

**APPROPRIATE ASSESSMENT SCREENING OF  
CONSTRUCTION OF NEW BRIDGE STRUCTURE  
UPSTREAM OF ASSAN BRIDGE, ASSAN,  
CO. CAVAN**

**Appropriate Assessment Screening**

In accordance with the requirements of Article 6 (3) of the Habitats Directive (Council Directive 92/43/EEC)



Assan Bridge

**PREPARED FOR**

**Malachy Walsh and Partners**

**By**

**Caroline Shiel, B.Sc., Ph.D.**

**Edenville,**

**Kinlough,**

**Co. Leitrim**

**(087) 2851148**

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## 1. INTRODUCTION

This Appropriate Assessment Screening report has been prepared in compliance with Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (DoEHLG 2009, February 2010) and the European Communities (Birds and Natural Habitats) Regulations 2011 (DoEHLG) to assess the potential impact of constructing a new clear span bridge c. 25m upstream of the existing Assan Bridge on the Natura 2000 network. In addition, the existing Assan Bridge will be repaired.

The closest protected Natura site to Assan Bridge is River Boyne and River Blackwater SPA (Site code. 004232)/ River Boyne and River Blackwater SAC (Site code 002299) the boundary of which lies approximately 15 km to the south of Assan Bridge, where the River Blackwater flows out of the southern shore of Lough Ramor.

This report provides the information required to establish whether or not the proposed work is likely to have a potential impact on this protected site in relation to its conservation objectives or specifically on the habitats and species for which this site has been designated.

## 2. PROTECTED SITES

### International Conservation Designations

The Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) forms the basis for the designation of Special Areas of Conservation (SAC). It lists certain habitats (Annex I) and species (Annex II) for special protection. Similarly, Special Protection Areas (SPA) are classified under the Birds Directive (Council Directive 2009/147/EEC on the Conservation of Wild Birds).

Collectively, SACs and SPAs are referred to as the Natura 2000 network.

In general terms, they are considered to be of exceptional importance for rare, endangered or vulnerable habitats and species within the European Community. The Screening Assessment is carried out in accordance with the requirements of Article 6(3) of the EU Habitats Directive (92/43/EEC), which attempts to ensure the conservation of a wide range of rare, threatened or endemic animal and plant species through the assessment of the potential adverse effects of a plan or project on SACs and SPAs.

An Appropriate Assessment is an evaluation of the potential impacts of a plan or project on the conservation objectives of a Natura 2000 site, and the development, where necessary, of mitigation or avoidance measures to preclude negative effects.

### National Conservation Designations

In Ireland, the basic designation for wildlife is the **Natural Heritage Area (NHA)**. This is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection.

Proposed Natural Heritage Areas (pNHA) are habitats or sites of interest to wildlife that have been identified by NPWS. These sites become NHAs once they have been formally advertised and landowners have been notified of their designation. NHAs are protected under the Wildlife (Amendment) Act, 2000, from the date they are formally proposed. NHA is a statutory designation according to the Wildlife (Amended) Act, 2000 and requires consultation with NPWS if any development impacts on a pNHA. Lough Romor which lies approximately 11 km downstream of Assan Bridge is designated as a pNHA.

Appropriate Assessment Screening

Appropriate Assessment screening takes into consideration the likely effects on any protected site (SAC or SPA) within 15km of the proposed works site. There are three protected sites in the European NATURA network within 15 km of Assan Bridge. These sites are listed in Table 1.

<b>SITE</b>	<b>SITE CODE</b>	<b>DISTANCE FROM SITE</b>
River Boyne and River Blackwater SPA	004232	15km downstream
River Boyne and River Blackwater SAC	002299	15 km downstream
Lough Sheelin SPA	004065	13.4 km to south west

**Table 1 – Protected Sites with 15km of works site**

Only the first two sites listed in Table 1 (River Boyne and River Blackwater SPA/River Boyne and River Blackwater SAC) are hydrologically linked to the proposed work site. The river running under Assan Bridge flows into Lough Ramor c. 11 km downstream. Lough Sheelin is not hydrologically connected to the proposed work site. Therefore, the works will have no impacts on this site. Lough Sheelin SPA will not be considered further.

**River Boyne and River Blackwater SPA/River Boyne and River Blackwater SAC**

The boundary of the River Boyne and River Blackwater SAC/SPA lies at the point where the River Blackwater flows out of the south east corner of Lough Ramor, approximately 15km downstream of Assan Bridge.

The Habitats Directive protects important habitats and species within Special Areas of Conservation (SACs). It lists certain habitats (Annex I) and species (Annex II) for special protection. A second European Directive – the Birds Directive – seeks to protect birds of conservation importance by the designation of Special Protection Areas (SPA's).

European and national legislation places an obligation on Ireland to maintain at favourable conservation status sites designated as Special Areas of Conservation and Special Protection Areas.

Favourable conservation status of a habitat is achieved when:

- Its natural range, and the area it covers within that range, is stable or increasing, and
- The ecological factors that 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 data on the species concerned indicate that it is maintaining itself, and
- The natural range of the species is neither being reduced or likely to be reduced for the foreseeable future, and

- There is, and probably will continue to be a sufficiently large habitat to maintain its populations on a long-term basis.

This report assesses the likely significant effects of the proposed new bridge project at Assan on the River Boyne and River Blackwater SPA (Site Code 004232) and River Boyne and River Blackwater SAC (Site Code 002299).

Article 6 assessments are required under the Habitat's Directive (92/43/EEC) where a project may have significant effects on a Natura 2000 site (a European compilation of Special Areas of Conservation - SAC's and Special Protection Areas – SPAs - for birds).

Currently a detailed conservation management plan has not been prepared by National Parks and Wildlife Service for River Boyne and River Blackwater SPA. A generic conservation objectives report was prepared in October 2022. A Site Synopsis for this SPA was prepared by NPWS in 2010. The Site Synopsis is included in the Appendix. A detailed conservation management plan has not been prepared by National Parks and Wildlife Service for River Boyne and River Blackwater SAC.

A generic conservation objectives report was prepared in 2021. A Site Synopsis for this SAC was prepared by NPWS in 2014. The Site Synopsis is included in the Appendix.

### **3. METHODOLOGY OF SCREENING**

This screening report examines whether the effects of the proposed new bridge construction upstream of the existing Assam bridge will have a negative effect on either River Boyne and River Blackwater SAC or River Boyne and River Blackwater SPA. The boundaries of these protected sites lie 15km downstream of the proposed site.

#### **Appropriate Assessment**

The assessment of a proposed project likely to affect a Natura 2000 site is a 4-stage process

The relevant guidance documents for Appropriate Assessment set out a staged process for carrying out Appropriate Assessment, the first of which is referred to as screening.

Stage 1 - The screening stage identifies the likely impacts on Natura 2000 sites, if any, which would arise from a proposed plan or project, either alone, or in combination with other plans and projects, and further considers whether these impacts are likely to be significant.

If it can be concluded during the screening exercise that there is no likelihood of significant impacts occurring on any Natura 2000 sites, as a result of the proposed development either alone or in combination with other plans and projects, then there is no requirement to proceed to subsequent stages of Appropriate Assessment.

If it is not possible to conclusively rule out significant impacts on Natura 2000 sites, the assessment should proceed to Stage 2: Appropriate Assessment for which a Natura Impact Statement (NIS) must be prepared.

Stage 3 of the process is Assessment of Alternative Solutions which examines alternative ways of achieving the objectives of the plan or project that avoid adverse impacts on the integrity of the Natura 2000 site.

Stage 4 Assessment where Adverse Impacts Remain is an assessment of compensatory measures where, in the light of an assessment of Imperative Reasons of Overriding Public Interest (IROPI), it is deemed that the project or plan should proceed.

This report is comprised of the ecological impact assessment and testing required under the provisions of Article 6(3) by means of the first stage of Appropriate Assessment – **Stage 1 - the screening process.**

EU Guidance states:

*“This stage examines the likely effects of a project or plan, either alone or in combination with other projects or plans, upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant”.*

This report also provides the information required for the Competent Authority to complete the Appropriate Assessment (Stage 2) should this be necessary in the opinion of the Competent Authority. Screening has been undertaken in accordance with the European Commission’s Guidance on Appropriate Assessment (European Commission, 2001) which comprises the following:

1. Description of the Plan
2. Identification of Natura 2000 Sites potentially affected by the Plan
3. Identification and Description of Individual and Cumulative impacts likely to result from the Plan
4. Assessment of the Significance of the impacts identified on the Conservation Objectives of the site(s)
5. Exclusion of sites where it can be objectively concluded that there will be no significant impacts on conservation objectives

Following the guidelines set out by NPWS (2009), Appropriate Assessment Screening (Phase 1 - Appropriate Assessment) is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3) of the EU Habitats Directive –

- (1) Is the plan or project directly connected to or necessary for the management of the site?
- (2) Is the plan or project, alone or in combination with other such plans or projects likely to have significant negative effects on a Natura 2000 site(s) in view of the conservation objectives of that site(s)?

The proposed construction of a new clear span bridge upstream of Assan Bridge does not comply with the first screening test as the proposed development is not directly connected to, or necessary for the management of any Natura 2000 site. This screening exercise will therefore inform the Appropriate Assessment process in determining whether the proposed development, alone or in combination with other plans or projects, is likely to have significant effects on the Natura 2000 sites within the study area.

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If effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overtly complicated, then the Appropriate Assessment process must proceed to Stage 2 Appropriate Assessment and the preparation of a Natura Impact Statement (NIS).

### 3.1 Guidance and Data Sources

The following documents have been used to complete this Stage 1 Appropriate Assessment:

- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. (Department of Environment, Heritage and Local Government, 2010).
- 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.
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities (Reference: NPW 1/10 & PSSP 2/10).
- Managing Natura 2000 Sites - The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC.
- Appropriate Assessment Mapping Tool at [www.gis.epa.ie/EPAMaps/AAGeoTool](http://www.gis.epa.ie/EPAMaps/AAGeoTool)

## 4. DESCRIPTION OF THE PROJECT

This screening report examines whether the proposed new bridge construction at Assan townland will have a significant impact on River Boyne and River Blackwater SPA (Site Code 004232) or on River Boyne and River Blackwater SAC (Site Code 002299).

Assan Bridge spans a river which feeds into Lough Ramor approximately 11km downstream to the south. The River Blackwater flows out of the south eastern end of Lough Ramor. The site boundary of River Boyne and River Blackwater SPA and SAC lies at the point where the River Blackwater leaves Lough Ramor.

### 4.1 Site Visit

Assan Bridge was surveyed on 22<sup>nd</sup> May 2021. A range of photographs were taken to include upstream and downstream elevations and views under the arches.

The bridge was surveyed for roosting bats and/or evidence of bat usage using a high-powered torch (Led Lenser Rechargeable System) and an endoscope to examine deep crevices. The bridge was also surveyed for birds’ nests.

The proposed position for the new bridge is c. 25m upstream of the existing bridge. The proposed location of the bridge was surveyed for the presence of otters.

Otters were surveyed by searching for otter spraints deposited in prominent places on rocks/ledges, otter tracks in mud or trails/slides adjacent to the site. Consultation with NBDC maps prior to survey revealed that there are no records of otter from the watercourse running under Assan Bridge but there are records from Lough Ramor - 11km downstream of the bridge.

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Consultation with NBDC maps prior to survey revealed that there are records of Freshwater Crayfish *Austropotomobius pallipies* from the river at Billis Bridge c. 2 km downstream and from Dunancory Bridge close to the north shore of Lough Ramor. No freshwater crayfish were recorded during the present survey but it is most likely that they are present in the watercourse in the vicinity of the proposed new bridge. There are no records of Freshwater Pearl Mussel *Margaritifera margaritifera* from this watercourse.

**Bridge Name: Assan Bridge + Site of new bridge (25m upstream)**

**Grid Reference: N55347 96116; 53.911644 -7.1584216**

**Watercourse: Not named**

**Species recorded: None**



**Figure 1** – aerial photo showing the location of Assan Bridge and proposed location of new bridge (red star).

Assan Bridge is located on the L3028 local road, approximately 5 km north west of Ballyjamesduff. It stands in the rural townland of Assan.

Assan Bridge is listed on the National Inventory of Architectural Heritage list (No. 40403301). It is described as -

*"Triple-arch stone road bridge, built c.1800, over a river flowing into Lough Ramor. Recently altered with concrete pipe and embankment to west side of north arch. Random rubble-stone piers and V-cutwaters to central arch, rubble-stone abutments. Rubble stone*

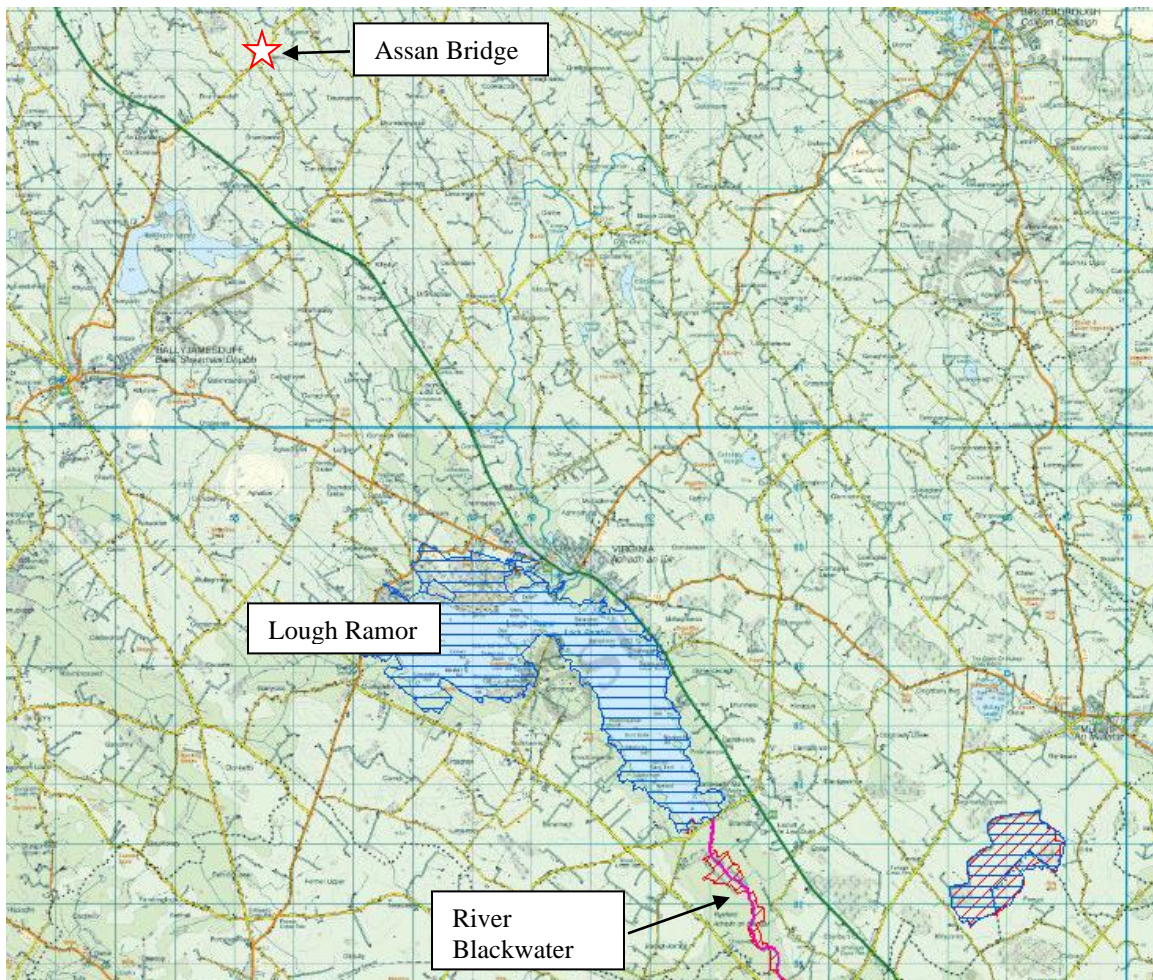


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*soffits with shallow segmental arches having cut-stone voussoirs, central arch wider and higher than flanking arches. Rubble stone spandrels and parapets, cement copings. Rubble stone wing walls extending to north and south along roadside, replacement rubble-stone to north-west and south-east walls.*

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*A small bridge at an important junction with two approach roads on either side, in a prominent location that can be seen from several directions. The bridge has a robust character, and the rough faces contrast with the cut stone arches. The bridge retains much of its original material and form despite the very unsympathetic additions to the north arch and replacement of some wing walls. It makes a significant contribution to the architectural character of its setting."*



**Figure 2** – showing distance from Assan Bridge to Lough Ramor pNHA (c. 11km downstream - blue hatching) and distance to outflow of River Blackwater at south east corner of lake (c. 15km downstream - River Blackwater is a component river of River Boyne and River Blackwater SAC 002299 – red hatching)

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The existing Assan Bridge is a 3 arch masonry structure with masonry parapet walls. A large concrete pipe has been added to the downstream face of the northern arch which extends beyond the other two arches.

All vegetation had been previously removed from the structure.

There is damage to the downstream parapet wall where a section of stonework is missing. Sections of the parapet wall on the upstream southern side have been replaced with concrete sections at various times.

The undersurfaces of all three arches are sealed with shuttered cement grout with no crevices for roosting bats or nesting birds. There were some suitable crevices in the bridge walls which were surveyed for bats and birds but none were recorded. Necessary repairs will be conducted to Assan Bridge.

The proposed site of the new bridge structure lies approximately 25m upstream of Assan Bridge. This area was surveyed for the presence of otters.

No signs of otters were recorded.

No freshwater crayfish were recorded in the present survey.

No invasive plant species were recorded in the vicinity of the bridge or in the vicinity of the proposed site of the new bridge.

### 4.2 Photographs



**Photo 1** – looking south east across Assan Bridge. The new bridge will be constructed c. 25m upstream of the existing bridge



**Photo 2** - view of watercourse upstream from bridge showing current course of river. The course of the river upstream of the bridge will be altered so that it flows directly under the bridge



**Photo 3** – area upstream of Assan Bridge where new bridge will be constructed. The course of the river will be altered so that it approaches the bridge directly as opposed to the current situation where it approaches the bridge from the north-west and flows along the bridge wall before turning south under the bridge.



**Photo 4** - cracked masonry wall upstream of bridge. Watercourse flows along this wall before turning south under the bridge.



**Photo 5** - river banks upstream of bridge surveyed for signs of otters



**Photo 6** - river banks upstream of bridge surveyed for signs of otters



**Photo 7** – Downstream parapet wall with damaged section

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**Photo 8** – view downstream from existing bridge showing rock armour on western river bank



**Photo 9** – upstream elevation of existing bridge



**Photo 10** – View under northern arch showing concrete pipe extension at downstream face



**Photo 11** – showing shuttered concrete grout on undersurface of northern arch

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**Photo 12** – downstream elevation showing concrete pipe extending beyond other two arches



**Photo 13** – riverbanks downstream of bridge. Banks surveyed for signs of otters



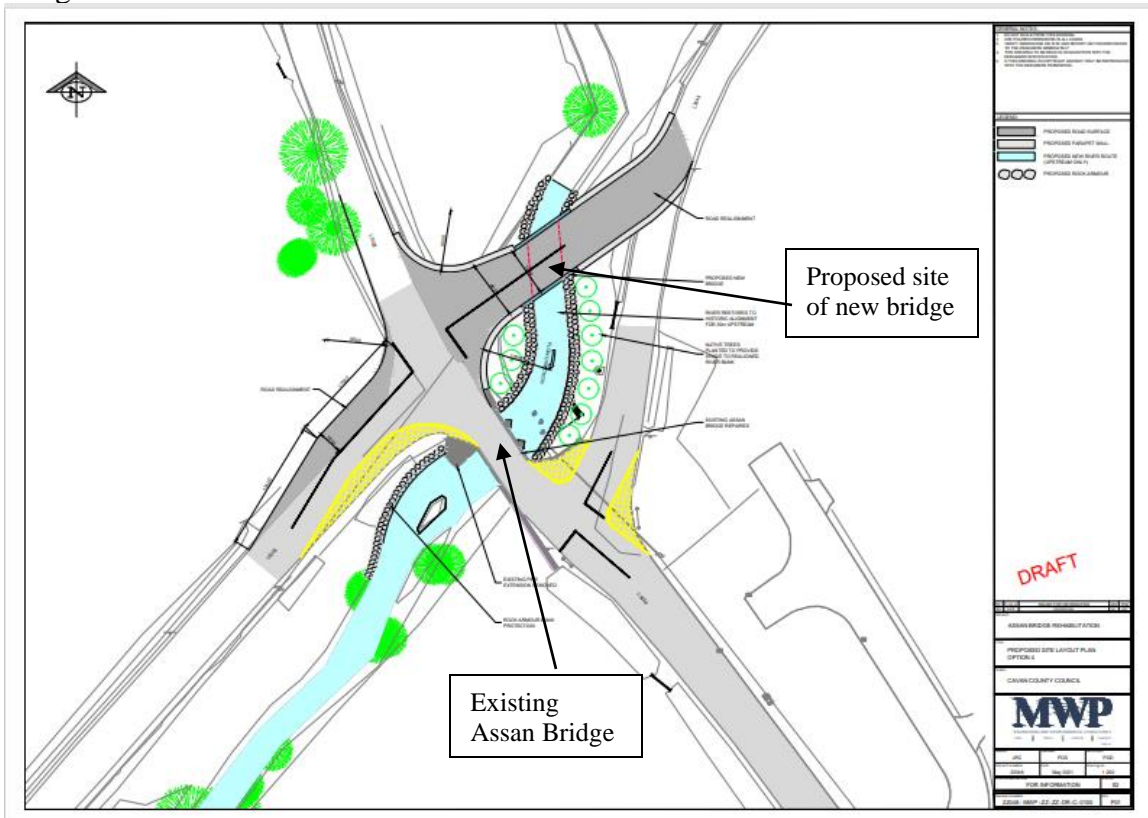
## 5. SCOPE OF THE WORKS

### Proposed Works

Various options have been considered for the upgrade of the junction at Assan Bridge which is a staggered crossroads.

The following option has been selected as the most appropriate -

Option 4 – Construct new bridge and realign the road upstream and downstream and the river on the upstream side. The junction of the L3028 (east-west) with the realigned L3545 (from the north) and the L3005 (going south) would be moved 4.5m to the northwest to allow HGV's coming from the south or north to turn east onto the existing bridge



**Figure 3** – showing position of proposed new bridge upstream of existing Assan Bridge

## 6. DESCRIPTION OF POTENTIAL IMPACTS

### 6.1 Potential Habitats Affected

#### Sediment Control:

The repair of Assan Bridge and the construction of a new bridge upstream could result in debris, mortar and sediment being washed downstream along the watercourse. Malachy Walsh and Partners have prepared an Environmental Method Statement which outlines measures such as the placement of silt traps downstream to catch any suspended sediment.

Tarpaulins lining scaffold and work platforms under the arches of Assan Bridge will catch any loose mortar inadvertently falling from the bridge structure.

The proposed new bridge will be a single clear span. Therefore there will be instream works during the construction of the new bridge.

#### Invasive species

All machinery, vehicles and equipment brought on site are to be treated for potential contamination with biohazards such as invasive species.

#### Pollutants

A spill kit will be available on site.

### **6.2 Potential Species affected**

Assan Bridge has very little potential for roosting bats. No birds' nests were recorded in the structure.

The proposed works will have no significant impact on any of the birds listed within River Boyne and River Blackwater SPA - Kingfisher.

Qualifying interests for River Boyne and River Blackwater SAC include River Lamprey *Lampetra fluviatilis*, Salmon *Salmo salar* and Otter *Lutra lutra*. It is likely that all three of these species are present in the watercourse at Assan Bridge. Salmon would be adversely affected by sediment entering the watercourse. Lamprey may be inadvertently removed during the river realignment process. Any material removed from the watercourse should be inspected for lamprey. It is likely that otters are present on this watercourse, even though no signs were recorded in the present survey. Otters will not be adversely affected by the proposed works.

Consultation with National Biodiversity Data Centre maps confirms that there are previous records of Freshwater crayfish *Austromotabobius pallipies* from Billis Bridge which is approximately 2 km downstream of Assan Bridge, although none were recorded in the present survey. It is likely that Freshwater crayfish also occur in the watercourse at Assan Bridge. If Freshwater Crayfish are encountered during works a procedure known as a "crayfish rescue" should be carried out by an ecologist. Crayfish inadvertently removed from the watercourse are returned to the watercourse upstream of the works.

### **Environmental Risks and Control Procedures**

An Environmental Method Statement will be prepared by Malachy Walsh and Partners. A signed copy of the Environmental Method Statement will be submitted to the District Conservation Officer of the NPWS. Advance notice of all works and associated Method Statements to be provided to NPWS.

The Method Statement must include details of methodology employed to prevent silt entering the stream by use of silt traps immediately downstream of bridge.

Work platforms erected at the structure to be lined with tarpaulins to catch any falling debris/mortar. Tarpaulins to be carefully removed once pointing is completed.

Following the implementation of best practice management any risks associated with the works should be reduced to negligible levels. Although there will be some temporary disturbance associated with the proposed works, this disturbance should not cause any significant impacts.

## 7. ASSESSMENT OF SIGNIFICANCE

The following table summarises the projects construction, operation and decommissioning phases, with special reference to their impact, if any, on any Natura 2000 site (European Commission 2001) - Assessment of plans and projects significantly affecting Natura 2000 sites – methodological guidance on the provisions of Article 6(3) and 6 (4) of the Habitats Directive 92/43/EEC

- Size and Scale
- Land-take
- Distance from Natura 2000 site or key features of the site
- Resource requirements (Water abstraction etc)
- Emissions (disposal to land, water or air)
- Excavation requirements
- Transportation requirements
- Duration of construction, operation, decommissioning etc
- Reduction of habitat area
- Disturbance to key species
- Habitat or species fragmentation
- Reduction in species density
- Changes in key indicators of conservation value (water quality etc)
- Climate change
- Key relationships that define the structure of the sites
- Key relationships that define the function of the sites

**Table 1 - Likely direct, indirect or secondary impacts of the proposed works (either alone or in combination with any other plans or projects) on Natura 2000 sites within 15km radius of the site by virtue of:**

ITEMS	PROJECT FEATURES	DIRECT OR INDIRECT IMPACT ON NATURA 2000 SITES?
Size, scale & land-take	<ul style="list-style-type: none"> <li>• Construction of new bridge c. 25m upstream of existing bridge</li> <li>• Existing concrete pipe extension to be demolished at Assan Bridge</li> <li>• 30m of upstream banks to be realigned and faced in rock armour</li> <li>• River bed to be reprofiled for 30m upstream to tie into</li> </ul>	No

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	<p>existing</p> <ul style="list-style-type: none"> <li>Existing piers and abutments to be underpinned</li> </ul>	
<b>Distance from Natura 2000 site</b>	The closest Natura 2000 site is River Boyne and River Blackwater SPA/River Boyne and River Blackwater SAC with is situated 15km straight line distance from Assan Bridge. The actual distance if measured along the watercourse is > 15km. This is outside the 15km zone of influence.	No
<b>Resource requirements (water extraction etc.)</b>	There are no resource requirements such as water extraction required for this road realignment work.	No
<b>Emissions (disposal to land, water or air)</b>	Emissions before and after the scheme are not expected to increase significantly. Existing emissions can be expected to increase during the construction period. However, there are expected to be negligible.	No
<b>Excavation requirements</b>	30m of upstream banks to be realigned and faced in rock armour River bed to be reprofiled for 30m upstream to tie into existing	No
<b>Transportation requirements</b>	Importation of suitable material to form rock armour embankments upstream and downstream of bridge. No soil will be removed from site. Existing stone will be reused in the construction of new parapet walls	No
<b>Duration of construction, operation, decommissioning etc</b>	At present, the duration of this project is unknown.	
<b>Reduction of habitat area</b>	None within any Natura 2000 site	No

### **7.1 Appraisal of Likely Significant Effects**

The potential for significant impacts resulting from the proposed new bridge construction project has been assessed in relation to Natura 2000 sites within the 15km zone of potential impact. Impacts that require consideration are categorised under the following headings, as outlined in Assessment of Plans and Projects significantly affecting Natura 2000 sites: Methodological Guidance on the provisions of Article 6(3) and (4) of the habitats Directive 92/43/EEC (European Commission, 2001).

- Habitat loss or alteration
- Habitat/ species fragmentation
- Disturbance and/ or displacement of species
- Changes in population density, and
- Changes in water quality and resource

Following an examination of the proposals for the construction of a new bridge with respect to impacts affecting Natura 2000 sites, it is considered that the proposed scheme will not result in any significant effects.

The proposed scheme is specific to the area of the Assan Bridge and any associated effects are very localised

### **8. CUMULATIVE EFFECTS**

Cumulative impacts or effects are changes in the environment that result from numerous human-induced, small-scale alterations. As noted in the Department's Guidance document for Planning Authorities, Appropriate Assessment must take account of cumulative effects, as these effects often only occur over time, plans or projects that are completed, approved but uncompleted, or proposed (but not yet approved).

The proposed bridge construction scheme will have no impact on Natura 2000 sites, as determined in the previous section. However, the previous section did not consider the cumulative effect that the road alignment scheme may have on Natura 2000 sites when combined with other projects that have been approved for construction or have recently been constructed.

At the time of writing this report, there were no neighbouring construction projects in development, or recently completed.

### **9. SCREENING STATEMENT**

This Stage 1 Appropriate Assessment has investigated the proposed bridge construction and its potential effects on Natura 2000 sites within a 15km radius. There are no Natura 2000 sites within 15km of the proposed site. Therefore, the works will not have a negative impact on any Natura 2000 sites.

Following objective analysis of the proposed new bridge scheme, and assuming all codes of best practice and management are complied with, this Appropriate Assessment (Stage 1) concludes the following:

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1. There are no Natura 2000 Sites within the 15km zone of impact.
2. The proposed bridge construction project is not directly connected, or adjacent, to any Natura 2000 site.
3. It is possible to conclude that there would be no significant effects, no potentially significant effects and no uncertain effects if the project were to proceed.

It is therefore the determination of this report that it is not necessary to undertake any further stage of the Appropriate Assessment process. Therefore, Stage II Appropriate Assessment and the preparation of a Natura Impact Statement is not required in this case.

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NPWS (2021) Conservation Objectives for River Boyne and river Blackwater SAC 002299. Generic version 8.0. Department of Housing, Local Government and Heritage

Wildlife Act 1976 including all other amendments 1979 – 2010. Number 39 of 1976 and Number 38 of 2000. Dublin: Government Publications.

#### Websites

[www.npws.ie](http://www.npws.ie) – website of the national Parks and Wildlife Service

[www.nbdc.ie](http://www.nbdc.ie) – website of the National Biodiversity Data Centre

[www.epa.ie](http://www.epa.ie) – website of the Environmental Protection Agency



## **11. APPENDIX**

### **SITE SYNOPSIS**

**SITE NAME: RIVER BOYNE AND RIVER BLACKWATER SPA**

**SITE CODE: 004232**

The River Boyne and River Blackwater SPA is a long, linear site that comprises stretches of the River Boyne and several of its tributaries; most of the site is in Co. Meath, but it extends also into Cos Cavan, Louth and Westmeath. It includes the following river sections: the River Boyne from the M1 motorway bridge, west of Drogheda, to the junction with the Royal Canal, west of Longwood, Co Meath; the River Blackwater from its junction with the River Boyne in Navan to the junction with Lough Ramor in Co. Cavan; the Tremblestown River/Athboy River from the junction with the River Boyne at Kilnagross Bridge west of Trim to the bridge in Athboy, Co. Meath; the Stoneyford River from its junction with the River Boyne to Stonestown Bridge in Co. Westmeath; the River Deel from its junction with the River Boyne to Cummer Bridge, Co. Westmeath. The site includes the river channel and marginal vegetation. Most of the site is underlain by Carboniferous limestone but Silurian quartzite also occurs in the vicinity of Kells and Carboniferous shales and sandstones close to Trim.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive of special conservation interest for the following species: Kingfisher. A survey in 2010 recorded 19 pairs of Kingfisher (based on 15 probable and 4 possible territories) in the River Boyne and River Blackwater SPA. A survey conducted in 2008 recorded 20-22 Kingfisher territories within the SPA.

Other species which occur within the site include Mute Swan (90), Teal (166), Mallard (219), Cormorant (36), Grey Heron (44), Moorhen (84), Snipe (32) and Sand Martin (553) – all figures are peak counts recorded during the 2010 survey.

The River Boyne and River Blackwater Special Protection Area is of high ornithological importance as it supports a nationally important population of Kingfisher, a species that is listed on Annex I of the E.U. Birds Directive.

25.11.2010

## **SITE SYNOPSIS**

**SITE NAME: RIVER BOYNE AND RIVER BLACKWATER SAC**

**SITE CODE: 002299**

This site comprises the freshwater element of the River Boyne as far as the Boyne Aqueduct, the Blackwater as far as Lough Ramor and the Boyne tributaries including the Deel, Stoneyford and Tremblestown Rivers. These riverine stretches drain a considerable area of Meath and Westmeath, and smaller areas of Cavan and Louth. The underlying geology is Carboniferous Limestone for the most part, with areas of Upper, Lower and Middle well represented. In the vicinity of Kells Silurian Quartzite is present while close to Trim are Carboniferous Shales and Sandstones. There are many large towns adjacent to but not within the site, including Slane, Navan, Kells, Trim, Athboy and Ballivor. The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (\* = priority; numbers in brackets are Natura 2000 codes):

[7230] Alkaline Fens

[91E0] Alluvial Forests\*

[1099] River Lamprey (*Lampetra fluviatilis*)

[1106] Atlantic Salmon (*Salmo salar*)

[1355] Otter (*Lutra lutra*)

The main areas of alkaline fen in this site are concentrated in the vicinity of Lough Shesk, Freehan Lough and Newtown Lough. The hummocky nature of the local terrain produces frequent springs and seepages which are rich in lime. A series of base-rich marshes have developed in the poorly-drained hollows, generally linked with these three lakes. Open water is usually fringed by Bulrush (*Typha latifolia*), Common Club-rush (*Scirpus lacustris*) or Common Reed (*Phragmites australis*), and this last species also extends shorewards where a dense stand of Great Fen-sedge (*Cladium mariscus*) frequently occurs. This in turn grades into a sedge and grass community (*Carex* spp. and Purple Moor-grass, *Molinia caerulea*), or one dominated by Black Bog-rush (*Schoenus nigricans*). An alternative aquatic/terrestrial transition is a floating layer of vegetation. This is normally based on Bogbean (*Menyanthes trifoliata*) and Marsh Cinquefoil (*Potentilla palustris*). Other species gradually become established on this cover, especially plants tolerant of low nutrient status e.g. bog mosses (*Sphagnum* spp.). Diversity of plant and animal life is high in the fen and the flora includes many rarities. Plants of interest include Narrow-leaved Marsh-orchid (*Dactylorhiza traunsteineri*), Fen Bedstraw (*Galium uliginosum*), Cowbane (*Cicuta virosa*), Frogbit (*Hydrocharis morsus-ranae*) and Least Bur-reed (*Sparganium minimum*). These species tend to be restricted in their distribution in Ireland. Also notable is the abundance of aquatic stoneworts (*Chara* spp.) which are characteristic of calcareous wetlands. The rare plant Round-leaved Wintergreen (*Pyrola rotundifolia*) occurs around Newtown Lough. This species is listed in the Red Data Book and this site represents its only occurrence in Co. Meath. Wet woodland fringes many stretches of the Boyne.

The Boyne River Islands are a small chain of three islands situated 2.5 km west of Drogheda. The islands were formed by the build-up of alluvial sediment in this part of the river where water movement is sluggish. All of the islands are covered by dense thickets

of wet, willow (*Salix* spp.) woodland, with the following species occurring: Osier (*S. viminalis*), Crack Willow (*S. fragilis*), White Willow (*S. alba*), Purple Willow (*Salix purpurea*) and Rusty Willow (*S. cinerea* subsp. *oleifolia*). A small area of Alder (*Alnus glutinosa*) woodland is found on soft ground at the edge of the canal in the north-western section of the islands.

Along other stretches of the rivers of the site Rusty Willow scrub and pockets of wet woodland dominated by Alder have become established, particularly at the river edge of mature deciduous woodland. Ash (*Fraxinus excelsior*) and Downy Birch (*Betula pubescens*) are common in the latter, and the ground flora is typical of wet woodland with Meadowsweet (*Filipendula ulmaria*), Wild Angelica (*Angelica sylvestris*), Yellow Iris (*Iris pseudacorus*), horsetails (*Equisetum* spp.) and occasional tussocks of Greater Tussock-sedge (*Carex paniculata*). The dominant habitat along the edges of the river is freshwater marsh, and the following plant species occur commonly in these areas: Yellow Iris, Creeping Bent (*Agrostis stolonifera*), Canary Reed-grass (*Phalaris arundinacea*), Marsh Bedstraw (*Galium palustre*), Water Mint (*Mentha aquatica*) and Water Forget-me-not (*Myosotis scorpioides*). In the wetter areas Common Meadow-rue (*Thalictrum flavum*) is found. In the vicinity of Dowth, Fen Bedstraw (*Galium uliginosum*), a scarce species mainly confined to marshy areas in the midlands, is common in this vegetation. Swamp Meadow-grass (*Poa palustris*) is an introduced plant which has spread into the wild (naturalised) along the Boyne approximately 5 km south-west of Slane. It is a rare species which is listed in the Red Data Book and has been recorded among freshwater marsh vegetation on the banks of the Boyne in this site. The only other record for this species in the Republic of Ireland is from a site in Co. Monaghan. The secondary habitat associated with the marsh is wet grassland and species such as Tall Fescue (*Festuca arundinacea*), Silverweed (*Potentilla anserina*), Creeping Buttercup (*Ranunculus repens*), Meadowsweet and Meadow Vetchling (*Lathyrus pratensis*) are well represented. Strawberry Clover (*Trifolium fragiferum*), a plant generally restricted to coastal locations in Ireland, has been recorded from wet grassland vegetation at Trim. At Rosnaree river bank on the River Boyne, Round-Fruited Rush (*Juncus compressus*) is found in alluvial pasture, which is generally periodically flooded during the winter months. This rare plant is only found in three counties in Ireland.

Along much of the Boyne and along tributary stretches are found areas of mature deciduous woodland on the steeper slopes above the floodplain marsh or wet woodland vegetation. Many of these are planted in origin. However the steeper areas of King Williams Glen and Townley Hall wood have been left unmanaged and now have a more natural character. East of Curley Hole the woodland has a natural appearance with few conifers. Broadleaved species include oaks (*Quercus* spp.), Ash, willows, Hazel (*Corylus avellana*), Sycamore (*Acer pseudoplatanus*), Holly (*Ilex aquifolium*), Horse-chestnut (*Aesculus hippocastanum*) and the shrubs Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*) and Elder (*Sambucus nigra*). Southwest of Slane and in Dowth, some more exotic tree species such as Beech (*Fagus sylvatica*), and occasionally Lime (*Tilia cordata*), are seen. The coniferous trees Larch (*Larix* sp.) and Scots Pine (*Pinus sylvestris*) also occur. The woodland ground flora includes Barren Strawberry (*Potentilla sterilis*), Enchanter's-nightshade (*Circaea lutetiana*) and Ground-ivy (*Glechoma hederacea*), along with a range of ferns. Variation occurs in the composition of the canopy - for example, in wet patches alongside the river, White Willow and Alder form

the canopy. Other habitats present along the Boyne and Blackwater include lowland dry grassland, improved grassland, reedswamp, weedy waste ground, scrub, hedge, drainage ditch and canal. In the vicinity of Lough Shesk, the dry slopes of the morainic hummocks support grassland vegetation which, in some places, is partially colonised by Gorse (*Ulex europaeus*) scrub. Those grasslands which remain unimproved for pasture are species-rich, with Common Knapweed (*Centaurea nigra*), Creeping Thistle (*Cirsium arvense*) and Ribwort Plantain (*Plantago lanceolata*) commonly present. Fringing the canal alongside the Boyne south-west of Slane are areas with Reed Sweet-grass (*Glyceria maxima*), Great Willowherb (*Epilobium hirsutum*) and Meadowsweet.

The Boyne and its tributaries form one of Ireland's premier game fisheries and the area offers a wide range of angling, from fishing for spring salmon and grilse to seatrout fishing and extensive brown trout fishing. Atlantic Salmon (*Salmo salar*) use the tributaries and headwaters as spawning grounds. Although this species is still fished commercially in Ireland, it is considered to be endangered or locally threatened elsewhere in Europe and is listed on Annex II of the Habitats Directive. Atlantic Salmon run the Boyne almost every month of the year. The Boyne is most important as it represents an eastern river which holds large three-sea-winter fish from 20-30 lb. These fish generally arrive in February, with smaller spring fish (10 lb) arriving in April/May. The grilse come in July, water permitting. The river gets a further run of fish in late August and this run would appear to last well after the fishing season. The salmon fishing season lasts from 1st March to 30th September.

The Blackwater is a medium sized limestone river which is still recovering from the effects of the arterial drainage scheme of the 1970s. Salmon stocks have not recovered to the numbers that existed pre-drainage. The Deel, Riverstown, Stoneyford and Tremblestown Rivers are all spring-fed, with a continuous high volume of water. They are difficult to fish because some areas are overgrown, while others have been affected by drainage with resultant high banks. This site is also important for the populations of two other species listed on Annex II of the E.U. Habitats Directive which it supports, namely River Lamprey (*Lampetra fluviatilis*), which is present in the lower reaches of the Boyne River, and Otter (*Lutra lutra*), which can be found throughout the site.

In addition, the site also supports many more of the mammal species occurring in Ireland. Those which are listed in the Irish Red Data Book include Pine Marten, Badger and Irish Hare. Common Frog, another Red Data Book species, also occurs within the site. All of these animals, with the addition of the Stoat and Red Squirrel, which also occur within the site, are protected under the Wildlife Act, 1976.

Whooper Swans winter regularly at several locations along the Boyne and Blackwater Rivers. Known sites are at Newgrange (approx. 20 in recent winters), near Slane (20+ in recent winters), Wilkinstown (several records of 100+) and River Blackwater from Kells to Navan (104 at Kells in winter 1996/97, 182 at Headfort in winter 1997/98, 200-300 in winter 1999/00). The available information indicates that there is a regular wintering population of Whooper Swans based along the Boyne and Blackwater River valleys. The birds use a range of feeding sites but roosting sites are not well known. The population is substantial, certainly of national, and at times international, importance. Numbers are probably in the low hundreds.

Intensive agriculture is the main land use along the site. Much of the grassland is in very large fields and is improved. Silage harvesting is carried out. The spreading of slurry and

fertiliser poses a threat to the water quality of this salmonid river and to the lakes. In the more extensive agricultural areas sheep grazing is carried out. Fishing is a main tourist attraction on the Boyne and Blackwater and there are a number of Angler Associations, some with a number of beats. Fishing stands and styles have been erected in places. The Eastern Regional Fishery Board have erected fencing along selected stretches of the river as part of their salmonid enhancement programme.

Parts of the river system have been arterially dredged. In 1969 an arterial dredging scheme commenced and disrupted angling for 18 years. The dredging altered the character of the river completely and resulted in many areas in very high banks. The main channel from Drogheda upstream to Navan was left untouched, as were a few stretches on the Blackwater. Ongoing maintenance dredging is carried out along stretches of the river system where the gradient is low. This is extremely destructive to salmonid habitat in the area. Drainage of the adjacent river systems also impacts on the many small wetland areas throughout the site.

The River Boyne is a designated Salmonid Water under the E.U. Freshwater Fish Directive. The site supports populations of several species listed on Annex II of the E.U. Habitats Directive, and habitats listed on Annex I of this Directive, as well as examples of other important habitat types. Although the wet woodland areas appear small there are few similar examples of this type of alluvial wet woodland remaining in the country, particularly in the north-east. The semi-natural habitats, particularly the strips of woodland which extend along the river banks, and the marsh and wet grasslands, increase the overall habitat diversity and add to the ecological value of the site, as does the presence of a range of Red Data Book plant and animal species and the presence of nationally rare plant species.

2014

**SITE NAME: RIVER BOYNE AND RIVER BLACKWATER SAC**

**Conservation objectives for River Boyne and River Blackwater SAC [002299]**

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites. The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

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.

Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:

Code Description

7230 Alkaline fens

91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)\*

\* denotes a priority habitat

Code	Common Name	Scientific Name
1099	River Lamprey	<i>Lampetra fluviatilis</i>
1106	Salmon	<i>Salmo salar</i>
1355	Otter	<i>Lutra lutra</i>

23/3/21