Sea Defences Work (Translink) Section 19C - Habitat Regulations Assessment

Draft Report

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This report describes work commissioned by Amey Consulting. Jonathan Harrison and Hannah Webster of JBA Consulting carried out this work.

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Abbreviations

CIEEM	Chartered Institute of Ecology and Environmental Management
HRA	Habitat Regulations Assessment
INNS	Invasive Non-Native Species
OSGR	Ordnance Survey Grid Reference
JNCC	Joint Nature Conservation Committee
SAC	Special Area of Conservation
SPA	Special Protection Area

1 Introduction

1.1 Background

JBA Consulting has been commissioned to undertake Habitat Regulations Assessments (HRA's) to inform remedial works for coastal assets in Northern Ireland, by Amey Consulting (Amey) on behalf of Translink. This HRA covers the remedial works at Section 19C of the defence along the ELR-010 (Engineer's Line Reference) Coleraine to Derry line.

Due to the potential impacts the proposed works could have upon the interest features of the River Faughan and Tributaries Special Area of Conservation (SAC) and the Lough Foyle Special Protection Area (SPA) and Ramsar, a HRA is required to be undertaken by the competent authority(s), prior to the consenting of works.

This report provides information to support a HRA Screening and Appropriate Assessment for the proposed works. It is intended to identify, describe and assess impact pathways that could result in likely significant effects on European designated sites (i.e. SACs and SPAs) and Ramsar sites, followed by a more detailed assessment of the potential impacts of the work on site integrity, and the avoidance/mitigation measures required to ensure no adverse impact on site integrity.

1.2 Legislative Context

The Conservation of Habitats and Species Regulations 2017 (as amended by the Conservation of Habitats and Species (amendment) (EU Exit) Regulations 2019), also known as the 'Habitats Regulations', provide legal protection to habitats and species of national importance. The regulations also secure an ecological network of protected sites, consisting of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). Government guidance also requires that Ramsar sites (which support internationally important wetland habitats and are listed under the Convention on Wetlands of International Importance) are given the same level of protection as SACs and SPAs.

Prior to the UK's withdrawal from the EU, SACs were designated and protected under domestic legislation transposed from European Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive), and SPAs under European Directive 2009/147/EC on the Conservation of Wild Birds (Birds Directive). Together these sites formed a European-wide Natura 2000 network of protected sites. Since 31 December 2020, SACs and SPAs within the UK no longer fall within the Natura 2000 network, and instead form a National Site Network. SPAs and SACs continue to be referred to collectively as 'European sites' within the context of the Habitats Regulations, reflecting their international importance for the conservation of biodiversity.

SACs and SPAs within the National Site Network are also still designated for habitats listed on Annex I and for species listed on Annex II of the Habitats Directive, and criteria listed under the Birds Directive, and it is these Annex I habitats, Annex II species and Birds Directive Criteria against which assessments under the Habitats Regulations are still made.

Regulation 63 of the Habitats Regulations states that “A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which (a) is likely to have a significant effect on a European Site or a European offshore marine site (either alone or in-combination with other plans or projects), and (b) is not directly connected with or necessary to the management of that site, must make an appropriate assessment of the implications of the plan or project for that site in view of that site’s conservation objectives.” This process is commonly referred to as Habitats Regulations Assessment (HRA)

2 Habitats Regulation Assessment Methods

2.1 Overview

Habitat Regulations Assessment follows a four-stage process as outlined in the Habitats Regulations Assessment Handbook (DTA, 2019) and summarised in Table 2-1 below. This report provides evidence to support Stage 1 and Stage 2 of the HRA process, to provide the Competent Authority(s) with information to make their assessment.

Table 2-1. The HRA Process

HRA Stage	Description
Stage 1: Screening	This process identifies the likely significant effects upon a European site of a project or plan, either alone or incombination with other projects or plans and determines whether these impacts are likely to be significant. Following the recent ECJ judgement in the case of *People over Wind & Sweetman v Coillte Teoranta* (Case C-323/17) measures that are necessary to avoid or reduce impacts on the European site can only be at Stage 2. If no likely significant effect is determined, the project or plan can proceed. If a likely significant effect is identified, stage 2 is commenced.
Stage 2: Appropriate Assessment	Stage 2 is subsequent to the identification of likely significant effects upon a European site in stage 1. This assessment determines whether a project or plan would have an adverse impact on the integrity of a European site, either alone or incombination with other projects or plans. This assessment is confined to the effects on the internationally important habitats and species for which the site is designated (i.e. the interest features of the site). Appropriate Assessments, in line with ECJ Case C-461/17 *Holohan v An Bord Pleanála*, must also consider impacts upon habitats and species within or outside of a site boundary if they support a qualifying feature and could impact upon the conservation objectives of the site. If no adverse impact is determined, the project or plan can proceed. If an adverse impact is identified, stage 3 is commenced.
Stage 3: Assessment where no alternatives and adverse impacts remain	Where a plan or project has been found to have adverse impacts on the integrity of a European site, potential avoidance/mitigation measures or alternative options should be identified. If suitable avoidance/mitigation or alternative options are identified, that result in there being no adverse impacts from the project or plan on European sites,

HRA Stage	Description
	the project or plan can proceed. If no suitable avoidance/mitigation or alternative options are identified, as a rule the project or plan should not proceed. However, in exceptional circumstances, if there is an 'imperative reason of overriding public interest' for the implementation of the project or plan, consideration can be given to proceeding in the absence of alternative solutions. In these cases, compensatory measures will have to be put in place to offset any negative impacts.
Stage 4: Compensatory measures	Stage 4 comprises an assessment of the compensatory measures where, in light of an assessment of imperative reasons of overriding public interest, it is deemed that the project should proceed.

2.2 The Precautionary Principle

If there is uncertainty, and it is not possible, based on the information available, to confidently determine no significant effects on a site then the precautionary principle will be applied, and the plan will be subject to an appropriate assessment (HRA Stage 2).

2.3 Guidance

The methodology used for this assessment is based on guidance in The Habitats Regulations Assessment Handbook (DTA, 2019). In addition, the following guidance documents were also consulted:

- European Commission Notice: Managing Natura 2000 sites. The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018)
- UK Government Guidance on the Use of Habitats Regulations Assessment (UK Government, 2019).

2.4 Assumptions and Limitations

Information on the works and conditions on site are based on current knowledge at the time of writing. Cumulative impacts are based on published documentation. If other projects with the potential for cumulative impacts are identified, it may be necessary to re-assess this project.

3 Description of the Project

3.1 Project Overview

JBA Consulting has been commissioned to undertake Habitat Regulations Assessments (HRA's) to inform remedial works for coastal assets in Northern Ireland, by Amey Consulting (Amey) on behalf of Translink. This HRA covers the remedial works at Section 19C of the defence along the ELR-010 (Engineer's Line Reference) Coleraine to Derry line at Foyle Bridge at Rosses Bay (of which Chainage 915-930 requires remedial works as well as like for like remedial repairs at Chainage 343, 357, 500-515, 640-645, 865, 880-920 and 900-930).

The scheme seeks to achieve the following objectives:

- Repair, remediate or replace sea defence structures based on the 2017 AECOM report to maintain assets at a steady state condition;
- Eliminate the risk to passengers and Northern Ireland Railways (NIR) staff by ensuring structures are of structurally sound condition; and
- Reduce the risk of implementing Temporary Speed Restrictions (TSR) imposed due to an existing or deteriorating sea defence condition.

3.2 Site Location

Section 19C is located at Foyle Bridge at Rosses Bay, Londonderry (Central grid reference NV 62003 81168) and extends for 1,165m along the ELR-010 Coleraine to Derry. Currently, the section consists of a 1 in 2.5 gradient sloped open jointed stone revetment, above which a stone ballast retaining wall or grassed embankment extends to track level.

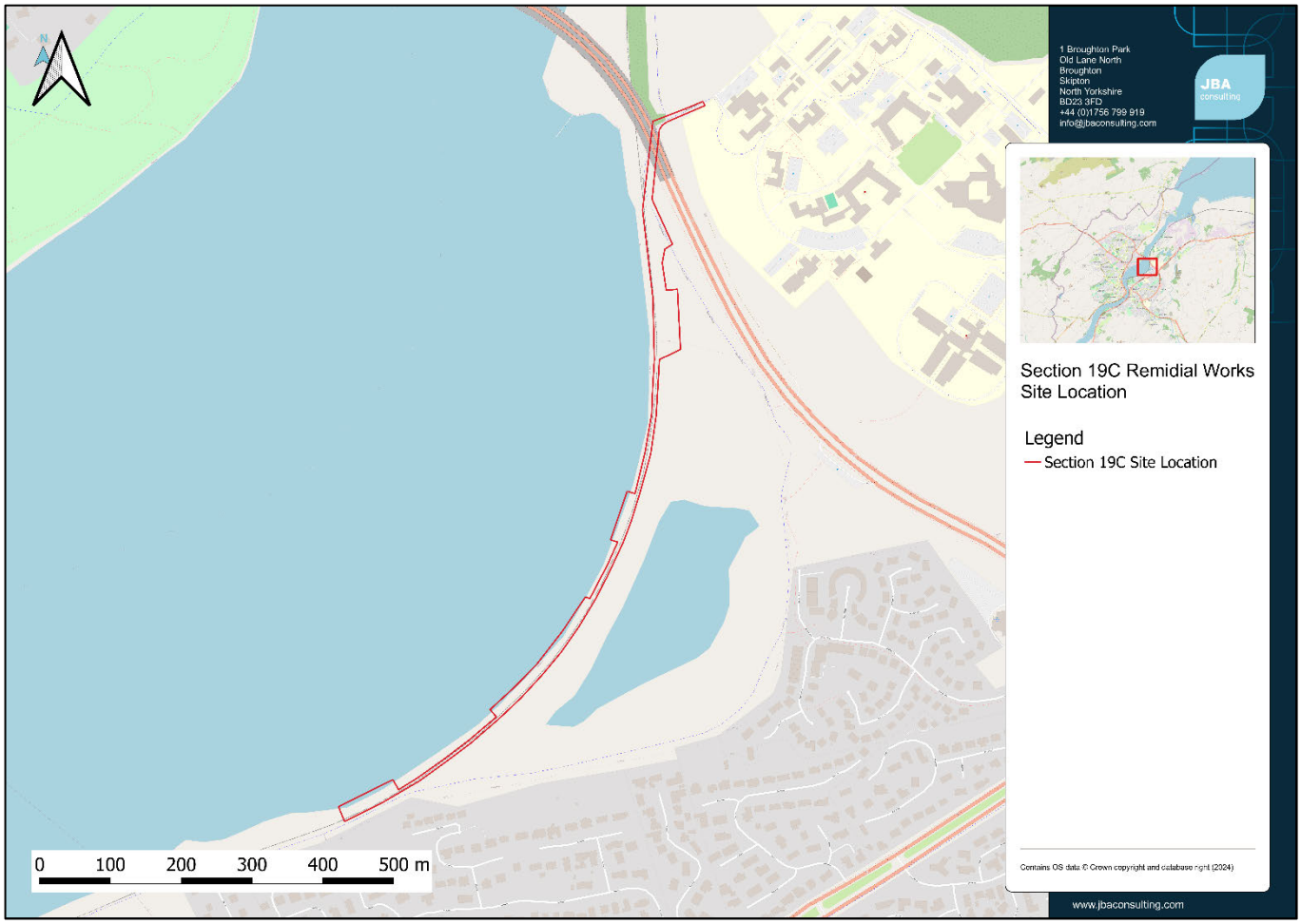

Figure 3-1. Site 19C Location

3.3 Proposed Works

Section 19C was last inspected in January 2017 by AECOM where it was identified that 30m of the existing revetment requires new rock rip-rap, 75m of the stone revetment requires infilling and re-grouting, and ballast stone retention measures are required along a 30m length of track.

The existing stone revetment at Ch 915-9301 has been undermined. This is due to flow velocities during high tidal water levels scouring the toe of the revetment and displacing stone blocks. The existing rock revetment either side of the culvert structure at Ch 9301 has been displaced and scoured away due to flow velocities at high tidal water levels. The existing stone pitched revetment at Ch 343, 357, 500-515, 640-645, 865, 880 and 920 has experienced displacement of capping stones and loss of grout from joints as a result of flow velocities acting on the structure during high tidal water levels. The existing track at Ch. 900-930 has insufficient ballast retention measures. The defects above present a risk of overall slope instability along the existing revetment and material washout which could result in serious structural damage and collapse if defence enhancement works are not undertaken in the medium to long term.

To protect against the risks of tidal and fluvial erosion, AECOM recommended that remedial repairs should consist of approximately 15m of additional rock rip-rap at Chainage 915-9301 and either side of the culvert at Chainage 9301, infilling of recesses/voids at Chainages 343, 357, 500-515, 640-645, 865 and 8801, and ballast retention measures at Chainage 900-9301.

3.3.1 Anticipated Works Methodology

The following anticipated sequence of construction has been considered for the rock revetment design:

1) Mobilise to site, establish site compound, site boundaries, material stockpile areas and temporary access haul routes.

Note: Possible temporary works required for access haul route from railway track to revetment toe based on specific site characteristics (i.e. earth or rock slope through re-grading or use of existing/imported rock).

2) Import new primary layer rock. This is likely to be via either road or by rail.

3) Re-establish a consistent profile of the existing embankment face to act as a suitable formation for the new rock armour. Excavation into the face of the existing embankment will be minimised. Surface vegetation will be removed. Displaced existing revetment stone will be removed. Notable undulations in the existing surface of the embankment will be filled with engineered fill. Naturally accreted material at the toe of the embankment will be removed. Material will be excavated at the toe of the existing embankment, as a continuation of the existing embankment profile, in preparation for the new rock revetment toe.

4) Place geotextile along this new profile.

5) Place new stockpiled rock armour in a double-interlocking primary rock layer as per design.

Note: Appointed Contractor to assess opportunities for placement of upper rock sections from railway track level to enable high tide working and efficient sequencing of works.

6) Plant access will either from the rail line, foreshore, or a combination of the two.

7) The rock revetment will be constructed from the toe, working up the slope.

8) Repeat steps 4 to 6 along full extent of defence section, including tie-ins with existing adjacent defences.

9) De-mobilise from site.

It should be noted that this is a high-level anticipated construction methodology only and subject to change as the scheme develops.

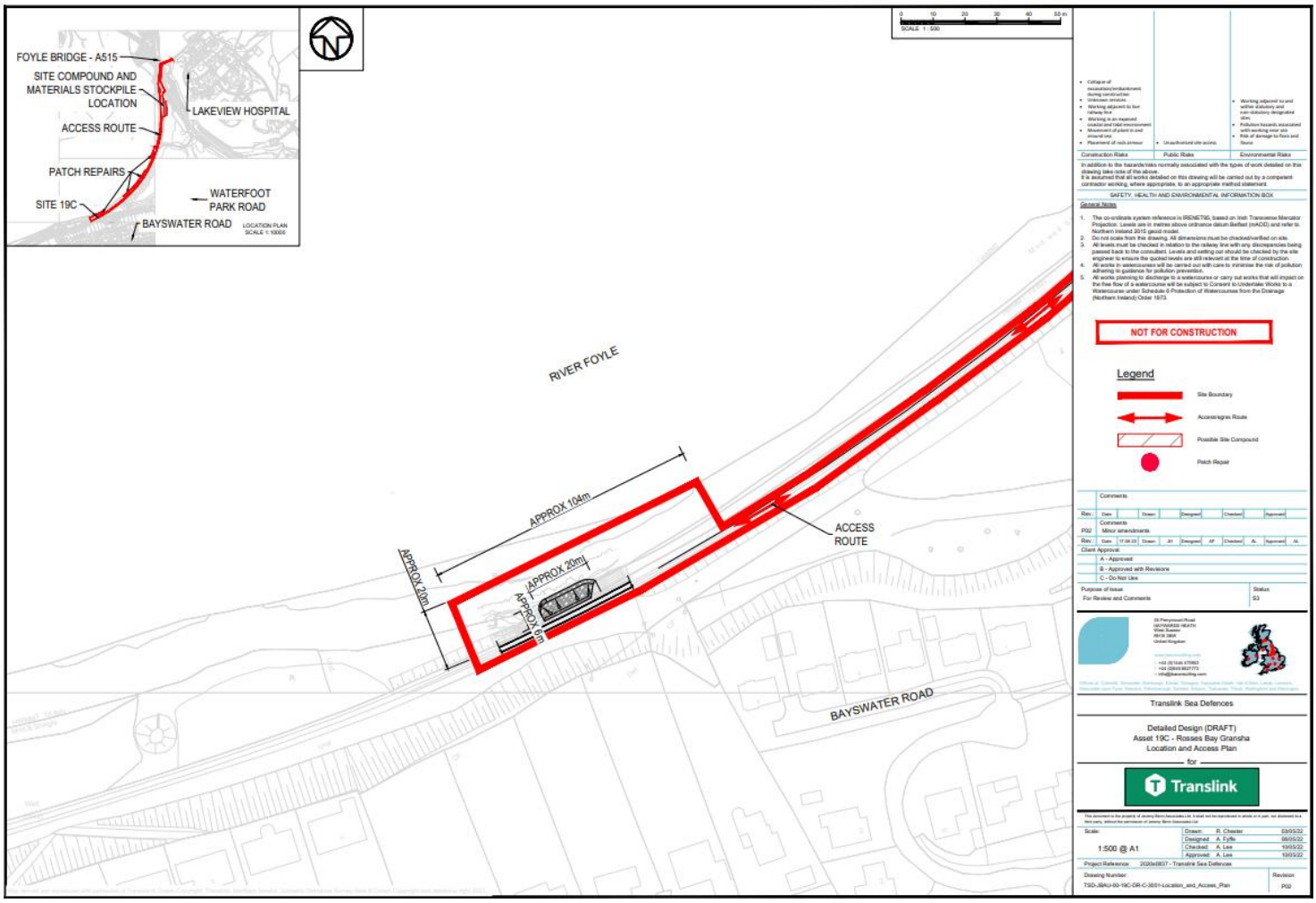

Figure 3-2. Location and Proposed Access Route for Section 19C

4 European Sites

4.1 Project Area of Influence and European Sites

The proposed scheme is located approximately 1.8km west of the River Faughan and Tributaries Special Area of Conservation (SAC). The Lough Foyle Special Protection Area (SPA) and Ramsar site are approximately 3.3km northeast of the proposed works (see Figures 4-1 and 4-2 below).

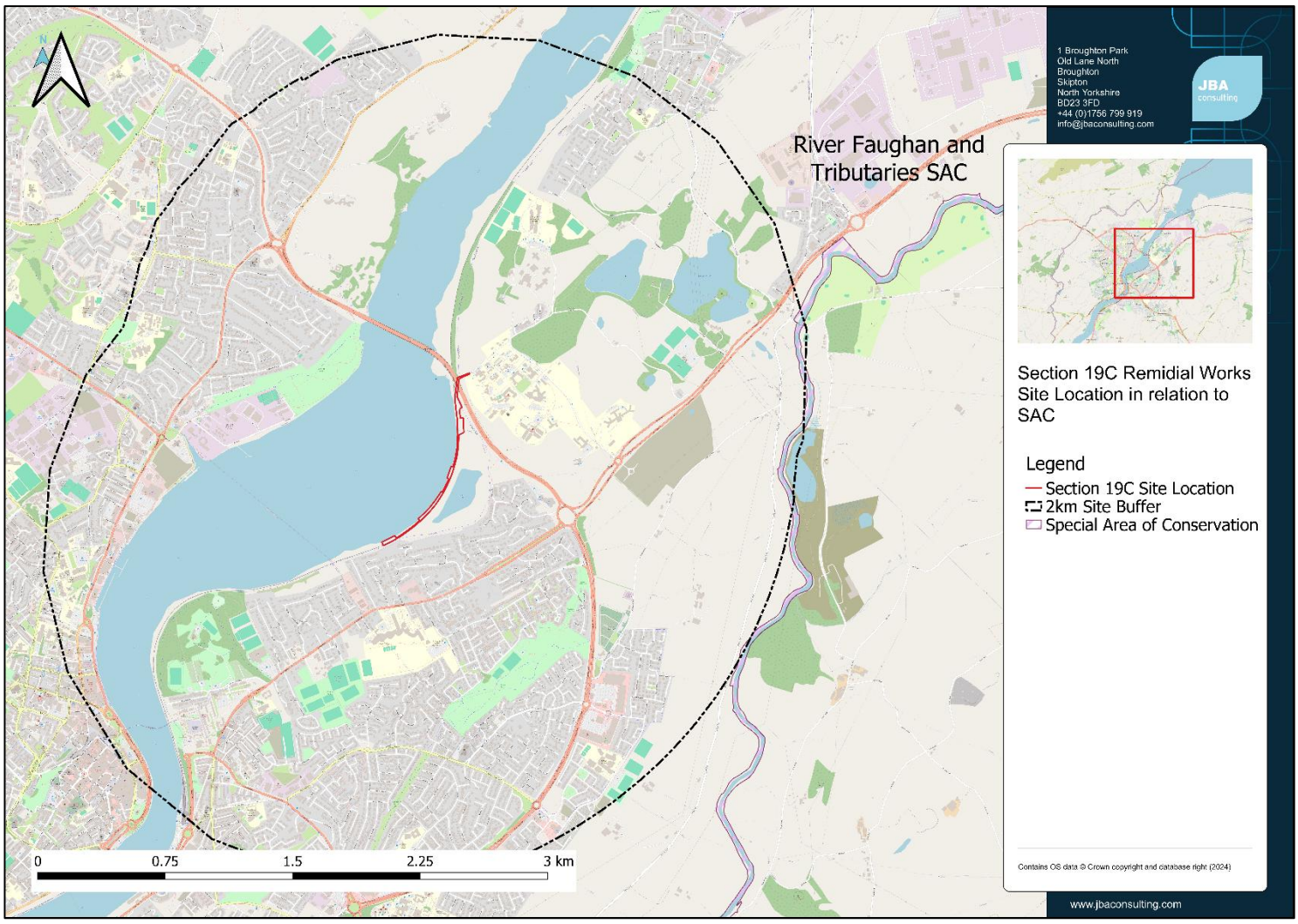

Figure 4-1. Location of the works proposed at Section 19C in relation to the River Faughan and Tributaries SAC.

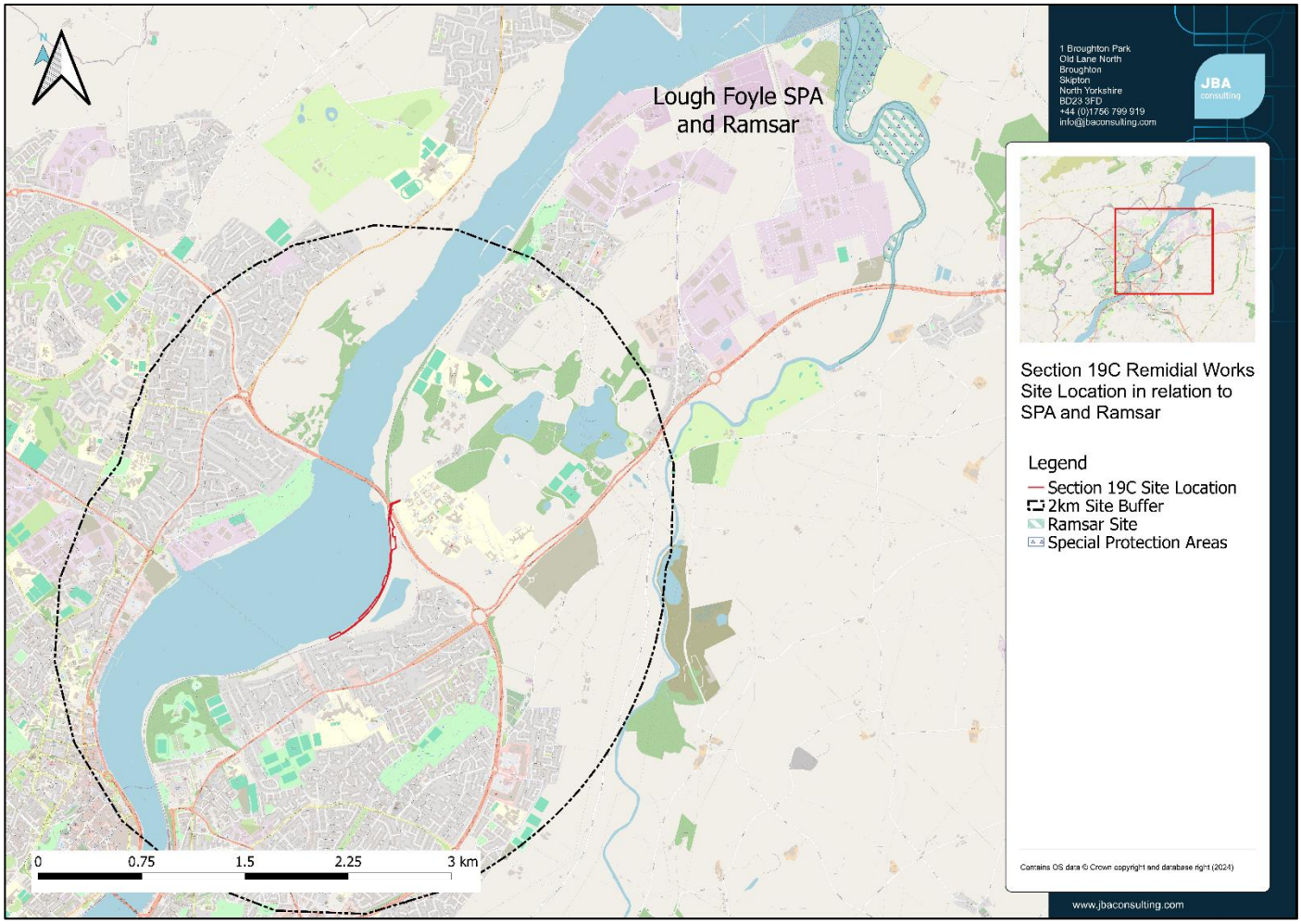

Figure 4-2. Location of the works proposed at Section 19C in relation to the Lough Foyle Special Protection Area (SPA) and Ramsar.

4.2 River Faughan and Tributaries Special Area of Conservation (SAC)

4.2.1 Qualifying Features

The River Faughan and Tributaries SAC comprises 62.6% Broad-leaved deciduous woodland, 26.2% Inland water bodies (Standing water, Running water), 5% Improved grassland, 5.1 % Humid grassland, Mesophile grassland and 1.1% Heath, Scrub, Maquis and Garrigue, Phygrana.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of the site:

- 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles

Annex II species that are a primary reason for selection of this site:

- 1106 Atlantic salmon *Salmo salar*

Annex II species present as a qualifying feature, but not a primary reason for selection of this site:

- 1355 Otter *Lutra lutra*

4.2.2 Conservation Objectives

The Conservation Objective for the River Faughan and Tributaries SAC is:

To maintain (or restore where appropriate) the

- Atlantic Salmon *Salmo salar*
- Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles
- Otter *Lutra lutra*

to favourable condition.

For each SAC feature, there are a number of component objectives which are outlined in the table below. These include a series of attributes, measures and targets which form the basis of Condition Assessment. The results of this will determine whether the feature is in favourable condition or not.

Table 4-1. River Faughan and Tributaries SAC Selection Feature Objective Requirements

Feature	Grade	Objective
Atlantic Salmon *Salmo salar*	B	Maintain and if possible, expand existing population numbers and distribution (preferably through natural recruitment), and improve age structure of population
		Maintain and if possible, enhance the extent and quality of suitable Salmon habitat - particularly the chemical and biological quality of the water and the condition of the river channel and substrate.
Old Sessile Oak Woodlands with *Ilex* and *Blechnum* in the British Isles	C	Maintain and where feasible expand the extent of existing oak woodland but not at the expense of other SAC (ABC) features. (There are areas of degraded heath, wetland and damp grassland which have the potential to develop into Oak woodland)
		Maintain and enhance Oak woodland species diversity and structural diversity.
		Maintain the diversity and quality of habitats associated with the Oak woodland, e.g. fen, swamp, grasslands, scrub, especially where these exhibit natural transition to Oak woodland
		Seek nature conservation management over adjacent forested areas outside the ASSI where there may be potential for woodland rehabilitation.
		Seek nature conservation management over suitable areas immediately outside the ASSI where there may be potential for woodland expansion.
Otter *Lutra lutra*	C	Maintain and if possible, increase population numbers and distribution.
		Maintain the extent and quality of suitable Otter habitat, in particular the chemical and biological quality of the water and all associated wetland habitats.

4.3 Lough Foyle Special Protection Area (SPA)

4.3.1 Qualifying Features

- The site is selected as a Special Protection Area (SPA) under the E.U. Birds Directive, as it is part of an internationally important wetland site that regularly supports in excess of 20,000 wintering waterbirds. The assemblage of birds that utilise Lough Foyle includes:
  - Internationally important populations of Whooper Swan, Light-bellied Brent Goose and Bar-tailed Godwit
  - and nationally important populations of a further 20 species: Red-throated Diver, Great Crested Grebe, Bewick's Swan, Greylag Goose, Shelduck, Wigeon, Teal, Mallard, Eider, Red-breasted Merganser, Oystercatcher, Golden Plover, Lapwing, Knot, Dunlin, Curlew, Redshank, Black-headed Gull, Common Gull and Herring Gull
- The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

4.3.2 Conservation Objectives

The conservation of objective of the Lough Foyle SPA is 'To maintain the favourable conservation condition of the qualifying features (as outlined above) in the Lough Foyle SPA'

Favourable conservation status of a habitat is achieved when:

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

The favourable conservation status of a species is achieved when:

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

4.4 Lough Foyle Ramsar

4.4.1 Qualifying Features

The site qualifies for Ramsar designation under:

- Ramsar Criterion 1 - The site is a particularly good representative example of a wetland complex including intertidal sand and mudflats with extensive seagrass beds, saltmarsh, estuaries and associated brackish ditches. The site is a particularly good representative example of a wetland, which plays a substantial hydrological, biological and ecological system role in the natural functioning of a major river basin which is located in a trans-border position.
- Ramsar Criterion 2 - The site supports an appreciable assemblage of rare, vulnerable or endangered species or sub-species of plant and animal. A range of notable fish species have been recorded for the Lough Foyle estuary and the lower reaches of some of its tributary rivers. These include Allis shad *Alosa alosa*, Twaite shad *A. fallax fallax*, Smelt *Osmerus eperlanus* and Sea lamprey *Petromyzon marinus*, all of which are Irish Red Data Book species. In addition, important populations of Atlantic salmon *Salmo salar* migrate through the system to and from their spawning grounds.
- Ramsar Criterion 3 - The site supports a diverse assemblage of wintering waterfowl which are indicative of wetland values, productivity and diversity. These include internationally important populations of Whooper Swan *Cygnus cygnus*, Light-bellied Brent Goose *Branta bernicla hrota* and Bar-tailed Godwit *Limosa lapponica*. Additional wildfowl species which are nationally important in an all-Ireland context are Red-throated Diver *Gavia stellata*, Great crested *Grebe Podiceps cristatus*, Mute swan *Cygnus olor*, Bewick's Swan *C. columbianus*, Greylag Geese *Anser anser*, Shelduck *Tadorna tadorna*, Teal *Anas crecca*, Mallard *Anas platyrhynchos*, Wigeon *A. penelope*, Eider *Somateria mollissima*, and Redbreasted Merganser *Mergus serrator*. Nationally important wader species are Oystercatcher *Haematopus ostralegus*. Golden Plover *Pluvialis apricaria*, Grey Plover *Pluvialis squatarola*, Lapwing *Vanellus vanellus*, Knot *Calidris canutus*, Dunlin *C. aplina*, Curlew *Numenius arquata*, Redshank *Tringa tetanus* and Greenshank *T. nebilaria*.
- Ramsar Criteria 5 - The site supports about 29000 migrating birds.
- Ramsar Criteria 6 - Species/populations occurring at levels of international importance.

4.4.2 Conservation Objectives

No specific conservation objectives have been set for the Lough Foyle Ramsar site.

5 Screening Assessment

5.1 Introduction

This project is not wholly directly connected with, or necessary to, the conservation management of the listed site's qualifying features; therefore, a HRA screening assessment is required.

The following section identifies potential hazards of the proposed works. The effects of relevant hazards are then assessed in relation to each of the relevant qualifying features of the European sites outlined above. The likelihood of potential exposure to the hazard and the mechanism of effect are also identified where possible. This then allows for likely significant effects on the interest features of the designated sites to be identified.

5.2 Potential Hazards to European Sites

The proposed project, as detailed in Section 3, was assessed in order to identify potential hazards that might arise to the relevant interest features of the River Faughan and Tributaries SAC and Lough Foyle SPA and Ramsar. The list of potential hazards to the European sites are based on the designated site features and conservation objectives. These are:

- Direct habitat loss
- Noise and visual disturbance
- Water pollution
- Physical damage/mortality
- Competition from, or mortality due to, invasive non-native species (INNS)

5.3 Assessment of Likely Significant Effects

Assessment of the hazards identified above was undertaken to determine whether they would be likely to have a significant effect on the relevant qualifying features of the River Faughan and Tributaries SAC and Lough Foyle SPA and Ramsar, as a consequence of the project either alone or in combination with other plans or projects. The results of the screening assessment are given in Table 5-1. Plans and projects considered for the in-combination assessment are outlined in Section 6.4. Where appropriate, both construction and operational phase effects are considered.

Table 5-1. Assessment of Likely Significant Effects

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combinations
River Faughan and Tributaries SAC				
Annex I habitats; not primary reason for selection: - Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	Direct habitat loss Physical damage	The Annex I habitat is not present within or adjacent to the works footprint of this project (RSK 2021). Therefore, the habitat will not be directly impacted upon by the scheme during either the construction phase or during the operation phase. There will be no habitat loss or physical damage to this SAC habitat.	No	No in combination assessment required; zero effect alone.
	Competition from INNS	The proposed works have the potential to spread terrestrial INNS, however, no INNS were	No	No in combination assessment required; zero effect alone

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combinations
		recorded within the works footprint (RSK 2021).		
	Water Pollution	During the construction phase, accidental fuel or concrete spills could cause changes in water chemistry and impact upon the habitats within the SAC, in the absence of suitable on-site avoidance and mitigation measures.	Yes	In combination assessment carried forward to Appropriate Assessment.
Annex II species; primary reason for selection: - Atlantic salmon	Habitat Loss	No in-channel works are proposed as part of the scheme and therefore the proposed works do not propose a risk of disturbance to Atlantic Slamon in the SAC.	No	No in combination assessment required; zero effect alone
	Noise and visual disturbance	No in-channel works are proposed as part of the scheme and therefore there	No	No in combination assessment required; zero effect alone
	Water pollution	During the construction phase, accidental fuel or concrete spills could cause changes in water chemistry and impact upon the	Yes	In combination assessment carried forward to Appropriate Assessment

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combinations
		habitats used by Atlantic Salmon in the SAC, in the absence of suitable on-site avoidance and mitigation measures.		
	Physical damage/mortality	No in-channel works are proposed as part of the scheme and therefore the proposed works do not propose a risk of mortality or injury to Atlantic Slamon in the SAC.	No	No in combination assessment required; zero effect alone
Annex II species; not primary reason for selection: -Otter	Habitat Loss	There is the potential for Otter to be present in the works area foraging and commuting. The works will result in a small area of temporary habitat loss, however, there is ample alternative habitat available, and any potential impact on Otter habitat would be negligible.	No	No in combination assessment required; zero effect alone

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combinations
	Noise and visual disturbance	Operations during the construction phase could cause noise and visual disturbance to Otter in the SAC.	Yes	In combination assessment carried forward to Appropriate Assessment
	Water pollution	During the construction phase, accidental fuel or concrete spills could cause changes in water chemistry and impact upon the habitats used by Otter in the SAC, in the absence of suitable on-site avoidance and mitigation measures.	Yes	In combination assessment carried forward to Appropriate Assessment
	Physical damage/mortality	The works area is relatively small scale and no holts or resting sites for Otter are present on site (RSK 2021). Any Otter present in the works area can reasonably be expected to move away from harm, however, there is a potential for harm.	Yes	In combination assessment carried forward to Appropriate Assessment

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combinations
Lough Foyle SPA				
-Internationally important populations of Whooper Swan, Light-bellied Brent Goose and Bar-tailed Godwit	Habitat Loss	The proposed works are located outside of the SPA boundary and therefore no habitats within the SPA will be impacted.	No	No in combination assessment required; zero effect alone
-nationally important populations of: Red-throated Diver, Great Crested Grebe, Bewick's Swan, Greylag Goose, Shelduck, Wigeon, Teal, Mallard, Eider, Red-breasted Merganser, Oystercatcher, Golden Plover, Lapwing, Knot, Dunlin, Curlew, Redshank, Black-headed Gull, Common Gull and Herring Gull -interest for Wetland & Waterbirds.	Noise and visual disturbance	Given the distance between the proposed works and the SPA (3.3km) and the nature of the works it is not anticipated that the works will result in any disturbance to the qualifying features of the SPA.	No	No in combination assessment required; zero effect alone
	Water pollution	During the construction phase, accidental fuel or concrete spills could cause changes in water chemistry and impact upon the habitats and in the SPA, in the absence of suitable on-site avoidance and mitigation measures.	Yes	In combination assessment carried forward to Appropriate Assessment
	Physical damage/mortality	Given the distance between the proposed works and the SPA (3.3km) and the nature of the	No	No in combination assessment required; zero effect alone

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combinations
		works it is not anticipated that the works will result in any physical damage or injury to the qualifying features of the SPA.		
Lough Foyle Ramsar				
Ramsar Criterion 1 - wetland complex Ramsar Criterion 2 - assemblage of rare, vulnerable or endangered species or sub-species of plant and animal. Ramsar Criterion 3 - diverse assemblage of wintering waterfowl wildfowl species Ramsar Criteria 5 - The site supports about 29000 migrating birds. Ramsar Criteria 6 - Species/populations	Habitat Loss	The proposed works are located outside of the Ramsar boundary and therefore no habitats within the Ramsar will be impacted.	No	No in combination assessment required; zero effect alone
	Noise and visual disturbance	Given the distance between the proposed works and the Ramsar (3.3km) and the nature of the works it is not anticipated that the works will result in any disturbance to the qualifying features of the Ramsar.	No	No in combination assessment required; zero effect alone
	Water pollution	During the construction phase, accidental fuel or concrete spills could cause changes in water chemistry and impact upon the habitats and in the Ramsar, in the absence of suitable on-site	Yes	In combination assessment carried forward to Appropriate Assessment

Qualifying Feature	Risk (Pressure)	Likely Significant Effect Alone	Yes or No	Likely Significant Effect in Combinations
occurring at levels of international importance.		avoidance and mitigation measures.		
	Physical damage/mortality: Any Otter present in the works area can reasonably be expected to move away from harm, however, there is a potential for harm.	Given the distance between the proposed works and the Ramsar (3.3km) and the nature of the works it is not anticipated that the works will result in any physical damage or injury to the qualifying features of the Ramsar.	No	No in combination assessment required; zero effect alone

5.4 Screening Statement Conclusion

At Stage 1 certain effects could not be screened out without appropriate mitigation/avoidance strategies put in place; consequently, a Stage 2 appropriate assessment is required. Those effects requiring appropriate assessment are summarised in Table 5-2 below.

Table 5-2. Summary of screening conclusions for the proposed scheme showing all screened in hazards and European Sites.

Qualifying Feature	Hazard	Likely significant effect alone or in combination
River Faughan and Tributaries SAC		
Annex I habitats; not primary reason for selection: - Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	Water Pollution	Both
Annex II species; primary reason for selection: - Atlantic salmon	Water Pollution	Both
Annex II species; not primary reason for selection: -Otter	Noise and visual disturbance	Both
	Water Pollution	Both
	Physical damage/ mortality	Both
Lough Foyle SPA		
-Internationally important populations of Whooper Swan, Light-bellied Brent Goose and Bar-tailed Godwit -nationally important populations of: Red-throated Diver, Great Crested Grebe, Bewick's Swan, Greylag Goose, Shelduck, Wigeon, Teal, Mallard, Eider, Red-breasted Merganser, Oystercatcher, Golden Plover, Lapwing, Knot, Dunlin, Curlew, Redshank, Black-headed Gull, Common Gull and Herring Gull -interest for Wetland & Waterbirds.	Water Pollution	Both

Qualifying Feature	Hazard	Likely significant effect alone or in combination
Lough Foyle Ramsar		
Ramsar Criterion 1 - wetland complex Ramsar Criterion 2 - assemblage of rare, vulnerable or endangered species or sub-species of plant and animal. Ramsar Criterion 3 - diverse assemblage of wintering waterfowl wildfowl species Ramsar Criteria 5 - The site supports about 29000 migrating birds. Ramsar Criteria 6 - Species/populations occurring at levels of international importance.	Water Pollution	Both

6 Appropriate Assessment

6.1 Introduction

Stage 2 of the HRA process is an Appropriate Assessment, which is required because likely significant effects caused by the proposed works have been identified on the River Faughan and Tributaries SAC and Lough Foyle SPA and Ramsar. The Appropriate Assessment determines whether the project will have an adverse impact on the integrity of the European sites. In this assessment, avoidance or mitigation measures are applied to a point where the effects identified are no longer significant. If no significant impact on site integrity can be demonstrated, beyond reasonable scientific doubt, the project can proceed. If sufficient avoidance or mitigation measures cannot be applied, the project should not be taken forward in its current form unless there is a demonstration of no suitable alternatives and there are reasons of overriding public interest.

6.2 European Sites

Table 6-1 below shows the European sites that have been screened into the Appropriate Assessment, as summarised in Table 5-2 above.

Table 6-1. European sites screened into this assessment.

Site Name	Proximity to site
River Faughan and Tributaries SAC	1.8km
Lough Foyle SPA	3.3km
Lough Foyle Ramsar	3.3km

6.3 General Scheme Mitigation Measures

6.3.1 Pollution Prevention Measures

Appropriate pollution prevention measures will be implemented to ensure that the habitats within proximity of the works, including the interest features and supporting habitats of the River Faughan and Tributaries SAC and Lough Foyle SPA and Ramsar are not degraded as a result of pollution events during the construction phase. This mitigation will include:

- Following relevant guidance e.g. CIRIA Guidance: Control of water pollution from construction sites. Guidance for consultants and contractors (C532D) (Masters-Williams, 2001), including the delivery of toolbox talks to site staff.
- Any chemical, fuel and oil stores will be located on impervious bases within a secured bund with a storage capacity 110% of the stored volume.
- Biodegradable oils and fuels will be used where possible.
- Drip trays will be placed underneath any standing machinery to prevent pollution by oil/fuel leaks. Refuelling of vehicles and machinery will be carried out on an impermeable surface in one designated area well away from the high tide mark with capture of any spillages.
- Emergency spill kits will be available on site and staff trained in their use.

- Operators will check their vehicles on a daily basis before starting work to confirm the absence of leakages. Any leakages will be reported immediately.
- Daily checks will be carried out and records kept on a weekly basis and any items that have been repaired/replaced/rejected noted and recorded. Any items of plant machinery found to be defective will be removed from site immediately or positioned in a place of safety until such time that it can be removed.
- This mitigation is industry standard practice and as a result will be incorporated into the project through the Environmental Management Plan (EMP).

6.4 In-combination Effects

The proposed works at section 19C are part of a wider scheme to complete remedial works for coastal assets in Northern Ireland, by Amey Consulting (Amey) on behalf of Translink. The scheme involves undertaking works at 26 coastal and estuarine flood defence locations along Translink's railway system in Northern Ireland. Four of these sites comprise minor patch repair works only. The works are required to improve the resilience of the existing rail infrastructure against the risks associated to climate change, including rising extreme sea levels and more severe storm events. The construction methodology is yet to be finalised and is subject to change as the scheme develops however in order to meet project delivery schedules, parallel working between sites may occur.

Other plans and projects with potential in-combination impacts were reviewed through the Derry City & Strabane District Council Planning Portal. No plans were identified that could potentially act in-combination with the proposed works. All of the planning applications within 1km of the site are all small-scale works that have no direct connection to the site. There are no Nationally Significant Infrastructure projects within 1km of the site.

6.5 Appropriate Assessment of Project Impacts and Mitigation

Taking into account the prevailing site conditions, screened in qualifying features, and the typical habitats and species necessary to the conservation of these features, the proposed works and mitigation measures and the conservation objectives for each European site, the following table details the Appropriate Assessment undertaken for the project. In Table 6-2 avoidance and mitigation measures are presented, and an assessment is made on whether an adverse impact remains after the mitigation is applied.

Table 6-2. Appropriate Assessment of Hazards and Mitigation

Qualifying Feature	Description of adverse effect(s)	Can adverse effect(s) be mitigated?	Description of mitigation measures and how they would be applied	Can adverse effect on site integrity be ruled out?
River Faughan and Tributaries SAC				
Annex I habitats; not primary reason for selection: - Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	Water pollution: Construction activity may result in accidental fuel or concrete spills which could cause changes in water chemistry and impact the Annex I habitats within the SAC.	Yes	Strict pollution prevention measures will be implemented on site, as outlined in Section 6.3.	Yes
Annex II species; primary reason for selection: - Atlantic salmon	Water pollution: Construction activity may result in accidental fuel or concrete spills which could cause changes in water chemistry and impact the	Yes	Strict pollution prevention measures will be implemented on site, as outlined in Section 6.3.	Yes

Qualifying Feature	Description of adverse effect(s)	Can adverse effect(s) be mitigated?	Description of mitigation measures and how they would be applied	Can adverse effect on site integrity be ruled out?
	habitats utilised by Atlantic salmon within the SAC.			
Annex II species; not primary reason for selection: -Otter	Noise and visual disturbance: Operations during the construction phase could cause noise and visual disturbance to Otter in the surrounding area.	Yes	The works area is not known to contain any holts or resting sites for Otter, although it is possible Otter use the area for foraging and commuting. There is ample alternative habitat available, and therefore any potential impact on Otter habitat would be negligible. A pre-works check will be completed as close to the construction works starting as possible in order to identify any new potential holts or resting areas within the site area. Prior to works commencing each day, the works area and immediate vicinity will be checked for Otter presence. Should an Otter be encountered on site during the works, all works should cease immediately, and advice be obtained from an experienced ecologist.	Yes

Qualifying Feature	Description of adverse effect(s)	Can adverse effect(s) be mitigated?	Description of mitigation measures and how they would be applied	Can adverse effect on site integrity be ruled out?
			Works will not be undertaken at night and watercourses will not be illuminated by lighting, such as security lights, during works. Excavations left overnight should ither be covered, or an escape ramp installed to prevent the trapping of Otter.	
	Water pollution: Construction activity may result in accidental fuel or concrete spills which could cause changes in water chemistry and impact the habitats utilised by Otter within the SAC.	Yes	Strict pollution prevention measures will be implemented on site, as outlined in Section 6.3.	Yes
	Physical damage/ mortality: Any Otter present in the works area can reasonably be expected to move away from harm, however, there is a potential for harm	Yes	The works area is not known to contain any holts or resting sites for Otter, although it is possible Otter use the area for foraging and commuting. There is ample alternative habitat available, and therefore any potential impact on Otter habitat would be negligible. A	Yes

Qualifying Feature	Description of adverse effect(s)	Can adverse effect(s) be mitigated?	Description of mitigation measures and how they would be applied	Can adverse effect on site integrity be ruled out?
	during the construction phase.		pre-works check will be completed as close to the construction works starting as possible in order to identify any new potential holts or resting areas within the site area. Prior to works commencing each day, the works area and immediate vicinity will be checked for Otter presence. Should an Otter be encountered on site during the works, all works should cease immediately, and advice be obtained from an experienced ecologist. Works will not be undertaken at night and watercourses will not be illuminated by lighting, such as security lights, during works. Excavations left overnight should ither be covered, or an escape ramp installed to prevent the trapping of Otter.	

Qualifying Feature	Description of adverse effect(s)	Can adverse effect(s) be mitigated?	Description of mitigation measures and how they would be applied	Can adverse effect on site integrity be ruled out?
Lough Foyle SPA				
-Internationally important populations of Whooper Swan, Light-bellied Brent Goose and Bar-tailed Godwit -nationally important populations of: Red-throated Diver, Great Crested Grebe, Bewick's Swan, Greylag Goose, Shelduck, Wigeon, Teal, Mallard, Eider, Red-breasted Merganser, Oystercatcher, Golden Plover, Lapwing, Knot, Dunlin, Curlew, Redshank, Black-headed Gull, Common Gull and Herring Gull -interest for Wetland & Waterbirds.	Water pollution: Construction activity may result in accidental fuel or concrete spills which could cause changes in water chemistry and impact the habitats within the SPA.	Yes	Strict pollution prevention measures will be implemented on site, as outlined in Section 6.3.	Yes

Qualifying Feature	Description of adverse effect(s)	Can adverse effect(s) be mitigated?	Description of mitigation measures and how they would be applied	Can adverse effect on site integrity be ruled out?
Lough Foyle Ramsar				
Ramsar Criterion 1 - wetland complex Ramsar Criterion 2 - assemblage of rare, vulnerable or endangered species or sub-species of plant and animal. Ramsar Criterion 3 - diverse assemblage of wintering waterfowl wildfowl species Ramsar Criteria 5 - The site supports about 29000 migrating birds. Ramsar Criteria 6 - Species/populations occurring at levels of international importance.	Water pollution: Construction activity may result in accidental fuel or concrete spills which could cause changes in water chemistry and impact the habitats within the Ramsar.	Yes	Strict pollution prevention measures will be implemented on site, as outlined in Section 6.3.	Yes

6.6 Implementation of Mitigation

The mitigation measures listed above are to be included in the Method Statement produced by the contractor who will be undertaking the works. The appointed contractor will therefore be responsible for ensuring that all on-site mitigation measures are implemented effectively.

7 Appropriate Assessment Conclusion

The proposed works will not have an adverse impact upon the River Faughan and Tributaries SAC and Lough Foyle SPA and Ramsar either alone or in combination with any other plans or projects, providing the following mitigation measures are implemented:

- Industry standard pollution prevention measures, particularly addressing the risks of fuel and concrete spills.
- A pre-works check will be completed as close to the construction works starting as possible in order to identify any new potential Otter holts or resting areas within the site area. Prior to works commencing each day, the works area and immediate vicinity will also be checked for Otter. Should an Otter be encountered on site during the works, all works should cease immediately, and advice be obtained from an experienced ecologist.
- Where possible, works should be carried out in daylight hours. If works must be carried out at night, any artificial worksite lighting should be minimised. Any floodlights should be fitted with a directional cowl to avoid light-spill onto the watercourse.

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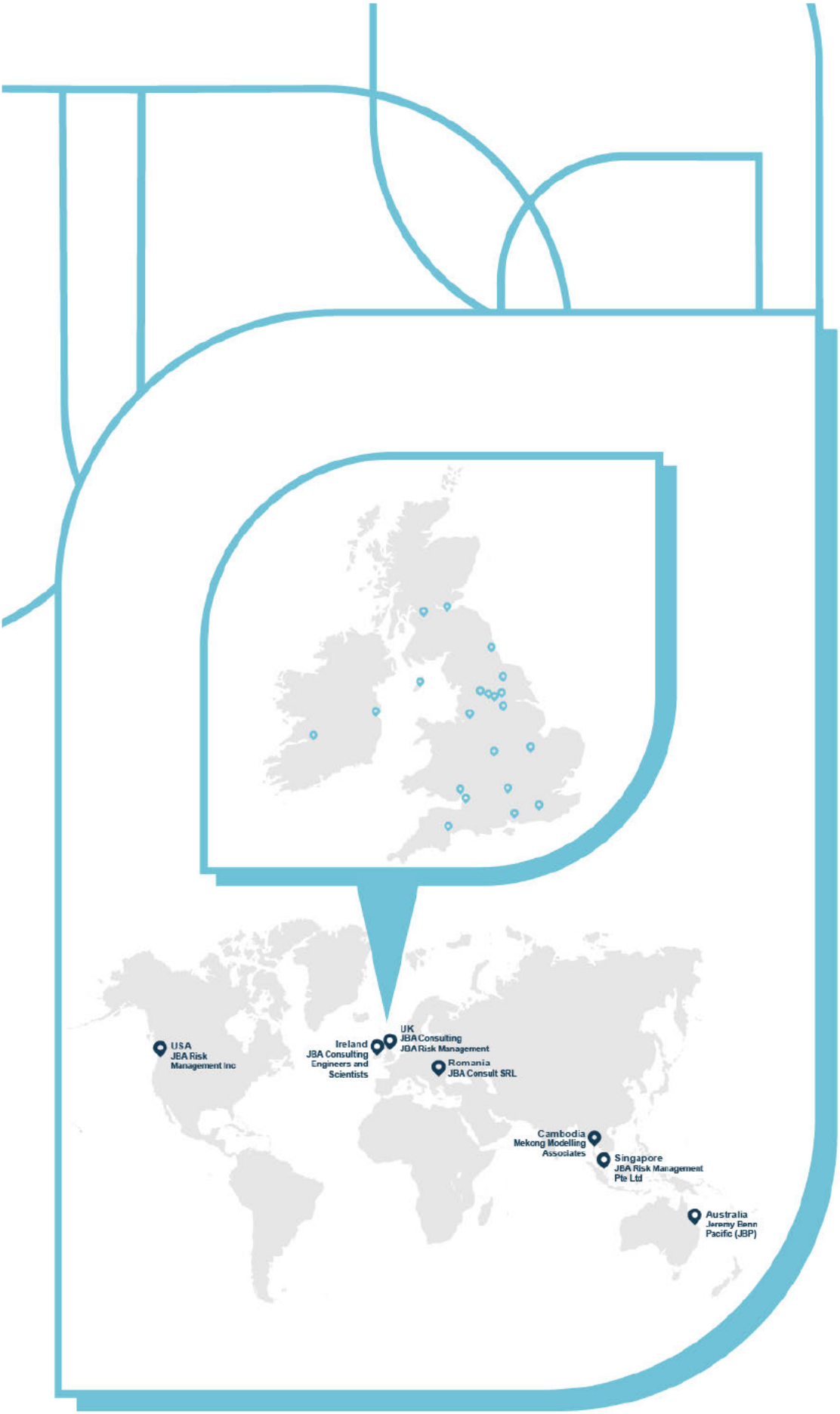

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