

Kilkenny County Council

**Proposed Bus Stop, Glenmore,
Co. Kilkenny.**

NATURA IMPACT STATEMENT

24th August 2026

Version 2.0

Lisa Dowling MCIEEM,
Ecological Consultant,
Friars Lough, Leighlinbridge,
Co. Carlow.

Telephone: 087 6125041

Email: dowling_lisab@yahoo.com

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	Background.....	1
1.2	Legislative Context	1
2	METHODOLOGY	2
3	PROJECT DETAILS & EXISTING ENVIRONMENT	3
3.1	Site Overview.....	3
3.2	Surface Waters	4
3.3	Field Surveys.....	6
3.3.1	Habitat Assessment	6
3.3.2	Otter Survey.....	8
3.4	Proposed Works	8
4	STAGE 1 SCREENING	10
5	NATURA IMPACT STATEMENT	16
5.1.	Assessment of Effects on Natura Sites.....	16
5.2	In-Combination Effects.....	50
6	MITIGATION MEASURES	51
6.1	Protection of Surface and Ground Waters.....	51
6.2	Control of Invasive Species.....	52
6.3	Wildlife Disturbance	52
7	RESIDUAL IMPACTS & CONCLUSIONS.....	54
8	BIBLIOGRAPHY	55

TABLES

Table 5.1. Qualifying Interests of the Screened-In European Sites with respect to Zone of Influence of the Project	17
Table 5.2 Assessment of Effects on Screened-in Qualifying Interests of European Sites	25

FIGURES

Figure 1	Study Area
Figure 2	Local Drainage
Figure 3	Excerpt from Pre-Earthworks Drainage Plan Layouts (Sheet 1 of 20) of N25 New Ross Bypass PPP Scheme (Drg. No. N25-ENG-DG 0500-DR200-201 Rev. AB-C) (As Built)
Figure 4	Habitat and Biodiversity Map

APPENDICES

Appendix 1	General Layout and Sections (Drawing No. 25024-BS-DR-0101 Rev. PR5)
	Drainage General Layout and Details (Drawing No. 25024-BS-DR-0501 Rev. PR5)
Appendix 2	Otter Survey Map and Results

1 INTRODUCTION

1.1 Background

Lisa Dowling MCIEEM was commissioned by Kilkenny County Council to prepare a Natura Impact Statement (NIS) for a new bus stop at Glenmore, Co. Kilkenny. The proposed works will be undertaken on a site of 0.57ha near to the River Barrow and River Nore SAC (sitecode: 002162) (See Figure 1) where it includes Glenmore Stream and associated habitats.

The assessment was conducted in accordance with Schedule 6(3) of the Habitats Directive 92/43/EEC (Assessment of Plans and projects significantly affecting Natura 2000 Sites).

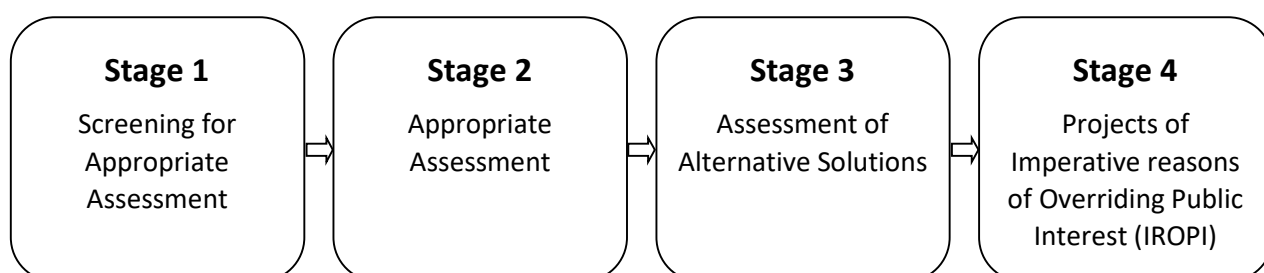
Statement of Authority

Lisa Dowling has almost twenty years environmental consultancy experience, specialising in the areas of Ecological Impact Assessment and Appropriate Assessment. She obtained an honours degree in Applied Ecology in 1995 from University College Cork; a masters degree in Environmental Resource Management in 1997 from University College Dublin; and a Certificate in Biological Recording and Species Identification from University of Birmingham in 2005. She is a full member of the professional body, the Chartered Institute of Ecology and Environmental Management (CIEEM) since 2006 and is nominated vice-county recorder of the Botanical Society of Britain and Ireland (BSBI) for County Carlow.

1.2 Legislative Context

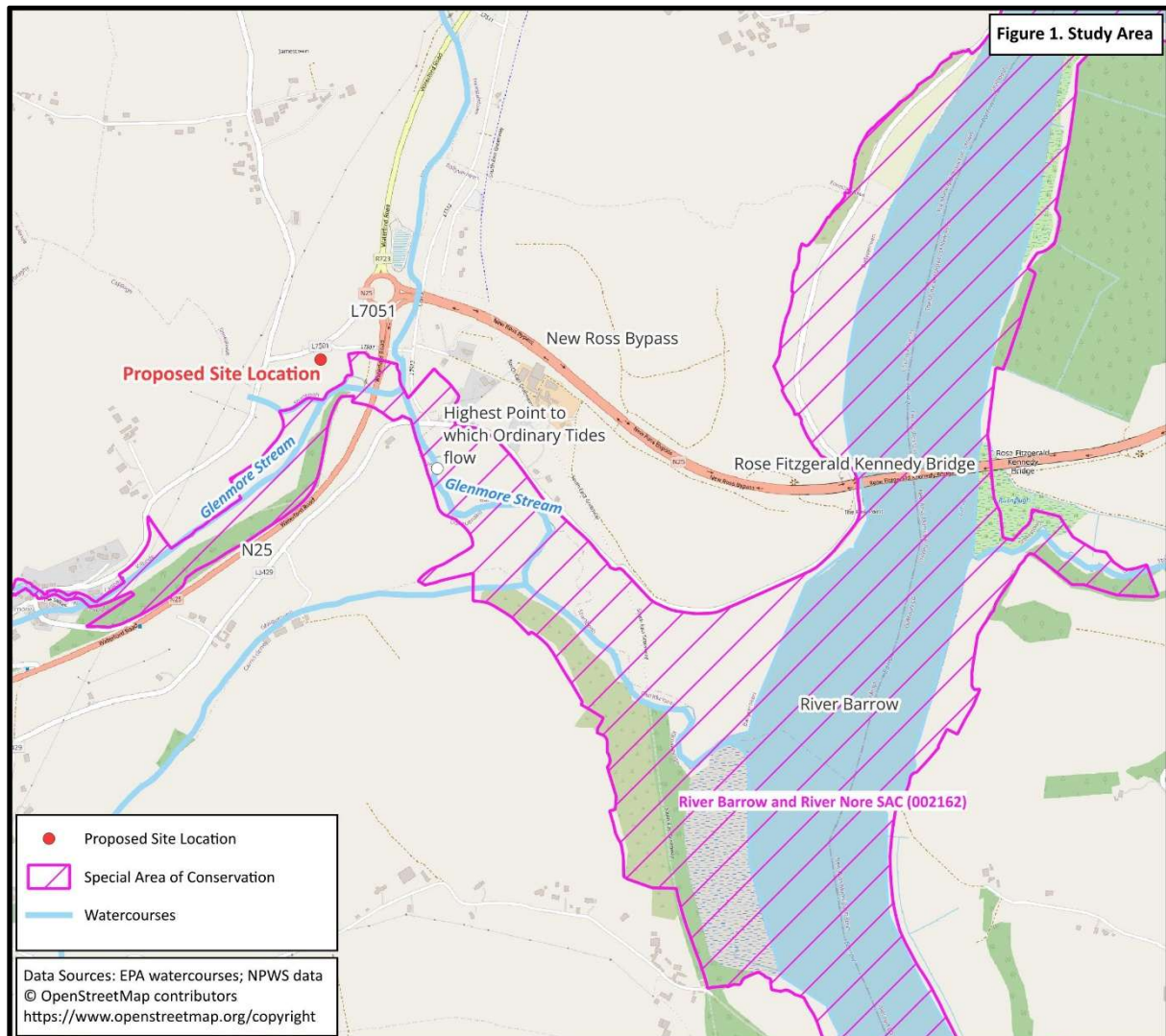
The Habitats Directive “*Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora*” provides legal protection for habitats and species of European importance. The main aim of this Directive is to promote biodiversity by the conservation of natural habitats and wild fauna and flora within the European Union. Under this Directive, Special Areas of Conservation (SACs) have been selected as important examples of habitat types listed in Annex I, and the habitats of certain species listed in Annex II of the Habitats Directive. SACs together with Special Protection Areas (SPAs) make up a network of European sites called the Natura 2000 network. SPAs are designated under the “*Council Directive 79/409/EEC on the Conservation of Wild Birds*”, commonly known as the “Birds Directive”.

Appropriate Assessment is required under the Habitats Directive for any plan or project likely to have a significant effect on a Natura 2000 site. Articles 6(3) and 6(4) of the Habitats Directive lay down a four-step procedure to be followed with respect to proposed plans or projects that may impact on Natura 2000 sites. This procedure is summarised in the flowchart below.



For the purposes of this document, we are only concerned with the first and second stages: Stage 1 Screening and Stage 2 Appropriate Assessment. Appropriate Assessment procedure has been clarified in recent years by the ruling from CJEU (C-323/17) which held that any measures intended to avoid or reduce the harmful effects of a project on a site should not be taken into account at Screening stage.

The triggers for Appropriate Assessment are based on a ‘likelihood’ or possibility of a potential significant effect occurring and are not based on certainty. This test is based on the precautionary principle (OPR, 2021).



2 METHODOLOGY

This NIS has been prepared in accordance with:

- “Assessment of Plans and Projects in relation to Natura 2000 sites – Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC” (EC, 2021).
- “Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities” (DEHLG, 2010).

- “*Appropriate Assessment Screening for Development Management*” (OPR, 2021).
- Rulings of the Justice of the European Union (CJEU) cases relating to Appropriate Assessment, particularly C-323/17 “*People Over Wind, Peter Sweetman v Coillte Teoranta*”, C-258/11 “*Peter Sweetman and Others v An Bord Pleanála*” and C-521/12 “*T.C. Briels and Others v Minister van Infrastructuur en Milieu*”.

A desktop review using the following sources of information was undertaken:

- Ordnance Survey mapping and aerial photography.
- Google aerial photograph and Google Earth historical mapping.
- Available data and literature on qualifying interests of the relevant Natura sites as held by the National Parks and Wildlife Service (NPWS) database (www.npws.ie), National Biodiversity Data Centre (NBDC) database (www.biodiversityireland.ie), Inland Fisheries Ireland (IFI) and other relevant literature.
- National Association Soil Map for Ireland at a scale of 1:250,000 (Irish Soil Information System Project) (Teagasc, 2026).
- Bedrock Geology of Ireland, at a scale of 1:100,000 (GSI, 2026).
- WFD risk status and pressures (WFD, 2026).

A multi-disciplinary site walkover was undertaken 26/02/2026 with Kilkenny County Council Engineer Mr Paul Byrne to establish scope of proposed works and to identify potential impact pathways to European sites. In addition, habitats at works footprint and adjacent areas were identified in accordance with current guidelines (“*A Guide to Habitats in Ireland*” (Fossitt, 2000) and “*Best Practice Guidance for Habitat Survey and Mapping*” (Smith *et al.*, 2011)).

As Otter is a qualifying interest of the adjacent River Barrow and River Nore SAC, an Otter survey was undertaken 23/03/2026. NRA ‘*Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes*’ identifies that mitigations are necessary to reduce disturbance on active non-breeding otter holts within 20m distance and on active breeding otter holts within 150m distance (NRA, 2008). With that in mind, watercourses and waterbodies within 150m of the site with potential otter habitat were surveyed for otter field signs such as spraints (droppings), prints, food signs, otter slides, couches and holts. Bankside cover and adjacent habitats were also noted (See Otter Survey Map, Appendix 2 for survey extent).

3 PROJECT DETAILS & EXISTING ENVIRONMENT

3.1 Site Overview

The proposed site is c. 1km northeast of the centre of Glenmore village in south Co. Kilkenny and c. 6km southwest of New Ross town. It is situated c. 135m south of Glenmore roundabout which connects with New Ross Bypass. It is situated at the junction of L7051 road and the underpass of the N25 national route.

The River Barrow (tidal) flows southwards c. 1.2km east of the proposed site. The site is located at an elevation of between 6m and 16m. O.D. and is situated on a southeast facing slope. It is evident from

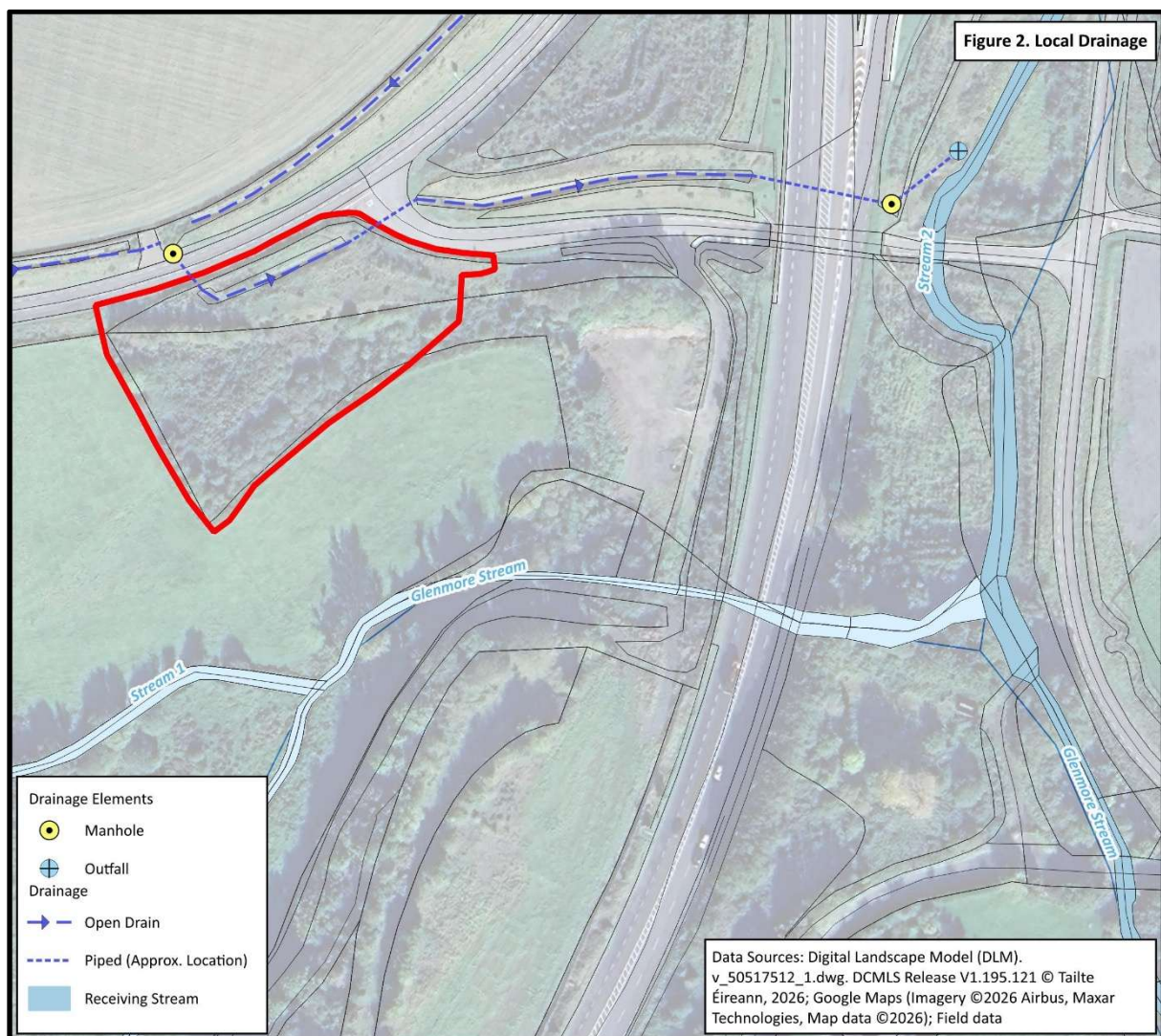
examination of Google Earth historical maps that the land parcel had been bisected in an east-west direction by the local road up until road realignment works undertaken c. 2017 - 2018 as part of the development of the New Ross Bypass. The northern part of the site comprises relatively flat ground which falls off sharply east and southwards.

Soils in the area are brown earths belonging to Clonroche (1100a) soil series, described as “Fine loamy drift with siliceous stones” (Teagasc, 2026). Underlying bedrock comprises slates and siltstones of the Oaklands Formation (GSI, 2026).

The proposed site is located 14m west of the River Barrow and River Nore SAC (sitecode: 002162) where it includes scrub habitat.

3.2 Surface Waters

An unnamed 1st order stream (Stream 1) flanks the southern and southeastern boundaries of the adjacent field and is located c. 43m from the proposed site at its closest location. This watercourse flows eastwards merging with an unnamed 2nd order stream (referred to as Glenmore Stream in this report) which flows in a mainly easterly direction within c.53m of the southern boundary of the proposed site prior to being culverted under the N25 where it merges with a second unnamed 1st order stream (Stream 2).



There is no downstream hydrological connection between Stream 1 nor the section of the Glenmore Stream to the south of the proposed site. However, an on-site drain provides a hydrological connection with Stream 2. The drain (48m in length within the site) which flows through the northern part of the site is part of the existing local drainage network associated with the completed road upgrading works in the surrounding area (See Figures 2 and 3).

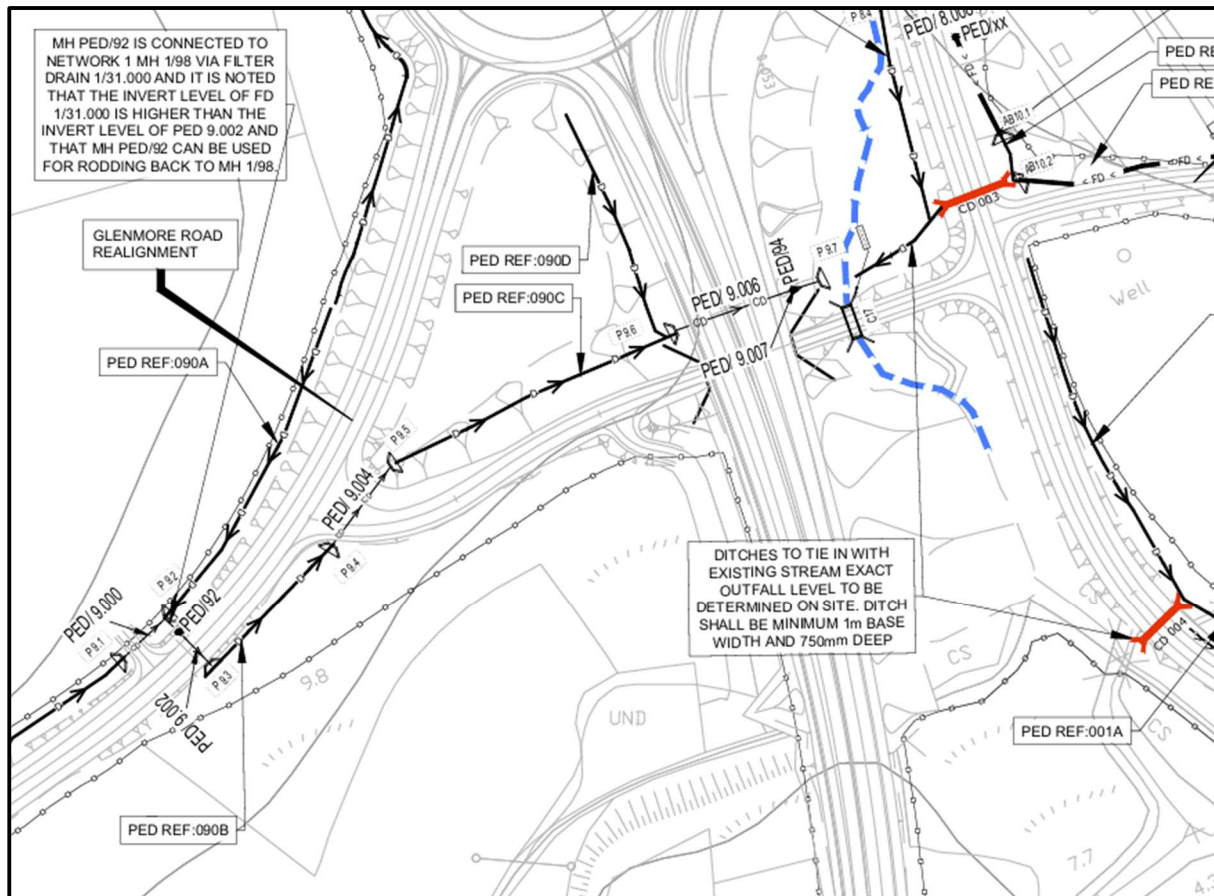


Figure 3: Excerpt from Pre-Earthworks Drainage Plan Layouts (Sheet 1 of 20) of N25 New Ross Bypass PPP Scheme (Drg. No. N25-ENG-DG 0500-DR200-201 Rev. AB-C) (As Built) (ARUP 09/05/2016)

Water flows in an easterly direction through the drain, then piped under the local road discharging to an open drain on the high roadside embankment opposite the proposed site and is then piped under the N25. On the eastern side of the N25, the piped waters discharge to terrestrial habitat c. 7m from Stream 2. While water flow from the site to this Stream was very low on the day of site visit, substantial scouring at the outfall of piped waters points to likely high flows during heavy rainfall. Despite the pipe headwall being setback from the stream, sediment deposition was noted along the banks of the stream indicating a downstream hydrological connection of c. 190m of the proposed site. This stream flows south for c. 120m where it is included within the River Barrow and River Nore SAC and then merges with Glenmore Stream after a further c. 20m. A hydrological connection of c. 310m between the site and the River Barrow and River Nore SAC is therefore identified.

25" Ordnance Survey mapping indicates the highest point to which ordinary tides flow along the Glenmore a further 220m downstream.

Glenmore Stream merges with the tidal waters of the Barrow-Nore channel c. 2km downstream of the proposed site.

The Water Framework Directive (WFD) requires EU member States to achieve water quality of at least Good Status in rivers, lakes, groundwater, estuaries and coastal waters, by 2027 at the latest. Ireland delivers the EU Water Framework Directive (WFD) through six-year River Basin Management Plans (RBMPs); we are currently in Cycle 3 (2022–2027).

Under this reporting framework, the proposed site is located within the “Nore_SC_140” sub-catchment (Subcatchment Code: 15_18) which in turn is located within the “Nore catchment” (Catchment ID: 15). The Nore_SC_140 sub-catchment includes the lower reaches of the River Nore and all streams entering tidal waters between its confluence and the River Barrow, and upstream of their confluence with the River Suir. Both nearby 1st order streams (Streams 1 and 2) and Glenmore Stream are designated the Oaklands_010 river water body under the WFD. While the potential status of this water body was modelled as ‘Good’ during the 2019-2024 monitoring period, the water body is not part of the EPA monitoring network. As no monitoring data is available, status confidence is given as low. The assigned risk to this water body indicates it is ‘under review’ and the waterbody is subject to significant pressure (WFD, 2026).

The Oaklands_010 waterbody discharges to the transitional waterbody New Ross Port which was determined as ‘Moderate’ status during the 2019-2024 monitoring period with a high degree of certainty. The assigned risk to this water body is identified as ‘At Risk’.

Pressures on both these waterbodies under the 2nd WFD cycle were identified as agriculture, urban wastewater (WFD, 2026).

3.3 Field Surveys

3.3.1 Habitat Assessment

5 no. Fossitt habitats were mapped on site and are presented on Figure 4.

Dry Meadows and Grassy Verges (GS2) – Scrub (WS1) Mosaic

This habitat mosaic includes what was once part of the local road and comprises rank grassland with some colonisation of low native scrub. The grassland comprised abundant Yorkshire fog *Holcus lanatus* and red fescue *Festuca rubra*, with cock’s-foot *Dactylis glomerata* occurring to a lesser extent. Broadleaved herbs were occasional and included creeping thistle *Cirsium arvense*, broad-leaved and curled docks *Rumex obtusifolius* and *R. crispus*, creeping buttercup *Ranunculus repens* and cleavers *Galium aparine*. On more open ground on the slope a small amount of cat’s-ear *Hypochaeris radicata* was found. Scattered low scrub comprising clumps of bramble *Rubus fruticosus* agg. or gorse *Ulex europaeus* occurred throughout the mosaic. Some native regeneration of hawthorn *Crataegus monogyna* and holly *Ilex aquifolium* was also noted. Tree planting was undertaken within this habitat mosaic in the northeastern part (See Treelines).

Scrub (WS1)

This habitat type mainly comprised low scrub to c. 2m in height of bramble or gorse. Bracken *Pteridium aquilinum* was frequent throughout. Access to investigate this habitat was constrained by dense scrub and so it was in part assessed from adjacent areas. A small patch of taller scrub comprising willow *Salix* sp. c. 4-5m in height occurred at the southern end of this habitat, grading into the adjacent hedgerow.

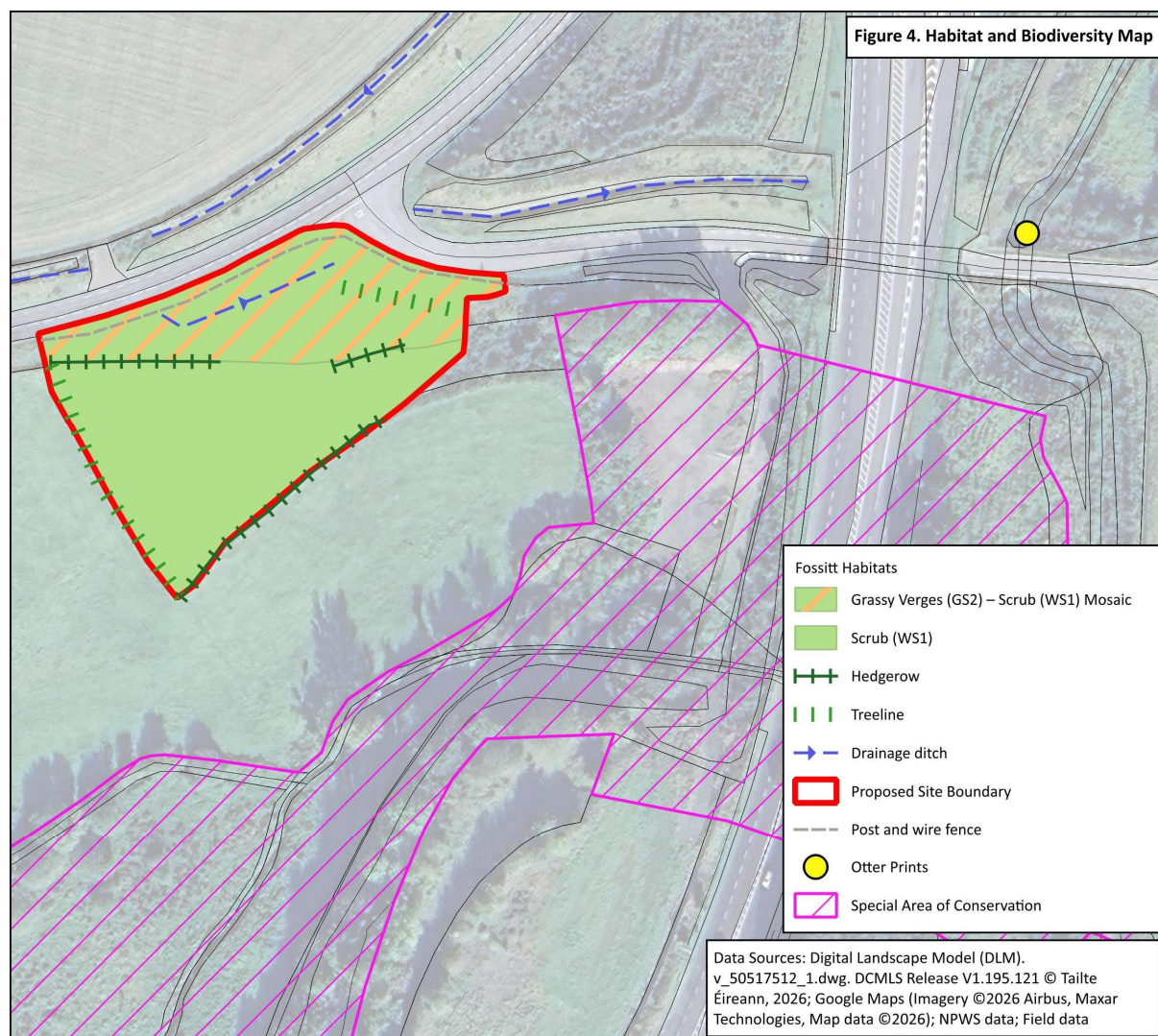
Hedgerows (WL1)

Two hedgerow fragments that follow the edge of the local road predating realignment were recorded on the slope within the site. They were dominated by mature hawthorn *Crataegus monogyna*, with elder *Sambucus nigra* found less commonly. This habitat graded into adjacent Scrub habitat. Little ground flora was noted apart from ivy *Hedera hibernica*. A hedgerow (c. 2-3m in height) also occurred along the southern site boundary, and was dominated by gorse, with blackthorn *Prunus spinosa* also present.

Treelines (WL2)

A Treeline bordered the site to the west, and was dominated by mature hawthorn to c. 5-6m. Semi-mature ash *Fraxinus excelsior* also occurred occasionally.

A young Treeline (to c. 6m in height) was planted in the northeastern part of the site. It comprised a row each of alder *Alnus glutinosa*, silver birch *Betula pendula* and hazel *Corylus avellana*. The occasional young pedunculate oak *Quercus robur* and Scot's pine *Pinus sylvestris* also occurred. The canopy was still very open along this Treeline, and so the ground flora typical of Dry Meadows and Grassy Verge habitat persisted.



Drainage Ditch (FW4)

A section of Drainage Ditch (48m in length) was set back c. 5m from the northwestern boundary of the site. The channel ranged from 2m to 3m in width and c. 1m depth. Waterflow on the day of site survey was very low. Some pooling of water was observed at inflow to drain at western end to a depth of c. 20cm, but this flow petered out to scarcely 2cm to 3cm depth at eastern end before leaving the site in easterly direction via a pipe culvert. The channel was dominated by creeping bent grass *Agrostis stolonifera* and nettles *Urtica dioica* with creeping buttercup occasional.

Adjacent Habitats

A field of Improved Agricultural Grassland (GA1) bordered the proposed site to the west and south. This graded into a narrow margin of Wet Grassland (GS4) along the watercourses to the west and south. The River Barrow and River Nore SAC where it occurred in proximity to the site eastwards comprised a band of Scrub (WS1) surrounding an old site compound from works on the New Ross Bypass. The old site compound comprised Spoil and Bare Ground (ED2) /Recolonising Bare Ground (ED3) habitats.

3.3.2 Otter Survey

One 2nd order stream (Glenmore Stream), two 1st order streams (Streams 1 and 2), an unconnected linear waterbody and millrace were surveyed within 150m of the proposed site for Otter signs and potential Otter habitat. The banks of all waterbodies were assessed with the exception of Stream 2. Stream 2 banks south of the bridge were not fully accessible due to dense scrub and steep slopes; partial survey was undertaken in this section of the stream to the confluence with Glenmore Stream.

Otter footprints were recorded north of the bridge on the eastern side of Stream 2 on a muddy bank (See Figure 4). No other Otter signs were observed during the survey including spraints, prints, slides, paths, holts, couches or potential resting places (e.g. holes or rock crevices). In terms of potential Otter habitat, bankside cover on Stream 1 and the upstream section of Glenmore Stream was sparse reducing the likelihood of potential resting sites. Some tree and scrub cover was present along the Glenmore Stream in proximity to the site to the southeast. Additionally, dense scrub was present along the Glenmore east of the N25 dual carriageway and also along Stream 2, particularly south of the bridge.

3.4 Proposed Works

Proposed works entail the relocation of the existing bus stop along the N25 dual carriageway to a site south of Glenmore roundabout junction c. 0.57ha. The proposal includes the following:

- Bus carriageway and parking
- Car carriageway and parking. 15 no. car park spaces including two accessible parking spaces and two electric car charging spaces
- An electric car charging point
- Bus shelter
- Concrete footpaths with two raised pedestrian crossings

- Greenway link (granted planning) will flank the proposed site along the northern and northeastern boundaries.
- Proposed Infiltration Trench. Size of trench to be confirmed at detailed design stage following RE365 soakaway tests at appropriate locations within the site.
- 1 No. proposed Kingspan Klargester NSBP003 bypass separator or similar approved to be installed upstream of infiltration trench.

The General Layout and Sections (25024-BS-DR-0101. Rev. PR5) and the Drainage General Layout and Details (25024-BS-DR-0501. Rev. PR5) are included in Appendix 1.

The site compound will likely be located c. 187m eastwards on the east side of the N25 on an existing triangular hardcore area (subject to landowner agreement).

No changes to the existing drain will take place. The existing scrub and hedgerow along the southern boundary will be retained as no works are proposed to this site boundary.

It is predicted that construction works will be 6 months in duration.

4 STAGE 1 SCREENING

Appropriate assessment screening was undertaken with regard to the proposed development. Screening was conducted in accordance with OPR Practice Note *Appropriate Assessment Screening for Development* (OPR, 2021) which identifies 4 individual steps as followed below.

Step 1: Description of the project/proposal and local site characteristics:	
Brief description of the project or plan:	Proposed works entail the relocation of the existing bus stop along the N25 dual carriageway to a site south of Glenmore roundabout junction (c. 0.57 ha). The proposal will include bus carriageway and parking, car carriageway and parking (15 no. car park spaces total), electric car charging point, bus shelter, footpath with two raised pedestrian crossings (See General Layout and Sections (25024-BS-DR-0101), Appendix 1). The existing drain on site will remain unaltered. Excavation works and reprofiling works will take place downgradient of drain. Proposed location for the site compound is c. 187m east of the site in a triangular hardcore area subject to landowner agreement. Estimated duration of construction is 6 months.
Brief description of site characteristics:	The proposed site is c. 1km NE of Glenmore village in south Co. Kilkenny. It is situated at the junction of L7051 road and the underpass of N25 national route. The River Barrow and River Nore SAC (sitecode: 002162) is located 14m eastwards at its nearest location. Glenmore Stream and a 1st order tributary are respectively c. 53m south and c. 43m southwest of the proposed site at their closest points. A drainage ditch 48m in length which runs along the northern part of the site has a hydrological connection with another 1st order stream c. 190m downstream and east of the site, to the east of the N25. This 1st order stream flows southwards where it is included within the River Barrow and River Nore SAC (sitecode: 002162), then merging with Glenmore Stream. The Glenmore Stream becomes tidal c. 550m downstream of the site and discharges to the estuarine waters of the Barrow-Nore channel c. 2km downstream of the site. The site is located at an elevation of between 6m and 16m. O.D., on a SE facing slope and is underlain by brown earths. The land parcel had been bisected in an E-W direction by a local road up until road realignment works undertaken as part of works on the New Ross Bypass. The northern part of the site comprises relatively flat ground which falls off sharply east and southwards.
List of prescribed bodies consulted:	The Development Applications Unit (DAU) and Inland Fisheries Ireland (IFI) were consulted with pertaining to the proposal (22/04/2026). Response pending.
Response to Consultation:	n/a
Is the plan or project directly connected with, or necessary to, the management of a Natura 2000 site	No

STEP 2. Identification of relevant Natura 2000 sites using Source-Pathway-Receptor model and compilation of information, qualifying interests and conservation objectives.				
European Site (Code)	List of Qualifying Interests	Distance from Proposed Works	Connections (Source, Pathway, Receptor)	Considered further in Screening (Y/N)
River Barrow and River Nore SAC (002162)	• Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Reefs [1170] • <i>Salicornia</i> and other annuals colonising mud and sand [1310] • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [3260] • European dry heaths [4030] • Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] • Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220] • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0]	14m terrestrial distance c. 310m downstream distance	14m distance to SAC with potential disturbance and invasive species pathways during construction works identified. Hydrological connection via drainage ditch on site which ultimately links with the SAC via a 1 st order stream	Yes

	• Desmoulin's Whorl Snail <i>Vertigo moulinsiana</i> [1016] • Freshwater Pearl Mussel <i>Margaritifera margaritifera</i> [1029] • White-clawed Crayfish <i>Austropotamobius pallipes</i> [1092] • Sea Lamprey <i>Petromyzon marinus</i> [1095] • Brook Lamprey <i>Lampetra planeri</i> [1096] • River Lamprey <i>Lampetra fluviatilis</i> [1099] • Twaite Shad <i>Alosa fallax fallax</i> [1103] • Atlantic Salmon <i>Salmo salar</i> [1106] • Otter <i>Lutra lutra</i> [1355] • Killarney Fern <i>Vandenboschia speciosa</i> [6985] https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002162.pdf				
Lower River Suir SAC (002137)	• 15 Qualifying Interests (QIs) https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002137.pdf	c. 9.2km South	No	In consideration of the project's size and scale and due to the absence of downstream hydrological pathway to this European Site and the lack of any relevant ex-situ factors of significance to QIs.	No
River Nore SPA (004233)	• A229 Kingfisher (<i>Alcedo atthis</i>) https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004233.pdf	c. 11.4km North	No	In consideration of the project's size and scale and due to the absence of downstream hydrological pathway to this European Site and the lack of any relevant ex-situ factors of significance to QIs.	No

STEP 3. Assessment of Likely Significant Effects

(a) Identify all potential impacts that may result in significant effects on the conservation objectives of a European site, taking into account the size and scale of the project under the following headings:

Impacts:

Construction phase e.g.

- Vegetation clearance
- Demolition
- Surface water runoff from soil excavation/infill/landscaping (including borrow pits)
- Dust, noise, vibration
- Lighting disturbance
- Impact on groundwater/dewatering
- Storage of excavated/construction materials
- Access to site
- Pests

Contaminated Runoff

- Activities such as clearance of vegetation and large-scale removal, grading, and levelling of topsoil and subsoils have the potential to produce large amounts of sediment-laden runoff especially during periods of heavy rainfall. Likewise, stockpiling of topsoil, and other materials may give rise to large amounts of silt-laden runoff.
- The introduction of pollutants such as raw or uncured concrete and grouts, wash down water from exposed aggregate surfaces, cast-in-place concrete, fuels and lubricants to groundwaters, rivers and streams poses a significant risk to fish, plants and invertebrates.
- In the case of the proposal, works will be undertaken principally downgradient of the open drain on site and so loss of contaminants will be reduced. However, given the hydrological link between the site and the SAC c. 310m downstream, impacts on water quality of the SAC downgradient / downstream of the site cannot be ruled out during the construction stage.

Introduction of Invasive Species

- Given that soil and aggregate will be imported to the site as infill, there is a possibility of introducing non-native invasive species such as Japanese knotweed, Himalayan balsam or giant hogweed to the site with potential to spread and disperse within the nearby terrestrial habitats of the SAC.

Wildlife Disturbance

- The proposed project will entail various operations that have the potential, through excessive noise, vibration, mechanical movement, artificial lights, etc. to disturb the breeding activity of wildlife. All phases of the development including site clearance, development and landscaping may cause disturbance to wildlife in the vicinity of the site.

Operational phase e.g.

- Direct emission to air and water
- Surface water runoff containing contaminant or sediment
- Lighting disturbance

- Surface water runoff at operational phase will discharge via a fuel-oil interceptor to an on-site infiltration trench. No indirect impacts on water quality of downstream surface waters or groundwaters are therefore anticipated.
- Given that the nearest riparian corridor is 43m distance and retained scrub and hedgerows along the southern and western boundaries will provide screening, it is expected that Otters will become habituated

- Noise/vibration - Changes to water/groundwater due to drainage or abstraction - Presence of people, vehicles and activities - Physical presence of structures (eg collision risks) - Potential for accidents or incidents	to any additional human activity at the bus stop. No disturbance impacts arising from noise or human activity are identified during the operational phase.
In-combination/Other	Possible impacts considered for in-combination effects include water quality deterioration, wildlife disturbance, and spread of invasive species. Projects or plans considered in combination with the proposal to determine the potential for having any significant in-combination effects on the Natura 2000 sites within the Zone of Influence of the project were: - Kilkenny County Development Plan (2021 - 2027); - River Basin Management Plan (2022 - 2027); - Granted or proposed developments within 1km of the proposed site, within the last five years (22215; 22564; 2360243; 2360290; 2460346; and 2660005); - South East Greenway (approved but uncompleted) No likely significant in-combination effects are identified between identified plans and projects and the proposed development.
<i>(b) Describe any likely changes to the European site arising as a result of:</i>	
Examples of the type of changes to give consideration to include: - Reduction or fragmentation of habitat area. - Disturbance to QI species - Habitat or species fragmentation - Reduction or fragmentation in species density - Changes in key indicators of conservation status value (water quality etc.)	Construction works may give rise to a reduction in water quality in the downstream waters of the SAC resulting in adverse effects on the populations and ranges of water-dependent qualifying species, and prey availability. Increased noise arising from construction activities may give rise to disturbance of the qualifying interest Otter. Potential introduction of non-native invasive plant species during the construction phase could allow spread and dispersal in nearby habitat within the SAC, and potentially downstream habitats in the longer term.

-
- Changes to areas of sensitivity or threats to QI
 - Interference with the key relationships that define the structure or ecological function of the site
 - Climate change
-

Step 4. Screening Determination Statement:

The assessment of significance of effects:

Describe how the proposed development (alone or in-combination) is/is not likely to have significant effects on European site(s) in view of its conservation objectives.

Based on available information, and having regard to:

- the proposed works which are adjacent to **River Barrow and River Nore SAC** with potential effects on its SCLs via disturbance, hydrological and invasive species pathways;
- the potential for cumulative and / or in-combination effects with existing activities and granted projects in the vicinity,

it is concluded that the proposed development, individually or in-combination with other plans or projects, is likely to have a significant effect on the above listed European site, in view of the site's conservation objectives.

An appropriate assessment is, therefore, required to determine if adverse effects on site integrity can be excluded in view of the conservation objectives of the River Barrow and River Nore SAC.

5 NATURA IMPACT STATEMENT

Stage 1 Appropriate Assessment Screening has identified the European Site, the River Barrow and River Nore SAC, upon which the proposed works, in the absence of mitigation, has the potential to result in significant effects, and the pathways by which those effects may occur.

The objective of the Natura Impact Statement is to provide the information necessary to allow the competent authority to conduct an Article (3) Appropriate Assessment of the proposed bus stop at Glenmore, Co. Kilkenny. The purpose of the Appropriate Assessment is to assess the implications of the plan or project against the site's conservation objectives, either individually or in combination with other plans or projects (E.C., 2021). The conclusions should enable the competent authorities to ascertain whether the plan or project will adversely affect the integrity of the European site concerned. The focus of the Appropriate Assessment is therefore specifically on the species and/or the habitats for which the Natura 2000 site is designated (E.C., 2021).

5.1. Assessment of Effects on Natura Sites

The qualifying interests of the River Barrow and River Nore SAC within the Zone of Influence of the project are identified in Table 5.1. Sixteen qualifying interests were determined to be within the Zone of Influence based on their likely occurrence within the European site and with respect to potential impact pathways.

The potential for adverse effects on the qualifying interests within the Zone of Influence of the project in light of the likely impacts of the project alone, and the necessity for mitigations, are identified in Table 5.2.

The 2025 national conservation assessment together with overall trend (in brackets) (NPWS, 2025b) is listed for each qualifying habitat of River Barrow and River Nore SAC in Table 5.2.

Table 5.1. Qualifying Interests of the Screened-In European Sites with respect to Zone of Influence of the Project

Qualifying Interest (Short Name)	Location in the Natura 2000 site relative to Proposed Site	Potential for Impacts from the Development	Listed for Further Examination in Table 5.2
River Barrow and River Nore SAC (002162)			
Estuaries [1130]	This qualifying habitat is located c. 2km downstream of the site where it occurs within the Barrow-Nore channel according to the Conservation Objectives for the SAC (NPWS, 2025a). However, 6" Cassini and 25" Ordnance Survey historical maps indicate the highest point to which ordinary tides flow is c. 550m downstream of the site. Based on this factor, the lower reaches of the Glenmore River (c. 1.4km) are assumed to be transitional estuarine waters.	Given the relatively short hydrological distance downstream of c. 550m from the proposed site to this qualifying habitat, potential indirect impacts are identified on a precautionary basis.	Yes
Mudflats and sandflats not covered by seawater at low tide [1140] (Tidal Mudflats and Sandflats)	The closest known example of this habitat is located c. 2km downstream of the site where it occurs along shallow areas on both banks of the Barrow-Nore estuary (NPWS, 2025a).	Given the relatively short hydrological distance downstream of c. 2km from the proposed site to this qualifying habitat, potential indirect impacts are identified on a precautionary basis.	Yes
Reefs [1170]	This habitat type occurs c. 21km downstream and c. 17km direct distance from the proposed site. The habitat is an extensive and expansive area of <i>Sabellaria alveolata</i> reef occurring intertidally in Duncannon Bay (NPWS, 2011b, NPWS, 2025a).	There is no potential for direct or indirect impacts due to the large terrestrial and hydrological distances of c. 17km and c. 21km respectively, and the nature of this habitat type being subject to coastal and marine influences.	No
<i>Salicornia</i> and Other Annuals colonising Mud and Sand [1310] (<i>Salicornia</i> Mud)	Salt marsh habitat occurs at Carrickcloney according to the Site Synopsis for the SAC and supporting documentation for the Conservation Objectives	Given the relatively short hydrological distance downstream of c. 740m from the proposed site to	Yes

Qualifying Interest (Short Name)	Location in the Natura 2000 site relative to Proposed Site	Potential for Impacts from the Development	Listed for Further Examination in Table 5.2
River Barrow and River Nore SAC (002162)	(NPWS, 2011a; NPWS, 2024). Examination of aerial photography indicates this complex is c.740m downstream of the proposed site within the neighbouring townlands of Graiguenakill and Carrickcloney. This salt marsh was not among the four sites within the SAC surveyed as part of the Saltmarsh Monitoring Project 2007-2008 (McCorry & Ryle, 2009), nor in follow-up monitoring undertaken 2017 – 2018 period (Brophy <i>et al.</i> , 2019), therefore no details on habitats present is available. There is potential that <i>Salicornia</i> Mud is among the salt marsh habitats present at this site. A single example of <i>Salicornia</i> Mud was identified in the Conservation Objectives, c. 7.7km downstream and c. 5.9km direct distance of the site. (NPWS, 2011a, NPWS, 2025a).	potential <i>Salicornia</i> Mud, potential indirect impacts are identified on a precautionary basis.	
Atlantic Salt Meadows (<i>Glaucopuccinellietalia maritimae</i>) [1330] (Atlantic Salt Meadows)	Salt marsh habitat occurs at Carrickcloney according to the Site Synopsis for the SAC and supporting documentation for the Conservation Objectives (NPWS, 2011a; NPWS, 2024). Examination of aerial photography indicates this complex is c. 740m downstream of the proposed site within the neighbouring townlands of Graiguenakill and Carrickcloney. This salt marsh was not among the four sites within the SAC surveyed as part of the Saltmarsh Monitoring Project 2007-2008 (McCorry & Ryle, 2009), nor in follow-up monitoring undertaken 2017	Given the relatively short hydrological distance downstream of c. 740m from the proposed site to potential Atlantic Salt Meadows, potential indirect impacts are identified on a precautionary basis.	Yes

Qualifying Interest (Short Name)	Location in the Natura 2000 site relative to Proposed Site	Potential for Impacts from the Development	Listed for Further Examination in Table 5.2
River Barrow and River Nore SAC (002162)			
	– 2018 period (Brophy <i>et al.</i>, 2019), therefore no details on habitats present is available. There is potential that Atlantic Salt Meadows is among the salt marsh habitats present at this site. The Conservation Objectives (including supporting documentation) for the SAC lists the nearest confirmed example of this habitat type (site no. 0049) c. 4.4km downstream of the site at Killowen, Co. Wexford, on the eastern side of the Barrow-Nore estuary. (NPWS, 2011a; NPWS, 2025a).		
Mediterranean Salt Meadows (<i>Juncetalia maritimi</i>) [1410] (Mediterranean Salt Meadows)	An example of Mediterranean Salt Meadows is referred to as occurring in the salt marsh complex within the neighbouring townlands of Graiguenakill and Carrickcloney which is c. 740m downstream of site (NPWS, 2011a; NPWS, 2024). A further example of this habitat type (site no. 0050) is located c. 6km downstream of the proposed site at Rochestown on the west side of the Barrow-Nore estuary (NPWS, 2011a; NPWS, 2025a).	Given the relatively short hydrological distance downstream of c. 740m from the proposed site to Mediterranean Salt Meadows, potential indirect impacts are identified on a precautionary basis.	Yes
Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] (Vegetation of Flowing Waters)	The full extent of this habitat in the SAC is currently unknown (NPWS, 2025a). Given the absence of survey data, this qualifying habitat has potential to occur in the Glenmore Stream downstream of the project (NPWS, 2025a).	Given the relatively short hydrological distance of c. 310m to downstream waters of the SAC and due to the unknown extent of this habitat within the SAC, potential indirect impacts are identified on a precautionary basis.	Yes
European dry heaths [4030] (Dry Heaths)	This habitat type is indicated as occurring on the steep, free-draining river valley sides, especially along	As this qualifying habitat is terrestrial in nature with at least 20km separation distance from the proposed	No

Qualifying Interest (Short Name)	Location in the Natura 2000 site relative to Proposed Site	Potential for Impacts from the Development	Listed for Further Examination in Table 5.2
River Barrow and River Nore SAC (002162)			
	the Barrow and its tributaries in the foothills of the Blackstairs Mountains (NPWS, 2025a). From examination of aerial photography, the nearest example of this within the SAC is likely to be over 20km distance where it encompasses heath habitat adjacent to the Aughavaud River in the Blackstairs Mountains.	site, there is no pathway for direct or indirect impacts arising from the project.	
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] (Hydrophilous Tall-Herb Swamp)	The distribution of Hydrophilous Tall-Herb Swamp within the SAC is currently unknown. It 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 (NPWS, 2025a). This habitat type does not occur within the land take of the project.	Given the proposed site's close proximity to the SAC and the potential invasive species pathway, and by virtue of Hydrophilous Tall-Herb Swamp being vulnerable to colonization of non-native invasive species, potential impacts to this qualifying habitat have been identified on a precautionary basis.	Yes
Petrifying Springs with Tufa Formation (<i>Cratoneurion</i>) [7220]* (Petrifying Springs)	The extent of this priority habitat in the SAC is currently unknown. Water quality is listed among attributes in the conservation objective for this habitat type (NPWS, 2025a).	Given the proposed site's close proximity to the SAC and by virtue of Petrifying Springs sensitivity to changes in groundwater quality, potential impacts to this qualifying interest have been identified on a precautionary basis.	Yes
Old Sessile Oak Woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] (Old Oak Woodland)	The closest known example of this habitat type is located c. 2.8km direct distance and c. 3.2km downstream at Dunganstown, Co. Wexford (site no. 508). A second example is located c. 3.3km direct distance and c. 5.3km upstream at Stokestown, Co.	As this qualifying habitat is terrestrial in nature with at least 2km separation distance from the project area, there is no pathway for impacts arising from the project. As such, there is no potential for the proposed project to directly or indirectly impact on this qualifying habitat.	No

Qualifying Interest (Short Name)	Location in the Natura 2000 site relative to Proposed Site	Potential for Impacts from the Development	Listed for Further Examination in Table 5.2
River Barrow and River Nore SAC (002162)			
Alluvial Forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) [91E0]* (Alluvial Woodland)	Wexford (site no. 510) (NPWS, 2025a; Perrin <i>et al.</i> , 2008). The closest known example of this habitat type is located c. 5.9km direct distance and c. 6.8km hydrological distance of the site at Fisherstown, Co. Wexford (site no. 511) (NPWS, 2025a; Perrin <i>et al.</i> , 2008).	Given the proposed site's close proximity to the SAC and the potential invasive species pathway, and by virtue of Alluvial Woodland being vulnerable to colonization of non-native invasive species, potential impacts to this qualifying habitat have been identified on a precautionary basis.	Yes
Desmoulin's Whorl Snail <i>Vertigo moulinsiana</i> [1016]	The proposed site is not adjacent to a known population of Desmoulin's Whorl Snail. The nearest reported location of this qualifying species within the SAC is along the River Barrow at Borris Bridge (S711503), c. 27km direct distance (NPWS, 2025a). Habitat with the potential to support this species does not occur within the proposed site or within the Zone of Influence of the project. Potential suitable habitat for this species occurs in marsh habitat c. 40m south of the proposed site in a low-lying area beside Glenmore Stream.	The project has no likelihood of adversely impacting on potentially suitable habitat within the SAC by virtue of works being undertaken upgradient of the nearest potential habitat, which has a minimum separation distance of 40m distance, with no potential to alter the hydrological regime of the habitat or its habitat quality.	No
Freshwater Pearl Mussel <i>Margaritifera margaritifera</i> [1029]	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) (NPWS, 2025a). The Ballymurphy and Mountain rivers discharge to the Barrow catchment c. 30km indirect hydrological distance	The proposed site is located significant distances downstream of known populations of Freshwater Pearl Mussel within the SAC. No direct or indirect potential impacts on this qualifying interest are identified.	No

Qualifying Interest (Short Name)	Location in the Natura 2000 site relative to Proposed Site	Potential for Impacts from the Development	Listed for Further Examination in Table 5.2
River Barrow and River Nore SAC (002162)			
White-clawed Crayfish <i>Austropotamobius pallipes</i> [1092]	upstream of the proposed site, while the population along the Nore river is c. 60km indirect hydrological distance upstream of the proposed site. Freshwater Pearl Mussel is not likely to occur in downstream waters of the Glenmore Stream. This qualifying interest is present almost throughout this SAC. The Conservation Objectives reports that records extend as far downstream as Thomastown on the River Nore and Graiguenamanagh on the River Barrow (NPWS, 2025a). However, the most recent Article 17 report indicates the hectad within which the proposed site lies (S62) is within its range and distribution (NPWS, 2025d). This qualifying species is considered within the Zone of Influence of the project on a precautionary basis.	Potential impacts on downstream water quality arising during the construction phase may adversely affect this qualifying species which is sensitive to changes in water quality.	Yes
Sea Lamprey <i>Petromyzon marinus</i> [1095]	The proposed project has a downstream hydrological connection to the European site designated for the protection of this aquatic species which especially occurs in the lower stretches of the SAC (NPWS, 2025a). For this reason, this qualifying species is considered within the Zone of Influence of the project.	Potential impacts on downstream water quality arising during the construction phase may adversely affect this qualifying species which is sensitive to changes in water quality.	Yes
Brook Lamprey <i>Lampetra planeri</i> [1096]	The proposed project has a downstream hydrological connection to the European site designated for the protection of this aquatic species which occurs within the SAC (NPWS, 2025a). For this reason, this	Potential impacts on downstream water quality arising during the construction phase may adversely affect this qualifying species which is sensitive to changes in water quality.	Yes

Qualifying Interest (Short Name)	Location in the Natura 2000 site relative to Proposed Site	Potential for Impacts from the Development	Listed for Further Examination in Table 5.2
River Barrow and River Nore SAC (002162)			
River Lamprey <i>Lampetra fluviatilis</i> [1099]	qualifying species is considered within the Zone of Influence of the project. The proposed project has a downstream hydrological connection to the European site designated for the protection of this aquatic species which occurs within the SAC (NPWS, 2025a). For this reason, this qualifying species is considered within the Zone of Influence of the project.	Potential impacts on downstream water quality arising during the construction phase may adversely affect this qualifying species which is sensitive to changes in water quality.	Yes
Twaite Shad <i>Alosa fallax fallax</i> [1103]	The proposed project has a downstream hydrological connection to the European site designated for the protection of this aquatic species which especially occurs in the lower stretches of the SAC (NPWS, 2025a). For this reason, this qualifying species is considered within the Zone of Influence of the project.	Potential impacts on downstream water quality arising during the construction phase may adversely affect this qualifying species which is sensitive to changes in water quality.	Yes
Atlantic Salmon <i>Salmo salar</i> [1106]	The proposed project has a downstream hydrological connection to the European site designated for the protection of this aquatic species is known to occur in the SAC (NPWS, 2025a). For this reason, this qualifying species is considered within the Zone of Influence of the project.	Potential impacts on downstream water quality arising during the construction phase may adversely affect this qualifying species which is sensitive to changes in water quality.	Yes
Otter <i>Lutra lutra</i> [1355]	While the proposed site does not provide suitable habitat for Otter, it is located in proximity (closest point 43m) to a tributary of the Glenmore Stream and the Glenmore Stream itself within the SAC, which may provide suitable habitat for Otter resting places.	Potential impacts on downstream water quality arising during the construction phase may adversely affect the abundance of prey on which this qualifying interest depends. In addition, the proximity of works to potential Otter habitat may cause disturbance impacts.	Yes

Qualifying Interest (Short Name)	Location in the Natura 2000 site relative to Proposed Site	Potential for Impacts from the Development	Listed for Further Examination in Table 5.2
River Barrow and River Nore SAC (002162)			
Killarney Fern <i>Vandenboschia speciosa</i> [6985]	In addition, the prey species on which this species depends are frequently dependent on good water quality. This plant species is known in three upstream locations within the SAC as per Map 7 of the Conservation Objectives for the SAC (NPWS, 2025a), the closest of which is c. 10km north of the proposed site, along the River Nore (NPWS, 2025a).	As this qualifying species is terrestrial in nature with at least 10km separation distance from the project area, there is no pathway for impacts arising from the project.	No

*Priority habitat

Table 5.2 Assessment of Effects on Screened-in Qualifying Interests of European Sites

<i>River Barrow and River Nore SAC (002162)</i>	
Qualifying Interest	Estuaries [1130]
National Conservation Assessment 2025	Bad (Stable)
Conservation Objective	To maintain the favourable conservation condition of Estuaries in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:
Targets	• Area stable or increasing, subject to natural processes. • Conserve the following community types in a natural condition: Muddy estuarine community complex; Sand to muddy fine sand community complex; Fine sand with <i>Fabulina fabula</i> community; Sheltered to moderately exposed intertidal reef community complex. • Conserve the extent of <i>Sabellaria alveolata</i> reef community, subject to natural processes. • Conserve the high quality of <i>Sabellaria alveolata</i> reef community subject to natural processes (NPWS, 2025a).
Description of QI	Estuaries are described as the downstream part of a river valley which is subject to the tide and extending from the limit of brackish waters. They generally have a significant freshwater influence but the salinity can be temporally variable. They are very diverse habitats and are recognised as playing an important role in maintaining the health of coastal ecosystems. This habitat provides important feeding areas for bird and mammal species and often supports a range of other habitats. Estuarine communities are strongly influenced by environmental conditions and generally have muddy and/or sandy sediments (NPWS, 2025b and 2025c).
Threats and Pressures	Chief pressures noted in Ireland on this habitat is pollution generated from agricultural activities which affects the majority of Estuaries. Shipping activities, and fish and shellfish harvesting also pose a low threat in some cases (NPWS, 2025c).
Potential for Interaction with Project	A hydrological link is present between the site and downstream surface waters which are included in the SAC c. 310m downstream. The qualifying habitat Estuaries is considered to be present c. 550m downstream of the proposed site based on examination of 6" and 25" Ordnance Survey mapping which indicate the ordinary tide high point, and includes the lower stretch of Glenmore River and the Barrow-Nore channel c. 1.4km further downstream. Potential threats arising from the project are:

	a) Release of sediment to local watercourses. The open drain along the northern part of the site has connectivity to local watercourses, and though most works will be undertaken downgradient of the drain, potential loss of soil or sediment-laden runoff to this drain cannot be ruled out during the construction phase. b) Release of chemicals (e.g. oils, fuels, cement, cementitious residues) into watercourses via the drain on-site poses a water quality risk during the construction phase. c) While potential loss of pollutants from the development is likely to be limited, there is the possibility of contributing to deterioration of water quality which can adversely affect the natural condition of estuarine community types. Note, no threat to the qualifying habitat Reefs [1170] (<i>Sabellaria alveolata</i> reef community) is expected which was identified as outside the Zone of Influence of the project in Table 5.1.
Mitigations Necessary?	Yes. In order to protect this aquatic habitat, standard best construction practices will be employed for the duration of the construction phase in order to ensure no release of silt/sediment or chemicals to receiving waters.
Qualifying Interest	Mudflats and sandflats not covered by seawater at low tide [1140]
National Conservation Assessment 2025	Inadequate (Stable)
Conservation Objective	To maintain the favourable conservation condition of the Mudflats and sandflats not covered by seawater at low tide in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:
Targets	• The permanent habitat area is stable or increasing, subject to natural processes. • Conserve the following community types in a natural condition: Muddy estuarine community complex; Sand to muddy fine sand community complex (NPWS, 2025a).
Description QI	Tidal Mudflats and Sandflats are widespread around the coast of Ireland and are characterised by sands and muds not covered by sea water at low tide (Scully <i>et al.</i> , 2020). In areas dominated by mudflats, the sediment is comprised of fine silt and clay particles while sandflats are characterised by larger particles associated with higher levels of wave exposure. These habitats are dynamic in nature and are dependent on a balance of natural erosion and accretion. Sediments are often high in nutrients and low in oxygen with faunal communities generally dominated by molluscs, crustaceans and worms (Scully <i>et al.</i> , 2020).
Threats and Pressures	This habitat is under threat in Ireland from nutrient enrichment due mainly to diffuse pollution from agriculture, forestry, and wastewater, particularly in enclosed bays with poor mixing, and from impacts associated with aquaculture (NPWS, 2025b and 2025c).

Potential for Interaction with Project	A hydrological link is present between the site and downstream surface waters which are included in the SAC c. 310m downstream. Tidal Mudflats and Sand Flats are identified, c. 2km downstream of the proposed site where they occur along shallow areas along both banks of the Barrow-Nore estuary. The qualifying habitat at this location comprises the community 'Muddy estuarine community complex' (See Map 4a in Conservation Objectives) (NPWS, 2025a). Potential threats arising from the project are: a) Release of sediment to local watercourses. The open drain along the northern part of the site has connectivity to local watercourses, and though most works will be undertaken downgradient of the drain, potential loss of soil or sediment-laden runoff to this drain cannot be ruled out during the construction phase. b) Release of chemicals (e.g. oils, fuels, cement, cementitious residues) into watercourses via the drain on-site poses a water quality risk during the construction phase. c) While potential loss of pollutants from the development is likely to be limited, there is the possibility of contributing to deterioration of water quality in estuarine waters. Negative effects on this habitat type such as degradation of habitat quality or changes to community types are identified on a precautionary basis.
Mitigations Necessary?	In order to protect this aquatic habitat, standard best construction practices will be employed for the duration of the construction phase in order to ensure no release of silt/sediment or chemicals to receiving waters.
Qualifying Interest	<i>Salicornia</i> and other annuals colonising mud and sand [1310]
National Conservation Assessment 2025	Bad (Deteriorating)
Conservation Objective	To maintain the favourable conservation condition of <i>Salicornia</i> and other annuals colonising mud and sand in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:
Targets	• Permanent habitat area stable or increasing, subject to natural processes, including erosion and succession. • No decline in habitat distribution, subject to natural processes. • Maintain or where necessary restore natural circulation of sediments and organic matter, without any physical obstructions. • Maintain natural tidal regime. • Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession.

- Maintain range of saltmarsh habitat zonations including transitional zones, subject to natural processes including erosion and succession.
- Maintain structural variation within sward.
- Maintain more than 90% of area outside creeks vegetated.
- Maintain range of subcommunities with typical species listed in Saltmarsh Monitoring Project (McCorry & Ryle, 2009).
- No significant expansion of *Spartina*. No new sites for this species and an annual spread of less than 1% where it is already known to occur (NPWS, 2025a).

Description of QI

Salicornia Mud is a pioneer saltmarsh community dominated by annual plant species. It can occur in proximity to established areas of saltmarsh, or within existing areas of saltmarsh. This community may occur on muddy sediment seaward of established saltmarsh, or form patches within other saltmarsh communities where the elevation is suitable and there is regular tidal inundation. The habitat is prone to erosion and is regarded as being ephemeral in nature. (NPWS, 2025b and 2025c).

Threats and Pressures

The presence of the invasive species Common Cordgrass *Spartina anglica* is seen as the main threat facing this habitat in Ireland. Livestock overgrazing and pollution arising from agricultural activities are also identified as high pressures. Pollution arising from other sources including commercial and residential sources has been recorded on a few sites (NPWS, 2025b and 2025c).

Potential for Interaction with Project

A hydrological link is present between the site and downstream surface waters which are included in the SAC c. 310m downstream.

A single example of *Salicornia* Mud within the SAC was identified in the Conservation Objectives, c. 7.7km downstream and c. 5.9km direct distance of the site (NPWS, 2011a, NPWS, 2025a). The Conservation Objectives acknowledges there may be further unsurveyed examples of this habitat within the European Site. Table 5.1 highlighted potential *Salicornia* Mud c. 740m downstream of the proposed site in salt marsh habitat at Carrickcloney (NPWS, 2011a; NPWS, 2025a). No details of this salt marsh site are included in reports for the Saltmarsh Monitoring Project 2007-2008 (McCorry & Ryle, 2009), nor in follow-up monitoring undertaken 2017 – 2018 period (Brophy *et al.*, 2019). There is therefore potential that *Salicornia* Mud is among the salt marsh habitats present at this site.

Potential threats arising from the project are:

a) Release of sediment to local watercourses. The open drain along the northern part of the site has connectivity to local watercourses, and though most works will be undertaken downgradient of the drain, potential loss of soil or sediment-laden runoff to this drain cannot be ruled out during the construction phase.

b) Release of chemicals (e.g. oils, fuels, cement, cementitious residues) into watercourses via the drain on-site poses a water quality risk during the construction phase.

c) While potential loss of pollutants from the development is likely to be limited, there is the possibility of contributing to deterioration of water quality in estuarine waters. Negative effects on this habitat type such as degradation of habitat quality or changes to community types are identified on a precautionary basis.

Mitigations Necessary?

In order to protect this aquatic habitat, standard best construction practices will be employed for the duration of the construction phase in order to ensure no release of silt/sediment or chemicals to receiving waters.

Qualifying Interest	Atlantic Salt Meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330]
National Conservation Assessment 2025	Bad (Deteriorating)
Conservation Objective	To restore the favourable conservation condition of Atlantic Salt Meadows in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:
Targets	• Habitat area stable or increasing, subject to natural processes, including erosion and succession. • No decline in habitat distribution, subject to natural processes. • Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions. • Maintain natural tidal regime. • Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession. • Maintain range of saltmarsh habitat zonations including transitional zones, subject to natural processes including erosion and succession. • Maintain structural variation within sward. • Maintain more than 90% of area outside creeks vegetated. • Maintain range of subcommunities with typical species listed in Saltmarsh Monitoring Project (McCorry & Ryle, 2009).

- No significant expansion of *Spartina*. No new sites for this species and an annual spread of less than 1% where it is already known to occur (NPWS, 2025a).

Description QI

Atlantic Salt Meadows are a coastal habitat with a distinctive topography and generally occupy the widest part of the saltmarsh gradient from the lowest part along the tidal zone, mid-marsh zones and upper marsh zones. An intricate network of creeks and salt pans occurs in medium to large sized salt meadows (NPWS, 2025b and 2025c). Atlantic Salt Meadows contain distinct zones associated with elevation and submergence. The lower zone is usually dominated by common salt-marsh grass *Puccinellia maritima*, the middle zone by thrift *Armeria maritima* and sea plantain *Plantago maritima*, while the upper zone comprises an herbaceous community including grass and rush species. Atlantic Salt Meadows are widely distributed along the Irish coast and provide an important habitat for waders and wildfowl (NPWS, 2025b and 2025c).

Threats and Pressures

The main threats to this habitat in Ireland are unsuitable grazing levels, land reclamation and the invasive cordgrass *Spartina*. Other recorded pressures include recreational infrastructure, rubbish and soil pollution, and pollution to surface and groundwaters arising from a variety of sources (NPWS, 2025b and 2025c).

Potential for Interaction with Project

A hydrological link is present between the site and downstream surface waters which are included in the SAC c. 310m downstream.

Atlantic Salt Meadows is the dominant saltmarsh habitat within the River Barrow and River Nore SAC, where it occurs in a mosaic with other saltmarsh habitats (NPWS, 2011a). The Conservation Objectives (including supporting documentation) for the SAC lists the nearest confirmed example of this habitat type (site no. 0049) c. 4.4km downstream of the site at Killowen, Co. Wexford, on the eastern side of the Barrow-Nore estuary. (NPWS, 2011a; NPWS, 2025a). The Conservation Objectives acknowledges there may be further unsurveyed examples of this habitat within the European Site. Table 5.1 identified potential Atlantic Salt Meadows c. 740m downstream of the proposed site in salt marsh habitat at Carrickcloney (NPWS, 2011a; NPWS, 2025a). No details of this salt marsh site are included in reports for the Saltmarsh Monitoring Project 2007-2008 (McCorry & Ryle, 2009), nor in follow-up monitoring undertaken 2017 – 2018 period (Brophy *et al.*, 2019). There is therefore potential that Atlantic Salt Meadows is among the salt marsh habitats present at this site.

Potential threats arising from the project are:

a) Release of sediment to local watercourses. The open drain along the northern part of the site has connectivity to local watercourses, and though most works will be undertaken downgradient of the drain, potential loss of soil or sediment-laden runoff to this drain cannot be ruled out during the construction phase.

b) Release of chemicals (e.g. oils, fuels, cement, cementitious residues) into watercourses via the drain on-site poses a water quality risk during the construction phase.

c) While potential loss of pollutants from the development is likely to be limited, there is the possibility of contributing to deterioration of water quality in estuarine waters. Negative effects on this habitat type especially on lower parts along the tidal zone such as deterioration of habitat quality are identified on a precautionary basis.

Mitigations Necessary?

In order to protect this aquatic habitat, standard best construction practices will be employed for the duration of the construction phase in order to ensure no release of silt/sediment or chemicals to receiving waters.

Qualifying Interest	Mediterranean Salt Meadows (<i>Juncetalia maritimi</i>) [1410]
National Conservation Assessment 2025	Inadequate (Deteriorating)
Conservation Objective	To restore the favourable conservation condition of Mediterranean Salt Meadows in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:
Targets	• Habitat area stable or increasing, subject to natural processes, including erosion and succession. • No decline in habitat distribution, subject to natural processes. • Maintain or where necessary restore natural circulation of sediments and organic matter, without any physical obstructions. • Maintain natural tidal regime. • Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession. • Maintain range of saltmarsh habitat zonations including transitional zones, subject to natural processes including erosion and succession. • Maintain structural variation within sward. • Maintain more than 90% of area outside creeks vegetated. • Maintain range of subcommunities with typical species listed in Saltmarsh Monitoring Project (McCorry & Ryle, 2009). • 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 (NPWS, 2025a).

Description of QI	Mediterranean Salt Meadows are coastal habitats which occur in the upper reaches of saltmarshes, usually adjacent to the boundary with terrestrial habitats. This habitat type is relatively widespread along the Irish coastline, though not as widespread as Atlantic Salt Meadows. It is distinguished from Atlantic Salt Meadows by the presence of rushes such as sea rush (<i>Juncus maritimus</i>) and/or sharp rush (<i>Juncus acutus</i>) (NPWS, 2025b and 2025c).
Threats and Pressures	The main threats facing this habitat type in Ireland arise from changes in agricultural practises, including abandonment of management, over or under grazing or land reclamation. Other recorded pressures include recreational activities, deposition of rubbish, coastline modification and invasive alien species (NPWS, 2025b and 2025c).
Potential for Interaction with Project	A hydrological link is present between the site and downstream surface waters which are included in the SAC c. 310m downstream. The Conservation Objectives (including supporting documentation) for the SAC lists the nearest confirmed example of this habitat type (site no. 0050) as located c. 6km downstream of the proposed site at Rochestown on the west side of the Barrow-Nore estuary (NPWS, 2011a; NPWS, 2025a). The Conservation Objectives acknowledges there may be further unsurveyed examples of this habitat within the European Site. The SAC site synopsis and Conservation Objectives supporting documentation refers to an example of Mediterranean Salt Meadows as occurring in the salt marsh complex within the neighbouring townlands of Graiguenakill and Carrickcloney which is c. 740m downstream of site (NPWS, 2011a; NPWS, 2024). Potential threats arising from the project are: a) Release of sediment to local watercourses. The open drain along the northern part of the site has connectivity to local watercourses, and though most works will be undertaken downgradient of the drain, potential loss of soil or sediment-laden runoff to this drain cannot be ruled out during the construction phase. b) Release of chemicals (e.g. oils, fuels, cement, cementitious residues) into watercourses via the drain on-site poses a water quality risk during the construction phase. c) While potential loss of pollutants from the development is likely to be limited, there is the possibility of contributing to deterioration of water quality in estuarine waters. Negative effects on this habitat type such as deterioration of habitat quality are identified on a precautionary basis.
Mitigations Necessary?	In order to protect this aquatic habitat, standard best construction practices will be employed for the duration of the construction phase in order to ensure no release of silt/sediment or chemicals to receiving waters.

Qualifying Interest	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [3260]
National Conservation Assessment 2025	Inadequate (Deteriorating)
Conservation Objective	To maintain the favourable conservation condition of Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:
Targets	• No decline in habitat distribution, subject to natural processes. • Habitat area stable or increasing, subject to natural processes. • Maintain appropriate hydrological regimes. • The groundwater flow to the habitat should be permanent and sufficient to maintain tufa formation. • The substratum should be dominated by large particles and free from fine sediments. • The groundwater and surface water should have sufficient concentrations of minerals to allow deposition and persistence of tufa deposits. • The concentration of suspended solids in the water column should be sufficiently low to prevent excessive deposition of fine sediments. • The concentration of nutrients in the water column should be sufficiently low to prevent changes in species composition or habitat condition. • Typical species of the relevant habitat sub-type should be present and in good condition. • The area of active floodplain at and upstream of the habitat should be maintained (NPWS, 2025a).
Description QI	This habitat has a broad definition, ranging from upland, flashy, oligotrophic, bryophyte- and algal-dominated rivers, to tidal reaches dominated by higher plants. In Ireland, the highest riverine conservation interest is associated with lowland depositing and tidal rivers and unmodified, fast-flowing, low-nutrient rivers. A number of rare submerged and marginal species are found in the former, including Opposite leaved Pondweed (<i>Groenlandia densa</i>), starworts (e.g. <i>Callitriche truncata</i>), Triangular Club-rush (<i>Schoenoplectus triqueter</i>), Needle Spike-rush (<i>Eleocharis acicularis</i>) and mud-dwelling mosses (e.g. <i>Ephemerum</i> spp.) (NPWS, 2025b and 2025c). While there is no dedicated monitoring programme in place for this habitat type, the continued decline in streams and rivers of high ecological status nationwide suggests an ongoing decline in conservation status of this habitat (NPWS, 2025c).

Threats and Pressures

The main pressures on this habitat type in Ireland are eutrophication and other water pollution, alterations to hydrology and physical alterations to river channels (NPWS, 2025b and 2025c).

Potential for Interaction with Project

A hydrological link is present between the site and downstream surface waters which are included in the SAC c. 310m downstream.

As the full extent of this habitat in the SAC is currently unknown (NPWS, 2025a), its occurrence in downstream freshwaters or tidal waters of the SAC cannot be ruled out. Several water quality parameters (minerals, nutrients and suspended solids) are listed among attributes in the conservation objective for this habitat type (NPWS, 2025a).

Potential threats arising from the project are:

- a) Release of sediment to local watercourses. The open drain along the northern part of the site has connectivity to local watercourses, and though most works will be undertaken downgradient of the drain, potential loss of soil or sediment-laden runoff to this drain cannot be ruled out during the construction phase.
- b) Release of chemicals (e.g. oils, fuels, cement, cementitious residues) into watercourses via the drain on-site poses a risk during the construction phase.
- c) While potential loss of pollutants from the development is likely to be limited, there is the possibility of contributing to deterioration of water quality downstream in freshwaters and estuarine waters. The targets for this habitat type indicate that *'the concentration of suspended solids in the water column should be sufficiently low to prevent excessive deposition of fine sediments'* (NPWS, 2025a). An increase in suspended solids in the water quality could adversely affect the distribution or species composition of this habitat type.

Mitigations Necessary?

Yes. In order to protect this aquatic habitat, standard best construction practices will be employed for the duration of the construction phase in order to ensure no release of silt/sediment or chemicals to receiving waters.

Qualifying Interest

Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]

National Conservation Assessment 2025

Bad (Deteriorating)

Conservation Objective

To maintain the favourable conservation condition of Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:

Targets

- No decline in habitat distribution, subject to natural processes.
- Habitat area stable or increasing, subject to natural processes.

- Maintain appropriate hydrological regimes.
- In terms of vegetation structure, 30-70% of sward is between 40 and 150cm in height.
- In terms of vegetation composition, broadleaf herb component of vegetation between 40 and 90%.
- In terms of vegetation composition, at least 5 positive indicator species present.
- Negative indicator species, particularly non-native invasive species, absent or under control- NB Indian balsam (*Impatiens glandulifera*), monkeyflower (*Mimulus guttatus*), Japanese knotweed (*Fallopia japonica*) and giant hogweed (*Heracleum mantegazzianum*) (NPWS, 2025a).

Description of QI

Hydrophilous Tall-Herb Swamp communities are characterised by a high proportion of tall herb-species in hydrophilous or nitrophilous conditions. The habitat occurs in two situations - upland, typically on base-rich ledges, and lowland, along the unmanaged margins of slow-moving rivers, lakes and other wetlands. In the lowland situation, relevant to this NIS, the community type typically occurs as stands dominated by tall herbs, with a diversity of species present, fringing rivers, lakes and other wetlands, usually as a narrow strip and often seasonally inundated (NPWS, 2025b).

Threats and Pressures

Main pressures on the lowland habitat are invasive alien species, such as Himalayan balsam *Impatiens glandulifera* and giant hogweed *Heracleum mantegazzianum*, drainage and direct impacts along riverbanks and canals to maintain access for walking or fishing (NPWS, 2025b).

Potential for Interaction with Project

The distribution of this habitat within the River Barrow and River Nore SAC is unknown. It 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 (NPWS, 2025a). While this habitat type was not observed along the banks of Glenmore Stream in proximity to the proposal, its occurrence along watercourses downstream cannot be ruled out.

Potential threats arising from the project are:

- a) The import of topsoil into the proposed site could inadvertently introduce non-native invasive species such as Himalayan balsam, Japanese knotweed and giant hogweed into the proposed site. Establishment of such species on the site and adjacent SAC could act as a potential seed source for dispersal of these invasive species further downstream along the Glenmore River, with potential long term indirect effects on Hydrophilous Tall-Herb Swamp communities through change in species composition.

Mitigations Necessary?

Yes, mitigations will be required to prevent the introduction and spread of invasive non-native plants in the proposed site in order to prevent spread and dispersal to the neighbouring SAC.

Qualifying Interest	Petrifying Springs with Tufa Formation (<i>Cratoneurion</i>) [7220] (Priority Habitat)
National Conservation Assessment 2025	Inadequate (Stable)
Conservation Objective	To maintain the favourable conservation condition of Petrifying Springs with Tufa Formation (<i>Cratoneurion</i>) in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:
Targets	• Habitat area stable or increasing, subject to natural processes. • No decline in habitat distribution. • Maintain appropriate hydrological regimes. • In terms of water quality, maintain oligotrophic and calcareous conditions. • In terms of vegetation composition, maintain typical species (NPWS, 2025a).
Description of QI	Petrifying Springs are lime-rich water sources where tufa is actively deposited and where highly specialised vegetation communities of mainly mosses and some vascular plants develop. A priority habitat under the Habitats Directive, the ecological significance of Petrifying Springs is often a continuum of intergrading hydrological conditions from the spring head, through a flushed slope and into small streams (NPWS, 2025b and 2025c).
Threats and Pressures	The main threats and pressures on this habitat type in Ireland are mixed source pollution of surface and ground waters, drainage, modification of hydrological flow, land abandonment and development of roads, paths and railroads (NPWS, 2025b and 2025c).
Potential for Interaction with Project	The extent of this qualifying habitat with the SAC is currently unknown (NPWS, 2025a). A hydrological link is present between the site and downstream surface waters which are included in the SAC c. 310m downstream. In addition, the SAC is located adjacent to the proposed site eastwards and downgradient of the site to the south with potential groundwater pathways. Water quality impacts are identified on a precautionary basis. Potential threats arising from the project are: a) Release of sediment to local watercourses. The open drain along the northern part of the site has connectivity to local watercourses, and though most works will be undertaken downgradient of the drain, potential loss of soil or sediment-laden runoff to this drain cannot be ruled out during the construction phase. b) Release of chemicals (e.g. oils, fuels, cement, cementitious residues) into surface waters and groundwaters may pose a water quality risk to this qualifying habitat during the construction phase.

c) As the full extent of this qualifying habitat is unknown within the SAC, potential adverse effects on water quality are identified on a precautionary basis.

Mitigations Necessary?

Yes. In order to protect this aquatic habitat, standard best construction practices will be employed for the duration of the construction phase in order to ensure no release of silt/sediment or chemicals to receiving waters.

Qualifying Interest	Alluvial Forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0] (priority habitat)
National Conservation Assessment 2025	Bad (Deteriorating)
Conservation Objective	To restore the favourable conservation condition of Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:
Targets	• Habitat area stable or increasing, subject to natural processes. • No decline in habitat distribution. • In terms of woodland size, area stable or increasing. Where topographically possible, “large” woods at least 25ha in size and “small” woods at least 3ha in size. • Diverse woodland structure with a relatively closed canopy containing mature trees; subcanopy layer with semi-mature trees and shrubs; and well-developed herb layer. • Maintain structural diversity and extent of community types. • Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy. • Appropriate hydrological regime necessary for maintenance of alluvial vegetation. • In terms of dead wood, at least 30m³/ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter (greater than 20cm diameter in the case of alder). • No decline of veteran trees. • No decline of indicators of local distinctiveness. • Native tree cover not less than 95%. • 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>).

- Negative indicator species, particularly non-native invasive species, absent or under control (NPWS, 2025a).

Description QI

Alluvial Woodland is a priority Annex I habitat that occurs on heavy soils periodically flooded by the annual rise of river levels. There are several types of this habitat, the most common of which is riparian woodland of ash (*Fraxinus excelsior*) and alder (*Alnus glutinosa*) (NPWS, 2025b). The other principal type is the gallery forests of tall willows (*Salix* spp.) that occur alongside lowland river channels and occasionally on river islands, where the tree roots are submerged continuously. This habitat type also includes lakeside wet woodlands, alder carr and willow carr (NPWS, 2025b).

Threats and Pressures

The main pressures on this habitat type are non-native invasives, especially Himalayan balsam, overgrazing by deer, Ash dieback and hydrological pressures such as drainage modification of flow (NPWS, 2025b).

Potential for Interaction with Project

The closest known example of this habitat type is located c. 5.9km direct distance and c. 6.8km hydrological distance of the site at Fisherstown, Co. Wexford (site no. 511) (NPWS, 2025a; Perrin et al., 2008). The Conservation Objectives note there maybe further unsurveyed areas present within the SAC (NPWS, 2025a). While this habitat type was not observed along the banks of Glenmore Stream in proximity to the site, its occurrence along watercourses downstream cannot be ruled out.

Potential threats arising from the project are:

- a) The import of topsoil into the proposed site could inadvertently introduce non-native invasive species such as Himalayan balsam, Japanese knotweed and giant hogweed into the proposed site. Establishment of such species on the site and adjacent SAC would act as a potential seed source for dispersal of these invasive species further downstream along the Glenmore River, with potential long term indirect effects on Alluvial Woodland through change in species composition.

Mitigations Necessary?

Yes, mitigations will be required to prevent the introduction and spread of invasive non-native plants in the proposed site in order to prevent spread and dispersal to the neighbouring SAC.

Qualifying Interest	White-clawed Crayfish <i>Austropotamobius pallipes</i> [1092]
National Conservation Assessment 2025	Bad (Deteriorating)
Conservation Objective	To maintain the favourable conservation condition of White-Clawed Crayfish in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:
Targets	• No reduction from baseline distribution (See Map 7 in NPWS, 2025a). • Juveniles and/or females with eggs in at least 50% of positive samples.

- No alien crayfish species.
- No instances of disease.
- At least Q3-4 at all sites sampled by EPA.
- No decline in heterogeneity or habitat quality (NPWS, 2025a).

Description QI

White-Clawed Crayfish distribution in Ireland extends from the smallest streams and drains to large rivers and medium-sized lakes wherever there is sufficient lime. Crayfish need a high level of 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 weed 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 (NPWS, 2025d).

Threats and Pressures

Two major threats to White-Clawed Crayfish are the Crayfish plague and non-native crayfish as competitors, predators and carriers of the Crayfish plague. While Crayfish is tolerant of a wide range of water quality conditions, the link between its distribution and water quality decline requires further investigation (NPWS, 2025d). Crayfish are now reported absent from the Barrow and Nore Rivers since the plague arrived. The impact of Crayfish Plague on the population in Ireland has been severe and will continue and it is predicted this will be reflected in the range with more gaps appearing as populations suffer mortalities (NPWS, 2025d).

Potential for Interaction with Project

A hydrological link is present between the site and downstream surface waters which are included in the SAC c. 310m downstream.

According to the Conservation Objectives for the SAC, White-Clawed Crayfish was present almost throughout this SAC with records indicating they occurred as far downstream as Thomastown on the River Nore and Graiguenamanagh on the River Barrow (NPWS, 2025a), however, the species is now reported as absent from the Barrow and Nore since the crayfish plague arrived (NPWS, 2025d).

While tidally influenced conditions such as the lower reaches of the Glenmore Stream are unsuitable for White-clawed Crayfish, potential habitat exists in the intervening stretch below the discharge point of stormwater drainage network. There is a low likelihood of impact on this species given no record of the species within this river system, and the short stretch of potentially suitable habitat upstream of tidal waters. However, absence of records from a system can also reflect low survey or monitoring effort. The majority of historical records for White-Clawed Crayfish originate from EPA water quality monitoring data and given that this network of small tributaries is not included within the EPA monitoring network,

the potential for Crayfish to occur within the Glenmore Stream and associated tributaries cannot be definitively ruled. Potential impacts on this species are therefore identified on a precautionary basis.

Potential threats arising from the project are:

a) Release of sediment to local watercourses. The open drain along the northern part of the site has connectivity to local watercourses, and though most works will be undertaken downgradient of the drain, potential loss of soil or sediment-laden runoff to this drain cannot be ruled out during the construction phase.

b) Release of chemicals (e.g. oils, fuels, cement, cementitious residues) into watercourses via the drain on-site poses a water quality risk during the construction phase.

c) While potential loss of pollutants from the development is likely to be limited, there is the possibility of contributing to deterioration of water quality downstream in freshwaters. The Conservation Objectives specify a target of at least Q3-4 at all sites sampled by the EPA (NPWS, 2025a), indicating this qualifying species sensitivity to water quality deterioration.

Mitigations Necessary?

In order to protect this aquatic species, standard best construction practices will be employed for the duration of the construction phase in order to ensure no release of silt/sediment or chemicals to receiving waters.

Qualifying Interest	Sea Lamprey <i>Petromyzon marinus</i> [1095]
National Conservation Assessment 2025	Bad (Deteriorating)
Conservation Objective	To restore the favourable conservation condition of Sea Lamprey in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:
Targets	• Greater than 75% of main stem length of rivers accessible from estuary. • At least three age/size groups present. • Juvenile density at least 1/m² in fine sediment. • No decline in extent and distribution of spawning beds. • More than 50% of sample sites positive for availability of juvenile habitat (NPWS, 2025a).
Description of QI	The lifecycle of Sea Lamprey has both a marine and freshwater phase. Adult Sea Lamprey live on host fish or marine mammals at sea and when large enough, migrate to freshwaters in spring to excavate redds or spawning beds in gravels in larger rivers. Upriver migration occurs at a time of generally falling water levels and substantial spawning activity has been recorded in gravelled areas downstream of large weirs in the major Irish SAC rivers. Sea Lamprey is listed in the most recent Irish Red Data Book as Near Threatened (King <i>et al.</i> , 2011).

Threats and Pressures	The main pressures identified on this species include infrastructure associated with hydropower, marine and shellfish harvesting, old barriers, diffuse and point source pollution from a variety of activities, land drainage, shipping lanes and climate change (NPWS, 2025d).
Potential for Interaction with Project	A hydrological link is present between the site and downstream surface waters which are included in the SAC c. 310m downstream. A survey of the main stems and tributaries of the River Barrow catchment in 2004 included one site along Glenmore Stream. While Brook or River Lamprey juveniles were recorded, Sea Lamprey were not recorded in this tidal tributary during that survey (King, 2006). It is uncertain therefore whether Glenmore Stream presents suitable spawning and/or juvenile habitat for Sea Lamprey. Given that the Glenmore Stream discharges to the River Barrow c. 2km downstream of the proposed site, the potential for the proposed development to interact with this qualifying species is identified on a precautionary basis in view of potential for adverse effects of reduced water quality on migrating adults. Potential threats arising from the project are: a) Release of sediment to local watercourses. The open drain along the northern part of the site has connectivity to local watercourses, and though most works will be undertaken downgradient of the drain, potential loss of soil or sediment-laden runoff to this drain cannot be ruled out during the construction phase. b) Release of chemicals (e.g. oils, fuels, cement, cementitious residues) into watercourses via the drain on-site poses a water quality risk during the construction phase. c) While potential loss of pollutants from the development is likely to be limited, there is the possibility of contributing to deterioration of water quality downstream in freshwaters and estuarine waters with potential to adversely affect migrating adults and lamprey spawning beds.
Mitigations Necessary?	In order to protect this aquatic species, standard best construction practices will be employed for the duration of the construction phase in order to ensure no release of silt/sediment or chemicals to receiving waters.
Qualifying Interest	Brook Lamprey <i>Lampetra planeri</i> [1096]
National Conservation Assessment 2025	Favourable (Stable)
Conservation Objective	To restore the favourable conservation condition of Brook Lamprey in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:

Targets

- Access to all watercourses down to first order streams.
- At least three age/size groups of Brook/River Lamprey present.
- Mean catchment juvenile density of Brook/River Lamprey at least 2/m².
- No decline in extent and distribution of spawning beds.
- More than 50% of sample sites positive for availability of juvenile habitat (NPWS, 2025a).

Description QI

Unlike the other two lamprey species, Brook Lamprey is non-parasitic and non-migratory as an adult. It lives its entire life in freshwater. Adults excavate shallow nests and spawn in Spring in relatively small-sized gravels in areas of reduced flow. The hatched larvae drift or swim downstream to areas of the riverbed or margins with fine silt deposits (NPWS, 2025d).

Of relevance to the project is that Brook Lamprey are vulnerable to declines in water quality caused by inputs of nutrients, sediment and pollutants, with the particular effect varying depending on the life stage (Igoe et al., 2004). Eggs within spawning redds are vulnerable to reductions in oxygen levels caused by siltation, which reduces survival at this early stage in the lifecycle (Igoe et al., 2004). In contrast, the larval stage of Brook Lamprey is dependent on the presence of areas of fine silt in which to burrow (Kelly and King, 2001).

Threats and Pressures

A variety of small-scale threats have been identified on Brook Lamprey, including mixed-source pollution, clear-felling of trees/forestry, land drainage, hydropower and barriers. These usually act in combination and are deemed to have a low influence (NPWS, 2025d).

Potential for Interaction with Project

A hydrological link is present between the site and downstream surface waters which are included in the SAC c. 310m downstream.

Brook or River Lamprey juveniles (not distinguishable during field survey) were recorded during a survey of the Barrow catchment undertaken in 2004, which included one site along Glenmore Stream. This site, located just downstream of proposed site, yielded a large number of lamprey ammocoetes of at least three age classes (King, 2006).

Potential threats arising from the project are:

- a) Release of sediment to local watercourses. The open drain along the northern part of the site has connectivity to local watercourses, and though most works will be undertaken downgradient of the drain, potential loss of soil or sediment-laden runoff to this drain cannot be ruled out during the construction phase.
- b) Release of chemicals (e.g. oils, fuels, cement, cementitious residues) into watercourses via the drain on-site poses a water quality risk during the construction phase.

c) While potential loss of pollutants from the development is likely to be limited, there is the possibility of contributing to deterioration of water quality downstream in freshwaters with potential to adversely affect adult lamprey, larvae, eggs and spawning beds.

Mitigations Necessary?

In order to protect this aquatic species, standard best construction practices will be employed for the duration of the construction phase in order to ensure no release of silt/sediment or chemicals to receiving waters.

Qualifying Interest	River Lamprey <i>Lampetra fluviatilis</i> [1099]
National Conservation Assessment 2025	Inadequate (Unknown)
Conservation Objective	To restore the favourable conservation condition of River Lamprey in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:
Targets	• Greater than 75% of main stem and major tributaries down to second order accessible from estuary. • At least three age/size groups of River/Brook Lamprey present. • Mean catchment juvenile density of River/Brook Lamprey at least 2/m². • No decline in extent and distribution of spawning beds. • More than 50% of sample sites positive for availability of juvenile habitat (NPWS, 2025a).
Description of QI	River Lamprey are parasitic as adults, attaching to larger fish within coastal waters and breeding in freshwater rivers and streams. Adults spawn in Spring, excavating shallow nests in river sections with fine gravels and small stones. The hatched larvae drift or swim downstream to areas of the riverbed or margins with fine silt deposits (NPWS, 2025d). Accurate reporting for this species is problematic due to the inability to distinguish between juvenile Brook and River Lamprey, and the difficulties in sampling for adult River Lamprey (NPWS, 2025d). Other survey limitations include frequently high river levels during the optimum survey period for redds between March and May, and the ephemeral nature of redds. Given their low detectability, records for this species are low, however this does not imply a limited or restricted distribution as River Lamprey is more than likely present in many more catchments than currently observed (NPWS, 2025d).
Threats and Pressures	The main pressures on this species include barriers to migration, increases in river discharge due to several factors including climate change, nutrient pollution due to anthropogenic activities, and impacts at sea such as commercial fishing that may impact on prey or host species (NPWS, 2025b).
Potential for Interaction with Project	A hydrological link is present between the site and downstream surface waters which are included in the SAC c. 310m downstream.

	Brook or River Lamprey juveniles (not distinguishable during field survey) were recorded during a survey of the Barrow catchment undertaken in 2004, which included one site along Glenmore Stream. This site, located just downstream of proposed site, yielded a large number of lamprey ammocoetes of at least three age classes (King, 2006). Potential threats arising from the project are: a) Release of sediment to local watercourses. The open drain along the northern part of the site has connectivity to local watercourses, and though most works will be undertaken downgradient of the drain, potential loss of soil or sediment-laden runoff to this drain cannot be ruled out during the construction phase. b) Release of chemicals (e.g. oils, fuels, cement, cementitious residues) into watercourses via the drain on-site poses a water quality risk during the construction phase. c) While potential loss of pollutants from the development is likely to be limited, there is the possibility of contributing to deterioration of water quality downstream in freshwaters with potential to adversely affect adult lamprey, larvae, eggs and spawning beds.
Mitigations Necessary?	In order to protect this aquatic species, standard best construction practices will be employed for the duration of the construction phase in order to ensure no release of silt/sediment or chemicals to receiving waters.
Qualifying Interest	Twaite Shad <i>Alosa fallax fallax</i> [1103]
National Conservation Assessment 2025	Bad (Deteriorating)
Conservation Objective	To restore the favourable conservation condition of Twaite Shad in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:
Targets	• Greater than 75% of main stem length of rivers accessible from estuary. • More than one age class present. • No decline in extent and distribution of spawning beds. • Oxygen levels no lower than 5mg/l. • Maintain stable gravel substrate with very little fine material, free of filamentous algal (macroalgae) growth and macrophyte (rooted higher plants) growth (NPWS, 2025a).
Description QI	Twaite Shad is a diadromous fish, spending most of its life in estuaries and coastal waters but returning upriver to spawn in late May/early June to gravelled areas of main-stem SAC rivers with a moderate gradient and a diversity of depth-

velocity conditions. In Ireland, adults migrate into the upper tidal freshwater areas of the main designated rivers where they spawn. There are four spawning populations nationwide which occur in the Barrow, Nore, Suir and Munster Blackwater rivers, all of which are SACs for this species (NPWS, 2025b). Twaite Shad were classified as 'Vulnerable' in the most recent Red List due to its very restricted distribution (King *et al.*, 2011).

Threats and Pressures

The main pressures identified on this species include dam construction, pollution, overexploitation and habitat destruction (NPWS, 2025b). Numbers of Twaite Shad have declined across its range since the previous reporting cycle. Reduced water quality can impact both larval and adult stages and diffuse nutrient loss and sedimentation to surface waters due to agriculture and urban wastewater have been identified as the major pressures (NPWS, 2025d).

Potential for Interaction with Project

A hydrological link is present between the site and downstream surface waters which are included in the SAC c. 310m downstream.

Twaite Shad generally spawn in main stem rivers and are known to spawn in the upper tidal limit of the River Barrow downstream of St Mullins, Co. Carlow (Doherty *et al.*, 2004). An egg survey undertaken on the River Nore in 2017 confirmed the presence of Twaite Shad eggs at the top of tidal influence downstream of Inistioge, Co. Kilkenny, indicating a spawning ground for the species that year (Gallagher *et al.*, 2019).

Given the downstream hydrological link between the proposed site and the Barrow-Nore estuary of c. 2km, the potential for the proposed development to interact with this qualifying species is identified on a precautionary basis in view of potential for adverse effects of reduced water quality on migrating adults Shad in the estuary.

Potential threats arising from the project are:

- a) Release of sediment to local watercourses. The open drain along the northern part of the site has connectivity to local watercourses, and though most works will be undertaken downgradient of the drain, potential loss of soil or sediment-laden runoff to this drain cannot be ruled out during the construction phase.
- b) Release of chemicals (e.g. oils, fuels, cement, cementitious residues) into watercourses via the drain on-site poses a risk during the construction phase.
- c) While potential loss of pollutants from the development is likely to be limited, there is the possibility of contributing to deterioration of water quality downstream in the Barrow-Nore estuary with potential to adversely affect migrating adults.

Mitigations Necessary?

In order to protect this aquatic species, standard best construction practices will be employed for the duration of the construction phase in order to ensure no release of silt/sediment or chemicals to receiving waters.

Qualifying Interest	Atlantic Salmon <i>Salmo salar</i> [1106]
National Conservation Assessment 2025	Bad (Deteriorating)
Conservation Objective	To restore the favourable conservation condition of Atlantic Salmon in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:
Targets	• 100% of river channels down to second order accessible from estuary. • Conservation limit (CL) for each system consistently exceeded. • Maintain or exceed 0+ salmon fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling. • No significant decline in out-migrating smolt abundance. • No decline in number and distribution of spawning redds due to anthropogenic causes. • At least Q4 at all sites sampled by EPA (NPWS, 2025a).
Description of QI	An anadromous species, Salmon juveniles usually spend two years in rivers, before going to sea as smolts. The majority of fish spend one winter at sea and then return to their natal river as grilse. Spawning occurs in freshwater in channels of suitable gradient with cobble/gravel beds in the November - March period (King <i>et al.</i> , 2011). Marine survival of Salmon is identified as a key determinant of trends of population size in natal rivers in Ireland and internationally. Within river systems, variation in stock abundance is influenced by a variety of factors, especially alterations in physical habitat, water quality, environmental factors, predation, and angling and commercial fisheries exploitation. While habitat for the species has been assessed as “Good” because there is considered to be sufficient habitat in Ireland as a whole to support a viable salmon population, water quality in Irish freshwaters continues to be a concern and Ireland continues to face major challenges to achieve water quality targets set for 2021 and 2027 (NPWS, 2025d).
Threats and Pressures	A substantial number of habitat threats and pressures impact Salmon in freshwater, including aquaculture, declining quality of water and habitat, and physical barriers to migration, including from hydroelectric scheme. Although the protection for this species is in freshwater, there are also marine pressures that are influencing the population viability (NPWS, 2025b).
Potential for Interaction with Project	A hydrological link is present between the site and downstream surface waters which are included in the SAC c. 310m downstream.

Information on the occurrence of Salmon in the downstream Glenmore Stream and tributaries was not in available literature or databases. A 2021 fish survey undertaken by Inland Fisheries Ireland of the Nore catchment as part of the national IFI fish monitoring programme confirmed Salmon throughout the Nore main channel and larger tributaries, with high salmon density on the Coolcullen River (Nore/Dinin catchment) (Corcoran *et al.*, 2022).

Given that the Glenmore Stream discharges to the Barrow-Nore estuary c. 2km downstream of the proposed site, the potential for the proposed development to interact with this qualifying species is identified on a precautionary basis in view of potential for adverse effects of reduced water quality on migrating adults and spawning beds.

Potential threats arising from the project are:

a) Release of sediment to local watercourses. The open drain along the northern part of the site has connectivity to local watercourses, and though most works will be undertaken downgradient of the drain, potential loss of soil or sediment-laden runoff to this drain cannot be ruled out during the construction phase.

b) Release of chemicals (e.g. oils, fuels, cement, cementitious residues) into watercourses via the drain on-site poses a water quality risk during the construction phase.

c) While potential loss of pollutants from the development is likely to be limited, there is the possibility of contributing to deterioration of water quality downstream in the Barrow-Nore estuary with potential to adversely affect migrating adults. In addition, the possibility of contributing to sedimentation of potential salmonid habitat in the Glenmore River is identified on a precautionary basis.

Mitigations Necessary?

In order to protect this aquatic species, standard best construction practices will be employed for the duration of the construction phase in order to ensure no release of silt/sediment or chemicals to receiving waters.

Qualifying Interest	Otter <i>Lutra lutra</i> [1355]
National Conservation Assessment 2025	Favourable (Stable)
Conservation Objective	To restore the favourable conservation condition of Otter in the River Barrow and River Nore SAC (NPWS, 2025a), which is defined by the following list of attributes and targets:
Targets	• No significant decline in distribution. • No significant decline of extent of terrestrial habitat. • No significant decline of extent of marine habitat.

- No significant decline of extent of freshwater (river) habitat.
- No significant decline of extent of freshwater (lake) habitat.
- No significant decline of couching sites and holts
- No significant decline of fish biomass available (NPWS, 2025a).

Description QI

Ireland continues to remain a stronghold for Otter. The first national survey almost 25 years ago found signs of Otter throughout the country. The most recent survey undertaken (2023/24) found that while there have been some declines since then, the population has stabilised overall and that the species remains widespread (Reid *et al.*, 2025). Otters occur in a variety of aquatic habitats including rivers, streams, canals, lakes and along the coast, where fish and other prey are abundant, and where bank-side habitat offers plenty of cover (NPWS, 2025b). Although Otters spend much of their time on land, they forage almost exclusively in water (NPWS, 2025d). Rarely found far from water, they normally occupy linear home ranges in rivers and streams. In Ireland, the territory of female Otters along rivers is an average of 7.5km in length, whilst that of male Otters is usually c. 13.2km in length (Reid *et al.*, 2013).

Threats and Pressures

The three main threats to Otter populations in Ireland are habitat destruction (removal of riparian vegetation/ bank clearance works), water pollution especially caused by agricultural and road kills (NPWS, 2025d).

Potential for Interaction with Project

A review of the NBDC database confirmed Otters were present along Glenmore Stream in 2005 when Otter footprints were recorded on a muddy bank east of the N25. The survey undertaken for this NIS searched all watercourses and waterbodies with potential Otter habitat (foraging, commuting and resting) within 150m of the proposed site as per NRA guidelines (NRA, 2008) (See Otter Survey Map in Appendix 2). This survey confirmed Otter footprints just north of the bridge along Stream 2 as shown on Figure 4. No other confirmed or potential signs including holts and couches (e.g. holes, rock crevices) were found within the study area.

The area in closest proximity to the site (c. 35m distance) with potential to host resting habitat is an area of scrub encompassing a remnant channel of Glenmore Stream, and bankside tree cover along Glenmore Stream itself. A narrow broadleaved woodland strip along the eastern bank and upslope of the millrace may also provide shelter for denning sites. While bankside cover and scrub is present along Stream 2 and Glenmore Stream east of the N25, distance to this habitat and existing background noise levels given proximity to a major road network, make it unlikely the proposal would have the potential to cause disturbance to potential breeding places east of the N25.

A hydrological link is present between the site and downstream surface waters which are included in the SAC c. 310m downstream. Water quality impacts are identified on a precautionary basis. No direct impacts on Otter or their habitats will occur as a result of the proposal. In terms of indirect impacts, NRA *Guidelines for The Treatment of Otters prior to the*

Construction of National Road Schemes identify that mitigations are necessary to reduce disturbance on active non-breeding otter holts or couches within 20m distance and on active breeding otter holts within 150m distance (NRA, 2008). As the nearest potential habitat to host resting places is c. 35m distance from the proposed site, disturbance impacts on non-breeding otter holts or couches are not identified.

Given the minimum 35m separation distance between the proposed works and the nearest riparian corridor, together with the presence of bankside trees, scrub, and other screening vegetation, it is unlikely that construction activities will impact foraging or commuting otters. These features provide both visual and acoustic buffering, reducing the likelihood that otters using the watercourse will detect or respond to construction-related disturbance. At most, temporary behavioural disturbance may occur during the construction phase, potentially resulting in short-term displacement or minor modification of commuting or foraging behaviour. Such effects would be localised, reversible, and limited to the duration of works, with no long-term reduction in habitat availability, no loss of resting places, and no barrier to movement along the riparian corridor.

Potential threats arising from the project are:

- a) No habitat suitable for Otters occurs within the proposed site. There will be no alteration of watercourses, or disturbance of bankside vegetation as part of this project. No loss of Otter habitats will arise as a result of the proposal.
- a) Release of sediment or chemicals (e.g. oils, fuels, cement, cementitious residues) to local watercourses via the drain on-site poses a water quality risk during the construction phase. The open drain along the northern part of the site has connectivity to local watercourses, and though most works will be undertaken downgradient of the drain, potential loss of soil, sediment-laden runoff or chemicals to this drain cannot be ruled out during the construction phase, with potential for negative impacts on water quality of downstream waters and adverse effects on the availability of prey for Otter.
- c) No existing holts or couches were identified within 150m of the proposed site. However, potential Otter habitat exists in the form of bankside scrub within c. 35m of the proposed site southwards, and broadleaved woodland c. 55m distance adjacent to the millrace. Direct disturbance of Otter or their breeding places may occur should a new holt for breeding purposes be established prior to construction.

Mitigations Necessary?

In order to protect this aquatic species and its fish prey, standard best construction practices will be employed for the duration of the construction phase in order to ensure no release of silt/sediment or chemicals to receiving waters. In addition, a pre-works otter survey will be carried out to inform any further measures required to protect otters and their resting places.

5.2 In-Combination Effects

In accordance with the EC guidance document on conducting Appropriate Assessment (EC, 2021), other projects or plans in the area must be considered in combination with the proposal to determine the potential for having any significant in-combination effects on the Natura 2000 sites within the Zone of Influence of the project.

Potential effects of the project alone on the River Barrow and River Nore SAC have been identified as indirect effects on water quality, potential seed source of invasive species and potential disturbance effects on the qualifying species Otter in neighbouring watercourses.

Plans considered include:

- Kilkenny County Development Plan (2021 - 2027); and
- River Basin Management Plan (2022 - 2027)

Kilkenny County Development Plan sets out the Council's policies and objectives for the proper planning and sustainable development of the County, while the River Basin Management Plan sets out the measures that are necessary to protect and restore water quality in Ireland. Each of these plans details a range of environmental and natural heritage objectives and policies to safeguard the environment and Natura 2000 sites.

South East Greenway which is granted planning will be a walking and cycling route from New Ross to Waterford City. Phase 1 of the greenway, from New Ross (Rosbercon carpark) to Ballyverneen, Glenmore, is complete and operational with Ballyverneen greenway carpark located c. 480m northeast of the proposed site. The planned greenway when complete, will continue to Waterford city and will flank the northern and eastern boundaries of the proposed site (www.southeastgreenway.net).

Kilkenny County Council planning website was consulted to identify granted or proposed developments within 1km of the proposed site within the last five years. The identified projects are generally small-scale, mainly residential in nature, and are as follows:

- 22215: Permission for alterations to existing dwelling including one-storey extension.
- 22564: Retention permission for domestic garage.
- 2360243: Permission for agricultural storage building with concrete aprons.
- 2360290: Retention permission for alterations and extensions to dwelling & change of use of garage to habitable space. Permission for new wastewater treatment system & polishing filter.
- 2460346: Retention permission for roof and window alterations to existing detached house.
- 2660005: Permission for new dwelling house & site entrance.

It is not foreseen that any of the projects or plans discussed above will result in significant in-combination impacts on the River Barrow and River Nore SAC in combination with the proposal due to their small scales and absence of connectivity with the SAC.

6 MITIGATION MEASURES

6.1 Protection of Surface and Ground Waters

The following mitigations will prevent indirect effects on the structure and function of the River Barrow and River Nore SAC and the following water-dependent qualifying interests:

Estuaries [1130]	White-Clawed Crayfish <i>Austropotamobius pallipes</i> [1092]
Tidal Mudflats and Sandflats [1140]	
<i>Salicornia</i> Mud [1310]	Sea Lamprey <i>Petromyzon marinus</i> [1095]
Atlantic Salt Meadows [1330]	Brook Lamprey <i>Lampetra planeri</i> [1096]
Mediterranean Salt Meadows [1410]	River Lamprey <i>Lampetra fluviatilis</i> [1099]
Vegetation of Flowing Waters [3260]	Twaite Shad <i>Alosa fallax fallax</i> [1103]
Petrifying Springs [7220]	Atlantic Salmon <i>Salmo salar</i> [1106]
	Otter <i>Lutra lutra</i> [1355]

Buffer Zone of Drainage Ditch

- A permanent buffer zone of minimum 2m width will be established along the southern edge of the open drain on site. This buffer zone will be designated and fenced for the duration of development works before site clearance and development works commence on site and until landscaping works are completed. The buffer zone will remain intact throughout all phases of development. Vehicles and construction personnel will be precluded from entering this buffer zone during all phases of the development.
- No stockpiling of soils or any materials will take place within this buffer zone or in the vicinity of fencing.
- A silt fence such as Terrastop™ Premium (<https://ssienviromental.ie/product/silt-fence/>) will be installed on the boundary of the buffer zone prior to all site clearance and development works in order to control suspended solids emissions from the development footprint from entering buffered area.
- A silt trap will be in place within the drain before outfall pipe prior to any clearance works take place in order to prevent any suspended solids or other materials continuing further downstream. This will comprise a silt mat (Sedimat™) or silt fence (e.g. Terrastop™ Premium) correctly installed.
- Silt fences and traps will be monitored and maintained weekly.

Management of Soils and Sediment-laden Runoff

- A temporary buffer zone 5m distance of the River Barrow and River Nore SAC eastwards will be fenced prior to any site clearance works and will remain for the duration of all construction phases.
- Site clearance and earthworks will be delayed until shortly before development begins to reduce the window for generation of silt-laden runoff.
- All temporary stockpiles of soils, sands and gravels will be sited outside of and away from the fenced buffer zones.

Concrete

- Concrete will be required to develop footpaths. The concrete will be poured within a completely sealed formed area away from drainage ditch. All concrete will be supplied ready-mixed by licensed suppliers.
- There will be no on-site batching of concrete.
- Chutes and drums of concrete trucks will return to suppliers depots to be washed out.
- Concrete pours will not be undertaken during heavy rainfall.

Fuels and Oils

- Fuels, lubricants and hydraulic fluids for equipment used on the site will be carefully handled to avoid spillage, properly secured against unauthorised access, and stored in bunded compounds away from drains or potential water features.
- Bunding should be to a volume not less than the following: 110% of the capacity of the largest tank or drum within the bunded area, or 25% of the total volume of substance that could be stored within the bunded area.
- Re-fuelling of plant and equipment will only take place within designated suitable areas.
- All plant will be equipped with drip trays. Spill-kits will be available in the event of any accidental spills of fuels, oils or other contaminants.
- The temporary site compound will be located at least 25m from any drains or other water features.

6.2 Control of Invasive Species

The following mitigations will prevent indirect effects on the structure and function of the River Barrow and River Nore SAC and the following qualifying interests:

Hydrophilous Tall-Herb Swamp [6430]

Alluvial Woodland [91E0]

Soil / Aggregate Importation

- Where soils are required for any aspect of the development, clean soil will be imported from areas free of invasive non-native plant species such as Japanese knotweed, Himalayan balsam, and giant hogweed as it is an offence to plant, disperse or allow dispersal of these non-native plants under the *European Communities (Birds and Natural Habitats) Regulations 2011* (as amended).

6.3 Wildlife Disturbance

The following mitigations will prevent direct effects on the structure and function of the River Barrow and River Nore SAC and the following qualifying interests:

Otter *Lutra lutra* [1355]

Otter Survey

- A pre-works otter survey will be undertaken within three months prior to the commencement of construction for all waterbodies and associated habitats within 150m distance of the proposed works area.
- If a breeding holt is identified within 150m of the proposed works area, the NPWS will be consulted immediately to determine the appropriate course of action which may include agreeing timing restrictions to avoid disturbance during the breeding period; confirming whether a derogation licence is required under the Wildlife Acts; or other recommended measures. No works will proceed within the 150m zone until NPWS has provided guidance and any required derogation procedures have been completed.

7 RESIDUAL IMPACTS & CONCLUSIONS

This Natura Impact Statement has been undertaken to evaluate the potential impacts of the proposed bus stop at Glenmore, Co. Kilkenny, with regard to the effects upon the conservation objectives and qualifying interests (including the habitats and species) of the River Barrow and River Nore SAC (sitecode: 002162).

It is considered that following mitigation, the proposed project does not have the potential to significantly affect the conservation objectives of this European site, either alone, or in combination with other projects or plans, and the integrity of this site will not be adversely impacted. No residual effects will occur on the Natura 2000 network.

Signed:



Lisa Dowling MCIEEM

Ecological Consultant

Date: 24th August 2026

8 BIBLIOGRAPHY

Brophy, J.T., Perrin, P.M., Penk, M.R., Devaney, F.M. and K. J. Leyden. 2019. *Saltmarsh Monitoring Project 2017-2018*. Irish Wildlife Manuals, No. 108. National Parks and Wildlife Service, Dept. of Culture, Heritage and the Gaeltacht, Ireland.

Corcoran, W., Matson, R., McLoone, P., Bateman, A., Cierpial, D., Donovan, R., Duffy, P., Gavin, A., Gordon, P., McCarthy, E., Robson, S., Wightman, G., Roche, W. and F.L. Kelly. 2022. *Sampling Fish for the Water Framework Directive - Summary Report 2021*. National Research Survey Programme, Inland Fisheries Ireland, 3044 Lake Drive, Citywest Business Campus, Dublin 24.

DEHLG (Dept. of Environment, Heritage & Local Government). 2010. *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities*. February 2010.

Doherty, D., O'Maoiléidigh, N. and T. K. McCarthy. 2004. *The Biology, Ecology and Future Conservation of Twaite Shad (*Alosa fallax* Lacépède), Allis Shad (*Alosa alosa* L.) and Killarney Shad (*Alosa fallax killarnensis* Tate Regan) in Ireland*. Biology and Environment: Proceedings of the Royal Irish Academy. Vol. 104B, No. 3, Threatened Irish Freshwater Fishes (Dec., 2004), pp. 93-102.

E.C. (European Commission). 2021. *Assessment of Plans and Projects in relation to Natura 2000 Sites – Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (2021/C 437/01)*. Official Journal of the European Union C 437/1.

Fossitt, J. 2000. *A Guide to Habitats in Ireland*. The Heritage Council.

Gallagher, T., O'Gorman, N.M., Rooney, S.M., Coghlan, B., and J.J. King. 2019. *National Programme: Habitats Directive and Red Data Book Species Summary Report 2017*. Inland Fisheries Ireland, 3044 Lake Drive, Citywest, Dublin 24, Ireland.

GSI (Geological Survey of Ireland). 2026. Bedrock Geology of Ireland, at a scale of 1:100,000. Accessed 27/02/2026.

<https://gsi.geodata.gov.ie/portal/apps/webappviewer/index.html?id=f1b130022e7146a7b76e1010c7efb2a9>.

Igoe, F., Quigley, D.T.G., Marnell, F., Meskell, E., O'Connor, W. and C. Byrne. 2004. *The Sea Lamprey Petromyzon marinus (L.), River Lamprey Lampetra fluviatilis (L.) and Brook Lamprey Lampetra planeri (Bloch) in Ireland: General Biology, Ecology, Distribution and Status with Recommendations for Conservation*. Biology and Environment: Proceedings of the Royal Irish Academy, 104B: 43-56.

Kelly, F. and J. J. King. 2001. *A review of the ecology and distribution of three lamprey species, Lampetra fluviatilis (L.), Lampetra planeri (Bloch) and Petromyzon marinus (L.): a context for conservation and biodiversity considerations in Ireland*. Biology and Environment: Proceedings of the Royal Irish Academy, 101B: 165-185.

King, J. J. 2006. *The Status and Distribution of Lamprey in the River Barrow SAC*. Irish Wildlife Manuals. No. 21. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.

King, J.L., Marnell, F., Kingston, N., Rosell, R., Boylan, P., Caffrey, J.M., FitzPatrick, Ú., Gargan, P.G., Kelly, F.L., O'Grady, M.F., Poole, R., Roche, W.K. and D. Cassidy. 2011. *Ireland Red List No. 5: Amphibians, Reptiles*

& *Freshwater Fish*. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.

McCorry, M. and T. Ryle. 2009. *Saltmarsh Monitoring Project 2007-2008: Final Report*. Volume 1. A Report for Research Branch, National Parks and Wildlife Service. Dept. Environment, Heritage and Local Government.

National Biodiversity Data Centre (NBDC). Maps and data on species and habitats. Available at: www.biodiversityireland.ie

NPWS (National Parks & Wildlife Service). 2011a. *River Barrow and River Nore SAC (site code: 2162) Conservation objectives. Supporting document - coastal habitats*. Version 1. March 2011. National Parks and Wildlife Service, Dept. of Environment, Heritage and Local Government.

NPWS (National Parks & Wildlife Service). 2011b. *River Barrow and River Nore SAC (site code: 2162) Conservation objectives. Supporting document – marine habitats*. Version 1. April 2011. National Parks and Wildlife Service, Dept. of Environment, Heritage and Local Government.

NPWS (National Parks & Wildlife Service). 2024. Site Synopsis: *River Barrow and River Nore SAC (site code: 2162)*. Dept. of Housing, Local Government and Heritage. Version date: 03.04.2024. 002162_rev24.docx.

NPWS (National Parks & Wildlife Service). 2025a. *Conservation Objectives: River Barrow and River Nore SAC 002162*. Version 2. National Parks and Wildlife Service, Dept. of Housing, Local Government and Heritage.

NPWS (National Parks & Wildlife Service). 2025b. *The Status of EU Protected Habitats and Species in Ireland*. Volume 1: Summary Overview. Unpublished NPWS report. Edited by: Domhnall Finch, Aoife Delaney, Fionnuala O’Neill and Deirdre Lynn.

NPWS (National Parks & Wildlife Service). 2025c. *The Status of EU Protected Habitats and Species in Ireland*. Volume 2: Habitat Assessments. Unpublished NPWS report. Edited by: Domhnall Finch, Aoife Delaney, Fionnuala O’Neill and Deirdre Lynn.

NPWS (National Parks & Wildlife Service). 2025d. *The Status of EU Protected Habitats and Species in Ireland*. Volume 3: Species Assessments. Unpublished NPWS report. Edited by: Domhnall Finch, Aoife Delaney, Fionnuala O’Neill and Deirdre Lynn.

NRA (National Roads Authority). 2008. *Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes. Environmental Series on Construction Impacts*. National Roads Authority. Dated 24/07/2008.

OPR (Office of the Planning Regulator). 2021. *Appropriate Assessment Screening for Development Management*. OPR Practice Note PN01. March 2021.

Perrin, P., Martin, J., Barron, S., O’Neill, F., McNutt, K. and A. Delaney. 2008. *National Survey of Native Woodlands 2003-2008. Volume 1: Main Report*. Unpublished Report to NPWS.

Reid, N., Hayden, B., Lundy, M.G., Pietravalle, S., McDonald, R.A. and W.I. Montgomery. 2013. *National Otter Survey of Ireland 2010/12*. Irish Wildlife Manuals, No. 76. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.

Reid, N., Dingerkus, K., Stone, R., Colhoun, K., Maddox, L. and F. Marnell. 2025. *Otter Survey of Ireland 2023-24*. Irish Wildlife Manuals, No. 161. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.

Scallan, L., Pfeiffer, N. and E. Hewitt. 2020. *The monitoring and assessment of six EU Habitats Directive Annex I Marine Habitats*. Irish Wildlife Manuals, No. 118. National Parks and Wildlife Service, Dept. of Culture, Heritage and the Gaeltacht, Ireland.

Smith, G.F., O'Donoghue, P., O'Hara, K. and E. Delaney. 2011. *Best Practice Guidance for Habitat Survey and Mapping*. The Heritage Council.

Teagasc. 2026. Irish Soil Information System. <http://gis.teagasc.ie/soils/index.php>. The project was co-funded by Teagasc and the Environmental Protection Agency (EPA) Science, Technology and Research & Innovation for the Environment (STRIVE) programme. Download date: 27/02/2026.

WFD (Water Framework Directive). 2026. WFD Cycle 2: Catchment Nore (Subcatchment Nore_SC_140). Generated on: 18/03/2026. Code 15_18.

Council Directive 79/409/EEC of 2 April 1979 on the Conservation of Wild Birds (Birds Directive).

Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive).

Council Directive 2000/60/EC of 23 October 2000 establishing a framework for Community Action in the Field of Water Policy (Water Framework Directive: WFD).

S.I. No. 296 of 2009 - The European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009.

S.I. No. 477 of 2011. European Communities (Birds and Natural Habitats) Regulations 2011.

APPENDIX 1
GENERAL LAYOUT AND SECTIONS
DRAINAGE GENERAL LAYOUT AND DETAILS

APPENDIX 2
OTTER SURVEY MAP AND RESULTS

The extent of the otter survey is shown on the map below.

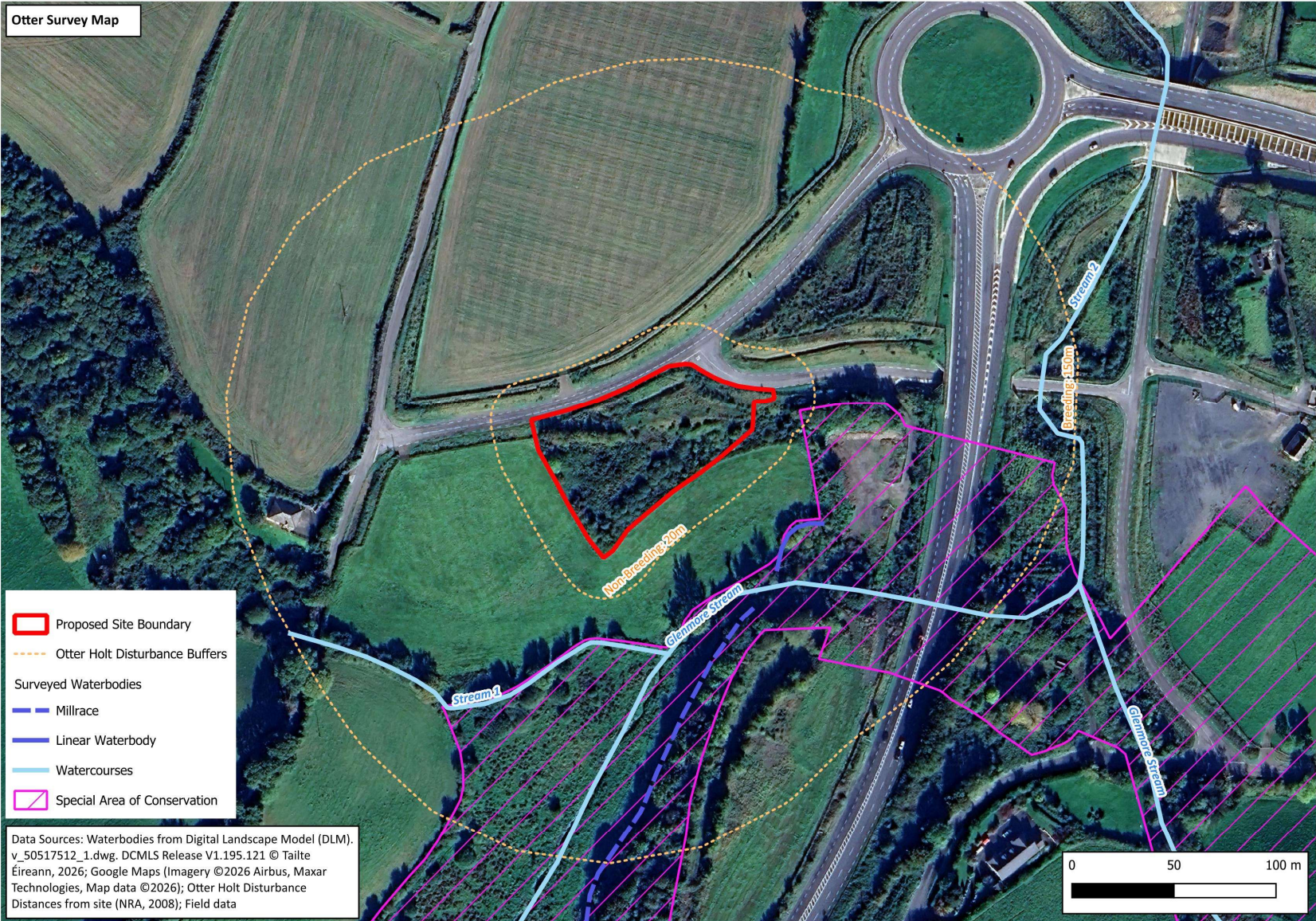


Table A2. Results of Otter Survey

Water body	Description	Closest Point to Site	Length within 150m of Site	Otter Habitat	Otter Signs
Stream 1	This is a small 1 st order stream that flows eastward under a road bridge (L7501) and then flanks the SW & S boundary of the adjacent field. Watercourse marked on OS historical mapping. Ranges from c. 2m to 4m width, and c. 5cm to 30cm depth. Channel substrate comprised a mixture of gravels, sands and silts at the bridge, and became dominated by silts further westward where emergent vegetation dominated the channel. A hedgerow and scattered willow scrub is present on southern bank but offer little bankside cover. Merges with a 2 nd order stream c. 190m downstream of road bridge, referred to in this report as Glenmore Stream.	43m	c. 200m	Unlikely to support holts or couches due to little bankside cover. Foraging and commuting habitat for Otter.	None
 P1. Western stretch of Stream 1, road bridge in background  P2. Eastern stretch of Stream 1 from northern bank					

Water body	Description	Closest Point to Site	Length within 150m of Site	Otter Habitat	Otter Signs
Glenmore Stream	This 2 nd order stream, referred to in this report as Glenmore Stream, ranges from c. 3m width upstream of confluence with Stream 1 and c. 40cm depth, to c. 6m in width following confluence with Stream 2 and up to 1m depth in places. Channel substrate is variable with variable proportions of silts, sands, fine and coarse gravels present. Generally moderate flowing with bank ranging from 0.25 to 0.5m in height. Some bankside cover is present in the northern sections of this watercourse, upstream and downstream of the N25 culvert. The Glenmore Stream flows through an open-bottomed culvert under N25 and then merges with Stream 2.	53m	c. 285m	Foraging and commuting habitat. Potential to host holts or couches to the southeast of site due to presence of cover. Unlikely to be used for breeding purposes, due disturbance effects of N25 proximity. No existing crevices or holes observed to serve as potential holts.	None



P3. Southern part of Glenmore Stream



P4. Glenmore Stream east of N25



P5. Glenmore Stream directly west of N25



P6. Glenmore Stream east of N25



P7. Glenmore Stream – Stream 2 confluence



P8. Glenmore Stream south of confluence with Stream 2

Water body	Description	Closest Point to Site	Length within 150m of Site	Otter Habitat	Otter Signs
Stream 2	The storm water outfall from the site links with this 1 st order stream. The stream was c. 4m width and c. 40cm at road bridge c. 18m south of the outfall. Flow was slow here and channel substrate dominated by silt and sand, with some coarse gravel. A muddy bank occurs on the eastern side upstream of the bridge which hosted otter prints. The stream narrows further south to c. 2.5m and depths are variable from c. 15 to 40cm. The entire banks of the watercourse were not accessed downstream of the bridge due to presence of dense scrub and steep slopes.	c. 130m	c. 70m	Foraging and commuting habitat. Potential to host holts or couches east of site due to dense scrub cover. Unlikely to be used for breeding purposes, due disturbance effects of N25 proximity. No existing holts or holes observed to serve as potential holts. Partial survey.	Yes Otter prints



P9. Stream 2 from road bridge northwards



P10. Stream 2 north of confluence with Glenmore Stream, northerly direction



P11. Otter print



P12. Otter prints

Water body	Description	Closest Point to Site	Length within 150m of Site	Otter Habitat	Otter Signs
Millrace	The Millrace is a wholly artificial body, developed as part of an old Corn Mill as indicated on historical 6" and 25" O.S. mapping. No connection between this waterbody and the Glenmore Stream was observed during surveys. The end of this body was c. 10m from the Glenmore channel. This relatively straight channel was quite uniform and straight, and was c. 2m in width. The channel held still water, and mainly between 30cm -40cm in depth, with <i>Callitriche</i> spp. abundant.	69m	c. 144m	Foraging and commuting habitat for Otter. A narrow broadleaved woodland upslope may provide potential habitat cover for otters, however no paths or tracks were observed.	None



P13. Millrace (closest location to proposed site), southwards



P14. Millrace southwards

Water body	Description	Closest Point to Site	Length within 150m of Site	Otter Habitat	Otter Signs
Linear Waterbody	This linear waterbody occurs in proximity of Glenmore Stream, east of the N25. Examination of historical OS mapping indicates that this is likely a remnant of Glenmore stream channel, remaining following straightening of the channel. No overground connection was noted with Glenmore Stream. The waterbody was c. 2 – 3 m wide, c. 30cm with no observed flow. Good scrub cover was observed.	36m	c. 39m	Potential to support holts due to bankside cover and proximity to good foraging waters of Glenmore.	None



P15. Linear waterbody