

EIRSPAN BRIDGE MANAGEMENT SYSTEM

Task Order No. 265
Leinster Bridges – Term
Maintenance Contract No. 3

Eldon Bridge and Whitestown
Bridge - Natura Impact Statement



September 2021



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1. INTRODUCTION

1.1 Background

The EIRSPAN Bridge Management System covers all aspects of bridge management, including routine maintenance. Over the past number of years routine maintenance contracts have been undertaken by private contractors under Bridge Term Maintenance contracts.

This contract will run until 2021, where it is intended to carry out annual routine maintenance work between 1st March and 30th September in each of the years 2018, 2019, 2020 and 2021, with a defects period extending for a further year.

Bridge inspections are carried out according to the EIRSPAN Bridge Management System Routine Maintenance Manual (TII, 2017). The undertaking of bridge inspections generates data that is entered into an EIRSPAN database and works orders are produced for each bridge, which details the works to be undertaken for each component of that bridge. The works orders detail "routine maintenance works" as set out in the manual.

Routine maintenance works are defined in the guidance document as "*works that are carried out at regular intervals*", the objective of which is to "*undertake cleaning and minor maintenance works to avoid or delay the development of deterioration*" (TII, 2017). Appendix J of the manual details the work specifications for routine maintenance works.

Non-routine or reactive works, which usually occur as a result of isolated incidents such as collisions or erosion damage due to floods (TII, 2017), are not included in the Works Orders under the Leinster Bridges Term Maintenance Contract No. 3. Such works will be subject to Screening for Appropriate Assessment as they arise.

During the last programme of maintenance works, 2013-2015 Term Maintenance Contract No. 2, in-stream maintenance works included works to bridge elements such as piers, wing walls and abutments. However, as much of this work was carried out during the 2013-2015 maintenance contract, the scale of interventions required between 2018 and 2021 is such that many bridges require little or no in-stream works.

As the maintenance contract is to run over a 4-year period, the Contractor is required to employ a suitably qualified ecologist to provide advice on the ecological features and constraints at specific bridge locations as the project progresses.

The Contractor is expected by the Contract to adhere to the level of best practice as espoused in these and other accepted/published best practice for on-site works; these requirements are also specifically included in the Contract. As part of the Contract, a Resident Engineer (RE) will oversee works on behalf of Transport Infrastructure Ireland (TII).

In accordance with Article 6(3) of Council Directive 92/43/EEC of 21st May 1992 on the conservation of natural habitats and of wild fauna and flora ("the Habitats Directive"), as transposed into Irish law by Part 5 of the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended) ("the Habitats Regulations") and Part XAB of the Planning and Development Act, 2000 (as amended) ("the Planning and Development Act"), an Appropriate Assessment (AA) Screening Report was prepared to assess whether or not the proposed routine maintenance works, either individually

or in combination with other plans or projects, were likely to have adverse effects on one or more sites of Community importance (“European sites”) for nature conservation.

The AA Screening for the works, which was carried out by TII, concluded, in view of best scientific knowledge and the Conservation Objectives of the sites concerned, that, in the absence of appropriate mitigation, the proposed works were likely to have adverse effects on one or more European sites. TII’s determination was based on the works involving in-stream concrete works within or upstream of European sites. On the basis of this conclusion, TII, in its capacity as the Competent Authority at the screening stage, determined that AA was required in order to assess the implications of the proposed works.

This document comprises the NIS in respect of the proposed works at two structures and has been prepared by ROD on behalf of TII. It contains an examination, analysis and evaluation of the likely impacts from the proposed works, both individually and in combination with other plans and projects, in view of best scientific knowledge and the Conservation Objectives of the European sites concerned. It also prescribes appropriate mitigation to ensure that the proposed works will not adversely affect the integrity of those sites. Finally, it provides complete, precise and definitive findings which are capable of removing all reasonable scientific doubt as to the absence of adverse effects on the integrity of the European sites concerned.

1.2 Legislative Context

The Habitats Directive and Directive 2009/147/EC of the European Parliament and of the Council of 30th November 2009 on the conservation of wild birds (“the Birds Directive”) list habitats and species which are, in a European context, important for conservation and in need of protection. This protection is afforded in part through the designation of sites which support significant examples of habitats or populations of species (“European sites”). Sites designated for birds are termed “Special Protection Areas” (SPAs) and sites designated for natural habitat types or other species are termed “Special Areas of Conservation” (SACs). The complete network of European sites is referred to as “Natura 2000”.

In order to ensure the protection of European sites in the context of land use planning and development, Article 6(3) of the Habitats Directive provides for the assessment of the implications of plans and projects for European sites, as follows:

“Any plan or project not directly connected with or necessary to the management of the site [or sites] but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site [...], the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned [...].”

The requirements arising out of Article 6(3) are transposed into Irish law by Part 5 of the Habitats Regulations, and the assessment is referred to as “Appropriate Assessment” (AA).

The determination of whether or not a plan or project meets the two thresholds for requiring AA is referred to as “Stage 1” or “AA Screening”. The first threshold is reached if the plan or project is not directly connected with or necessary to the

management of one or more European sites. In its ruling in the Waddenzee case¹, the Court of Justice of the European Union (CJEU) interpreted the second threshold as being reached where “*it cannot be excluded, on the basis of objective information, that [the plan or project] will have a significant effect on that site*”. Thus, in applying the Precautionary Principle, the CJEU interpreted the word “likely” to mean that, as long as it cannot be demonstrated that an effect will not occur, that effect is considered “likely”. A likely effect is considered to be “significant” only if it interrupts or causes a delay in achieving the Conservation Objectives of the site concerned.²

Prior to approval of a plan or project which is the subject of AA (also referred to as “Stage 2”), it is necessary to “ascertain” that the plan or project will not “adversely affect the integrity of the site”. In its guidance document (EC, 2001), the European Commission stated that “*the integrity of a site involves its ecological functions*” and that “*the decision as to whether it is adversely affected should focus on and be limited to the site’s conservation objectives*”. Regarding the word “ascertain”, the CJEU, also in its ruling in the Waddenzee case, interpreted this as meaning “*where no reasonable scientific doubt remains as to the absence of such effects*”. Therefore, the legal test at Stage 2 is satisfied (and the plan or project may be authorised) when it can be demonstrated beyond reasonable scientific doubt that the plan or project will not interrupt or cause delays in the achievement of the Conservation Objectives of the site or sites concerned. AA is informed by a “Natura Impact Report” (NIR) in the case of plans or a “Natura Impact Statement” (NIS) in the case of projects.

The CJEU has made a relevant judgment on what information should be contained within documents supporting AA³ (in the NIR or NIS):

“[The AA] cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the protected site concerned.”

The Irish High Court has also provided clarity on how competent authorities should undertake valid and lawful AA⁴, directing that the AA:

“Must identify, in the light of the best scientific knowledge in the field, all aspects of the development project which can, by itself or in combination with other plans or projects, affect the European site in the light of its conservation objectives. This clearly requires both examination and analysis.”

“Must contain complete, precise and definitive findings and conclusions and may not have lacunae or gaps. The requirement for precise and definitive findings and conclusions appears to require examination, analysis, evaluation and decisions. Further, the reference to findings and conclusions in a scientific context requires both findings following analysis and conclusions following an evaluation of each in the light of the best scientific knowledge in the field.”

“May only include a determination that the proposed development will not adversely affect the integrity of any relevant European site where, upon the basis of complete, precise and definitive findings and conclusions made, the consenting

¹ Landelijke Vereniging tot Behoud van de Waddenzee, Nederlandse vereniging tot Bescherming van Vogels v. Staatssecretaris van Landbouw, Natuurbeheer en Visserij (Waddenzee) [2004] C-127/02 ECR I-7405.

² Conservation Objectives are referred to, but not defined, in the Habitats Directive. In Ireland, Conservation Objectives are set for Qualifying Interests (the birds, habitats or other species for which a given European site is selected) and represent the overall target that must be met for that Qualifying Interest to reach or maintain favourable conservation condition in that site and contribute to its favourable conservation status nationally.

³ Sweetman v. An Bord Pleanála [2013] Case C-258/11.

⁴ Kelly v. An Bord Pleanála [2014] IEHC 422.

authority decides that no reasonable scientific doubt remains as to the absence of the identified potential effects.”

In accordance with Article 6(3) of the Habitats Directive, the responsibility to screen for and carry out AA lies solely with the “competent national authorities”, i.e. those with responsibility for granting or refusing consent for plans and projects. In that respect, an AA Screening Report, NIR or NIS (if not prepared by the competent authority) does not in itself constitute a valid AA Screening or AA; it merely provides the competent authority with the information that it needs in order to screen for and carry out its AA. In Ireland, the competent authority for a given plan or project is the relevant planning authority, e.g. Transport Infrastructure Ireland.

1.3 Methodology

On the basis of the objective information provided in the AA Screening spreadsheet and in view of the Conservation Objectives of the relevant European sites, TII, as the competent authority, determined that the proposed works, either individually or in combination with other plans and projects, was likely to have a significant effect on one or more European site.

In accordance with the requirements for AA, this NIS assesses the likely effects of the proposed works on the integrity of the European sites “screened in” at Stage 1. This assessment is undertaken in six steps, as follows:

- (1) Step 1 involves gathering all of the information and data that will be necessary for a full and proper assessment. These include, but are not limited to, the details of all phases of the plan or project, environmental data pertaining to the area in which the plan or project is located, e.g. rare or protected habitats and species or invasive species present or likely to be present, and the details of the European sites within the likely zone of impact.
- (2) Step 2 involves examination of the information gathered in the first step and detailed scientific analysis of the effects of the plan or project on the ecological structure and function of the receiving environment, focussing on European sites.
- (3) Step 3 evaluates the effects analysed in Step 2 against the Conservation Objectives of the relevant European site or sites, thereby determining whether or not they constitute adverse effects on site integrity.
- (4) Having established that the plan or project will adversely affect the integrity of one or more European sites, Step 4 involves the development of appropriate mitigation, including, where appropriate, monitoring and enforcement measures, to eliminate or minimise those effects such that they no longer constitute adverse effects on the integrity of the site(s) concerned, as well as consideration of the significance of any residual (post-mitigation) effects.
- (5) Step 5 involved the assessment of the significance of any residual effects arising from the proposed works in combination with other plans or projects.
- (6) Step 6 involves the final determination of whether or not the plan or project will adversely affect the integrity of one or more European sites. Notwithstanding the final recommendation made in the NIS, the responsibility for completing this step lies solely with the competent authority.

The following guidance documents informed the assessment methodology:

- DEHLG (2010) *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities*. Department of the Environment, Heritage and Local Government, Dublin.

- NPWS (2010) *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. Circular Letter NPWS 1/10 & PSSP 2/10. National Parks & Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.
- EC (2001) *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*. Environment Directorate-General of the European Commission.
- EC (2018) *Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC*. European Commission, Brussels

- [1096] Brook Lamprey (*Lampetra planeri*)
- [1099] River Lamprey (*Lampetra fluviatilis*)
- [1103] Twaité Shad (*Alosa fallax*)
- [1106] Atlantic Salmon (*Salmo salar*)
- [1355] Otter (*Lutra lutra*)
- [1365] Common (Harbour) Seal (*Phoca vitulina*)

Sensitivities of the Site and its Qualifying Interests

The greatest pressures/threats to the integrity of the Slaney River Valley SAC come from agriculture, fishing, and industrial activities. The spreading of slurry and fertiliser poses a threat to the water quality of this salmonid river and to the populations of Habitats Directive Annex II animal species within it. The spread of exotic species is reducing the quality of the woodlands within the site.

3. THE PROPOSED WORKS

This section outlines the works elements being undertaken on the structures.

3.1 Sweeping and Cleaning

The following description of the proposed works is taken from the *Lot 3 Leinster Bridges Term Maintenance Contract No. 3 Volume A: Works Requirements Part 2: Specification*:

All debris, silt and vegetation shall be removed from the bridge surface and footways using a mechanical road sweeper or other appropriate means. An ordinary sweeping brush may be acceptable on smaller bridges with the Employers Representative's consent. All drain gullies on or adjacent to the structures will be cleaned of silt, debris and vegetation and all deposits will be removed for off-site disposal. The contents of any rodded gully/outlet cannot be pushed out into/discharged to the watercourse. All gully connections and/or outlet pipes will be cleared to ensure the unimpeded flow of water from the gullies and through the drainage outlets and all deposits removed for off-site disposal. No discharge of waste is to be permitted on-site. The deposits are to be transported in permitted waste vehicles in compliance with the Waste Management (Collection Permit) Regulations, 2007 as amended and the waste disposed of at licensed/permitted waste facilities.

3.2 Clearance of Debris

The following description of the proposed works is taken from the *Lot 3 Leinster Bridges Term Maintenance Contract No. 3 Volume A: Works Requirements Part 2: Specification*:

The watercourse will be cleared of all obstructions, debris and vegetation that may impede flow. This includes household or domestic items dumped in the stream, tree branches, concrete or masonry rubble or other objects which have become lodged between abutments and /or piers or within pipes and silt /debris build up under the structure. This may also include obstructions up to 20m upstream or downstream of the bridge. Naturally occurring aquatic vegetation growth in the riverbed will not be cut back. Excessive overgrowth of brambles etc. from adjacent embankments which is impeding flow should be cut back by manual means only. Machinery is not permitted in the riverbed. The Contractor shall ensure that property boundary markings in the form of fencing, grates or grilles fixed to structure (i.e. at inlet or outlet) are not removed or disturbed throughout the works. Where debris or branches are snagged in any of the above, this is to be carefully removed and any damage to the fencing repaired, displaced grilles refixed etc. For the desilting of heavily silted culverts, the use of specialist drain clearing suction rigs may be required. No discharge of waste is to be permitted on-site. The deposits are to be transported in permitted waste vehicles in compliance with the Waste Management (Collection Permit) Regulations 2007 as amended and the waste disposed of at licensed/permitted waste facilities. Where clearance of an obstruction may result in undermining or instability or scour of the abutments the Employers Representative shall be informed and clearance at the risk area shall not be undertaken until instructions are received. All equipment including PPE which comes into contact with watercourses will be clean and will be disinfected prior to leaving each site using Vikron Aquatic or similar.

3.3 Safety Barrier Repairs

The following description of the proposed works is taken from the *Lot 3 Leinster Bridges Term Maintenance Contract No. 3 Volume A: Works Requirements Part 2: Specification*:

Lengths of guardrail (both safety barriers and pedestrian guardrails) on the bridge approaches or across the bridge which exhibit localised damage and which can be repaired by simply unbolting the damaged section and bolting on a new length which new bolts will be so repaired. In some instances, it may be necessary to cast new post footings, provide new connections with parapets or install safety barrier terminal concrete end blocks. All replacement components will meet the requirements of EN1317 and the Specification for Road Works Series 400. Repairs and new installation of safety barriers must be carried out by approved suppliers on TII's Works Framework for Safety Barrier Suppliers as listed in the above-mentioned contract.

3.4 Masonry Repointing and Repair

The following description of the proposed works is taken from the *Lot 3 Leinster Bridges Term Maintenance Contract No. 3 Volume A: Works Requirements Part 2: Specification*:

Prior to commencement of all repointing and repair works, all vegetation and algae to be removed from face of walls and arch barrel soffits in accordance with the specification. Loose and cracked pointing shall be raked out to sound material and the joint cleaned. All such joints and joints with deep pointing shall be repointed flush with the masonry face. All repointing shall be undertaken with lime mortar. The colour of the mortar shall match the existing to the reasonable satisfaction of the Engineer. Repointing shall only be undertaken by stonemasons who have attended the TII approved 'Masonry Arch Bridge Repair Workshop' or are members of the Guild of Master Craftsmen and their qualifications shall be submitted to the Employers Representative. Hand pointing only required to a depth not exceeding 50mm.

3.4.1 Herbicide Use in European Sites

The removal of Ivy and similar plants from surfaces may include the use of herbicide prior to mechanical removal. The use of any chemical to assist in the removal of vegetation from structures must be approved by the Employer's Representative and be undertaken under the advice of an appropriately trained and registered pesticide advisor. Herbicides must be of a type approved for use near water and must be used in accordance with the manufacturer's instructions. Only appropriately trained and registered users may carry out the application of herbicides.

The primary legislation governing the use of herbicides/ pesticides/ plant protection products are:

- Regulation (EC) No. 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC
- European Communities (Plant Protection Products) Regulations, 2012 (S.I. No. 159 of 2012)
- European Communities (Sustainable Use of Pesticides) Regulations, 2012, (S.I. No. 155 of 2012).
- European Communities (Sustainable Use of Pesticides) (Amendment) Regulations, 2019 (S.I. No. 438 of 2019).

The use of herbicide in European sites is only permissible where no other viable alternative exists. The need for herbicide must be demonstrated by the Registered Pesticide Advisor and a risk assessment will be prepared to this effect, in accordance with Regulation 12(2) of the Sustainable Use of Pesticides Regulations 2012 (as amended).

The use of herbicides in or near European sites are dealt with in Regulation 12 of the European Communities (Sustainable Use of Pesticides) Regulations, 2012 (as amended). Article 12 (1) prohibits the use of pesticides in European sites, however under certain circumstance this is permissible, as outlined in Regulation 12(2), which states that *“Where a person, having completed a risk assessment, is obliged to use a pesticide in an area referred to in paragraph (1), he or she shall ensure that preference is given to the use of low risk plant protection products or biological and cultural control measures and where such measures are not capable of performing the necessary function, a person shall prioritise the use of plant protection products that are not classified as R50 in accordance with Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 as amended by Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008”*.

Regulation 12(3) states that *“Where a person uses a pesticide in an area referred to in paragraph (1) the onus of proof will lie with that person to show that there was no viable alternative and appropriate risk management measures were put in place.”*

The European Communities (Sustainable Use of Pesticides) Regulations, 2012 (as amended) outlines the requirements for users of pesticides. Regulation 5(1) states that all users, subject to exemptions listed in Regulation 5(2), a professional user of pesticides must *hold a certificate confirming that the professional user has been trained to a standard determined by the Minister in the subjects listed in Annex I of the Directive and shall comply with any additional training requirements as determined by the Minister.*

The Contractor must ensure that users of pesticides are either registered professional users or are under the direct supervision of a registered professional user.

Records of pesticide use must be kept detailing the product, concentration and area where the product has been applied in line with Regulation 67(1) of the Plant Protection Products Regulation 1107/2009 which states that *professional users of plant protection products shall, for at least three years, keep records of the plant protection products they use, containing the name of the plant protection product, the time and the dose of application, the area and the crop where the plant protection product was used.*

4. THE STRUCTURES

4.1 Eldon Bridge [WW-N81-002.00]

Eldon Bridge is a three-span masonry arch bridge that spans the 4th order River Slaney. The bridge is located c. 1.9km northeast of Baltinglass, Co. Wicklow (ITM 687248.868 690485.206) and is within the Slaney River Valley SAC. Plate 4.1 shows the bridge inlet. The proposed works will take place during daylight hours and each work item is anticipated to last for a period of one day, although the work items may be phased over a number of days.



Plate 4.1

The proposed works at this bridge are:

- Sweep and clean 0.5m strip of carriageway both sides of bridge adjacent to verge (20m²). Clean drainage outfall on northwest corner (1no.).
- Clean footways (60m²).
- Repair impacted safety barrier where 2no. lengths of rail and 1no. Z post must be replaced (10.6m).
- Remove trees and debris from upstream side of bridge (10m²).

The Water Framework Directive (WFD) ecological status 2013-2018 of the river at the location of the structure is rated as 'Moderate' (EPA, 2021). There are two EPA water quality sampling stations in the vicinity of the Works, one 1.3km upstream, and a second 2.2km downstream in Baltinglass. The Q-values at both of these monitoring stations was 4-5, which corresponds to a status of 'High'.

An ecological survey was undertaken at this site on 15th July 2021. The river channel is approximately 20m wide at the location of Eldon Bridge. *Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion* was identified at the location of the bridge, which was dominated by Water-crowfoot (*Ranunculion fluitantis*). The substrate present at the site was dominated by cobble and gravel and was generally mobile. The land use in the area is agricultural and there is a narrow strip of riparian vegetation including trees along the river, apart from the south-west bank which has no riparian zone.

No evidence of otter was recorded within 150m of the bridge. The Otter survey was based on the “*Guidelines for the treatment of Otters prior to Construction of National Road Schemes*” (NRA, 2008) and involved a systematic search of the riverbanks for physical evidence of Otter e.g. spraints, prints, slides, trails, couches and holts. The survey methodology was also cognisant of the recommendations in the “*Otter Threat Response Plan 2009-2011*” (NPWS, 2009) which recognises the importance of the riparian buffer (10 m on both banks) for Otter.

A Freshwater Pearl Mussel survey was carried out under NPWS licence (C135/2021) in July 2021 (Ecofact, 2021). The surveys undertaken using a bathyscope aided with a handheld diving light for sections of the survey under bridges. No Freshwater Pearl Mussel were recorded within 100m upstream or downstream of the bridge. [REDACTED]

The ecological surveys also included a bat suitability assessment, a survey for nesting birds and an invasive species survey. Although these surveys are not directly related to Appropriate Assessment, in this case, the results are provided below for completeness.

A bat suitability assessment was also conducted at the structure on the 15th July 2021. The bat suitability assessment was conducted adhering to best practise guidelines (TII/NRA, 2006; Collins (ed.), 2016) and involved visual assessment and categorisation of the bridge structure capable of supporting roosting bats. The assessment was carried out using recognised criteria outlined in *Bat Surveys for Professional Ecologists: Good Practise Guidelines* (Collins (ed.), 2016). While there were some small cracks and holes in the masonry of the bridge, the bridge is overall well maintained with recent patch repairs.

No nesting birds or invasive species were recorded within 30m of the bridge.

The work elements along with the potential for the works to have adverse effects is discussed in Table 4.1 below.

Table 4.1 Works elements and potential to lead to adverse effects.

Works element	Is there potential for adverse effects?
Sweep and clean 0.5m strip of carriageway on both sides of bridge adjacent to verge (20m ²).	No – This work will be undertaken on the bridge surface. There is no source or potential for adverse effects.
Clean drainage outfall in NW corner (1no.).	No – The drainage outfall will be cleaned, and the contents collected and disposed of off-site.
Clean footways (60m ²).	No – This work will be undertaken on the bridge surface. There is no source or potential for adverse effects.

Works element	Is there potential for adverse effects?
Repair impacted safety barrier; replace 2no. lengths of rail and 1no. Z post (10.6m).	No – This work will be undertaken on the bridge surface. There are no potential pathways for adverse effects.
Removal of trees and debris from river at upstream side of the bridge (10m ²).	Yes – The removal of this volume of debris from the water has the potential to give rise to adverse effects on Qualifying Interests of the SAC. Mitigation is required to reduce this risk of sedimentation and disturbance to the watercourse.

4.1.1 Assessment of Adverse Effects

A detailed assessment of the potential adverse effects that the proposed works could give rise to is provided in Table 4.2 below.

Table 4.2 Assessment of Adverse Effects on the Site-Specific Conservation Objectives, as defined by their Attributes and Targets of the Slaney River Valley SAC [000781] at Eldon Bridge

Qualifying Interest	Site Specific Conservation Objective as per NPWS (2011)	Attribute	Target	Potential Adverse Effect
Estuaries [1130]	<i>"To maintain the favourable conservation condition of Estuaries in the Slaney River Valley SAC"</i>	Habitat area	Permanent area stable or increasing, subject to natural processes	Estuaries occur c. 100km downstream of the proposed works in Wexford Harbour. Due to the nature and location of the proposed works in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Estuaries, specifically with regards to the Attribute: Habitat area.
		Community distribution	Maintained in or restore to a natural condition: Mixed sediment community complex; Estuarine muds dominated by polychaetes and crustaceans community complex; and, Sand dominated by polychaetes community complex	Estuaries occur c. 100km downstream of the proposed works in Wexford Harbour. Due to the nature and location of the proposed works in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Estuaries, specifically with regards to the Attribute: Community distribution.
Mudflats and sandflats not covered by seawater at low tide [1140]	<i>"To maintain the favourable conservation condition of the Mudflats and sandflats not covered by seawater at low tide in the Slaney River Valley SAC"</i>	Habitat area	The permanent habitat area is stable or increasing, subject to natural processes.	Intertidal mudflats occur c. 100 km downstream of the proposed works (NPWS, 2011). Due to the nature and location of the proposed works in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Mudflats and sandflats not covered by seawater at low tide, specifically with regards to the Attribute: Habitat area.
		Community distribution	The following community types should be maintained in a natural condition: Estuarine muds dominated by polychaetes and crustaceans community complex; and Sand dominated by polychaetes community complex.	Intertidal mudflats occur c. 100 km downstream of the proposed works. Due to the nature and location of the proposed works in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Mudflats and sandflats not covered by seawater at low tide, specifically with regards to the Attribute: Community distribution.
Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260]	<i>"To maintain the favourable conservation condition of Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation in the Slaney River Valley SAC"</i>	Habitat distribution	No decline, subject to natural processes	This habitat is present at the location of the bridge with dense areas of water-crowfoot (<i>Ranunculus fluitantis</i>). Aquatic vegetation is sensitive to physical damage, eutrophication, and sedimentation of the water column as the sediment can settle on aquatic vegetation and inhibit their ability to photosynthesise. Therefore, adverse effects on the Conservation Objective for 3260, specifically with regards to the Attribute: Habitat distribution, cannot be excluded and mitigation measures are required.
		Habitat area	Area stable at 12.6 km or increasing, subject to natural processes	This habitat is present at the location of the bridge with dense areas of water-crowfoot (<i>Ranunculus fluitantis</i>). Aquatic vegetation is sensitive to physical damage, eutrophication, and sedimentation of the water column as the sediment can settle on aquatic vegetation and inhibit their ability to photosynthesise. Therefore, adverse effects on the Conservation Objective for 3260, specifically with regards to the Attribute: Habitat area, cannot be excluded and mitigation measures are required.
		Hydrological regime: river flow	Maintain appropriate hydrological regimes	The in-stream works are minor and temporary and will result in no change to the hydrological regime whatsoever. Therefore, the proposed works will have no adverse effect on the Conservation Objective for 3260, specifically with regards to the Attribute: Hydrological regime: river flow.
		Hydrological regime: tidal influence	Maintain natural tidal regime	The tidal reaches of the River Slaney are c. 75 km downstream near Enniscorthy. Given the nature of the works, it can be concluded that there will be no adverse effect on the Conservation Objective for 3260, specifically with regards to the Attribute: Hydrological regime: tidal influence.
		Substratum composition: particle size range	For the tidal sub-type, the substratum of the channel must be dominated by particles of sand to gravel, with silt at the river margins	This target applies to the tidal subtype only. The tidal reaches of the River Slaney are c. 75 km downstream near Enniscorthy. Given the nature of the works, it can be concluded that there will be no adverse effect on the Conservation Objective for 3260, specifically with regards to the Attribute: Substratum composition: particle size range.
		Water quality: nutrients	The concentration of nutrients in the water column must be sufficiently low to prevent changes in species composition or habitat condition.	The only element of the works that could lead to an increase in nutrients in the water column is the removal of the debris from the riverbed. This work element will be carried out on foot and may utilise an excavator bucket or similar to lift the debris out of the river. The works may result in the temporary mobilisation of nutrient laden matter from the riverbed. This would occur over a very short space of time and would not change the species or habitat conditions. Therefore, the proposed works will have no adverse effect on the Conservation Objective for 3260, specifically with regards to the Attribute: Water quality: nutrients.
		Vegetation composition: typical species	Typical species of the relevant habitat sub-type reach favourable status	This work element will be carried out on foot and may utilise an excavator bucket or similar to lift the debris out of the river. The works may result in the physical disturbance of the riverbed over a very small area and over a very short space of time and would not change the species composition in the local area. Therefore, the proposed works will have no adverse effect on the Conservation Objective for 3260, specifically with regards to the Attribute: Vegetation composition: typical species.
		Floodplain connectivity: area	The area of active floodplain at and upstream of the habitat must be maintained	No element of the works will lead to a reduction in the floodplain at or upstream of the works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for 3260, specifically with regards to the Attribute: Floodplain connectivity: area.
Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]	<i>"To restore the favourable conservation condition of Old oak woodland with <i>Ilex</i> and <i>Blechnum</i>"</i>	Habitat area	Area stable or increasing, subject to natural processes, at least 146.17ha for sub-sites surveyed.	The nearest record of Old sessile oak woods is located 34.7 km downstream of the proposed works (NPWS, 2011). Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Habitat area.

Qualifying Interest	Site Specific Conservation Objective as per NPWS (2011)	Attribute	Target	Potential Adverse Effect
	<i>Blechnum</i> in the Slaney River Valley SAC"	Habitat distribution	No decline	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Habitat distribution.
		Woodland size	Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Woodland size
		Woodland structure: cover and height	Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi- mature trees and shrubs; and well-developed herb layer	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Woodland structure: cover and height.
		Woodland structure: community diversity and extent	Maintain diversity and extent of community types	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Woodland structure: community diversity and extent.
		Woodland structure: natural regeneration	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Woodland structure: natural regeneration.
		Woodland structure: dead wood	At least 30m ³ /ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Woodland structure: dead wood.
		Woodland structure: veteran trees	No decline	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Woodland structure: veteran trees.
		Woodland structure: indicators of local distinctiveness	No decline	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Woodland structure: indicators of local distinctiveness.
		Vegetation composition: native tree cover	No decline. Native tree cover not less than 95%	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Vegetation composition: native tree cover.
		Vegetation composition: typical species	A variety of typical native species present, depending on woodland type, including oak (<i>Quercus petraea</i>) and birch (<i>Betula pubescens</i>)	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Vegetation composition: typical species.
		Vegetation composition: negative indicator species	Negative indicator species, particularly non-native invasive species, absent or under control	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Vegetation composition: negative indicator species.
*Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0]	"To restore the favourable conservation condition of Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i> , <i>Salicion albae</i>) in the Slaney River Valley SAC"	Habitat area	Stable or increasing, subject to natural processes	The nearest record of Alluvial forests is located approximately 33.2 km downstream of the proposed works (NPWS, 2011). Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Alluvial forests, specifically with regards to the Attribute: Habitat area.
		Habitat distribution	No decline	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Alluvial forests, specifically with regards to the Attribute: Habitat distribution
		Woodland size	Where possible, large woods of at least 25 ha and small woods of at least 3 ha	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Alluvial forests, specifically with regards to the Attribute: Woodland size.
		Woodland structure: cover and height	Diverse structure with a relatively closed canopy containing mature trees; sub-canopy layer with semi-mature trees and shrubs; well-developed herb layer	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Alluvial forests, specifically with regards to the Attribute: Woodland structure: cover and height.

Qualifying Interest	Site Specific Conservation Objective as per NPWS (2011)	Attribute	Target	Potential Adverse Effect
		Woodland structure: community diversity and extent	Maintain diversity and extent of community types	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Alluvial forests, specifically with regards to the Attribute: Woodland structure: community diversity and extent.
		Woodland structure: natural regeneration	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Alluvial forests, specifically with regards to the Attribute: Woodland structure: natural regeneration.
		Hydrological regime: flooding depth/height of water table	Appropriate hydrological regime necessary for maintenance of alluvial vegetation	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Alluvial forests, specifically with regards to the Attribute: Hydrological regime: flooding depth/height of water table.
		Woodland structure: dead wood	At least 30 m ³ /ha of fallen timber > 10 cm in diameter and 30 snags per ha; both should include stems > 40 cm in diameter or > 20 cm in diameter in the case of alder	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Alluvial forests, specifically with regards to the Attribute: Woodland structure: dead wood.
		Woodland structure: veteran trees	No decline	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Alluvial forests, specifically with regards to the Attribute: Woodland structure: veteran trees.
		Woodland structure: indicators of local distinctiveness	No decline	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Alluvial forests, specifically with regards to the Attribute: Woodland structure: indicators of local distinctiveness.
		Vegetation composition: native tree cover	No decline; native tree cover at least 95%	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Alluvial forests, specifically with regards to the Attribute: Vegetation composition: native tree cover.
		Vegetation composition: typical species	Variety of typical native species present, depending on woodland type, including alder, willows and, locally, ash	Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Alluvial forests, specifically with regards to the Attribute: Vegetation composition: typical species.
[REDACTED]	There is currently no Conservation Objective for this Qualifying Interest. [REDACTED]	Distribution	Restore distribution.	[REDACTED]
		Population size	Restore population.	There is potential for the in-stream works to mobilise sediment, organic matter and potentially introduce hydrocarbons. [REDACTED]
		Population structure: recruitment	[REDACTED]	There is potential for the in-stream works to mobilise sediment, organic matter and potentially introduce hydrocarbons. [REDACTED]
		Population structure: adult mortality	[REDACTED]	There is potential for the in-stream works to mobilise sediment, organic matter and potentially introduce hydrocarbons. [REDACTED]
		Suitable habitat: extent	Restore suitable habitat.	There is potential for the in-stream works to mobilise sediment, organic matter and potentially introduce hydrocarbons. [REDACTED]
		Suitable habitat: condition	Restore condition of suitable habitat	There is potential for the in-stream works to mobilise sediment, organic matter and potentially introduce hydrocarbons. [REDACTED]
		[REDACTED]	[REDACTED]	There is potential for the in-stream works to mobilise sediment, organic matter and potentially introduce hydrocarbons. [REDACTED]

Qualifying Interest	Site Specific Conservation Objective as per NPWS (2011)	Attribute	Target	Potential Adverse Effect
		[REDACTED]	[REDACTED]	The proposed works are in an area of mobile gravels and cobbles. Water-crowfoot is present at the bridge location. The in-stream works are limited to the removal of debris. [REDACTED]
		Substratum quality: sediment	Restore substratum quality - stable cobble and gravel substrate with very little fine material; no artificially elevated levels of fine sediment	The proposed works are in an area of mobile gravels and cobbles. Water-crowfoot is present at the bridge location. The in-stream works are limited to the removal of debris. [REDACTED]
		Substratum quality: oxygen availability	Restore to no more than 20% decline from water column to 5cm depth in substrate	The proposed works are in an area of mobile gravels and cobbles. Water-crowfoot is present at the bridge location. The in-stream works are limited to the removal of debris. [REDACTED]
		Hydrological regime: flow variability	Maintain appropriate hydrological regime	The in-stream work element is limited to the removal of debris from the river. The works are temporary, and the hydrological regime will not be altered. [REDACTED]
		[REDACTED]	[REDACTED]	[REDACTED]
		Fringing habitat: area and condition	Restore the area and condition of fringing habitats necessary to support the population	The works are temporary and will not result in any changes to the fringing habitats (riparian habitats). [REDACTED]
Sea lamprey (<i>Petromyzon marinus</i>) [1095]	<i>"To restore the favourable conservation condition of Sea lamprey in the Slaney River Valley SAC"</i>	Distribution: extent of anadromy	Greater than 75% of main stem length of rivers accessible from estuary	Sea Lamprey are considered to be present at the location of the works. The works will not involve any temporary or permanent in-stream structures. The instream element of the works will take place in a single day. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Sea Lamprey, specifically with regards to the Attribute: Distribution: extent of anadromy.
		Population structure of juveniles	At least 3 age/size groups present	The location of the works is not juvenile lamprey habitat and consists of mobile gravels and cobbles. The in-stream works are limited to the removal of debris from the river channel, which will be undertaken on a single day. Due to the nature and scale of the works, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Sea Lamprey, specifically with regards to the Attribute: Population structure of juveniles.
		Juvenile density in fine sediment	Juvenile density at least 1/ m ²	The location of the works is not juvenile lamprey habitat and consists of mobile gravels and cobbles. The in-stream works are limited to the removal of debris from the river channel, which will be undertaken on a single day. Due to the nature and scale of the works, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Sea Lamprey, specifically with regards to the Attribute: Juvenile density in fine sediment.
		Extent and distribution of spawning habitat	No decline in extent and distribution of spawning beds; improved dispersal of spawning beds into areas upstream of barriers	The in-stream works are limited to the removal of debris from the river channel, which will be undertaken on a single day. Due to the nature and scale of the works, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Sea Lamprey, specifically with regards to the Attribute: Extent and distribution of spawning habitat.
		Availability of juvenile habitat	More than 50% of sites sampled in 3 rd order (or greater) channels downstream of spawning sites positive for juvenile habitat	The proposed works are in an area of mobile gravels and cobbles. The in-stream works are limited to the removal of debris from the river channel, which will be undertaken on a single day. Due to the nature and scale of the works, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Sea Lamprey, specifically with regards to the Attribute: Availability of juvenile habitat.
Brook lamprey (<i>Lampetra planeri</i>) [1096]	<i>"To restore the favourable conservation condition of Brook lamprey in the Slaney River Valley SAC"</i>	Distribution	Access to all water courses down to 1 st order streams	Brook Lamprey are considered present at the location of the works. The works will not involve any temporary or permanent in-stream structures. The instream element of the works will take place in a single day. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Brook Lamprey, specifically with regards to the Attribute: Distribution.
		Population structure of juveniles	At least 3 age/size groups present	The proposed works are in an area of mobile gravels and cobbles. The in-stream works are limited to the removal of debris from the river channel, which will be undertaken on a single day. Due to the nature and scale of the works, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Brook Lamprey, specifically with regards to the Attribute: Population structure of juveniles.
		Juvenile density in fine sediment	Mean catchment juvenile density of brook/river lamprey at least 2 m ⁻²	The proposed works are in an area of mobile gravels and cobbles. The in-stream works are limited to the removal of debris from the river channel, which will be undertaken on a single day. Due to the nature and scale of the works, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Brook Lamprey, specifically with regards to the Attribute: Juvenile density in fine sediment.

Qualifying Interest	Site Specific Conservation Objective as per NPWS (2011)	Attribute	Target	Potential Adverse Effect
		Extent and distribution of spawning habitat	No decline in extent and distribution of spawning beds	The proposed works are in an area of mobile gravels and cobbles. The in-stream works are limited to the removal of debris from the river channel, which will be undertaken on a single day. Due to the nature and scale of the works, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Brook Lamprey, specifically with regards to the Attribute: Extent and distribution of spawning habitat.
		Availability of juvenile habitat	More than 50% of sites sampled in 2 nd order (or greater) channels downstream of spawning sites positive for juvenile habitat	The proposed works are in an area of mobile gravels and cobbles. The in-stream works are limited to the removal of debris from the river channel, which will be undertaken on a single day. Due to the nature and scale of the works, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Brook Lamprey, specifically with regards to the Attribute: Availability of juvenile habitat.
River lamprey (<i>Lampetra fluviatilis</i>) [1099]	<i>"To restore the favourable conservation condition of River lamprey in the Slaney River Valley SAC"</i>	Distribution: extent of anadromy	Greater than 75% of main stem length of rivers accessible from estuary	River Lamprey are considered present at the location of the works. The works will not involve any temporary or permanent in-stream structures. The instream element of the works will take place in a single day. Therefore, the proposed works will have no adverse effect on the Conservation Objective for River Lamprey, specifically with regards to the Attribute: Distribution: extent of anadromy.
		Population structure of juveniles	At least 3 age/size groups present	The proposed works are in an area of mobile gravels and cobbles. The in-stream works are limited to the removal of debris from the river channel, which will be undertaken on a single day. Due to the nature and scale of the works, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for River Lamprey, specifically with regards to the Attribute: Population structure of juveniles.
		Juvenile density in fine sediment	Mean catchment juvenile density of brook/river lamprey at least 2 m ⁻²	The proposed works are in an area of mobile gravels and cobbles. The in-stream works are limited to the removal of debris from the river channel, which will be undertaken on a single day. Due to the nature and scale of the works, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for River Lamprey, specifically with regards to the Attribute: Juvenile density in fine sediment.
		Extent and distribution of spawning habitat	No decline in extent and distribution of spawning beds	The proposed works are in an area of mobile gravels and cobbles. The in-stream works are limited to the removal of debris from the river channel, which will be undertaken on a single day. Due to the nature and scale of the works, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for River Lamprey, specifically with regards to the Attribute: Extent and distribution of spawning habitat.
		Availability of juvenile habitat	More than 50% of sites sampled in 2 nd order (or greater) channels downstream of spawning sites positive for juvenile habitat.	The proposed works are in an area of mobile gravels and cobbles. The in-stream works are limited to the removal of debris from the river channel, which will be undertaken on a single day. Due to the nature and scale of the works, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for River Lamprey, specifically with regards to the Attribute: Availability of juvenile habitat.
Atlantic salmon (<i>Salmo salar</i>) [1106]	<i>"To restore the favourable conservation condition of Salmon in the Slaney River Valley SAC"</i>	Distribution: extent of anadromy	100% of river channels down to 2 nd order accessible from estuary	Atlantic Salmon are considered present at the location of the works. The works will not involve any temporary or permanent in-stream structures. The in-stream works are limited to the removal of debris from the river channel, which will be undertaken on a single day. Due to the nature and scale of the works, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Atlantic Salmon, specifically with regards to the Attribute: Distribution: extent of anadromy.
		Adult spawning fish	Conservation Limit for each system consistently exceeded	The works will not involve any temporary or permanent in-stream structures. The in-stream works are limited to the removal of debris from the river channel, which will be undertaken on a single day. Due to the nature and scale of the works, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Atlantic Salmon, specifically with regards to the Attribute: Number of adult spawning fish, cannot be excluded and mitigation measures are required.
		Salmon fry abundance	Maintain or exceed mean catchment-wide 0+ fry abundance threshold (currently 17 fry per 5-min sample)	The only element of the works that could lead to a decline in fry abundance, both in the short and long-term, is the removal of the debris from the riverbed. This work element could lead to the introduction of hydrocarbons into the watercourse, and the mobilisation of sediment and organic matter. Therefore, adverse effects on the Conservation Objective for Atlantic Salmon, specifically with regards to the Attribute: Fry abundance, cannot be excluded and mitigation measures are required.
		Out-migrating smolt abundance	No significant decline	The only element of the works that could lead to a decline in out-migrating smolt abundance, both in the short and long-term, is the removal of the debris from the riverbed. This work element could lead to the introduction of hydrocarbons into the watercourse, and the mobilisation of sediment and organic matter. Therefore, adverse effects on the Conservation Objective for Atlantic Salmon, specifically with regards to the Attribute: Out-migrating smolt abundance, cannot be excluded and mitigation measures are required.
		Number and distribution of redds	No decline in number and distribution of spawning redds due to anthropogenic causes	The works will not involve any temporary or permanent in-stream structures. The in-stream works are limited to the removal of debris from the river channel, which will be undertaken on a single day. Due to the nature and scale of the works, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Atlantic Salmon, specifically with regards to the Attribute: Number and distribution of redds.
		Water quality	At least Q4 at all sites sampled by EPA	The only element of the works that could lead to a reduction in water quality, is the removal of the debris from the riverbed. This work element could lead to the introduction of hydrocarbons into the watercourse, and the mobilisation of sediment and organic matter. Therefore, adverse effects on the Conservation Objective for Atlantic Salmon, specifically with regards to the Attribute: Water quality, cannot be excluded and mitigation measures are required.
Twaite shad (<i>Alosa fallax</i>) [1103]	<i>"To restore the favourable conservation condition of Twaite shad in the Slaney River Valley SAC"</i>	Distribution: extent of anadromy	Greater than 75% of main stem length of rivers accessible from estuary	The natural range of Twaite Shad only extends to the tidal limit within the River Slaney, near Enniscorthy. Therefore, the closest possible point that this species is found to the proposed works is 74 km downstream of the proposed works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Twaite Shad, specifically with regards to the Attribute: Distribution: extent of anadromy.

Qualifying Interest	Site Specific Conservation Objective as per NPWS (2011)	Attribute	Target	Potential Adverse Effect
		Population structure- age classes	More than one age class present	The natural range of Twaite Shad only extends to the tidal limit within the River Slaney, near Enniscorthy. Therefore, the closest possible point that this species is found to the proposed works is 74 km downstream of the proposed works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Twaite Shad, specifically with regards to the Attribute: Population structure - age class.
		Extent and distribution of spawning habitat	No decline in extent and distribution of spawning habitats	The spawning range of Twaite Shad occurs at the upper tidal reaches of the River Slaney, as far as Enniscorthy. Therefore, the closest possible point that spawning habitat is found to the proposed works is 74 km downstream of the proposed works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Twaite Shad, specifically with regards to the Attribute: Extent and distribution of spawning habitat.
		Water quality- oxygen levels	No lower than 5mg/l	The natural range of Twaite Shad only extends to the tidal limit within the River Slaney, near Enniscorthy. Therefore, the closest possible point that this species is found to the proposed works is 74 km downstream of the proposed works. The works do not provide for any measurable change in oxygen levels at the site of the proposed works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Twaite Shad, specifically with regards to the Attribute: Water quality- oxygen levels.
		Spawning habitat quality: Filamentous algae; macrophytes; sediment	Maintain stable gravel substrate with very little fine material, free of filamentous algal (macroalgae) growth and macrophyte (rooted higher plants) growth	The spawning range of Twaite Shad occurs at the upper tidal reaches of the River Slaney, as far as Enniscorthy. Therefore, the closest possible point that spawning habitat is found to the proposed works is 74 km downstream of the proposed works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Twaite Shad, specifically with regards to the Attribute: Spawning habitat quality: Filamentous algae; macrophytes; sediment.
Otter (<i>Lutra lutra</i>) [1355]	<i>"To restore the favourable conservation condition of Otter in the Slaney River Valley SAC"</i>	Distribution	No significant decline	No evidence of Otter was recorded during the survey in July 2021. However, the species is widespread in Ireland and is considered present at the location of the proposed works. The proposed works will occur during daylight hours only for a period of one day (although the work elements may be phased over several days). Only one work element, the removal of the debris from the riverbed, will involve in-stream works. The remainder of the work items will occur on the road verge or on the bridge deck. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Otter, specifically with regards to the Attribute: Distribution.
		Extent of terrestrial habitat	No significant decline	The proposed works will not reduce the available terrestrial habitat for Otter within or outside the SAC. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Otter, specifically with regards to the Attribute: Extent of terrestrial habitat.
		Extent of freshwater (river) habitat	No significant decline	The proposed works will not reduce the available freshwater (river) habitat for Otter within or outside the SAC. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Otter, specifically with regards to the Attribute: Extent of freshwater (river) habitat.
		Extent of freshwater (lake/ lagoon) habitat	No significant decline	The proposed works will not reduce the available freshwater (lake/ lagoon) habitat for Otter within or outside the SAC. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Otter, specifically with regards to the Attribute: Extent of freshwater (lake/lagoon) habitat.
		Couching sites and holts	No significant decline	An Otter survey was carried out in July 2021, 150m upstream and downstream of Eldon Bridge. No evidence of Otter was recorded, including couching sites or holts. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Otter, specifically with regards to the Attribute: Couching sites and holts.
		Fish biomass available	No significant decline	The only element of the works that could lead to a decline in fish biomass is the removal of the debris from the riverbed. This work element could lead to the introduction of hydrocarbons to the watercourse, and the mobilisation of sediment and organic matter. Therefore, adverse effects on the Conservation Objective for Otter, specifically with regards to the Attribute: Fish biomass available, cannot be excluded and mitigation measures are required.
		Barriers to connectivity	No significant increase	No evidence of Otter was recorded during the survey in July 2021. However, the species is widespread in Ireland and is considered present at the location of the proposed works. The proposed works will occur during daylight hours only for a period of one day (although the work elements may be phased over several days). Only one work element, the removal of the debris from the riverbed, will involve in-stream works. The remainder of the work items will occur on the road verge or on the bridge deck. The works do not involve the construction of any permanent structure within or over the watercourse, including a 10m terrestrial buffer. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Otter, specifically with regards to the Attribute: Barriers to connectivity.
Harbour Seal (<i>Phoca vitulina</i>) [1365]	<i>"To maintain the favourable conservation condition of Harbour Seal in the Slaney River Valley SAC"</i>	Access to suitable habitat	Species range within the site should not be restricted by artificial barriers to site use.	Eldon Bridge is not within the range of Harbour Seal, which is upstream along the River Slaney as far as Enniscorthy, which is 74km downstream of the proposed works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Harbour Seal, specifically with regards to the Attribute: Access to suitable habitat.
		Breeding behaviour	The breeding sites should be maintained in a natural condition.	The breeding sites for Harbour Seal within the SAC are on the sand banks in Wexford Harbour, c. 100km downstream. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Harbour Seal, specifically with regards to the Attribute: Breeding behaviour.
		Moulting behaviour	The moult haul-out sites should be maintained in a natural condition.	The moulting sites for Harbour Seal within the SAC are on the sand banks in Wexford Harbour, c. 100km downstream. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Harbour Seal, specifically with regards to the Attribute: Moulting behaviour.
		Resting behaviour	The resting haul-out sites should be maintained in a natural condition.	The resting sites for Harbour Seal within the SAC are on the sand banks in Wexford Harbour, c. 100km downstream. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Harbour Seal, specifically with regards to the Attribute: Resting behaviour.

Qualifying Interest	Site Specific Conservation Objective as per NPWS (2011)	Attribute	Target	Potential Adverse Effect
		Disturbance	Human activities should occur at levels that do not adversely affect the harbour seal population	Eldon Bridge is not within the range of Harbour Seal, which is upstream along the River Slaney as far as Enniscorthy, which is 74km downstream of the proposed works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Harbour Seal, specifically with regards to the Attribute: Disturbance.

4.1.2 Summary of Potential Adverse Effects

In Section 2, it was established that one European site, namely the Slaney River Valley SAC, occurs within the likely zone of impact of the proposed works and that there are no pathways for effects between the proposed development and any other European sites.

In Table 4.2, it was established that, as a result of the proposed works, in the absence of appropriate mitigation, interruptions or delays in achieving certain Conservation Objectives cannot be ruled out. A summary of the Qualifying Interests and Attributes, where adverse effects could not be excluded is presented in Table 4.3 below.

Table 4.3 Summary of the Qualifying Interests and their respective attributes, where adverse effects could be excluded.

Qualifying Interest	Attribute
Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche Batrachion</i> vegetation [3260]	<ul style="list-style-type: none"> • Habitat Distribution • Habitat Area
[REDACTED]	<ul style="list-style-type: none"> [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
Atlantic salmon (<i>Salmo salar</i>) [1106]	<ul style="list-style-type: none"> • Salmon fry abundance • Out-migrating smolt abundance • Water quality
Otter (<i>Lutra lutra</i>) [1355]	<ul style="list-style-type: none"> • Fish biomass available

4.1.3 Mitigation- Principles and Approach

Section 4.0 of this NIS identified adverse effects likely to arise from the proposed works on the specific Attributes and Targets which define the Conservation Objectives for a number of Qualifying Interests of the Slaney River Valley SAC. This section prescribes measures aimed at mitigating these adverse effects, thereby protecting the integrity of the Slaney River Valley SAC during the proposed works.

The mitigation measures prescribed in this NIS have been designed according to the principle of a mitigation hierarchy, as outlined in the European Commission’s guidance document *Assessment of plans and projects significantly affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (EC, 2001). According to this hierarchy, the following mitigation approaches were adopted, in order of decreasing preference:

- (1) Avoiding impacts at their source;
- (2) Reducing impacts at their source;
- (3) Abating impacts on site; and,
- (4) Abating impacts at their receptor.

As mitigation measures are related directly to impacts and only indirectly to receptors and as, in this case, all of the affected receptors have been identified as being affected by the same set of impacts, to describe mitigation measures under the headings of the relevant receptors would lead to undue repetition. Therefore, the measures prescribed in this NIS are described under the impact of the single work item that the measures are intended to mitigate.

4.1.4 Mitigation

In order to avoid adverse effects on the integrity of the Slaney River Valley SAC as a result of the proposed works, the following mitigation measures will be implemented:

Removal of trees and debris from river at upstream side (10m²)

In order to remove the trees and debris, the contractor will use the following methods:

- In general, in-stream works are only be undertaken during the period beginning 1st July and ending 30th September, subject to agreement with Inland Fisheries Ireland (IFI). Minor works such as debris removal of this scale are not subject to this restricted period and can be undertaken at any time of year.
- The Contractor will be required to appoint an Ecologist (**'the Contractor's Ecologist'**); the following outline scope of works will allow the Contractor to provide a scope of works to TII for these professional services. The Contractor's Ecologist will be required to fulfil the following tasks:
 - Review of engineering & ecological documentation including method statements / ongoing liaison with Contractor / ROD / TII.
 - Preconstruction ecology visit.
 - The scope of the visit will be informed by the characteristics of the site (as set out in the NIS and subsequent correspondence) and will at a minimum include a check for Otter, nesting birds and invasive plant species.
 - The preconstruction survey must occur prior to the Contractor mobilising on site, but also as close to the mobilisation date as is practical. The Contractor's Ecologist will prepare a technical memo on the findings which will be provided to the Contractor and TII.
 - Presentation of Toolbox Talk to site staff prior to commencement of works on site.
 - The Contractor's Ecologist will be required to attend site during the removal of debris from the watercourse.
- If pieces of debris are small enough to be removed by hand, the contractor will enter the river on foot and remove the debris. Debris will be carried to the bank and disposed of at a suitable facility off site.
- Larger pieces of debris, such as tree trunks, will be cut into smaller pieces using a chainsaw and removed by hand. Alternatively, the debris can be removed using a machine based on the bridge deck or riverbank, where a bucket or sling can be used to remove the debris. The debris will not be rolled out of the river. Care will be taken to minimise disturbance of the riverbed.
- Where chainsaws are to be used in the river, only vegetable oil-based chainsaw lubricant will be used. Chainsaws will be fuelled, oiled and maintained at least 20m from the watercourse.
- No Floating River Vegetation will be removed. The Contractor's Ecologist will supervise the debris removal to ensure that access to the debris and the debris removal do not damage the Floating River Vegetation.

- No machines are permitted in the water.
- Branches lodged in the riverbed which cannot be removed by hand will be cut as low as possible but above the surface of the water, with the upper section removed by hand and the lower section left in the riverbed.
- All equipment, including PPE which comes into contact with the watercourse will be clean and will be disinfected before use on site and prior to leaving each site using Vikron Aquatic or similar. Equipment will be disinfected at least 20 m from the watercourse.
- A method statement will be produced by the Contractor and approved by the Employers Representative and the Contractor's Ecologist. The method statement will contain the following measures to protect water quality:
 - Plant is not permitted to enter the watercourse.
 - Stockpiling of materials and/or storage of fuels shall not be permitted at the site.
 - refuelling shall not be permitted within 50 m of the watercourse.
 - Spill kits shall be available on-site.

4.1.5 Assessment of in-combination effects

Introduction

Article 6(3) of the Habitats Directive requires that AA be carried out in respect of plans and projects that are likely to have significant effects on European sites, "*either individually or in combination with other plans or projects*". Therefore, regardless of whether or not the likely effects of a plan or project are significant when considered on their own, the significance of the combined effects of the plan or project under assessment and other plans or projects must also be evaluated.

Methodology

Plans and projects with potential for interactions with the additional works were considered for assessment. For the purposes of the assessment, small scale and domestic developments were not considered given the nature of the additional works and the fact that these developments would be subject to stringent planning controls.

The ePlanning website for Wicklow County Council as well as the EIA Portal were used to search for planning applications. The works at Whitestown Bridge were also considered.

Outcome

Considering the temporary nature and the scale of the works, it can be concluded that the works at Eldon Bridge will not lead to in-combination adverse effects.

4.1.6 Residual Impacts and Conclusion/ Recommendation

It is the considered opinion of ROD, as the author of this NIS, that, in making its AA in respect of the works proposed at Eldon Bridge [WW-N81-002.00], TII, as the Competent Authority in this case, can determine that, given the full and proper implementation of the mitigation prescribed in this NIS, the proposed works, either individually or in combination with other plans or projects, will not adversely affect the integrity of the Slaney River Valley SAC, in view of its Conservation Objectives, as defined by their Attributes and Targets, or any other European site.

4.2 Whitestown Bridge [WW-N81-007.00]

Whitestown Bridge is a single-span masonry arch bridge spanning the Carrigower River, a tributary of the River Slaney. The Carrigower River joins the River Slaney 1.8km downstream. The span is 5.4m in length. There is a small weir immediately downstream of the outlet. The bridge is located c. 7.5km northeast of Baltinglass, Co. Wicklow (ITM 690806.125 694907.234). It is within the Slaney River Valley SAC. Plate 4.2 shows the bridge outlet. The proposed works will take place during daylight hours and each work item is anticipated to last for a period of one day, although the work items may be phased over several days.



Plate 4.2

The following works are proposed at this structure:

- Sweep and clean the entire bridge surface (80m²).
- Clean rubbing strips (30m²).
- Repoint masonry at west wing and spandrel walls, and at east wing and spandrel walls (25m²).

The Water Framework Directive (WFD) ecological status 2013-2018 of the river at the location of the structure is rated as 'Good' (EPA, 2021). There is an EPA water quality sampling station at Whitestown Bridge, and a second 160m downstream. The most recent Q-values at these monitoring stations is 5 and 4 respectively, which correspond to a status of 'High' and 'Good'.

An ecological survey was undertaken at this site on 15th July 2021. The river channel is approximately 5m wide at the location of Whitestown Bridge, where it has been straightened and channelised. *Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion* was identified at the location of the

bridge, which was dominated by Water-crowfoot (*Ranunculus fluitantis*). The substrate at this site was mobile and unstable with fine sediment present. The land use in the area is agricultural and there is a narrow strip of riparian vegetation consisting of grasses and forbs. Cattle have access to the river at the northeast corner of the bridge.

No evidence of otter was recorded within 150m of the bridge. The Otter survey was based on the “*Guidelines for the treatment of Otters prior to Construction of National Road Schemes*” (NRA, 2008) and involved a systematic search of the riverbanks for physical evidence of Otter e.g. spraints, prints, slides, trails, couches and holts. The survey methodology was also cognisant of the recommendations in the “*Otter Threat Response Plan 2009-2011*” (NPWS, 2009) which recognises the importance of the riparian buffer (10 m on both banks) for Otter.

A Freshwater Pearl Mussel survey was carried out under NPWS licence (C135/2021) in July 2021 (Ecofact, 2021). The surveys undertaken using a bathyscope aided with a handheld diving light for sections of the survey under bridges. No Freshwater Pearl Mussel were recorded within 100m upstream or downstream of the bridge. [REDACTED]

The ecological surveys also included a bat suitability assessment, a survey for nesting birds and an invasive species survey. Although these surveys are not directly related to Appropriate Assessment in this case, the results are provided below for completeness.

A bat suitability assessment was conducted at the structure on the 15th July 2021. The bat suitability assessment was conducted adhering to best practise guidelines (TII/NRA, 2006; Collins (ed.), 2016) and involved visual assessment and categorisation of the bridge structure capable of supporting roosting bats. The assessment was carried out using recognised criteria outlined in Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins (ed.), 2016). While there were some small cracks and holes in the masonry of the bridge, the bridge is overall well maintained with recent patch repairs.

No nesting birds or invasive species were recorded within 30m of the bridge.

The work elements along with the potential for the works to have adverse effects is discussed in Table 4.4 below.

Table 4.4 Work elements and potential to have adverse effects.

Works element	Is there potential for adverse effects?
Sweep and clean bridge surface (80m ²).	No – this work will be undertaken on the bridge surface. There is no source or potential for adverse effects.
Clean rubbing strips (30m ²)	No – this work will be undertaken on the bridge surface. There is no source or potential for adverse effects.
Repoint masonry at west wing and spandrel walls and at east wing and spandrel walls (25m ²)	Yes - The use of wet mortar over the water has the potential to lead to adverse effects on aquatic life including Qualifying Interests of the SAC. Mitigation is required to reduce this risk of accidental introduction of mortar-based materials, sediment and other pollutants to the watercourse.

4.2.1 Assessment of Adverse Effects

A detailed assessment of the potential adverse effects that the proposed works could give rise to is provided in Table 4.5 below.

Table 4.5 Assessment of Adverse Effects on the Site-Specific Conservation Objectives, as defined by their Attributes and Targets of the Slaney River Valley SAC [000781] at Whitestown Bridge.

Qualifying Interest	Site Specific Conservation Objective as per NPWS (2011)	Attribute	Target	Potential Adverse Effect
Estuaries [1130]	<i>"To maintain the favourable conservation condition of Estuaries in the Slaney River Valley SAC"</i>	Habitat area	Permanent area stable or increasing, subject to natural processes	Estuaries occur c. 100km downstream of the proposed works in Wexford Harbour. Due to the nature and location of the proposed works in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Estuaries, specifically with regards to the Attribute: Habitat area.
		Community distribution	Maintained in or restore to a natural condition: Mixed sediment community complex; Estuarine muds dominated by polychaetes and crustaceans community complex; and, Sand dominated by polychaetes community complex	Estuaries occur c. 100km downstream of the proposed works in Wexford Harbour. Due to the nature, scale and location of the proposed works in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Estuaries, specifically with regards to the Attribute: Community distribution.
Mudflats and sandflats not covered by seawater at low tide [1140]	<i>"To maintain the favourable conservation condition of the Mudflats and sandflats not covered by seawater at low tide in the Slaney River Valley SAC"</i>	Habitat area	The permanent habitat area is stable or increasing, subject to natural processes.	Intertidal mudflats occur at least c. 100 km downstream of the proposed works. Due to the nature, scale and location of the proposed works in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Mudflats and sandflats not covered by seawater at low tide, specifically with regards to the Attribute: Habitat area.
		Community distribution	The following community types should be maintained in a natural condition: Estuarine muds dominated by polychaetes and crustaceans community complex; and Sand dominated by polychaetes community complex.	Intertidal mudflats occur c. 100 km downstream of the proposed works. Due to the nature, scale and location of the proposed works in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will have no adverse effect on the Conservation Objective for Mudflats and sandflats not covered by seawater at low tide, specifically with regards to the Attribute: Community distribution.
Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260]	<i>"To maintain the favourable conservation condition of Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation in the Slaney River Valley SAC"</i>	Habitat distribution	No decline, subject to natural processes	This habitat is present at the location of the bridge with dense areas of water-crowfoot (<i>Ranunculus fluitantis</i>) present. Aquatic vegetation is sensitive to physical damage, eutrophication, and sedimentation of the water column. The works could lead to an accidental pollution event involving the spillage of mortar and equipment including scaffolding into the watercourse. Therefore, adverse effects on the Conservation Objective for 3260, specifically with regards to the Attribute: Habitat distribution, cannot be excluded and mitigation measures are required.
		Habitat area	Area stable at 12.6 km or increasing, subject to natural processes	This habitat is present at the location of the bridge with dense areas of water-crowfoot (<i>Ranunculus fluitantis</i>) present. Aquatic vegetation is sensitive to physical damage, eutrophication, and sedimentation of the water column. The works could lead to an accidental pollution event involving the spillage of mortar and equipment including scaffolding into the watercourse. Therefore, adverse effects on the Conservation Objective for 3260, specifically with regards to the Attribute: Habitat area, cannot be excluded and mitigation measures are required.
		Hydrological regime: river flow	Maintain appropriate hydrological regimes	No in-stream are proposed, therefore the proposed works will not result in any change to the hydrological regime. Therefore, the proposed works will have no adverse effect on the Conservation Objective for 3260, specifically with regards to the Attribute: Hydrological regime: river flow.
		Hydrological regime: tidal influence	Maintain natural tidal regime	The tidal reaches of the River Slaney are c. 82 km downstream near Enniscorthy. Given the nature of the works, it can be concluded that there will be no adverse effect on the Conservation Objective for 3260, specifically with regards to the Attribute: Hydrological regime: tidal influence.
		Substratum composition: particle size range	For the tidal sub-type, the substratum of the channel must be dominated by particles of sand to gravel, with silt at the river margins	This target applies to the tidal subtype only. The tidal reaches of the River Slaney are c. 82 km downstream near Enniscorthy. Given the nature of the works, it can be concluded that there will be no adverse effect on the Conservation Objective for 3260, specifically with regards to the Attribute: Substratum composition: particle size range.
		Water quality: nutrients	The concentration of nutrients in the water column must be sufficiently low to prevent changes in species composition or habitat condition.	The works are temporary and will take place over a small area, therefore the proposed works will not result in any increase in the nutrient concentration in the water column. Therefore, the proposed works will have no adverse effect on the Conservation Objective for 3260, specifically with regards to the Attribute: Hydrological regime: river flow.
		Vegetation composition: typical species	Typical species of the relevant habitat sub-type reach favourable status	The works are temporary and will take place over a small area, therefore the proposed works will not result in any changes to the typical species found in the habitat subtype present at the bridge location. Therefore, the proposed works will have no adverse effect on the Conservation Objective for 3260, specifically with regards to the Attribute: Hydrological regime: river flow.
		Floodplain connectivity: area	The area of active floodplain at and upstream of the habitat must be maintained	No element of the works will lead to a reduction in the floodplain at or upstream of the works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for 3260, specifically with regards to the Attribute: Floodplain connectivity: area.

Qualifying Interest	Site Specific Conservation Objective as per NPWS (2011)	Attribute	Target	Potential Adverse Effect
Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]	<i>"To restore the favourable conservation condition of Old oak woodland with Ilex and Blechnum in the Slaney River Valley SAC"</i>	Habitat area	Area stable or increasing, subject to natural processes, at least 146.17ha for sub-sites surveyed.	The nearest record of Old sessile oak woods is located c. 40 km downstream of the proposed works. There is no hydrological connection between the works and this Qualifying Interest, which is terrestrial. Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Habitat area.
		Habitat distribution	No decline	Due to the nature, scale and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Habitat distribution.
		Woodland size	Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size	Due to the nature, scale and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Woodland size
		Woodland structure: cover and height	Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi- mature trees and shrubs; and well-developed herb layer	Due to the nature, scale and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Woodland structure: cover and height.
		Woodland structure: community diversity and extent	Maintain diversity and extent of community types	Due to the nature, scale and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Woodland structure: community diversity and extent.
		Woodland structure: natural regeneration	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy	Due to the nature, scale and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Woodland structure: natural regeneration.
		Woodland structure: dead wood	At least 30m ³ /ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter	Due to the nature, scale and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Woodland structure: dead wood.
		Woodland structure: veteran trees	No decline	Due to the nature, scale and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Woodland structure: veteran trees.
		Woodland structure: indicators of local distinctiveness	No decline	Due to the nature, scale and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Woodland structure: indicators of local distinctiveness.
		Vegetation composition: native tree cover	No decline. Native tree cover not less than 95%	Due to the nature, scale and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Vegetation composition: native tree cover.
		Vegetation composition: typical species	A variety of typical native species present, depending on woodland type, including oak (<i>Quercus petraea</i>) and birch (<i>Betula pubescens</i>)	Due to the nature, scale and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Vegetation composition: typical species.
		Vegetation composition: negative indicator species	Negative indicator species, particularly non-native invasive species, absent or under control	Due to the nature, scale and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Old sessile oak woods, specifically with regards to the Attribute: Vegetation composition: negative indicator species.
*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]	<i>"To restore the favourable conservation condition of Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) in the Slaney River Valley SAC"</i>	Habitat area	Stable or increasing, subject to natural processes	The nearest record of Alluvial forests is located approximately 33.2 km downstream of the proposed works (NPWS, 2011a). Due to the nature and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Alluvial forests, specifically with regards to the Attribute: Habitat area.
		Habitat distribution	No decline	Due to the nature, scale and location of the proposed works and their location in relation to this Qualifying Interest, and the assimilative capacity of the River Slaney system, it can be concluded that the proposed works will not have an adverse effect on the Conservation Objective for Alluvial forests, specifically with regards to the Attribute: Habitat distribution

Qualifying Interest	Site Specific Conservation Objective as per NPWS (2011)	Attribute	Target	Potential Adverse Effect
Brook lamprey (<i>Lampetra planeri</i>) [1096]	<i>"To restore the favourable conservation condition of Brook lamprey in the Slaney River Valley SAC"</i>	Distribution	Access to all water courses down to 1 st order streams	Brook Lamprey are considered present at the location of the works. The works will not involve any temporary or permanent in-stream structures. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Brook Lamprey, specifically with regards to the Attribute: Distribution: extent of anadromy.
		Population structure of juveniles	At least 3 age/size groups present	The habitats at the bridge location are considered suitable for juvenile lamprey, with fine sediment present. The works could lead to an accidental pollution event involving the spillage of mortar and equipment including scaffolding into the watercourse. Therefore, adverse effects on the Conservation Objective for Brook Lamprey, specifically with regards to the Attribute: Population structure of juveniles, cannot be excluded and mitigation measures are required.
		Juvenile density in fine sediment	Mean catchment juvenile density of brook/river lamprey at least 2 m ⁻²	The habitats at the bridge location are considered suitable for juvenile lamprey, with fine sediment present. The works could lead to an accidental pollution event involving the spillage of mortar and equipment including scaffolding into the watercourse. Therefore, adverse effects on the Conservation Objective for Brook Lamprey, specifically with regards to the Attribute: Juvenile density in fine sediment, cannot be excluded and mitigation measures are required.
		Extent and distribution of spawning habitat	No decline in extent and distribution of spawning beds	The are no in-stream works proposed. Therefore, there are no sources for effects that could lead to a decline in extent and distribution of spawning habitat. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Brook Lamprey, specifically with regards to the Attribute: Extent and distribution of spawning habitat.
		Availability of juvenile habitat	More than 50% of sites sampled in 2 nd order (or greater) channels downstream of spawning sites positive for juvenile habitat	The are no in-stream works proposed. Therefore, there are no sources for effects that could lead to a decline in availability of juvenile habitat. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Brook Lamprey, specifically with regards to the Attribute: Availability of juvenile habitat.
River lamprey (<i>Lampetra fluviatilis</i>) [1099]	<i>"To restore the favourable conservation condition of River lamprey in the Slaney River Valley SAC"</i>	Distribution: extent of anadromy	Greater than 75% of main stem length of rivers accessible from estuary	River Lamprey are considered present at the location of the works. The works will not involve any temporary or permanent in-stream structures. Therefore, the proposed works will have no adverse effect on the Conservation Objective for River Lamprey, specifically with regards to the Attribute: Distribution: extent of anadromy.
		Population structure of juveniles	At least 3 age/size groups present	The habitats at the bridge location are considered suitable for juvenile lamprey, with fine sediment present. The works could lead to an accidental pollution event involving the spillage of mortar and equipment including scaffolding into the watercourse. Therefore, adverse effects on the Conservation Objective for River Lamprey, specifically with regards to the Attribute: Population structure of juveniles, cannot be excluded and mitigation measures are required.
		Juvenile density in fine sediment	Mean catchment juvenile density of brook/river lamprey at least 2 m ⁻²	The habitats at the bridge location are considered suitable for juvenile lamprey, with fine sediment present. The works could lead to an accidental pollution event involving the spillage of mortar and equipment including scaffolding into the watercourse. Therefore, adverse effects on the Conservation Objective for River Lamprey, specifically with regards to the Attribute: Juvenile density in fine sediment, cannot be excluded and mitigation measures are required.
		Extent and distribution of spawning habitat	No decline in extent and distribution of spawning beds	The are no in-stream works proposed. Therefore, there are no sources for effects that could lead to a decline in extent and distribution of spawning habitat. Therefore, the proposed works will have no adverse effect on the Conservation Objective for River Lamprey, specifically with regards to the Attribute: Extent and distribution of spawning habitat.
		Availability of juvenile habitat	More than 50% of sites sampled in 2 nd order (or greater) channels downstream of spawning sites positive for juvenile habitat.	The are no in-stream works proposed. Therefore, there are no sources for effects that could lead to a decline in availability of juvenile habitat. Therefore, the proposed works will have no adverse effect on the Conservation Objective for River Lamprey, specifically with regards to the Attribute: Availability of juvenile habitat.
Atlantic salmon (<i>Salmo salar</i>) [1106]	<i>"To restore the favourable conservation condition of Salmon in the Slaney River Valley SAC"</i>	Distribution: extent of anadromy	100% of river channels down to 2 nd order accessible from estuary	Atlantic Salmon are considered present at the location of the works. The works will not involve any temporary or permanent in-stream structures. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Atlantic Salmon, specifically with regards to the Attribute: Distribution: extent of anadromy.
		Adult spawning fish	Conservation Limit for each system consistently exceeded	The works will not involve any temporary or permanent in-stream structures. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Atlantic Salmon, specifically with regards to the Attribute: Adult spawning fish.
		Salmon fry abundance	Maintain or exceed mean catchment-wide 0+ fry abundance threshold (currently 17 fry per 5-min sample)	The works could lead to an accidental pollution event involving the spillage of mortar and equipment including scaffolding into the watercourse. Therefore, adverse effects on the Conservation Objective for Atlantic Salmon, specifically with regards to the Attribute: Salmon fry abundance, cannot be excluded and mitigation measures are required.
		Out-migrating smolt abundance	No significant decline	The works could lead to an accidental pollution event involving the spillage of mortar and equipment including scaffolding into the watercourse. Therefore, adverse effects on the Conservation Objective for Atlantic Salmon, specifically with regards to the Attribute: Out-migrating smolt abundance, cannot be excluded and mitigation measures are required.
		Number and distribution of redds	No decline in number and distribution of spawning redds due to anthropogenic causes	The are no in-stream works proposed. Therefore, there are no sources for effects that could lead to a decline in the number or distribution of redds. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Atlantic Salmon, specifically with regards to the Attribute: Number and distribution of redds.
		Water quality	At least Q4 at all sites sampled by EPA	The works could lead to an accidental pollution event involving the spillage of mortar and equipment including scaffolding into the watercourse. Therefore, adverse effects on the Conservation Objective for Atlantic Salmon, specifically with regards to the Attribute: Water quality, cannot be excluded and mitigation measures are required.

Qualifying Interest	Site Specific Conservation Objective as per NPWS (2011)	Attribute	Target	Potential Adverse Effect
Twaite shad (<i>Alosa fallax</i>) [1103]	<i>"To restore the favourable conservation condition of Twaite shad in the Slaney River Valley SAC"</i>	Distribution: extent of anadromy	Greater than 75% of main stem length of rivers accessible from estuary	The natural range of Twaite Shad only extends to the tidal limit within the River Slaney, near Enniscorthy. Therefore, the closest possible point that this species is found to the proposed works is 80 km downstream of the proposed works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Twaite Shad, specifically with regards to the Attribute: Distribution: extent of anadromy.
		Population structure- age classes	More than one age class present	The natural range of Twaite Shad only extends to the tidal limit within the River Slaney, near Enniscorthy. Therefore, the closest possible point that this species is found to the proposed works is 80 km downstream of the proposed works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Twaite Shad, specifically with regards to the Attribute: Population structure- age class.
		Extent and distribution of spawning habitat	No decline in extent and distribution of spawning habitats	The spawning range of Twaite Shad occurs at the upper tidal reaches of the River Slaney, as far as Enniscorthy. Therefore, the closest possible point that spawning habitat is found to the proposed works is 80 km downstream of the proposed works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Twaite Shad, specifically with regards to the Attribute: Extent and distribution of spawning habitat.
		Water quality- oxygen levels	No lower than 5mg/l	The natural range of Twaite Shad only extends to the tidal limit within the River Slaney, near Enniscorthy. Therefore, the closest possible point that this species is found to the proposed works is 80 km downstream of the proposed works. The works do not provide for any measurable change in oxygen levels at the site of the proposed works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Twaite Shad, specifically with regards to the Attribute: Water quality- oxygen levels.
		Spawning habitat quality: Filamentous algae; macrophytes; sediment	Maintain stable gravel substrate with very little fine material, free of filamentous algal (macroalgae) growth and macrophyte (rooted higher plants) growth	The spawning range of Twaite Shad occurs at the upper tidal reaches of the River Slaney, as far as Enniscorthy. Therefore, the closest possible point that spawning habitat is found to the proposed works is 80 km downstream of the proposed works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Twaite Shad, specifically with regards to the Attribute: Spawning habitat quality: Filamentous algae; macrophytes; sediment.
Otter (<i>Lutra lutra</i>) [1355]	<i>"To restore the favourable conservation condition of Otter in the Slaney River Valley SAC"</i>	Distribution	No significant decline	No evidence of Otter was recorded during the survey in July 2021. However, the species is widespread in Ireland and is considered present at the location of the proposed works. The proposed works will occur during daylight hours only for a period of one day (although the work elements may be phased over several days) and there are no in-stream works or alterations to the banks proposed. The remainder of the work items will occur on the road verge or on the bridge deck. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Otter, specifically with regards to the Attribute: Distribution.
		Extent of terrestrial habitat	No significant decline	The proposed works will not reduce the available terrestrial habitat for Otter within or outside the SAC. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Otter, specifically with regards to the Attribute: Extent of terrestrial habitat.
		Extent of freshwater (river) habitat	No significant decline	The proposed works will not reduce the available freshwater (river) habitat for Otter within or outside the SAC. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Otter, specifically with regards to the Attribute: Extent of freshwater (river) habitat.
		Extent of freshwater (lake/ lagoon) habitat	No significant decline	The proposed works will not reduce the available freshwater (lake/ lagoon) habitat for Otter within or outside the SAC. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Otter, specifically with regards to the Attribute: Extent of freshwater (lake/lagoon) habitat.
		Couching sites and holts	No significant decline	An Otter survey was carried out in July 2021, 150m upstream and downstream of Eldon Bridge. No evidence of Otter was recorded, including couching sites or holts. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Otter, specifically with regards to the Attribute: Couching sites and holts.
		Fish biomass available	No significant decline	The works could lead to an accidental pollution event involving the spillage of mortar and equipment including scaffolding into the watercourse. Therefore, adverse effects on the Conservation Objective for Otter, specifically with regards to the Attribute: Fish biomass available, cannot be excluded and mitigation measures are required.
		Barriers to connectivity	No significant increase	No evidence of Otter was recorded during the survey in July 2021. However, the species is widespread in Ireland and is considered present at the location of the proposed works. The proposed works will occur during daylight hours only for a period of one day (although the work elements may be phased over several days). The works do not involve the construction of any permanent structure within or over the watercourse, including a 10m terrestrial buffer. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Otter, specifically with regards to the Attribute: Barriers to connectivity.
Harbour Seal (<i>Phoca vitulina</i>) [1365]	<i>"To maintain the favourable conservation condition of Harbour Seal in the Slaney River Valley SAC"</i>	Access to suitable habitat	Species range within the site should not be restricted by artificial barriers to site use.	Whitestown Bridge is not within the range of Harbour Seal, which is upstream along the River Slaney as far as Enniscorthy, which is 80km downstream of the proposed works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Harbour Seal, specifically with regards to the Attribute: Access to suitable habitat.
		Breeding behaviour	The breeding sites should be maintained in a natural condition.	The breeding sites for Harbour Seal within the SAC are on the sand banks in Wexford Harbour, c. 100km downstream. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Harbour Seal, specifically with regards to the Attribute: Breeding behaviour.

Qualifying Interest	Site Specific Conservation Objective as per NPWS (2011)	Attribute	Target	Potential Adverse Effect
		Moulting behaviour	The moult haul-out sites should be maintained in a natural condition.	The moulting sites for Harbour Seal within the SAC are on the sand banks in Wexford Harbour, c. 100km downstream. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Harbour Seal, specifically with regards to the Attribute: Moulting behaviour.
		Resting behaviour	The resting haul-out sites should be maintained in a natural condition.	The resting sites for Harbour Seal within the SAC are on the sand banks in Wexford Harbour, c. 100km downstream. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Harbour Seal, specifically with regards to the Attribute: Resting behaviour.
		Disturbance	Human activities should occur at levels that do not adversely affect the harbour seal population	Whitestown Bridge is not within the range of Harbour Seal, which is upstream along the River Slaney as far as Enniscorthy, which is 80km downstream of the proposed works. Therefore, the proposed works will have no adverse effect on the Conservation Objective for Harbour Seal, specifically with regards to the Attribute: Disturbance.

4.2.2 Summary of Potential Adverse Effects

In Section 2, it was established that one European site, namely the Slaney River Valley SAC, occurs within the likely zone of impact of the proposed works and that there are no pathways for effects between the proposed development and any other European sites.

In Table 4.5, it was established that, as a result of the proposed works, in the absence of appropriate mitigation, interruptions or delays in achieving certain Conservation Objectives cannot be ruled out. A summary of the Qualifying Interests and Attributes, where adverse effects could not be excluded is presented in Table 4.6 below.

Table 4.6 Summary of the Qualifying Interests and their respective attributes, where adverse effects could be excluded.

Qualifying Interest	Attribute
Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche Batrachion</i> vegetation [3260]	<ul style="list-style-type: none"> Habitat Distribution Habitat Area
[REDACTED]	<ul style="list-style-type: none"> [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
Sea Lamprey [1095]	<ul style="list-style-type: none"> Population structure of juveniles Juvenile density in fine sediment
Brook Lamprey [1096]	<ul style="list-style-type: none"> Population structure of juveniles Juvenile density in fine sediment
River Lamprey [1099]	<ul style="list-style-type: none"> Population structure of juveniles Juvenile density in fine sediment
Atlantic salmon (<i>Salmo salar</i>) [1106]	<ul style="list-style-type: none"> Salmon fry abundance Out-migrating smolt abundance Water quality
Otter (<i>Lutra lutra</i>) [1355]	<ul style="list-style-type: none"> Fish biomass available

4.2.3 Mitigation- Principles and Approach

Section 4.0 of this NIS identified adverse effects likely to arise from the proposed works on the specific Attributes and Targets which define the Conservation Objectives for a number of Qualifying Interests of the Slaney River Valley SAC. This section prescribes measures aimed at mitigating these adverse effects, thereby protecting the integrity of the Slaney River Valley SAC during the proposed works.

The mitigation measures prescribed in this NIS have been designed according to the principle of a mitigation hierarchy, as outlined in the European Commission’s guidance document *Assessment of plans and projects significantly affecting Natura 2000 Sites:*

Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2001). According to this hierarchy, the following mitigation approaches were adopted, in order of decreasing preference:

- (1) Avoiding impacts at their source;
- (2) Reducing impacts at their source;
- (3) Abating impacts on site; and,
- (4) Abating impacts at their receptor.

As mitigation measures are related directly to impacts and only indirectly to receptors and as, in this case, all of the affected receptors have been identified as being affected by the same set of impacts, to describe mitigation measures under the headings of the relevant receptors would lead to undue repetition. Therefore, the measures prescribed in this NIS are described under the potential adverse effects of the single work item that the measures are intended to mitigate.

4.2.4 Mitigation Measures

In order to avoid adverse effects on the integrity of the Slaney River Valley SAC as a result of the proposed works, the following mitigation measures will be implemented:

Masonry Repointing

- The Contractor will be required to appoint an Ecologist (**'the Contractor's Ecologist'**); the following outline scope of works will allow the Contractor to provide a scope of works to TII for these professional services. The Contractor's Ecologist will be required to fulfil the following tasks:
 - Review of engineering & ecological documentation including method statements / ongoing liaison with Contractor / ROD / TII.
 - Preconstruction ecology visit.
 - The scope of the visit will be informed by the characteristics of the site (as set out in the NIS and subsequent correspondence) and will at a minimum include a check for Otter, nesting birds and invasive plant species.
 - The preconstruction survey must occur prior to the Contractor mobilising on site, but also as close to the mobilisation date as is practical. The Contractor's Ecologist will prepare a technical memo on the findings which will be provided to the Contractor and TII.
 - Presentation of Toolbox Talk to site staff prior to commencement of works on site.
 - The Contractor's Ecologist will be required to attend site during the installation of the catch nets, and during the mobilisation of any 'in-stream' elements.
- Legislation related to herbicide use is summarised in Section 3.4.1 of this NIS. The Contractor will be responsible for ensuring that the use of herbicides complies with the legislation. The Contractor is required to demonstrate that herbicide is required and that there are no other viable options. In this case, the Contractor will prepare a Risk Assessment and Method Statement for the use of herbicide. These documents will be approved by the Employer's Representative.
- Repointing will be undertaken on foot, from a ladder, using scaffolding or using a bridge inspection unit. For repointing over water, the work will be carried out from a scaffold unit spanning the watercourse or from a bridge inspection unit.

- A catch net will be placed flush with the bridge to catch any spilled mortar. The catch net will be made of Visqueen heavy duty plastic sheeting or similar, with enough to cover the entire area underneath the works.
- The effectiveness of the catch net will be approved by the Employer's Representative and the Contractor's Ecologist.
- Scaffolding will be erected by persons trained to do so. The Contractor will demonstrate competency to the satisfaction of the Employer's Representative.
- Repointing will take place in dry weather and will not take place if rain is forecast in the following 12 hours. The commencement of the works will be approved by the Employer's Representative.
- Mortar will be mixed in a watertight container at least 20m from the watercourse.
- Only one bucket of wet mortar will be brought to the work site at any time by each person carrying out the repointing.
- No machinery is permitted in the water.
- All equipment including PPE which comes into contact with watercourses will be clean and will be disinfected prior to arrival and before leaving site each day using Virkon Aquatic or similar. Equipment will be disinfected at least 20m from the watercourse.
- A method statement will be produced by the Contractor and approved by the Employers Representative and the Contractor's Ecologist. The method statement will contain the following measures to protect water quality:
 - Mortar-based material will not be allowed to enter the watercourse.
 - Plant is not permitted to enter the watercourse.
 - Stockpiling of materials and/or storage of fuels shall not be permitted at the site.
 - Refuelling shall not be permitted within 50 m of the watercourse.
 - Spill kits shall be available on-site.

4.2.5 Assessment of in-combination effects

Introduction

Article 6(3) of the Habitats Directive requires that AA be carried out in respect of plans and projects that are likely to have significant effects on European sites, "*either individually or in combination with other plans or projects*". Therefore, regardless of whether or not the likely effects of a plan or project are significant when considered on their own, the significance of the combined effects of the plan or project under assessment and other plans or projects must also be evaluated.

Methodology

Plans and projects with potential for interactions with the additional works were considered for assessment. For the purposes of the assessment, small scale and domestic developments were not considered given the nature of the additional works and the fact that these developments would be subject to stringent planning controls.

The ePlanning website for Wicklow County Council as well as the EIA Portal were used to search for planning applications. The works at Eldon Bridge were also considered.

Outcome

Considering the temporary nature and the scale of the works, it can be concluded that the works at Whitestown Bridge will not lead to in-combination adverse effects.

4.2.6 Residual impacts and conclusion/recommendation

It is the considered opinion of ROD, as the author of this NIS, that, in making its AA in respect of the works proposed at Whitestown Bridge [WW-N81-007.00], Transport Infrastructure Ireland, as the Competent Authority in this case, can determine that, given the full and proper implementation of the mitigation prescribed in this NIS, the proposed works, either individually or in combination with other plans or projects, will not adversely affect the integrity of the Slaney River Valley SAC in view of its Conservation Objectives, as defined by their Attributes and Targets, or any other European site.

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