veteran trees are important habitats for bryophytes, lichens, saproxylic organisms and some bird species. Their retention is important to ensure continuity of habitats/niches and propagule sources. |
| Hydrological regime: Flooding depth/height of water table | Metres | Appropriate hydrological regime necessary for maintenance of alluvial vegetation | |
| Woodland structure: dead wood | m ³ per hectare; number per hectare | At least 30m ³ /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) | |
| Woodland structure: veteran trees | Number per hectare | No decline | The following are the most common invasive species in this woodland type: Sycamore (<i>Acer pseudoplatanus</i>), Beech (<i>Fagus sylvatica</i>), Rhododendron (<i>Rhododendron ponticum</i>), Cherry laurel (<i>Prunus laurocerasus</i>), Dogwood (<i>Cornus sericea</i>), Himalayan honeysuckle (<i>Leycesteria formosa</i>) and Himalayan balsam (<i>Impatiens grandiflora</i>). |
| Woodland structure: indicators of local distinctiveness | Occurrence | No decline | |
| Vegetation composition: native tree cover | Percentage | No decline. Native tree cover not less than 95% | |
| Vegetation composition: typical species | Occurrence | A variety of typical native species present, depending on woodland type, including ash (<i>Fraxinus excelsior</i>) alder (<i>Alnus glutinosa</i>), willows (<i>Salix</i> spp) and locally, oak (<i>Quercus robur</i>) | |
| Vegetation composition: negative indicator species | Occurrence | Negative indicator species, particularly non-native invasive species, absent or under control | |
| [1016] Desmoulin's Whorl Snail | | | |

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|---|---|--|---|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| Distribution: occupied sites | Number | No decline. Two known sites: Borris Bridge, Co. Carlow S711503; Boston Bridge, Kilnaseer S338774, Co. Laois. | |
| Population size: adults | Number per positive sample | At least 5 adults snails in at least 50% of samples | |
| Population density | Percentage positive samples | Adult snails present in at least 60% of samples per site | |
| Area of occupancy | Hectares | Minimum of 1ha of suitable habitat per site | |
| Habitat quality: vegetation | Percentage of samples with suitable vegetation | 90% of samples in habitat classes I and II | |
| Habitat quality: soil moisture levels | Percentage of samples with appropriate soil moisture levels | 90% of samples in moisture class 3-4 | |
| [1029] Freshwater Pearl Mussel | | | |
| Distribution: Ballymurphy | Kilometres | Restore distribution at 3.91km. | The conservation objective applies to the Ballymurphy, Mountain and Nore freshwater pearl mussel populations, which are listed on the European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009 (Statutory Instrument No. 296 of 2009). The Ballymurphy population is confined to the Ballymurphy (or Ballyroughan Little) River, a tributary of the Barrow River. The population is distributed from above Earl's Bridge down to the bridge at Clashganna. Given the severe decline since 2004 and the scattered distribution it is highly likely the species range has contracted. |
| Distribution: Mountain | Kilometres | Restore distribution at 9.45km. | The Mountain population is confined to the Mountain River, a tributary of the Barrow River. The population is distributed from just upstream of its confluence with the |

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|---|---------------------------|--|--|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| | | | Kiledmond River down to where the Mountain joins the main channel of the Barrow River. The best habitat for the species is upstream of Borris. |
| Distribution: Nore | Kilometres | Restore distribution at 21.13km. | The Nore population stretches from Poorman's Bridge to Lismaine Bridge, with most of the population found between Poorman's Bridge and just upstream of the bridge at Ballyragget (Moorkens, 1996). However, given the severe decline upstream of New Bridge, it is more likely that the range has contracted. |
| Population size: Ballymurphy | Number of adult mussels | Restore Ballymurphy population to at least 1,000 adult mussels | The population in 2024 was estimated to be 30 adult mussels. |
| Population size: Mountain | Number of adult mussels | Restore Mountain population to at least 4,000 adult mussels | The continual decline in numbers and no evidence of recruitment together with the 2016 monitoring results suggests that the population in the Mountain is unlikely to exceed 200 individual mussels in 2024. |
| Population size: Nore | Number of adult mussels | Restore Nore population to at least 5,000 adult mussels | The total counts from all post-2014 surveys estimate the freshwater pearl mussel population in the Nore at 100 individuals, unless some of the short term captive bred individuals released in 2014 have survived. |
| Population structure: recruitment | Percentage per size class | Restore to at least 20% of population no more than 65mm in length; and at least 5% of population no more than 30mm in length. | The species is known not to have reproduced successfully in the River Nore since 1970. |
| Population structure: adult mortality. Ballymurphy | Percentage | No more than 5% decline from previous number of live adults counted; dead shells less than 1% of the adult population and scattered in distribution. | The Ballymurphy failed the target for dead shells in 2009 with hundreds of dead shells on the river bed (DEHLG, 2010) and again in 2022 when a further 44 dead shells were recorded. |

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|--|--------------------------------|--|---|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| Population structure: adult mortality. Nore | Percentage | No more than 5% decline from previous number of live adults counted; dead shells less than 1% of the adult population and scattered in distribution. | The Nore failed the target for dead shells in 2009 (DEHLG, 2010) but it was unknown if the dead shells observed belonged to mussels that recently died or to mussels that died several years earlier because, as the Nore River water is highly calcareous, the dead shells do not erode quickly. |
| Suitable habitat: extent | Kilometres | Restore suitable habitat in more than 3.91km in the Ballymurphy, 5.3km in the Mountain and 16.72km in the Nore system. | While, the Mountain River was found to have extensive areas of physically good juvenile habitat, it is intermittently compromised by siltation to the extent that juveniles are killed and adults are stressed. |
| Suitable habitat: condition | Kilometres | Restore condition of suitable habitat | - |
| Water quality: macroinvertebrates and phytobenthos (diatoms) | Ecological quality ratio (EQR) | Restore water quality- macroinvertebrates: EQR greater than 0.90 (Q4-5 or Q5); phytobenthos: EQR greater than 0.93 | - |
| Substratum quality: filamentous algae (macroalgae); macrophytes (rooted higher plants) | Percentage | Restore substratum quality- filamentous algae: absent or trace (less than 5%); macrophytes: absent or trace (less than 5%) | - |
| Substratum quality: sediment | Occurrence | Restore substratum quality- stable cobble and gravel substrate with very little fine material; no artificially elevated levels of fine sediment | - |
| Substratum quality: oxygen availability | Redox potential | Restore to no more than 20% decline from water column to 5cm depth in substrate | - |
| Hydrological regime: flow variability | Metres per second | Restore appropriate hydrological regime | - |
| Host Fish | Number | Maintain sufficient juvenile salmonids to host glochidial larvae | - |
| Fringing habitat: area and condition | Hectares | Restore the area and condition of fringing habitats necessary to support the population | - |
| [1092] White-clawed Crayfish | | | |

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|---|--|--|---|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| Distribution | Occurrence | No reduction from baseline | <p>The crayfish is present almost throughout this SAC. The records extend as far downstream as Thomastown on the Nore and Graiguenamanagh on the Barrow.</p> <p>Alien crayfish species are identified as major direct threat to this species and as disease vector.</p> <p>Crayfish need high habitat heterogeneity. Larger crayfish must have stones to hide under, or an earthen bank in which to burrow. Hatchlings shelter in vegetation, gravel and among fine tree-roots. Smaller crayfish are typically found among weeds and debris in shallow water. Larger juveniles in particular may also be found among cobbles and detritus such as leaf litter. These conditions must be available on the whole length of occupied habitat</p> |
| Population structure: recruitment | % occurrence of juveniles and females with eggs | Juveniles and/or females with eggs in at least 50% of positive samples | |
| Negative indicator species | Occurrence | No alien crayfish species | |
| Disease | Occurrence | No instances of disease | |
| Water quality | EPA Q value | At least Q3-4 at all sites sampled by EPA | |
| Habitat quality: heterogeneity | Occurrence of positive habitat features | No decline in heterogeneity or habitat quality | |
| [1095] Sea Lamprey | | | |
| Distribution: extent of anadromy | % of river accessible | Greater than 75% of main stem length of rivers accessible from estuary | <p>Artificial barriers can block or cause difficulties to lampreys' upstream migration, thereby limiting species to lower stretches and restricting access to spawning areas.</p> <p>Juveniles burrow in areas of fine sediment in still water.</p> <p>Lampreys spawn in clean gravels.</p> |
| Population structure of juveniles | Number of age/size groups | At least three age/size groups present | |
| Juvenile density in fine sediment | Juveniles/m ² | Juvenile density at least 1/m ² | |
| Extent and distribution of spawning habitat | m ² and occurrence | No decline in extent and distribution of spawning beds | |
| Availability of juvenile habitat | Number of positive sites in 3rd order channels (and greater), downstream of spawning areas | More than 50% of sample sites positive | |

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|---|--|--|--|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| [1096] Brook Lamprey | | | |
| Distribution | % of river accessible | Access to all water courses down to first order streams | <p>Artificial barriers can block lampreys' upstream migration, thereby limiting species to lower stretches and restricting access to spawning areas.</p> <p>It is impossible to distinguish between brook and river lamprey juveniles in the field.</p> <p>Juveniles burrow in areas of fine sediment in still water. Lampreys spawn in clean gravels.</p> |
| Population structure of juveniles | Number of age/size groups | At least three age/size groups of brook/river lamprey present | |
| Juvenile density in fine sediment | Juveniles/m ² | Mean catchment juvenile density of brook/river lamprey at least 2/m ² | |
| Extent and distribution of spawning habitat | m ² and occurrence | No decline in extent and distribution of spawning beds | |
| Availability of juvenile habitat | Number of positive sites in 2nd order channels (and greater), downstream of spawning areas | More than 50% of sample sites positive | |
| [1099] River Lamprey | | | |
| Distribution: extent of anadromy | % of river accessible | Greater than 75% of main stem and major tributaries down to second order accessible from estuary | <p>Artificial barriers can block lampreys' upstream migration, thereby limiting species to lower stretches and restricting access to spawning areas.</p> <p>It is impossible to distinguish between brook and river lamprey juveniles in the field.</p> <p>Juveniles burrow in areas of fine sediment in still water. Lampreys spawn in clean gravels.</p> |
| Population structure of juveniles | Number of age/size groups | At least three age/size groups of river/brook lamprey present | |
| Juvenile density in fine sediment | Juveniles/m ² | Mean catchment juvenile density of brook/river lamprey at least 2/m ² | |
| Extent and distribution of spawning habitat | m ² and occurrence | No decline in extent and distribution of spawning beds | |
| Availability of juvenile habitat | Number of positive sites in 2nd order channels (and greater), downstream of spawning areas | More than 50% of sample sites positive | |
| [1103] Twaite Shad | | | |
| Distribution: extent of anadromy | % of river accessible | Greater than 75% of main stem length of rivers accessible from estuary | <p>In some catchments, artificial barriers block twaite shads' upstream migration, thereby limiting species to lower stretches</p> |
| Population structure- age classes | Number of age classes | More than one age class present | |

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|---|--|---|--|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| Extent and distribution of spawning habitat | m ² and occurrence | No decline in extent and distribution of spawning habitats | and restricting access to spawning areas. Regular breeding has been confirmed in the River Barrow in recent years, but not in the Nore. |
| Water quality- oxygen levels | Milligrammes per litre | No lower than 5mg/l | |
| Spawning habitat quality: Filamentous algae; macrophytes; sediment | Occurrence | Maintain stable gravel substrate with very little fine material, free of filamentous algal (macroalgae) growth and macrophyte (rooted higher plants) growth | |
| [1106] Atlantic Salmon | | | |
| Distribution: extent of anadromy | % of river accessible | 100% of river channels down to second order accessible from estuary | Artificial barriers block salmon's upstream migration, thereby limiting species to lower stretches and restricting access to spawning areas. Smolt abundance can be negatively affected by a number of impacts such as estuarine pollution, predation and sea lice (<i>Lepeophtheirus salmonis</i>). Salmon spawn in clean gravels. Q values based on triennial water quality surveys carried out by the EPA. |
| Adult spawning fish | Number | Conservation Limit (CL) for each system consistently exceeded | |
| Salmon fry abundance | Number of fry/5 minutes electrofishing | Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling | |
| Out-migrating smolt abundance | Number | No significant decline | |
| Number and distribution of redds | Number and occurrence | No decline in number and distribution of spawning redds due to anthropogenic causes | |
| Water quality | EPA Q value | At least Q4 at all sites sampled by EPA | |
| [1355] Otter | | | |
| Distribution | % positive survey sites | No significant decline | Otters need lying up areas throughout their territory where they are secure from disturbance. |
| Extent of terrestrial habitat | Hectares | No significant decline. Area mapped and calculated as 122.8ha above high water mark | |

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| TABLE 6.4: CONSERVATION OBJECTIVES (2025): RIVER BARROW AND RIVER NORE SAC | | | |
|---|-----------------------------|---|--|
| ATTRIBUTE | MEASURE | TARGET | SELECTED NOTES |
| | | (HWM); 1136.0ha along river banks / around ponds | <p style="text-align: center;">Broad diet that varies locally and seasonally, but dominated by fish, in particular salmonids, eels and sticklebacks in freshwater and wrasse and rockling in coastal waters</p> <p style="text-align: center;">Otters will utilise freshwater habitats from estuary to headwaters within 80m of the shoreline.</p> |
| Extent of marine habitat | Hectares | No significant decline. Area mapped and calculated as 857.7ha | |
| Extent of freshwater (river) habitat | Kilometres | No significant decline. Length mapped and calculated as 616.6km | |
| Extent of freshwater (lake) habitat | Hectares | No significant decline. Area mapped and calculated as 2.6ha | |
| Couching sites and holts | Number | No significant decline | |
| Fish biomass available | Kilograms | No significant decline | |
| [1421] Killarney Fern | | | |
| Distribution | Location | No decline. Three locations known, with three colonies of gametophyte and one sporophyte colony | <p style="text-align: center;">'Juvenile' sporophytes, which appear as small entire fronds, are known from this site. However, it is unknown whether they are due to apogamous growth or sexual reproduction.</p> |
| Population size | Number | Maintain at least three colonies of gametophyte, and at least one sporophyte colony of over 35 fronds | |
| Population structure: juvenile fronds | Occurrence | At least one of the locations to have a population structure comprising sporophyte, unfurling fronds, 'juvenile' sporophyte and gametophyte generations | |
| Habitat extent | m ² | 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 | |
| Hydrological conditions: visible water | Occurrence | Maintain hydrological conditions at the locations so that all colonies are in dripping or damp seeping habitats, and water is visible at all locations | |
| Hydrological conditions: humidity | Number of dessicated fronds | No increase. Presence of dessicated sporophyte fronds or gametophyte mats indicates conditions are unsuitable | |
| Light levels: shading | Percentage | No changes due to anthropogenic impacts | |
| Invasive species | Occurrence | Absent or under control | |

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River Barrow and River Nore SAC Conservation Status

According to the Habitat’s Directive, favourable conservation status of a habitat is achieved when:

- Its natural range and areas it covers within that range are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable as defined below.

According to the Habitat’s Directive, favourable conservation status of a species is achieved when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The conservation statuses for the qualifying interests of the River Barrow and River Nore SAC site are outlined below.

Table 6.5. Conservation Status of River Barrow and River Nore SAC Qualifying Interests.

| CODE | QUALIFYING INTEREST | NATIONAL CONSERVATION STATUS* |
|------|------------------------------------|-------------------------------|
| 1130 | Estuaries | Bad |
| 1140 | Tidal Mudflats and Sandflats | Inadequate |
| 1170 | Reefs | Bad |
| 1310 | <i>Salicornia</i> Mud | Bad |
| 1330 | Atlantic Salt Meadows | Bad |
| 1410 | Mediterranean Salt Meadows | Inadequate |
| 3260 | Floating River Vegetation | Inadequate |
| 4030 | Dry Heath | Bad |
| 6430 | Hydrophilous Tall Herb Communities | Bad |
| 7220 | Petrifying Springs | Inadequate |
| 91A0 | Old Oak Woodlands | Bad |
| 91E0 | Alluvial Forests | Bad |
| 1016 | Desmoulin's Whorl Snail | Inadequate |
| 1029 | Freshwater Pearl Mussel | Bad |
| 1092 | White-clawed Crayfish | Bad |
| 1095 | Sea Lamprey | Bad |
| 1096 | Brook Lamprey | Favourable |
| 1099 | River Lamprey | Inadequate |
| 1103 | Twaite Shad | Bad |
| 1106 | Atlantic Salmon | Bad |
| 1355 | Otter | Favourable |
| 1421 | Killarney Fern | Favourable |

**Sourced from the Status of EU Protected Habitats and Species in Ireland (NPWS, 2025b).*

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7.0 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

7.1 DISTURBANCE TO PROTECTED HABITATS AND SPECIES

The site does not directly impinge on any part of a European site, and as such would not be expected to have any in-situ effects upon a protected site through loss or destruction of habitat, fragmentation of habitat, disturbance of habitat or direct reduction in species density. See Appendix A for summary of the Qualifying Interests and summary of potential impact from the proposed site.

It is not considered that the development site would contain the habitats or species for which the River Barrow and River Nore SAC has been designated. No areas of woodland exist within the development site; therefore, the site does not contain any habitat which would have potential links to Old Oak Woodlands [91A0] or Alluvial Forests [91E0]. The closest Old Oak Woodlands are approximately 33km (over 40km hydrologically downstream) to the south and the closest Alluvial Forests is approximately 2.8km (2.9km hydrologically upstream) to the north of the development site. There are no water quality objectives set for these habitats within the Conservation Objectives document.

No areas of heath or marsh / swamp habitats occur on the development site therefore, the site does not contain any habitat which could have potential links to Dry Heath [4030] or Hydrophilous Tall Herb Communities [6430]. Dry Heath is currently unmapped within the SAC, however it is known to be along the River Barrow and tributaries in the Blackstairs Mountains. This habitat is not within or adjacent the site boundary and the site would not impact on this habitat. Hydrophilous Tall Herb Communities distribution is currently unknown. Hydrophilous Tall Herb Communities is considered to occur in association with some riverside woodlands, unmanaged river islands and in narrow bands along the floodplain of slow-flowing stretches of river. There will be no construction works within any watercourse, therefore there will be no direct or indirect significant effects are predicted.

The development site is located a considerable distance from the tidal stretches of the River Barrow, approximately 37.5km (over 80km hydrologically downstream), thus qualifying interests associated with saltwater and tidal conditions would not be present onsite. The River Barrow at its closest to the development site would contain aquatic freshwater species of conservation value. The development will not require any construction works within a watercourse or a riparian zone. Therefore, no direct or indirect significant effects are predicted.

During the site assessment, no Killarney Fern [1421] was present with the closest records approximately 33km (over 40km hydrologically downstream) to the south (near Graiguenamanagh). In the absence of swamp, fen and marsh habitat within the site, and in the absence of historic records, it is not considered that the proposed development site would be suitable to support populations of Desmoulin's Whorl Snail. The closest records for this species are approximately 26.4km (33.4km hydrologically downstream) near Borris.

No evidence of Otter (including holts, slides, spraints and tracks) was recorded during the ecological site assessment. NBDC has records of Otter on the River Barrow both upstream and downstream of the development site. The nearest NBDC record of Otter is 398m (321km hydrologically downstream) northeast of the development site on River Barrow (Chapman & Chapman, Otter Survey of Ireland 1982). The site is comprised of modified habitats which would be of limited value to Otter, should this species be present within the vicinity. There is limited tall vegetation onsite that could be suitable for Otter couches. There are no freshwater

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habitats onsite and therefore the development site would not offer foraging opportunities for Otter or suitable habitat for Otter holts. No works will take place within or directly adjacent to a watercourse. Therefore, the development would not significantly affect Otter due to habitat loss or fragmentation, given the limited land-take required, and of modified habitats, and given the availability of more suitable otter habitat in the general area. There are no water quality objectives set for this species within the Conservation Objectives document of the SAC. A potential deterioration in water quality could indirectly affect Otter by directly affecting food availability. However, it is not considered that the proposed development would have the potential to affect the water quality of the Barrow Catchment and the SAC (see section 6.3 below).

According to the revised 2025 Conservation Objectives Report, the distribution of Freshwater Pearl Mussel (*Margaritifera margaritifera*) within the SAC occurs within three catchments, the Ballymurphy, Mountain and Nore. The nearest records are located approximately 28km south of the development site on the Mountain River. There will be no construction works within any watercourse, therefore direct significant effects are not predicted. Salmonid fish are host to the larval form of Freshwater Pearl Mussels and therefore a potential deterioration in water quality could indirectly affect Freshwater Pearl Mussel by directly affecting its hosts. However, there will be no direct discharge to any watercourse or potential for surface water run-off to enter the River Barrow. Therefore, no direct significant effects are predicted.

There are no freshwater habitats onsite and therefore the development site would not contain the fish species for which the SAC has been designated. Lamprey species (*Lampetra* spp.) are limited in migrating upstream by artificial barriers such as weirs. Lamprey have been recorded both upstream and downstream of the development site on the River Barrow and many of its tributaries. The nearest Lamprey record is approximately 3.1km (6.9km hydrologically upstream) to the southwest of the development site on the Fushoge River (Delanty et al., 2017). Salmon (*Salmo salar*) juveniles have been recorded on the Fushoge River approximately 3.1km (6.9km hydrologically upstream) to the southwest of the development site (Delanty et al., 2017). Therefore, it is likely that Salmon is present in the stretch of the Barrow River close to the development site. Twaite shad navigate their way upstream to the gravel beds at St. Mullins each year to spawn, and the return to the sea (Delanty et al., 2017). St Mullins is located over 80km downstream of the development site. Therefore, it is unlikely that this species is present near the development site. White-clawed Crayfish (*Austropotamobius pallipes*) has been recorded within the SAC both upstream and downstream of the development site, with the nearest record approximately 640m (675m hydrologically downstream) to the north of the development site. Therefore, it is possible that this species is present in the stretch of the Barrow River close to the development site. The proposed development will not require any works within the watercourse, therefore it has no potential for directly affecting these freshwater species. There are water quality objectives set for these species within the Conservation Objectives document. However, it is considered that the proposed development would not have the potential to affect water quality within the Barrow Catchment and within the SAC (see section 7.3 below).

It is not envisaged that protected species would be adversely impacted upon by the development due to noise generated by the proposed development as the surrounding area is mostly urban in nature. Fauna in the area would be accustomed to human generated noise from residential and commercial activities commonly audible within urban areas. While there would be an increase in noise emissions during the construction phase of the development, these would not be considered to pose a significant risk owing to the transient nature of the works. Fauna in the area would also be accustomed to noise from vehicular traffic during the

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operational phase of the development. There will be no lighting directed towards the River Barrow. Lighting will be sensitive to nocturnal species.

Materials containing asbestos have been found in the buildings onsite. Mammals have been demonstrated to be susceptible to airborne Asbestos the same way humans are (Wagner, 1963; Holt, 1974). The ecological significance of asbestos released in water is yet unclear. However, fish have been reported to bioaccumulate asbestos fibres (Marengo et al., 2022). According to the report prepared by Celtic Asbestos Consultancy Ltd., “all work with asbestos will be carried out in accordance with SI no. 386 of the Safety, Health & Welfare at Work (Exposure to Asbestos) Regulations 2006 & amended version 2010 & Guidelines issued by the Health & Safety Authority in Ireland”. Therefore, the proposed development would not be anticipated to have a significant impact on the qualifying interests of the SAC due to airborne or waterborne asbestos.

It is therefore considered that the proposed development would not result in any significant risk to the protected habitats and species of the River Barrow and River Nore SAC due to habitat fragmentation or loss, disturbance or reduction in species density.

7.2 INVASIVE SPECIES

Under Regulation 49(2) of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) as amended 2015 (S.I. No. 355 of 2015), save in accordance with a licence granted under paragraph (7), any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow in any place specified in relation to any plant which is included in Part 1 of the Third Schedule shall be guilty of an offence. Materials containing invasive species such as Japanese Knotweed are considered “controlled waste”, and, as such, there are legal restrictions on their handling and disposal. Under Regulation 49(7) of the European Communities (Birds and Natural Habitats) Regulations 2011, it is a legal requirement to obtain a license to move “vector materials” listed in the Third Schedule, Part 3.

Table 7.1: National Biodiversity Data Centre records of Third Schedule invasive species within 10km square (Tetrad – S77) of the proposed development.

| THIRD SCHEDULE INVASIVE FLORA | |
|---|--|
| Water Fern (<i>Azolla filiculoides</i>) | Giant-rhubarb (<i>Gunnera tinctoria</i>) |
| Indian Balsam (<i>Impatiens glandulifera</i>) | Japanese Knotweed (<i>Fallopia japonica</i>) |
| Nuttall's Waterweed (<i>Elodea nuttallii</i>) | Three-cornered Garlic (<i>Allium triquetrum</i>) |

The spread of invasive plant and animal species can negatively impact on the conservation objectives of certain Annex I habitats and species designated within SACs.

No Third Schedule invasive species are within or adjacent to the site boundary.

The risk of invasive species being introduced onto the site during the operational phase of the project is considered to be low, with no import of materials with the potential to contain invasive flora species. Additionally, no landscaping works have been proposed as part of the proposed development. Therefore, it is considered that there will be no significant risk to protected habitats and species as a result of invasive species.

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7.3 POTENTIAL IMPACTS ON WATER QUALITY

The development is located within the Barrow Catchment (ID 14), Sub Catchment Barrow_SC_090 (ID: 14_13). The nearest mapped watercourse to the proposed development site is the River Barrow (EPA Code: 14B01– Order 5) located approximately 123m to the west of the development site. The Barrow River at its closest to the development site forms part of the River Barrow and River Nore SAC, which contains qualifying interests sensitive to water quality deterioration.

During the construction phase of projects, a deterioration in water quality can arise through the release of suspended solids during soil disturbance works, the release of uncured concrete and the release of hydrocarbons (fuels and oils). In the event suspended solids become entrained in surface water run-off during the construction phase, there is considered to be no significant risk of impact on water quality as surface water will be collected by the existing surface water drainage system that directs surface water to a combined sewer to the east of the site. The risk of water quality deterioration as a result of uncured concrete would be further reduced, given that precast concrete / blockwork would be used where possible and surplus concrete would be returned to the batching plant.

The development is not adjacent to a watercourse and there are no drainage ditches on site that connect to the River Barrow. The nearest mapped watercourse is located a considerable distance away from the development site (123m) and there are physical barriers and infiltration areas in between (such as wall, grasslands, etc) that would prevent any potential surface water runoff from the development site into the River Barrow during the construction phase. Construction works would be confined to the proposed development footprint, with no works taking place within a riparian zone or aquatic habitat.

During the operational phase, surface water will be treated onsite through SuDS features such as detention basins, swales, permeable paving and raingardens. Surplus surface water will be directed to the existing surface water drainage network which connects to a combined sewer to the east of the development site at a greenfield run-off rate. The proposed development will also use the existing foul water network which directs the foul water to the existing combined sewer. Foul water from the building onsite is ultimately directed to the Carlow WWTP (D0028-01).

It is therefore considered that, due to the nature and location of the development and no excavation works within a watercourse or riparian zone, the development would not pose a significant risk upon the River Barrow and River Nore SAC site due to a deleterious effect on water quality during either the construction or operational phases.

7.4 IN COMBINATION EFFECTS

The following plans and projects were reviewed and considered for in-combination effects with the proposed development:

- Carlow County Development Plan 2022-2028;
- Proposed and permitted developments in the area available on Carlow County Council planning system.

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The development site is located in Carlow town approximately 650m from the centre of the town. According to the Carlow County Development Plan, Carlow is as a self - sustaining, key town, being the principal centre of economic activity in County Carlow.

The proposed development is accessed via an existing local access off the R1417 (Athy Road) to the east. The N80 is located approximately 1.3km to the north of the development site, providing connection to Enniscorthy to the southeast and to Portlaoise to the northwest. The M9 is located approximately 76.8km to the southeast, providing connection to Dublin to the northeast and to Waterford to the south. Recent planning applications granted within the vicinity are shown in table 7.1 below.

Table 7.1: Recent planning applications close to the proposed site

| Application No. | Development Type | Outcome | Approximate Distance |
|------------------------|---|-----------------------|-----------------------------|
| 17137 | Permission to install a 0.51m x 1.42m x 1.8m (LxWxH) above ground enclosure to house a new natural gas district regulating installation with all ancillary services and associated site works at the junction of Greenbank road carpark with Athy Road, Co. Carlow. | Granted - Conditional | 42m NE |
| 20267 | Permission for a change of use from 2 No. Office units on first and second floor of existing three storey building to 2 No one bedroom apartments and internal alterations to layout of same. Planning permission is also sought for a change of use to detached two storey building to rear of same from commercial unit to 1 No. one bedroom apartment and all associated works. | Granted - Conditional | 84m S |
| 18384 | Permission to the retention of demolition & reconstruction of the original two storey building at 25 Dublin Street, Carlow on a site extended to 533m ² . The proposed building, including the rear two storey extension, has a gross floor area of 174.2m ² consisting of a ground floor shop of 31.6m ² with ancillary storage and kitchen areas to the rear of 44.1m ² . The first floor consists of a dwelling extending to 98.5m ² . 2 car parking spaces will be provided at the rear of the building. | Granted - Conditional | 108m SE |
| 18317 | Permission to demolish existing two No. derelict two storey dwellings to the rear of No. 41 & No. 42 Dublin Street and Cox's Lane and construct 4 No. two bedroom, two and a half storey residential units, associated car parking, green area and connection to existing services. Planning permission is also sought for a change if use at No. 41 and No. 42 Dublin Street (junction of Cox's Lane) from existing commercial/retail use with residential units at first and second floor, to office use at basement and ground floor level, reinstate first and second floor residential use with new access from Cox's Lane, revised ground floor facade to No. 42, demolition of existing single storey structure to rear (No.41) and construction of 2 No. two bedroom, two and a half storey | Granted - Conditional | 118m S |

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| Application No. | Development Type | Outcome | Approximate Distance |
|------------------------|---|------------------------------------|-----------------------------|
| | residential units, associated parking and bicycle storage, connection to existing services, refuse storage, general landscaping, new footpath and all associated site works within the curtilage of a protected structure(s). | | |
| 19487 | Permission for proposed widening of existing pedestrian entrance to accommodate a vehicular entrance, widening of existing opening in front boundary wall, proposed new gates to same, widening of driveway and all associated works (being within an ACA). | Granted - Conditional | 118m SW |
| 20380 | Change of use of premises from existing commercial premises to use as a domestic dwelling and all associated site works. | Granted - Conditional | 122m E |
| 2560236 | Permission for the development consists of; 1A: Existing Single storey new build development of 232m ² to the rear of the existing approved pub (1B), consisting of 5no. single bedrooms with en-suites, as well as kitchen, bar and seating area to 11 Centaur Street (Eircode R93E030), 2A: Change of use of existing 2 storey building of 237m ² from retail to guest accommodation, consisting of 8no. bedrooms with en-suites, kitchen, lounge and office facilities to the front of 10 Centaur Street (Eircode R93VK22), along with 2B: existing single storey new build development of 164m ² , consisting of tented beer garden, bar and covered seating areas to the rear of 10 Centaur Street (Eircode R93VK22), 3A: Reconstruction and change of use of existing 2 storey building of 51m ² from residential to guest accommodation, consisting of 1no. bedrooms to the front of 9 Centaur Street (Eircode R93W894), along with 3B: existing single storey new build extension of 60m ² consisting of 3no. single storey bedrooms with en-suites to the rear of 9 Centaur Street (Eircode R93W894).All works above to allow for Bar/Lounge/Beer garden & 26 no. room Guesthouse Complex | Retention Granted - Conditional | 154m SW |
| 17324 | Change of use from existing Private Members' Club/Casino at ground floor, basement and part of first floor, to prior granted use of Public House and Restaurant at No's 1-1a Brown St. and from previous residential use at No.2 Brown Street to open smoking area incorporating the open space to the rear of 1, 1a and 2 Brown Street, together with the alteration of existing access between No's 1-1a Brown Street and No.2 Brown Street, accessing the rear of No.1, 1a & 2 Brown St., together with all associated works | Granted - Conditional | 175m SE |
| 1782 | Planning permission is sought to construct of a rear extension to existing dwelling and all ancillary services associated with the above. | Granted - Conditional | 238m N |

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| Application No. | Development Type | Outcome | Approximate Distance |
|-----------------|---|-----------------------|----------------------|
| 2460294 | Permission for the change of use of part of existing shop for use as an off licence to sell alcohol (Beers, wines and Spirits) and all associated site works. | Granted - Conditional | 2266m N |

Most of the recent developments in the vicinity of the site consisted of construction or amendments to existing buildings and demolition, and most of these have been granted planning permission subject to conditions.

The proposed heating system for the proposed development is air-to-water heat pumps with solar panels, which is low impact in-and-of-itself. The development will be designed to be energy efficient and achieve a BER Rating of A3. In-combination heating impacts would be controlled by national energy policies, grant schemes and gas emission targets.

Continued implementation of the Water Framework Directive would result in achieving, or maintaining, improvements to water quality in the Barrow Catchment. Developments such as this proposed development could act in combination with existing environmental pressures on the Barrow Catchment, including agriculture, anthropogenic, domestic and urban waste water, urban run-off, industry and forestry. However, as noted in Section 7.3, it is considered that the development would not pose a significant risk upon any Natura 2000 site due to a deleterious effect on water quality, during either the construction or operational phase given the existing drainage systems, and due to the distance between the proposed works and the nearest mapped watercourse. Foul water from the site will ultimately be directed to the Carlow Waste Water Treatment Plant (WWTP) (D0028-01). The WWTP is compliant with the ELV's set in the Wastewater Discharge Licence. A deterioration in water quality has been identified, however it is not known if it or is not caused by the WWTP. Other causes of deterioration in water quality in the area are unknown. The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status. Surface water will be retained onsite with overflow directed to the mains sewer. Therefore, it is considered that there would be no significant cumulative effects upon water quality which could pose a risk to the River Barrow and River Nore SAC.

Fauna in the area would be accustomed to noise commonly audible within the vicinity which includes residential commercial and vehicular activities. No other potential in-combination impacts have been identified.

As discussed in Sections 7.1 – 7.3 above, it is considered that there would be no significant in-combination risk to any European site owing to the development. As there are no anticipated significant risks from the development and proposed works given the scale and nature of recent nearby developments, the type of proposed development (redevelopment), the distances of other developments in the area, it is considered that there would be no cumulative water, noise or air impacts which would pose a significant risk to designated sites or species.

8.0 SCREENING STATEMENT AND CONCLUSIONS

This report identified the presence of European sites (Natura 2000) within the potential zone of influence of the proposed development and noted that the proposed development site is located approximately 137m from the River Barrow and River Nore SAC (Site Code 002162). The potential for impacts to European sites as a result of the proposed development such as

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potential water quality impacts, introduction of invasive species, habitat destruction and impacts from noise and dust were considered and the level of risk posed assessed.

During Stage 1 Screening for Appropriate Assessment, it was considered that there would be no potential for a significant effects upon the qualifying interests / special conservation interests of the River Barrow and River Nore SAC during both the construction and operational phase of the proposed development.

This report presents a Stage 1 Appropriate Assessment Screening for the Proposed Development, outlining the information required for the competent authority to screen for appropriate assessment and to determine whether or not the Proposed Development, either alone or in combination with other plans and projects, in view of best scientific knowledge, is likely to have a significant effect on any European or Natura 2000 site.

Accordingly, having carried out the Stage 1 Appropriate Assessment Screening, the competent authority may determine that a Stage 2 Appropriate Assessment of the Proposed Development is not required as it can be excluded, on the basis of objective scientific information following screening under this Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended, that the Proposed Development, individually or in combination with other plans or projects, will not have a significant effect on any European site.

It can be objectively concluded that no significant effects arising from the proposed development are likely to occur in relation to the River Barrow and River Nore SAC or indeed any other Natura 2000 site in the wider hinterland.

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APPENDIX A
ALL QUALIFYING INTERESTS

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| QUALIFYING INTEREST | LOCATION IN THE NATURA 2000 SITE RELATIVE TO APPLICATION SITE | POTENTIAL FOR IMPACTS FROM THE DEVELOPMENT | LISTED FOR FURTHER EXAMINATION IN APPENDIX B |
|--|--|--|--|
| [1130] Estuaries | The proposed development is located outside the current distribution and current range of this qualifying interest (NPWS, 2025b). The nearest examples of these qualifying interests are located 37.5km (over 80km hydrologically downstream) of the proposed development (NPWS, 2025). Given the considerable distance, it is not anticipated that the proposed development would have the potential to affect this qualifying interest. | No | No |
| [1140] Tidal Mudflats and Sandflats | The proposed development is located outside the current distribution and current range of this qualifying interest (NPWS, 2025b). The nearest examples of these qualifying interests are located approximately over 80km hydrologically downstream of the proposed development (NPWS, 2015). Given the considerable distance, it is not anticipated that the proposed development would have the potential to affect this qualifying interest. | No | No |
| [1170] Reefs | The proposed development is located outside the current distribution and current range of this qualifying interest (NPWS, 2025b). The nearest examples of these qualifying interests are located greater than 80km hydrologically downstream of the development site (NPWS, 2025). Given the considerable distance, it is not anticipated that the proposed development would have the potential to affect this qualifying interest. | No | No |
| [1330] Atlantic Salt Meadows (<i>Glauco-Puccinellietalia maritima</i>) | The proposed development is located outside the current distribution and current range of this qualifying interest (NPWS, 2025b). The nearest examples of these qualifying interests are located greater than 80km hydrologically downstream of the proposed development (NPWS, 2025). Given the considerable distance, it is not anticipated that the proposed development would have the potential to affect this qualifying interest. | No | No |
| [1410] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) | The proposed development is located outside the current distribution and current range of this qualifying interest (NPWS, 2025b). The nearest examples of these qualifying interests are located greater than 80km downstream of the proposed development (NPWS, 2025). Given the considerable distance, it is not anticipated that the proposed development would have the potential to affect this qualifying interest. | No | No |
| [3260] Floating River Vegetation | The proposed development site is located within the current distribution and current range of this qualifying interest (NPWS, 2025b). While this habitat is noted in the SAC site synopsis as being well represented in the River Barrow and its tributaries. | Yes | Yes |

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| QUALIFYING INTEREST | LOCATION IN THE NATURA 2000 SITE RELATIVE TO APPLICATION SITE | POTENTIAL FOR IMPACTS FROM THE DEVELOPMENT | LISTED FOR FURTHER EXAMINATION IN APPENDIX B |
|---|---|---|---|
| | The Conservation Objectives for this qualifying interest include water quality attributes. | | |
| [4030] Dry Heath | The proposed development is located outside the current known distribution but within the current range of this qualifying interest (NPWS, 2025b). The SAC Conservation Objectives report notes that the spatial extent of this habitat is currently unmapped, but is indicated as occurring on steep, free-draining river valley sides. Dry heath is a terrestrial habitat, therefore a potential deterioration in water quality during construction works would not be anticipated to have a significant adverse impact upon this qualifying interest should it be present adjacent to the River Barrow downstream of the development site. | No | No |
| [6430] Hydrophilous Tall Herb Communities | The proposed development is located within the current distribution and current range of this qualifying interest (NPWS, 2025b). The SAC Conservation Objectives report notes that the distribution of this habitat within the SAC site is currently unknown, but is considered to occur at some riverside woodlands, river islands and in narrow bands along the floodplain of slow-flowing river stretches. Water quality is not listed as a conservation objective for this qualifying interest. It is therefore not anticipated that the proposed development would have the potential to significantly affect this qualifying interest. | No | No |
| [7220] Petrifying Springs* | The proposed development is located outside the current distribution and current range of this qualifying interest (NPWS, 2025b). The nearest example of this qualifying interest is located on the River Nore (NPWS, 2025), approximately 39.6km southwest (over 100km hydrologically upstream) of the development site. Given the considerable hydrological distance and that it is above the tidal reach of the River Nore, it is not anticipated that the proposed development would have the potential to significantly affect this qualifying interest. | No | No |
| [91A0] Old Oak Woodlands | The proposed development is located outside the current distribution and current range of this qualifying interest (NPWS, 2025b). According to the SAC Conservation Objectives report, old oak woodlands are located approximately 33km (over 40km | No | No |

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| QUALIFYING INTEREST | LOCATION IN THE NATURA 2000 SITE RELATIVE TO APPLICATION SITE | POTENTIAL FOR IMPACTS FROM THE DEVELOPMENT | LISTED FOR FURTHER EXAMINATION IN APPENDIX B |
|---|---|--|--|
| | hydrologically downstream) to the south of the development site However, the report notes that further unsurveyed areas may be present within the SAC. Old oak woodland is a terrestrial habitat, therefore a potential deterioration in water quality during construction works would not be anticipated to have a significant adverse impact upon this qualifying interest. | | |
| [91E0] Alluvial Forests* | The proposed development is located within the current distribution and current range of this qualifying interest (NPWS, 2025b). According to the SAC Conservation Objectives report, alluvial forests are located approximately 2.8km (2.9km hydrologically upstream) to the north of the development site. However, the report notes that further unsurveyed areas may be present within the SAC. A potential deterioration in water quality would not be anticipated to significantly affect this qualifying interest. | No | No |
| [1016] Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>) | The proposed development is located outside the current distribution and current range of this qualifying interest (NPWS, 2025). According to the SAC Conservation Objectives report, the nearest record of Desmoulin's whorl snail is approximately 26.4km (33.4km hydrologically downstream) near Borris. Water quality is not listed as a conservation objective for this qualifying interest. It is not anticipated that the proposed development would have the potential to significantly affect the Desmoulin's whorl snail. | No | No |
| [1029] Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) | The proposed development is located outside the current distribution and current range of this qualifying interest of the freshwater pearl mussel (NPWS, 2025c). The SAC Conservation Objectives Report applies to three distinct catchments in relation to records of <i>Margaritifera margaritifera</i> . The nearest record of this species is approximately 28km south on the Mountain River. The Conservation Objectives for this qualifying interest notes Salmonid fish are host to the larval form of freshwater pearl mussels. A deterioration in water quality could affect Salmonid fish thereby indirectly affecting Freshwater Pearl Mussel. | Yes | Yes |

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| QUALIFYING INTEREST | LOCATION IN THE NATURA 2000 SITE RELATIVE TO APPLICATION SITE | POTENTIAL FOR IMPACTS FROM THE DEVELOPMENT | LISTED FOR FURTHER EXAMINATION IN APPENDIX B |
|--|--|--|--|
| [1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>) | The proposed development site is located within the current distribution and current range of this qualifying interest (NPWS, 2025c). The SAC Conservation Objectives report notes that crayfish are present almost throughout the SAC. According to the Conservation Objectives report, white-clawed crayfish are located upstream and downstream of the site within the River Barrow. The nearest record of this species within the SAC is approximately 640m (675m hydrologically downstream) to the north of the development site. The conservation status of crayfish in the SAC is dependent on good water quality status, as this species requires clean water (Q3-4). Therefore, a potential deterioration in water quality could significantly affect this species. | Yes | Yes |
| [1095] Sea Lamprey (<i>Petromyzon marinus</i>) | The proposed development is located outside the current distribution and current range of this qualifying interest of the Sea Lamprey (NPWS, 2025b). The SAC Conservation Objectives report notes that upstream migration may be inhibited by artificial barriers, and that artificial barriers are currently preventing juvenile lampreys from accessing the full extent of suitable habitat. Potentially located within the River Barrow both upstream and downstream of the development site. A survey carried out in 2015 noted Lamprey (<i>Lampetra</i> spp.) approximately 3.1km (6.9km hydrologically upstream) to the southwest of the development site on the Fushoge River (Delanty et al., 2017). The Conservation Objectives for this qualifying interest include water quality attributes. | Yes | Yes |
| [1096] Brook Lamprey (<i>Lampetra planeri</i>) | The proposed development is located within the current distribution and current range of this qualifying interest of brook lamprey. River and brook lamprey are indistinguishable as larvae. A survey carried out in 2015 noted lamprey (<i>Lampetra</i> spp.) approximately 3.1km (6.9km hydrologically upstream) to the southwest of the development site on the Fushoge River (Delanty et al., 2017). The Conservation Objectives for this qualifying interest include water quality attributes. | Yes | Yes |
| [1099] River Lamprey (<i>Lampetra fluviatilis</i>) | The proposed development is located outside the current distribution and current range of this qualifying interest river lamprey (NPWS, 2025c). River and brook lamprey are indistinguishable as larvae A survey carried out in 2015 noted Lamprey (<i>Lampetra</i> spp.) on the Barrow approximately 3.1km (6.9km hydrologically upstream) to the | Yes | Yes |

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| QUALIFYING INTEREST | LOCATION IN THE NATURA 2000 SITE RELATIVE TO APPLICATION SITE | POTENTIAL FOR IMPACTS FROM THE DEVELOPMENT | LISTED FOR FURTHER EXAMINATION IN APPENDIX B |
|--|---|--|--|
| | southwest of the development site on the Fushoge River (Delanty et al., 2017). The Conservation Objectives for this qualifying interest include water quality attributes. | | |
| [1103] Twaite Shad (<i>Alosa fallax</i>) | The proposed development is located outside the current distribution and current range of this qualifying interest of the Twaite Shad (NPWS, 2025c). Artificial barriers block twaite shads' upstream migration, thereby limiting species to lower stretches and restricting access to spawning areas. Twaite shad navigate their way upstream to the gravel beds at St. Mullins each year to spawn, and the return to the sea (Delanty et al., 2017). St Mullins is located over 80km downstream of the development site. | No | No |
| [1106] Atlantic Salmon (<i>Salmo salar</i>) | The proposed development is located within the current distribution and current range of this qualifying interest (NPWS, 2025c). Salmon juveniles have been recorded on the Fushoge River approximately 3.1km (6.9km hydrologically upstream) to the southwest of the development site on the Fushoge River (Delanty et al., 2017). The Conservation Objectives for this qualifying interest include water quality attributes. | Yes | Yes |
| [1355] Otter (<i>Lutra lutra</i>) | The proposed development is located within the current distribution and current range of this qualifying interest of Otter (NPWS, 2025c). The nearest NBDC record of Otter is 398m (321km hydrologically downstream) northeast of the development site on River Barrow. A potential deterioration in water quality could indirectly affect this qualifying interest by causing a reduction in prey populations and availability. | Yes | Yes |
| [6985] Killarney Fern (<i>Trichomanes speciosum</i>) | The proposed development is located outside the current distribution and current range of this qualifying interest of this qualifying interest (NPWS, 2025c). According to the SAC Conservation Objectives report, the nearest record of Killarney fern to the proposed site is located approximately 33km (over 40km hydrologically downstream) to the south near Graiguenamanagh. Water quality is not listed as a conservation objective for this qualifying interest. It is therefore not anticipated that the proposed development would have the potential to adversely impact upon this qualifying interest. | No | No |

APPENDIX B
QUALIFYING INTERESTS WITHIN THE PROJECT ZONE OF INTEREST

APPROPRIATE ASSESSMENT SCREENING REPORT
COURT PLACE, CARLOW, CO. CARLOW

| CONSERVATION OBJECTIVES (NPWS 2025) | THREATS AND PRESSURES (NPWS 2025) | KEY ENVIRONMENTAL CONDITIONS | POTENTIAL IMPACTS FROM THE DEVELOPMENT |
|---|--|---|---|
| [3260] Floating River Vegetation | <ul style="list-style-type: none"> • Modification of hydrological flow. • Physical alteration of water bodies. • Discharge of urban wastewater (excluding storm overflows and/or urban run-offs) generating pollution to surface or ground water. • Forestry activities generating pollution to surface or ground waters. • Pollution to surface or ground water due to urban runoffs. • Peat extraction. • Plants contaminated or abandoned industrial sites generating pollution to surface or ground water. • Abstraction from groundwater, surface water or mixed water. | <p>A potential deterioration in Water Quality* could potentially impact on this habitat.</p> <p style="text-align: center;"><u>Key Conservation Measures</u></p> <ul style="list-style-type: none"> • Reversal/rehabilitation of hydro-morphological changes, including in-stream structures and catchment drainage impacts/restoration of hydrological regime. • Reducing pollution (with dissolved and/or particulate nutrients, humic substances, organic matter and fine sediment/turbidity) from agricultural, forestry, turf-cutting, and domestic and urban waste-water sources. | <p>No potential for a significant impact on water quality as there is no potential for significant groundwater contamination or significant runoff (sediments or hydrocarbons) from the site that would enter any watercourse or drainage system that is hydrologically connected to the SAC.</p> |
| [1029] Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) | <ul style="list-style-type: none"> • Conversion into agricultural land (excluding drainage and burning) . • Agricultural activities generating point source pollution to surface or ground waters. • Livestock farming generating pollution. • Drainage for use as agricultural land. • Conversion to forest from other land uses, or afforestation (excluding drainage). • Forestry activities generating pollution to surface or ground waters (including marine). | <p>Freshwater Pearl Mussels are sensitive to sedimentation and nutrient enrichment. Furthermore, as the larval stages relay on salmonid fish hosts, any potential impact on salmonids can have an impact upon the Freshwater Pearl Mussel.</p> <p style="text-align: center;"><u>Key Conservation Measures</u></p> <ul style="list-style-type: none"> • Manage drainage and irrigation operations and infrastructures in agriculture. | <p>No potential for a significant impact on water quality as there is no potential for significant groundwater contamination or significant runoff (sediments or hydrocarbons) from the site that would enter any</p> |

APPROPRIATE ASSESSMENT SCREENING REPORT
COURT PLACE, CARLOW, CO. CARLOW

| CONSERVATION OBJECTIVES (NPWS 2025) | THREATS AND PRESSURES (NPWS 2025) | KEY ENVIRONMENTAL CONDITIONS | POTENTIAL IMPACTS FROM THE DEVELOPMENT |
|--|---|--|--|
| | <ul style="list-style-type: none"> • Modification of hydrological conditions, or physical alteration of water bodies and drainage for forestry (including dams). • Other modification of hydrological conditions for residential or recreational development. • Agricultural activities generating diffuse pollution to surface or ground waters. • Forestry activities generating pollution to surface or ground waters. • Discharge of urban wastewater (excluding storm overflows and/or urban run-offs) generating pollution to surface or ground water. • Peat extraction. • Modification of flooding regimes, flood protection for residential or recreational development. • Hydropower (dams, weirs, run-off-the-river), including infrastructure. • Abstraction of ground and surface waters (including marine) for public water supply and recreational use. | <ul style="list-style-type: none"> • Reduce diffuse pollution to surface or ground waters from agricultural activities. • Adapt mowing, grazing and other equivalent agricultural activities. • Manage the use of natural fertilisers and chemicals in agricultural (plant and animal) production. • Adapt/manage reforestation and forest regeneration. • Stop forest management and exploitation practices. • Adapt/change forest management and exploitation practices. • Manage drainage and irrigation operations and infrastructures. | <p style="text-align: center;">watercourse or drainage system that is hydrologically connected to the SAC.</p> |
| <p>[1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>)</p> | <ul style="list-style-type: none"> • Plant and animal diseases, pathogens and pests. • Invasive alien species of Union concern | <p>A potential deterioration in Water Quality* could potentially impact on this species.</p> <p style="text-align: center;"><u>Key Conservation Measures</u></p> | <p>No potential for a significant impact on water quality as there is no potential for significant</p> |

APPROPRIATE ASSESSMENT SCREENING REPORT
COURT PLACE, CARLOW, CO. CARLOW

| CONSERVATION OBJECTIVES (NPWS 2025) | THREATS AND PRESSURES (NPWS 2025) | KEY ENVIRONMENTAL CONDITIONS | POTENTIAL IMPACTS FROM THE DEVELOPMENT |
|---|--|---|---|
| | | <ul style="list-style-type: none"> • Early detection and rapid eradication of invasive alien species of Union concern. • Controlling and eradicating plant and animal diseases, pathogens and pests. | <p style="text-align: center;">groundwater contamination or significant runoff (sediments or hydrocarbons) from the site that would enter any watercourse or drainage system that is hydrologically connected to the SAC.</p> |
| <p>[1095] Sea Lamprey (<i>Petromyzon marinus</i>)</p> | <ul style="list-style-type: none"> • Hydropower (dams, weirs, run-off-the-river), including infrastructure. • Increases or changes in precipitation due to climate change. • Application of natural fertilisers on agricultural land. • Application of synthetic (mineral) fertilisers on agricultural land. • Drainage for use as agricultural land. • Marine fish and shellfish harvesting (professional, recreational) causing reduction of species/prey populations. • Threats and pressures from outside the Member State. • Temperature changes (e.g. rise of temperature & extremes) due to climate change. | <p>Sea lamprey may be adversely impacted upon by sedimentation and water pollution.</p> <p style="text-align: center;"><u>Key Conservation Measures</u></p> <ul style="list-style-type: none"> • Reduce impact of hydropower operations and infrastructure. • Manage changes in hydrological and coastal systems and regimes for construction and development. • Any measure to reduce diffuse pollution to surface or ground waters from agricultural activities would benefit water quality in rivers. This would have a knock-on beneficial effect on sea lamprey during the freshwater spawning phase, when spawning | <p>No potential for a significant impact on water quality as there is no potential for significant groundwater contamination or significant runoff (sediments or hydrocarbons) from the site that would enter any watercourse or drainage system that is hydrologically connected to the SAC.</p> |

APPROPRIATE ASSESSMENT SCREENING REPORT
COURT PLACE, CARLOW, CO. CARLOW

| CONSERVATION OBJECTIVES (NPWS 2025) | THREATS AND PRESSURES (NPWS 2025) | KEY ENVIRONMENTAL CONDITIONS | POTENTIAL IMPACTS FROM THE DEVELOPMENT |
|---|--|--|---|
| | <ul style="list-style-type: none"> • Droughts and decreases in precipitation due to climate change. | <p>grounds can experience substantial filamentous algal growth.</p> | |
| <p>[1096] Brook Lamprey (<i>Lampetra planeri</i>)</p> | <ul style="list-style-type: none"> • Application of synthetic (mineral) fertilisers on agricultural land. • Drainage for use as agricultural land. • Clear-cutting, removal of all trees. • Hydropower (dams, weirs, run-off-the-river), including infrastructure. • Pollution to surface or ground water due to urban runoffs. • Discharge of urban wastewater (excluding storm overflows and/or urban run-offs) generating pollution to surface or ground water. • Temperature changes (e.g. rise of temperature & extremes) due to climate change. • Droughts and decreases in precipitation due to climate change. | <p>Brook lamprey may be adversely impacted upon by sedimentation and water pollution.</p> <p><u>Key Conservation Measures</u></p> <ul style="list-style-type: none"> • Diffuse and point source pollution may be having localised impacts on populations of <i>L. planeri</i>. There has been a 3% reduction in river water quality in the national territory since 2015 (EPA, 2018) and the main sources of nutrient inputs are agriculture (slurry and chemical fertilisers) and sewage (waste water treatment plants). | <p>No potential for a significant impact on water quality as there is no potential for significant groundwater contamination or significant runoff (sediments or hydrocarbons) from the site that would enter any watercourse or drainage system that is hydrologically connected to the SAC.</p> |
| <p>[1099] River Lamprey (<i>Lampetra fluviatilis</i>)</p> | <ul style="list-style-type: none"> • Hydropower (dams, weirs, run-off-the-river), including infrastructure. • Increases or changes in precipitation due to climate change. • Application of natural fertilisers on agricultural land. • Application of synthetic (mineral) fertilisers on agricultural land. • Drainage for use as agricultural land. | <p>River lamprey may be adversely impacted upon by sedimentation and water pollution.</p> <p><u>Key Conservation Measures</u></p> <ul style="list-style-type: none"> • Reduce impact of hydropower operations and infrastructure. | <p>No potential for a significant impact on water quality as there is no potential for significant groundwater contamination or significant runoff</p> |

APPROPRIATE ASSESSMENT SCREENING REPORT
COURT PLACE, CARLOW, CO. CARLOW

| CONSERVATION OBJECTIVES (NPWS 2025) | THREATS AND PRESSURES (NPWS 2025) | KEY ENVIRONMENTAL CONDITIONS | POTENTIAL IMPACTS FROM THE DEVELOPMENT |
|--|--|---|---|
| | <ul style="list-style-type: none"> Shipping lanes, ferry lanes and anchorage infrastructure (e.g. canalisation, dredging). Temperature changes (e.g. rise of temperature & extremes) due to climate change. Droughts and decreases in precipitation due to climate change. | <ul style="list-style-type: none"> Manage changes in hydrological and coastal systems and regimes for construction and development. | <p>(sediments or hydrocarbons) from the site that would enter any watercourse or drainage system that is hydrologically connected to the SAC.</p> |
| <p>[1106] Atlantic Salmon (<i>Salmo salar</i>)</p> | <ul style="list-style-type: none"> Marine fish and shellfish harvesting (professional, recreational) causing reduction of species/prey populations. Freshwater fish and shellfish harvesting (recreational). Bycatch and incidental killing (due to fishing and hunting activities). Other invasive alien species (other than species of Union concern). Temperature changes (e.g. rise of temperature & extremes) due to climate change. Droughts and decreases in precipitation due to climate change. | <p>Salmon, particularly juveniles and spawning beds, are sensitive to sedimentation and water pollution. A potential deterioration in Water Quality* could impact on this species.</p> <p><u>Key Conservation Measures</u></p> <ul style="list-style-type: none"> Manage the use of natural fertilisers and chemicals in agricultural (plant and animal) production. Reduce/eliminate point pollution to surface or ground waters from agricultural activities. Reduce diffuse pollution to surface or ground waters from agricultural activities. Adapt/change forest management and exploitation practices. Reduce diffuse pollution to surface or ground waters from forestry activities. | <p>No potential for a significant impact on water quality as there is no potential for significant groundwater contamination or significant runoff (sediments or hydrocarbons) from the site that would enter any watercourse or drainage system that is hydrologically connected to the SAC.</p> |

APPROPRIATE ASSESSMENT SCREENING REPORT
COURT PLACE, CARLOW, CO. CARLOW

| CONSERVATION OBJECTIVES (NPWS 2025) | THREATS AND PRESSURES (NPWS 2025) | KEY ENVIRONMENTAL CONDITIONS | POTENTIAL IMPACTS FROM THE DEVELOPMENT |
|-------------------------------------|-----------------------------------|--|--|
| | | <ul style="list-style-type: none"> • Management of professional /commercial fishing (including shellfish and seaweed harvesting). • Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants. • Control/eradication of illegal killing, fishing and harvesting. • Manage water abstraction for public supply and for industrial and commercial use. • Support conservation measures in countries outside the EU. | |
| [1355] Otter (<i>Lutra lutra</i>) | None listed | <p>A significant impact on water quality could indirectly impact upon this qualifying interest by causing a reduction in prey populations and availability.</p> <p><u>Key Conservation Measures</u></p> <ul style="list-style-type: none"> • The network of mammal underpasses on new roads are examples of positive measures that have been taken to reduce otter roadkill. • Diffuse and point-source pollution of freshwaters and coastal waters is likely to impact otters indirectly through changes to prey abundance. | No potential for a significant impact on water quality as there is no potential for significant groundwater contamination or significant runoff (sediments or hydrocarbons) from the site that would enter any watercourse or drainage system that is hydrologically |

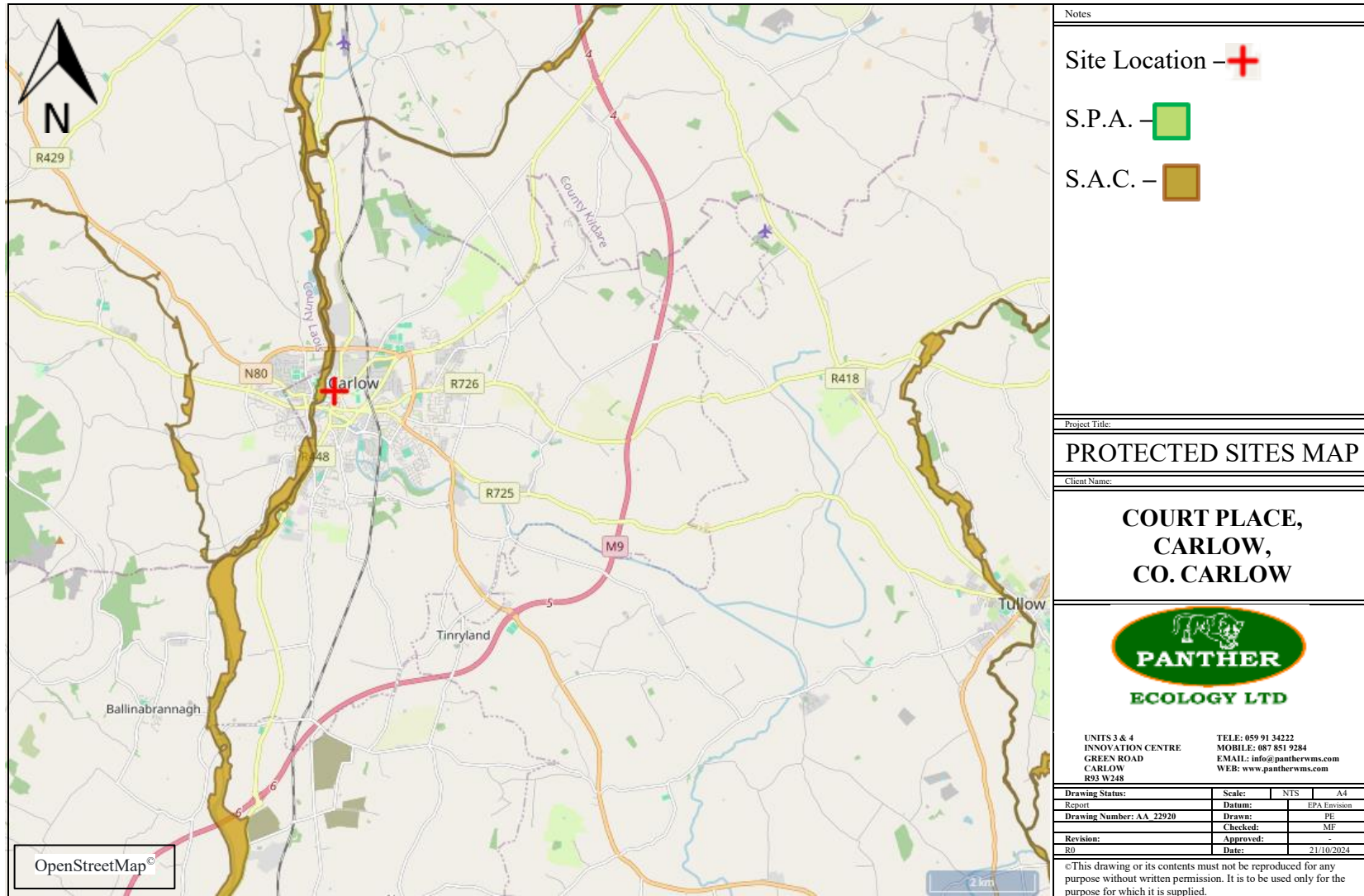
APPROPRIATE ASSESSMENT SCREENING REPORT
COURT PLACE, CARLOW, CO. CARLOW

| CONSERVATION OBJECTIVES (NPWS 2025) | THREATS AND PRESSURES (NPWS 2025) | KEY ENVIRONMENTAL CONDITIONS | POTENTIAL IMPACTS FROM THE DEVELOPMENT |
|--|--|-------------------------------------|---|
| | | | connected to the SAC. |

** See Table 5.1 for Water Quality Targets set in Conservation Objectives*

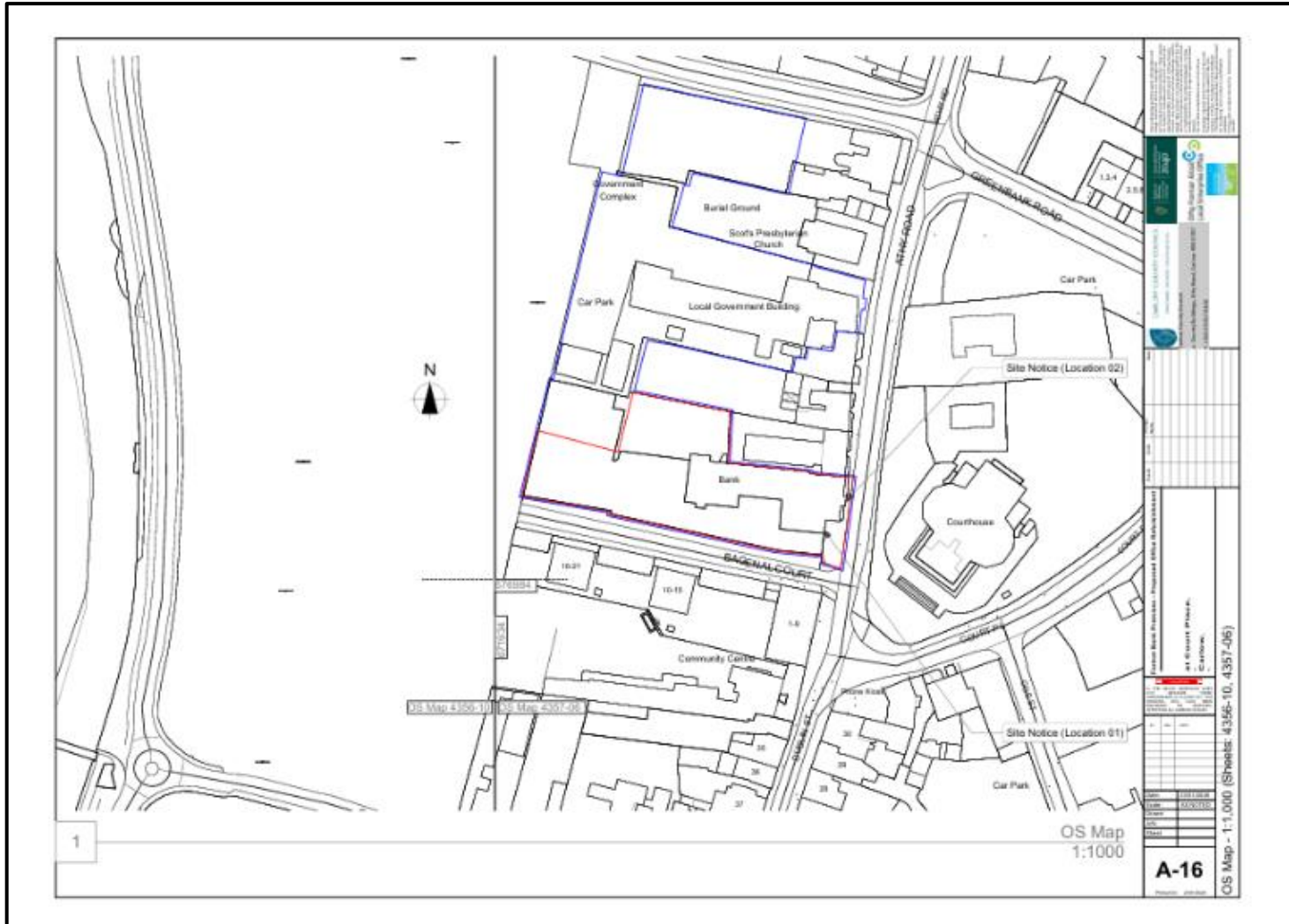
APPENDIX C
PROTECTED SITES AND SITE PLANS

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 COURT PLACE, CARLOW, CO. CARLOW



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 COURT PLACE, CARLOW, CO. CARLOW



APPENDIX D
PHOTO LOG

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Plate 1: Site entrance (BL3)



Plate 2: Rear of the existing building (BL3)



Plate 3: Spoil and bare ground (ED2)



Plate 4: Recolonising bare ground (ED3)

Notes:

APPENDIX D
PHOTO LOG



UNITS 3 & 4
INNOVATION
CENTRE
GREEN ROAD
CARLOW

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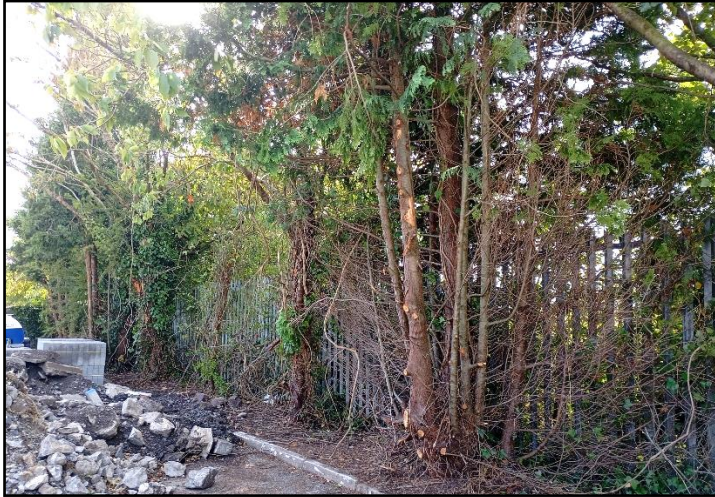


Plate 5: Treeline (WL2) along the west boundary



Plate 6: Treeline (WL2) to the north



Plate 7: Ornamental shrubs (WS3)



Plate 8: Temporary offices (BL3)

Notes:

APPENDIX D
PHOTO LOG



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