

Monaghan Bridges Horseshoe Bridge (Mullaghmatt)

Horseshoe (Mullaghmatt) Bridge AA Screening

Monaghan County Council

20/10/2023



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1. Introduction

Monaghan County Council (MCC) have commissioned Atkins to prepare a Screening for Appropriate Assessment report for the proposed works on Horseshoe (Mullaghmatt) Bridge, Monaghan Town, Co. Monaghan.

1.1. Project Location

Horseshoe Bridge is located on Park Road, Mullaghcroghery, County Monaghan. The bridge spans the Ulster Canal along the existing greenway. The bridge is a very high single arch structure with substantial wing walls on both sides. The bridge is listed on the Record of Protected Structures in the Monaghan County Development Plan (Reference ID: Local 18). It dates from 1835 – 1845.

1.2. Bridge Description

Horseshoe Bridge is a single arch stone road over the Ulster Canal. Horseshoe Bridge was built ca. 1839, carrying Park Road, which narrows at the crossing over Ulster Canal. The bridge is comprised of parapet walls of roughly squared rubble sandstone with heavy flat capping stones having rounded arises and punch-finished surfaces. The parapets have large, curved splays to both ends of bridge where they are terminated by square piers, having heavy pyramidal stone caps to the northeast end or continue along roadside to south. Both elevations of the bridge are obscured by ivy and trees growing on embankments either side of disused canal.

The Location of Horseshoe Bridge is illustrated in Figure 1-1 below.

Ecological walkover surveys of the bridge and the surrounding area were carried out on 21st of May 2022, by Ecologist Caroline Shiel.

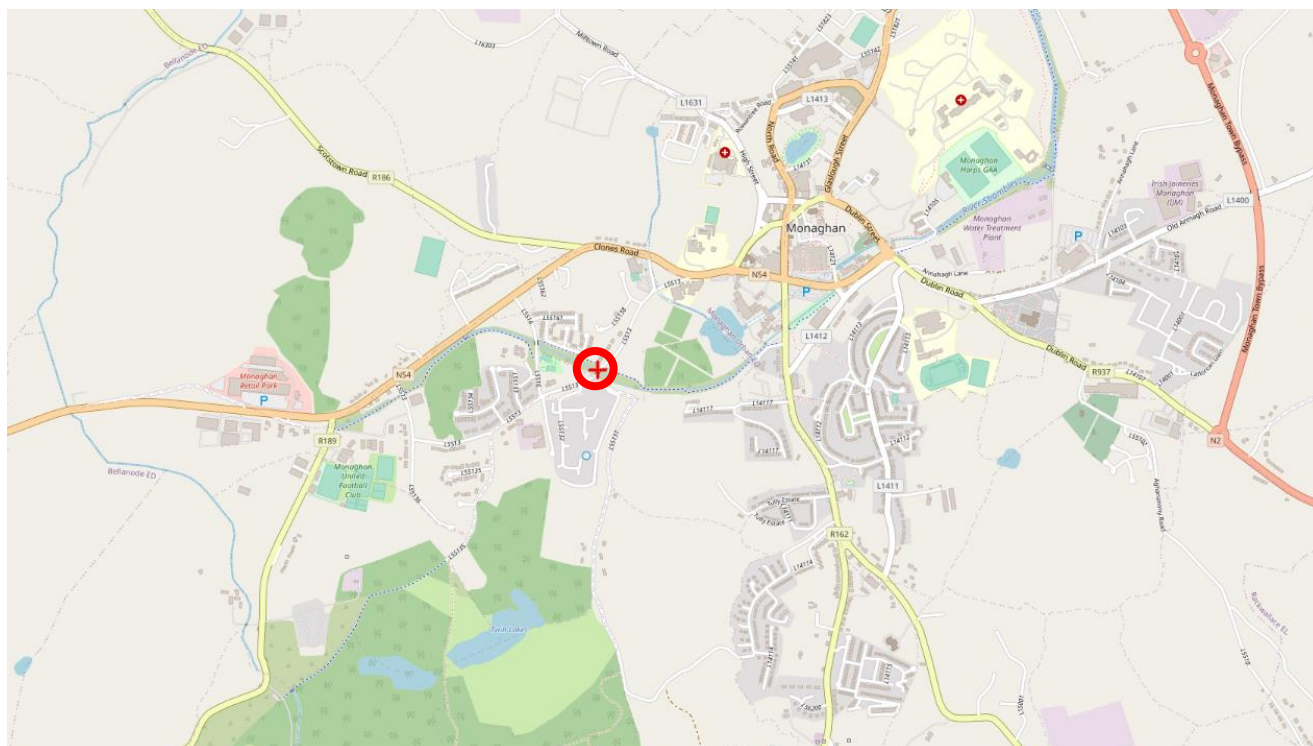


Figure 1-1 - Location of Horseshoe Bridge (red circle) on Park Road, Monaghan Town

1.3. Project Description

The following summarises the proposed works to be undertaken by Monaghan County Council:

A new active travel link will be constructed across the Ulster Canal, alongside the protected masonry Horseshoe Bridge structure (Reference ID: Local 18). This will require the construction of new bridge structure comprising a 27.0 m long, single span, precast beam and slab bridge deck, made integral with the abutments. The superstructure will comprise a single pretensioned W-beam with an in-situ concrete deck slab which varies in width from 3.0 m to 4.4 m to provide sufficient space for the active travel scheme and to accommodate the curved plan of the existing bridge structure. The substructure will comprise wall type abutments with wingwalls, founded on spread footings. Besides the bridge construction, the project will involve developing approach embankments and footways, upgrading controlled crossings, and implementing a signalised shuttle system for motorists crossing the bridge. Pedestrians and cyclists will have priority access. Maintenance work, such as vegetation removal and masonry repointing, will also be carried out on the west-facing side of the parapet, spandrel wall, and abutments of the existing masonry structure.

The proposed construction will not require any road closures. Temporary arrangements for vehicular, cyclist, and pedestrian traffic will be made throughout all construction phases to minimise disruption to existing traffic.

The water level and flow of the Ulster Canal are generally low, and the construction of the new bridge and maintenance of the existing structure will not impede or require temporary diversion of the water flow. Therefore, the canal flow will remain unaffected.

1.3.1. Proposed Construction Sequence

- Remove trees and vegetation to allow access for construction;
- Install falsework (scaffolding) for maintenance of the existing masonry arch;
- Implement maintenance on the existing structure;

- Excavate for the installation of spread footings (including Temporary lateral shoring if required);

Note: All materials will be excavated, removed, and disposed of off-site at a licensed waste disposal facility. Any temporary storage of excavated material, where required, must be stored away from the river.

- Construct spread footings and abutments;
- Install precast beam (including permanent formwork and formwork for deck cantilevers);
- Cast deck top slab and diaphragms (pre-cast or in-situ, to be chosen by Contractor)
- Install handrails;
- Construct approaches (including landscaping);
- Construct shared area footways and raised cycle track;
- Install traffic signals, crossings and paint road markings;

Finish off road reserve and open new active travel route.

During construction, standard best practice procedures will be followed.

The Preliminary Design Drawing of the Horseshoe Bridge is illustrated in Figure 1-2 below. Full scale drawings are included in Appendix A.

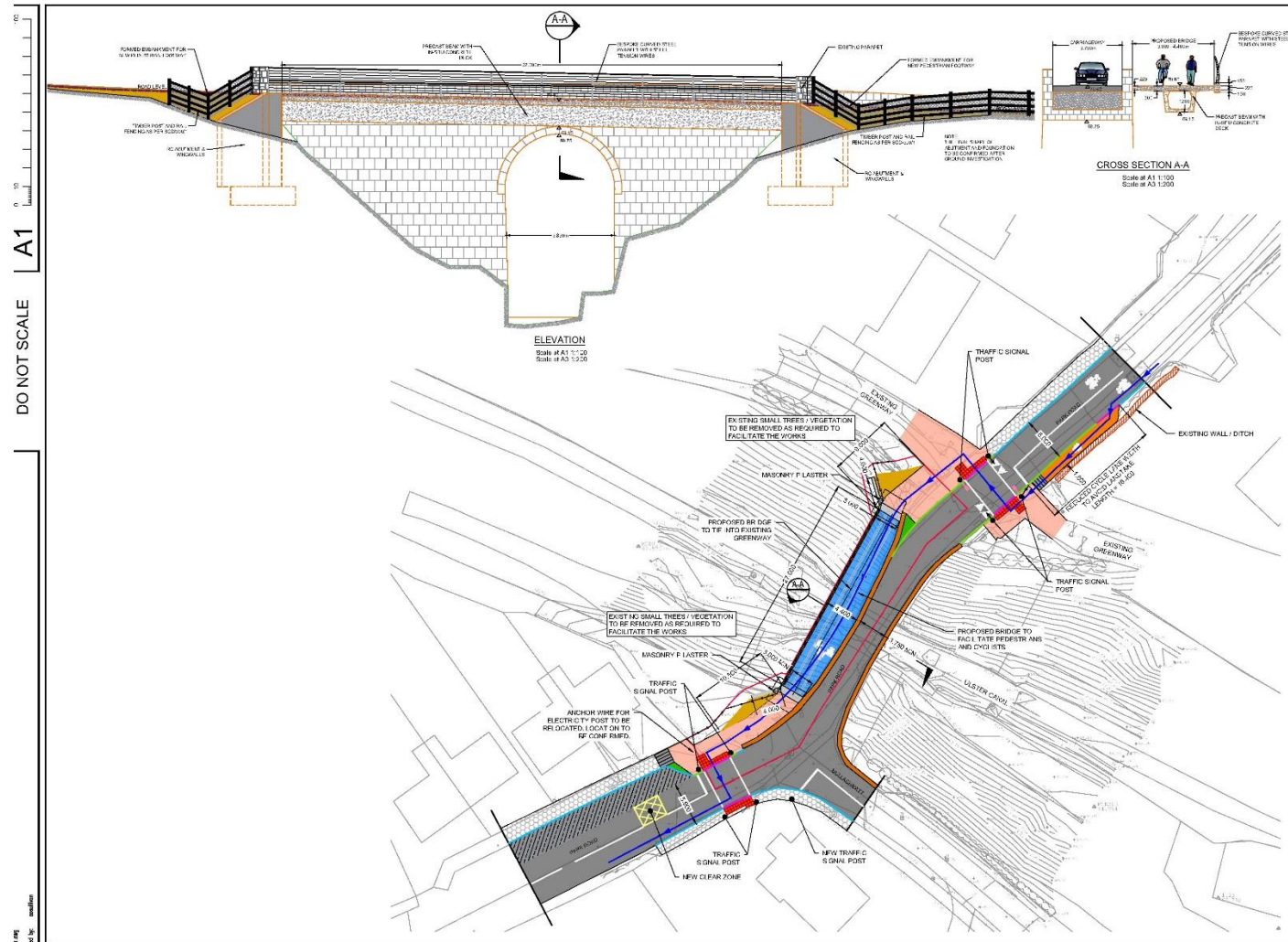


Figure 1-2 - Horseshoe Bridge Preliminary Design Drawing

2. Scope of Study

2.1. Legislative Context

2.1.1. Natura 2000

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (“the Habitats Directive”) is a legislative instrument of the European Union (EU) which provides legal protection for habitats and species of Community interest. Article 2 of the Directive requires the maintenance or restoration of such habitats and species at a favourable conservation status, while Articles 3 to 9, inclusive, provide for the establishment and conservation of an EU-wide network of special areas of conservation (SACs), known as Natura 2000, which also includes special protection areas (SPAs) designated under Article 4 of Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (“the Birds Directive”). Both SACs and SPAs are commonly referred to as “European sites” or “Natura 2000 sites”.

SACs are selected for natural habitat types listed on Annex I to the Habitats Directive and the habitats of species listed on Annex II to the Habitats Directive. SPAs are selected for species listed on Annex I to the Birds Directive and other regularly occurring migratory species. The habitats and species for which a Natura 2000 site is selected are referred to as the “qualifying interests” of that site and each is assigned a “conservation objective” aimed at maintaining or restoring its “favourable conservation condition” at the site, which contributes to the maintenance or restoration of its “favourable conservation status” at national and European levels.

2.1.2. Appropriate Assessment

Article 6 of the Habitats Directive deals with the management and protection of Natura 2000 sites. Articles 6(3) and (4) set out the decision-making process, known as “Appropriate Assessment” (AA), for plans or projects in relation to Natura 2000 sites. Article 6(3) states:

“Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”

The first sentence of Article 6(3) provides a basis for determining which plans and projects require AA, i.e. those “not directly connected with or necessary to the management of [one or more Natura 2000 sites] but likely to have a significant effect thereon, either individually or in combination with other plans or projects”. In *Waddenzee* (C-127/02), the Court of Justice of the European Union (CJEU) ruled that significant effects must be considered “likely” if “it cannot be excluded, on the basis of objective information”, that they would occur. This clearly sets a low threshold, such that AA is required wherever there is a reasonable possibility of significant effects on a Natura 2000 site. In the same judgment, the CJEU established that the test of significance relates specifically to the conservation objectives of the site concerned, i.e. “significant effects” are those which, “in the light, inter alia, of the characteristics and specific environmental conditions of the site”, could undermine the site’s conservation objectives. In addition to the effects of the plan or project on its own, the combined effects arising from the plan or project under consideration and other plans and projects must also be assessed (see Section 6).

The last part of the first sentence of Article 6(3) defines AA as an assessment of the “implications [of the plan or project] for the site in view of the site’s conservation objectives”. In the second sentence, Article 6(3) requires that, prior to agreeing to a plan or project, the competent authority must “ascertain” that “it will not adversely affect the integrity of the site concerned”. In *Sweetman v. An Bord Pleanála* (C-258/11), the CJEU ruled that a plan or project “will adversely affect the integrity of that site if it is liable to prevent the lasting preservation of the constitutive characteristics of the site that are connected to the presence of a priority natural habitat whose conservation was the objective justifying the designation of the site in the list of sites”. On that basis, EC (2018) described the “integrity of the site” as “the coherent sum of the site’s ecological structure, function and ecological processes, across its whole area, which enables it to sustain the habitats, complex of habitats and/or populations of species for which the site is designated”. As such, the “integrity” of a specific site is defined by its conservation

objectives and is “adversely affected” when those objectives are undermined. In *Waddenzee*, the CJEU ruled that the absence of adverse effects can only be ascertained “*where no reasonable scientific doubt remains*”.

The “precautionary principle” applies to all of the legal tests in AA, i.e. in the absence of objective information to demonstrate otherwise, the worst-case scenario is assumed. Where the tests established by Article 6(3) cannot be satisfied, Article 6(4) applies (see explanation in Section 2.2 below).

2.1.3. Competent Authority

The requirements of Articles 6(3) and (4) are transposed into Irish law by, inter alia, Part 5 of the European Communities (Birds and Natura Habitats) Regulations, 2011 (as amended) (“the Habitats Regulations”) and Part XAB of the Planning and Development Act, 2000 (as amended) (“the Planning and Development Acts”). As per the second sentence of Article 6(3), it is the “competent national authorities” who are responsible for carrying out AA and, by extension, for determining which plans and projects require AA. The competent authority in each case is the authority responsible for consenting to or licensing a plan or project, e.g. local authorities, An Bord Pleanála, the Environmental Protection Agency (EPA) or a Government Minister. In all cases, it is the competent authority who is ultimately responsible for determining whether or not a plan or project requires AA and for carrying out the AA, where required.

2.2. Appropriate Assessment Process

The AA process can be described as being made up of three distinct stages, as described below, the need to progress to each stage being determined by the outcome of the preceding stage.

Stage 1: Screening – This stage involves a determination by the competent authority as to whether or not a given plan or project required AA. As explained in Section 2.1.2, AA is required in respect of any plan or project not directly connected with or necessary to the management of a Natura 2000 site, but for which the possibility of likely significant effects on one or more Natura 2000 sites cannot be excluded. In *People Over Wind* (C-323/17), the CJEU ruled that measures intended to avoid or minimise harmful effects on a Natura 2000 site cannot be considered in making this determination. Consideration of the potential for in-combination effects is also required at this stage.

Stage 2: Appropriate Assessment – This stage involves a detailed assessment of the implications of the plan or project, individually and in combination with other plans and projects, for the integrity of the Natura 2000 site(s) concerned. This stage also involves the development of appropriate mitigation to address any adverse effects and an assessment of the significance of any residual impacts following the inclusion of mitigation. In *Kelly v. An Bord Pleanála* (IEHC 400), the High Court ruled that a lawful AA must contain complete, precise and definitive findings based on examination and analysis, and conclusions and a final determination based on an evaluation of the findings. In the same judgment, the High Court stressed that, in order for the findings to be complete, precise and definitive, the AA must be carried out in light of best scientific knowledge in the field and cannot have gaps or lacunae. In *Holohan v. An Bord Pleanála* (C-461/17), the CJEU clarified that AA must “*catalogue the entirety of habitat types and species for which a site is protected*” (i.e. the qualifying interests of the site) and assess the implications of the plan or project for the qualifying interests, both within and outside the site boundaries, and other, non-qualifying interest habitats and species, whether inside or outside the site boundaries, “*provided that those implications are liable to affect the conservation objectives of the site*”. The proposer of a plan or project requiring AA is furnishes the competent authority with the scientific evidence upon which to base its AA by way of a Natura Impact Statement (NIS) or Natura Impact Report (NIR). If it is not possible to ascertain that the plan or project will not adversely affect one or more Natura 2000 sites, authorisation can only be granted subject to Article 6(4).

Stage 3: Article 6(4) – If a plan or project does not pass the legal test at Stage 2, alternative solutions to achieve its aims must be considered and themselves subject to Article 6(3). If no feasible alternatives exist, authorisation can only be granted where it can be demonstrated that there are imperative reasons of overriding public interest (IROPI) justifying its implementation. Where this is the case, all compensatory measures must be taken to protect the overall coherence of Natura 2000.

The three stages described above are illustrated in Figure 2-1 below.

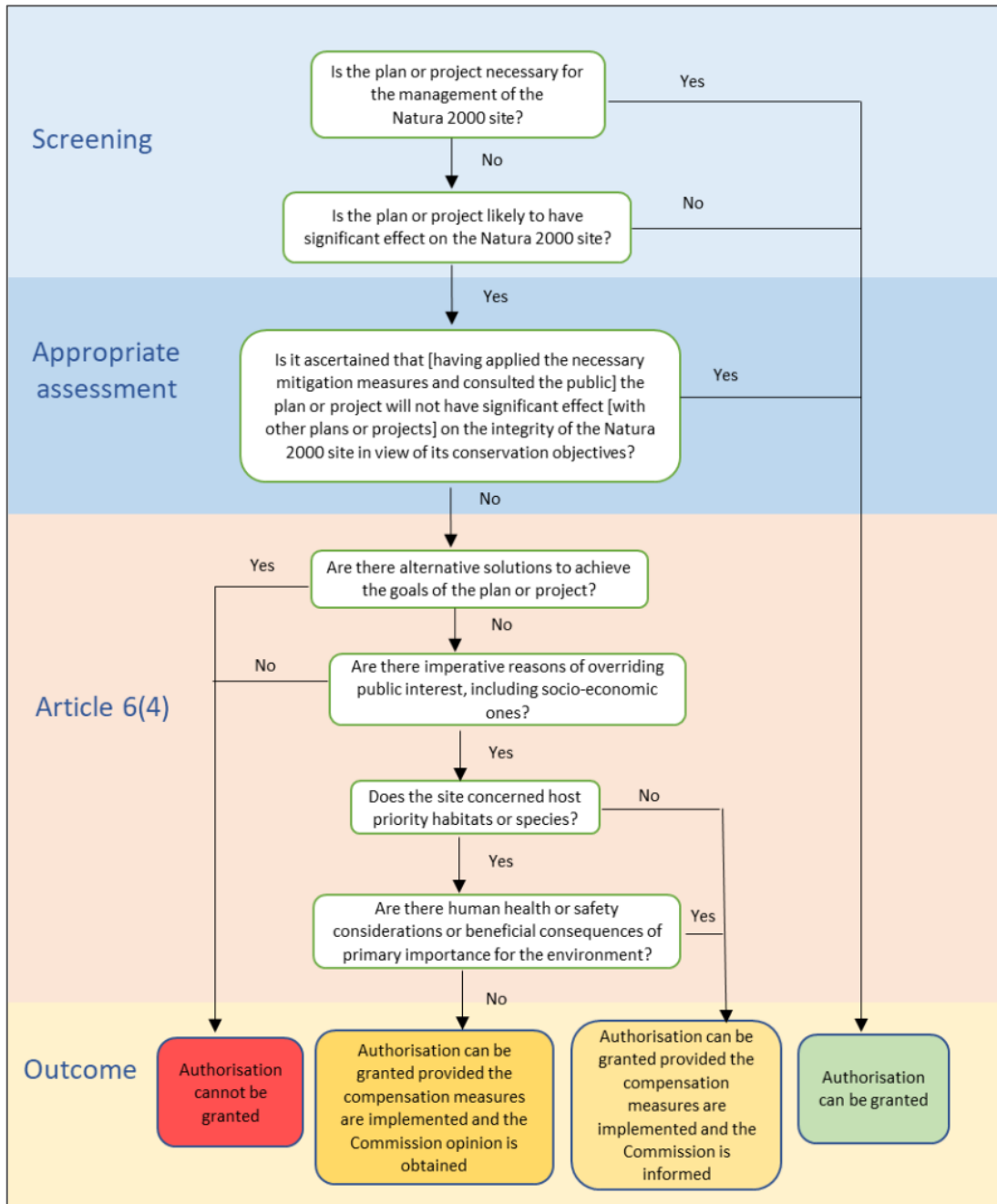


Figure 2-1 - Stages of the Appropriate Assessment process (EC, 2021).

3. Methodology

3.1. Sources of Guidance

This report was prepared with due regard to the relevant European and Irish legislation, case law and guidance, including but not limited to: -

- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna. *Official Journal of the European Communities* L 206/7-50.
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds. *Official Journal of the European Union* L 20/7-25.
- European Communities (Birds and Natural Habitats) Regulations, 2011. *S.I. No. 77/2011* (as amended) (“the Habitats Regulations”).
- Planning and Development Act, 2000. *No. 30 of 2000* (as amended) (“the Planning and Development Acts”).
- Planning and Development Regulations, 2001. *S.I. No. 600/2001* (as amended) (“the Planning Regulations”).
- EC (2018) *Managing Natura 2000 sites: The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC*. European Commission, Brussels.
- EC (2021a) *Assessment of plans and projects in relation to Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC*. C(2021) 6913. European Commission, Brussels.
- EC (2021b) *Guidance document on the strict protection of animal species of Community interest under the Habitats Directive*. C(2021) 7301. European Commission, Brussels.
- DEHLG (2010a) *Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Revised 11/02/2010*. Department of the Environment, Heritage and Local Government, Dublin.
- DEHLG (2010b) *Circular NPW 1/10 & PSSP 2/10. Dated 11/03/2010*. Department of the Environment, Heritage and Local Government, Dublin.
- NPWS (2012a) *Marine Natura Impact Statements in Irish Special Areas of Conservation. A Working Document. April 2012*. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.
- NPWS (2021) *Guidance on the Strict Protection of Certain Animal and Plant Species under the Habitats Directive in Ireland. National Parks & Wildlife Service Guidance Series 1*, Department of Housing, Local Government and Heritage, Dublin.
- Mullen, E., Marnell, F. and Nelson, B. (2021) *Strict Protection of Animal Species – Guidance for Public authorities on the Application of Articles 12 and 16 of the EU Habitats Directive to development/works undertaken by or on behalf of a Public authority. National Parks & Wildlife Service Guidance Series 2*, Department of Housing, Local Government and Heritage, Dublin.
- OPR (2021) *Appropriate Assessment Screening for Development Management. OPR Practice Note PN01*. Office of the Planning Regulator, Dublin.
- *Applications for Approval for Local Authority Developments made to An Bord Pleanála under 177AE of the Planning and Development Act, 2000, as amended (Appropriate Assessment) – Guidelines for Local Authorities* <<https://www.pleanala.ie/getmedia/0f385f48-7e84-43e3-b405-1201e490740a/Applications-for-approval-for-LA-Developments-S177AE-EN.pdf>>. An Bord Pleanála, Dublin.

- Case law, including *Waddenzee* (C-127/02), *Sweetman v. An Bord Pleanála* (C-258/11), *Kelly v. An Bord Pleanála* (IEHC 400), *Commission v. Germany* (C-142/16), *People Over Wind* (C-323/17), *Holohan v. An Bord Pleanála* (C-461/17), *Eoin Kelly v. An Bord Pleanála* (IEHC 84) and *Heather Hill* (IEHC 450).
- Sundseth, K. and Roth, P. (2014) *Article 6 of the Habitats Directive – Rulings of the European Court of Justice*. Ecosystems LTD (N2K Group), Brussels.

3.2. Desk Study and Consultation

A desk study was carried out to collate information available on Natura 2000 sites in the vicinity of the proposed works. These areas were viewed using Google Earth, Google Maps¹ and Bing Maps² (last accessed 27/04/2023).

The National Parks and Wildlife Service (NPWS) and National Biodiversity Data Centre (NBDC) online databases were reviewed concerning European sites and their features of interest in the vicinity of the proposed project.

The locations and boundaries of Natura 2000 sites in relation to the proposed works were reviewed on the *NPWS Designations Viewer* (NPWS, 2022d). Information on the qualifying interests and the structures and functions of the relevant Natura 2000 sites was found in the Site Synopsis, Natura 2000 Standard Data Form, Conservation Objectives and supporting documents for each site. Reporting under Article 17 of the Habitats Directive (NPWS, 2019a-c; ETC/DB, 2022a) and Article 12 of the Birds Directive (NPWS, 2022e; ETC/BD, 2022b) provided further information on the habitats and species concerned at the national level.

Spatial and other data regarding rivers and other waterbodies were obtained from the Environmental Protection Agency (EPA) using its online facility *EPA Maps: Water* (EPA, 2022).

Locations and boundaries of all European sites within 15km or with hydrological connectivity to the proposed project were identified and reviewed using the NPWS online map viewer. Boundary shapefiles were also downloaded from this site to facilitate the preparation of project graphics.

Desktop information on relevant European sites were reviewed on the NPWS website, including the site synopsis for each SAC/SPA, the conservation objectives, the site boundaries as shown on the NPWS online map viewer, the standard Natura 2000 Data Form for the SAC/SPA which details conditions and threats of the sites, and published information and unpublished reports on the relevant European sites.

Relevant planning information for the surrounding area was reviewed using the planning enquiry systems of Monaghan County Council. Search criteria were implemented to determine whether such projects or plans would not be relevant to this study. Information on other plans and projects proposed or consented to in the vicinity of the proposed works was also reviewed. This information was used to identify potential in-combination effects from other plans and projects with the proposed works.

Baseline data regarding the receiving environment, including Natura 2000 sites, was gathered through desk study and consultation with relevant bodies, most importantly the National Parks & Wildlife Service (NPWS).

3.3. Site Visits

A survey of Horseshoe Bridge was carried out on the 21st of May 2022.

The purpose of these surveys was to identify any ecological constraints or sensitive ecological features within the watercourse corridor, riparian area and adjacent lands and to identify fallen trees or obstructions within the watercourse. This technical note is not an assessment of works that may be proposed within the survey area in the future and hence, it does not contain an impact assessment of proposed works or any site-specific protection measures for any such works.

Ecological survey methods were in general accordance with those outlined in the following documents:

- *A Guide to Habitats in Ireland* (Fossitt, 2000);

¹ <https://www.google.ie/maps>

² <http://www.bing.com/maps/>

- *Best Practice Guidance for Habitat Survey and Mapping (Smith et al., 2011);*
- *Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes (NRA, 2009).*

Mammals and birds were surveyed based on incidental sightings, signs of activity during the survey and the identification of possible suitable habitats to support these species.

While on site, semi-natural habitats present were recorded using the Fossitt (2000) classification system and their constituent species noted. Potential sensitive ecological receptors present within the survey area were recorded, including the presence of protected species and habitats or habitats that would support protected species, in addition to noting connectivity to European sites. The presence of non-native invasive species was also recorded. All features of interest were recorded using a handheld Garmin Map 62 device.

3.4. Impact Assessment

The assessment detailed in this report was undertaken in the following steps, following the best practice guidance highlighted above: -

1. Description of the proposed works, including their locations, nature, scale, duration, and potential impacts on the natural environment.
2. Description of the baseline conditions in the receiving environment, focussing on habitats, species, ecological corridors, and any known threats, pressures and activities.
3. Establishment of a Zone of Influence, and identification and description of Natura 2000 sites therein.
4. Identification of source-pathway-receptor chains between the proposed works and the qualifying interests of Natura 2000 sites, and evaluation of effects in view of the relevant conservation objectives.
5. Consideration of the potential for significant effects in combination with other plans and projects.
6. Conclusion and recommendation.

Further details of the methodology and the rationale behind it are provided in the relevant sections.

3.5. Statement of Authority

This report has been prepared by Sinéad Kinsella and reviewed by Kevin Mc Caffrey.

Sinéad Kinsella has a BSc in Applied Freshwater and Marine Biology. She has experience in preparing Appropriate Assessment Screening Reports, Natura Impact Statements and prepares Ecological Impact Assessment Reports and undertakes a range of ecological surveys (e.g. mammal and bat surveys) for a range of proposed developments.

Kevin Mc Caffrey is a Senior Ecologist with a BSc (Hons) in Applied Freshwater and Marine Biology and a MSc in Environmental Sustainability. He has over 10 years' experience in freshwater and marine ecology, environmental surveying, impact assessment and as an Ecological clerk of Works. He has prepared and reviewed a wide range of technical reports including Environmental Impact Assessment Reports, AA Screening Reports, Natura Impact Statements and sanitary surveys.

4. Receiving Natural Environment

This section provides an overall description of the natural environment in the vicinity of the proposed works and is not limited to Natura 2000 sites.

4.1. Desktop Review

Horseshoe Bridge spans the disused Ulster Canal which joins the Mullaghmatt River (IE_NB_03S010500) ca. 177m away.

The proposed works site and the Mullaghmatt River are located in Hydrometric Area no. 03 – the Lough Neagh and Lower Bann catchment and the subcatchment Blackwater (Monaghan)_SC_010.

Q-values, a biological water quality metric based on the composition of a river's macroinvertebrate community, detail the Shambles River (which conjoins with the Mullaghmatt River) as being of 'Poor' (Q2-3) ecological condition at the EPA sampling station 'Culvert u/s of N1 Roundabout' ca. 3.1km downstream of the proposed works site in 2022. The Mullaghmatt River is categorized as 'Poor' status under the Water Framework Directive (2016-2021).

There is a remote hydrological connection from the proposed works site to Slieve Beagh SPA (site code: 004167) via the Mullaghmatt River and the Blackwater River. The shortest possible distance from the proposed works site to this SPA is ca. 19.8km via hydrological routes (upstream) and ca. 11km via straight line distance. The sole qualifying interest of this SPA is Hen Harrier (*Circus cyaneus*) [A082].

The NBDC database shows records for white-clawed crayfish (*Austropotamobius pallipes*) in the Blackwater River [Monaghan] approximately 5km away from Horseshoe Bridge. The most recent of these records dates from EPA sampling in 2007.

Otter (*Lutra lutra*) were recorded ca. 3km to the west of the proposed works by the NBDC. Otter use watercourses as commuting routes and foraging areas, with their banks offering places of shelter and breeding. The Ulster Canal, the Mullaghmatt River, the Blackwater River and the proposed works area are not located within a *Margaritifera sensitive area*.

4.2. Site Surveys

Horseshoe Bridge was surveyed on 21st May 2022 by Ecologist Caroline Shiel. The purpose of the survey was to characterise and record the habitats and sensitive ecological receptors within and immediately adjacent to the channels included in the study area.

The Ulster Canal channel was practically dry on the date of the survey, but it was unsafe to walk on the bed of the channel due to deep mud. The tow path is located on the southern side of the canal. All embankments in the vicinity of the bridges are covered with deciduous trees mainly ash and sycamore, with occasional hawthorn. The understorey is comprised of brambles, ferns and ivy.

There is heavy ivy growth on the parapet walls at road level but the spandrel walls and abutments of the bridges are largely ivy-free.

No bats were recorded roosting in the structure. There are some suitable crevices for bats under the arch. It was not possible to mark crevices for retention due to the extreme height of the arch. If the arch is to be repointed the under surface should be examined more closely from a scaffold and crevices marked for retention for bats.

No birds' nests were visible in the structure.

No invasive plant species were recorded.

The embankments were walked for 50m both upstream and downstream of the bridge to survey for signs of otter or badger. None were recorded.

It is proposed to erect a new pedestrian bridge directly adjacent to Horseshoe Bridge on the west side of the structure. Trees up 5-6m from the western elevation will need to be removed to facilitate construction. Currently trees growing in this location are immature ash and sycamore. The trees are tall but trunks are slim due to competition for light in this location.

There is a problem with dumping at this location.



Plate 4-1 - View across bridge looking south showing long parapet walls with ivy growth.



Plate 4-2 - View across bridge looking north



Plate 4-3 - Cut stone parapet walls with considerable ivy growth



Plate 4-4 - Western elevation of Horseshoe Bridge showing extreme height of structure. This is the side proposed for pedestrian bridge.



Plate 4-5 - Close up of northern embankment on western side of bridge - vegetation mainly ash saplings and some sycamore



Plate 4-6 - Close up of northern embankment on western side of bridge - vegetation mainly ash saplings and some sycamore



Plate 4-7 - Southern embankment immediately downstream of bridge with immature ash and sycamore with understory of ferns, ivy and brambles



Plate 4-8 - Southern embankment immediately downstream of bridge with immature ash and sycamore with understory of ferns, ivy and brambles



Plate 4-9 - Tow path looking east under structure. Canal channel is dry with a lot of rubbish dumped into it



Plate 4-10 - Under surface of arch



Plate 4-11 - Some suitable crevices for bats under the arch close to the western side of the bridge. It was not possible to mark any crevices due to the extreme height of structure. If under surface of arch is to be repointed this section should be surveyed more closely from a scaffold and crevices selected for retention



Plate 4-12 - Looking east along tow path. Rubbish in channel



Plate 4-13 - Ash and sycamore saplings growing on eastern side of structure on northern embankment



Plate 4-14 - Retaining wall abutting base of abutment at eastern side of structure on southern bank



Plate 4-15 - Damage to retaining wall on eastern side of structure on southern bank



Plate 4-16 - Eastern elevation of bridge from tow path



Plate 4-17 - Ash and sycamore saplings on northern embankment to east of structure



Plate 4-18 - Vegetation on southern embankment to east of structure



Plate 4-19 - Retaining wall abutting base of bridge on western side on southern embankment



Plate 4-20 - Rubbish dumped from road level lying on embankment

5. Connectivity to Natura 2000 sites

5.1. Zone of Influence

The “*Zone of Influence*” of a plan or project is the area which may experience ecological effects as a result of its implementation, including any ancillary activities. The various impacts of a plan or project will each have their own characteristics, e.g. nature, extent, magnitude, duration etc. Accordingly, the area subject to each impact (“zone of impact”) will vary depending on characteristics of the impact and the presence of pathways for its propagation. Ecological features within or connected to one or more zones of impact could, depending on their sensitivities, be affected by the plan or project under consideration. The area containing such features may be regarded as the Zone of Influence. As such, in establishing the Zone of Influence for a plan or project, regard must be had to the characteristics of its potential impacts, potential pathways for impacts and the sensitivities of ecological features in the receiving environment.

In its guidance on selecting which Natura 2000 sites to include in the AA Screening, *Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities* (DEHLG, 2010a) recommends inclusion of sites in the following three categories: -

- Any Natura 2000 sites within or adjacent to the plan or project area,
- Any Natura 2000 sites within the Zone of Influence of the plan or project (generally within 15 km for plans, to be established on a case-by-case basis for projects, having regard to the nature, scale and location of the project, the sensitivities of the ecological receptors and the potential for in-combination effects), and
- Following the precautionary principle, any other Natura 2000 sites for which the possibility of significant effects cannot be excluded, e.g. for a project with hydrological impacts, it may be necessary to check the full extent of the catchment for Natura 2000 sites with water-dependent qualifying interests.

In addition, *Assessment of plans and projects in relation to Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC* (EC, 2021) recommends consideration of Natura 2000 sites hosting fauna which could move to the plan or project area or its zone(s) of impact, and the potential for the plan or project to sever ecological connectivity within or between Natura 2000 sites. *Appropriate Assessment Screening for Development Management* (OPR, 2021) emphasises the importance of employing the source-pathway-receptor model (rather than arbitrary distances such as 15 km) when selecting Natura 2000 sites for inclusion in the AA Screening.

Based on the descriptions of the proposed works (Section 1.3) and the receiving natural environment (Section 4), the zones of impact of the proposed works were defined as: -

- For temporary disturbance to fauna, all areas within a precautionary buffer of 500m of each of the proposed work locations, and
- For hydrological impacts, waterbodies and riparian zones/floodplains within 500m of all works locations and downstream waterbodies as far as any accidental pollution could conceivably be carried.

Due to the nature, scale and extent of the proposed project, sources of potential effect during the works include; human presence, localised temporary disturbance to bankside vegetation, localised removal of channel obstructions and re-establishment of the dry drain. Thus, the potential zone of influence is considered to be 500m for mobile species, i.e. otter (NRA, 2009), and receptors with hydrological connectivity to the proposed project. Due to the nature scale and extent of the proposed project, there are no anticipated sources of potential effect post-completion of the works.

Publicly available spatial data for river, transitional and coastal waterbodies (EPA, 2022) were used in conjunction with aerial imagery to identify pathways and zones of impact for disturbance and water quality impacts from the proposed works. These were then mapped in relation to Natura 2000 sites (see Figure 5-1). In addition, the wider Zone of Influence described above was examined to identify any other Natura 2000 sites with potential ecological connections to these zones of impact.

5.2. Identification of Sites

5.2.1. Disturbance to habitats

The Ulster Canal, which the bridge spans and the Mullaghmat River, which is ca. 177m downstream of the bridge, provides a suitable environment for a number of aquatic or riparian habitats. During the proposed works, the removal of vegetation and trees along the banks to allow access for construction on the bridge will be carried out. There is only one Natura 2000 site which is hydrologically connected to the proposed works location. The proposed works site is hydrologically connected to the Slieve Beagh SPA (site code: 004167), via the Blackwater River. The proposed works site is located ca. 11km away via straight line distance and ca. 19.8km by hydrological connection via the shortest possible route. However, the proposed works site is located downstream of the SPA. The sole qualifying interest of this SPA is Hen Harrier (*Circus cyaneus*) [A082]. There is no suitable habitat for Hen Harrier within the proposed works area and therefore, there will be no disturbance to this species as a result of the proposed works.

During the proposed works, the Ulster Canal will not be obstructed or diverted. Therefore, there will be no impact to fish species which inhabit this river. Further, given the nature and scale of the proposed works, there will be no impact to habitats, including any qualifying interests of nearby Natura 2000 sites or any UK Protected Sites, as a result of the proposed works.

5.2.2. Hydrological impacts

Water quality

Given the nature and scale of the proposed works and that there will be no in-stream works, there will be no impact on the water quality of the Ulster Canal or the Mullaghmat River. The water level and flow of the Ulster Canal are generally low and the canal was dry on the day of the site survey. In the case that pollution or chemicals from the proposed works, accidentally enters the watercourse, they will be localised to the immediate environs and dispersed and diluted within the watercourse. There is no hydrological connection to any Natura 2000 sites or Northern Ireland protected sites located downstream of the proposed works. There will be no impact on water quality of the proposed works and hence, no impact on any species or habitats that are sensitive to water quality impacts, which are qualifying interests of any Natura 2000 sites or UK Protected Sites.

5.2.3. Disturbance to fauna

The Ulster Canal and the Mullaghmat River both provide suitable holting, commuting and foraging habitat for otter. However, no signs of otter were recorded during the site survey. During the site survey no bats were recorded roosting in the bridge. There were some suitable crevices recorded under the arch for bats. However, it was not possible to mark these crevices for retention due to the extreme height of the arch.

As mentioned, Slieve Beagh SPA is hydrologically connected to the proposed works site, via the Blackwater River (ca. 16km via watercourse and ca. 10km via straight line distance). The SPA is located upstream of the proposed works. The sole qualifying interest of this SPA is Hen Harrier. Given, the distance from the proposed works to this SPA, the lack of suitable habitat for this species in the vicinity of the proposed works and that no signs of this species were recorded during the proposed works, there will be no significant impact on Hen Harrier as a result of the proposed works. No birds' nests were visible in the structure during the site survey.

5.2.4. Invasive alien species

The introduction or spread of any aquatic or riparian invasive alien species could negatively affect the downstream rivers and the canal itself. The introduction or spread of any terrestrial invasive alien species could negatively affect habitats and species in the vicinity of the proposed works. In addition, the introduction or spread of diseases such as crayfish plague pose a risk to species such as White-clawed Crayfish (*Austropotamobius pallipes*). These species and habitats mentioned are not qualifying interests of any nearby or hydrologically connected Natura 2000 sites, or UK Protected Sites. No invasive species listed under the EC (Birds and Natural Habitats) Regulations 2011, as amended, were recorded during the site survey. Standard biosecurity measures will be in place to prevent the spread of invasive species to the site during the proposed works.

5.2.5. Indirect effects

In the wider Zone of Influence, there are no other Natura 2000 sites. The following Northern Ireland protected sites are located within the wider Zone of Influence:

- Peatlands Park (site code: UK0030236)
- Slieve Guillion SAC (site code: UK0030277)

As mentioned, Slieve Beagh SPA (site code: 004167) is located ca. 11km away via straight line distance and there is remote upstream hydrological connectivity(19.8km). The sole qualifying interest of this SPA is Hen Harrier. There is a lack of ecological dependency for this species on the proposed works area and therefore, this SPA can be ruled out for potential impacts as a result of the proposed works. Peatlands Park SAC is located ca. 43km away via straight line distance with no hydrological connection to the proposed works site. Slieve Guillion SAC is located ca. 45km away with no hydrological connection. Given these distances and the lack of ecological connectivity between the zones of impact of the proposed works and the qualifying interests of these sites, the possibility of likely significant effects on these sites can be ruled out at this stage.

Summary

Based on the above examination of the Zone of Influence, no Natura 2000 sites or UK Protected Sites have been selected for inclusion in the screening assessment.

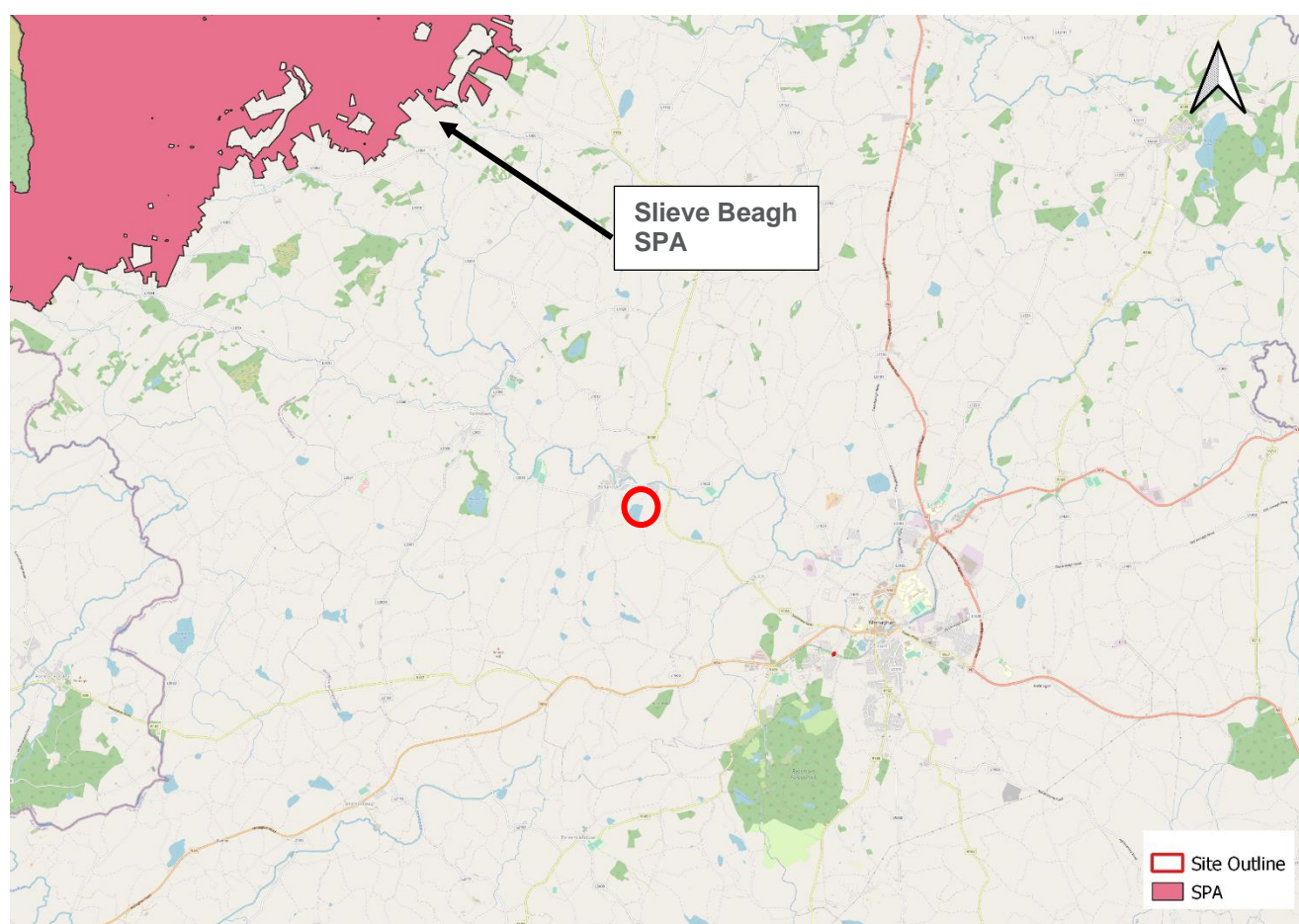


Figure 5-1 - Proposed works site in relation to the Slieve Beagh SPA (Source: OpenStreetMap)

6. Potential In-combination Effects

Potential in-combination effects with the following plans and projects were considered during the preparation of this report. The search of Monaghan County Council was based on a map-based search (MyPlan.ie).

The Monaghan County Development Plan 2019-2025³ sets out strategies and objectives to provide sustainable development within Co. Monaghan. The aim of this Plan is to ensure that the future development of County Monaghan is promoted and regulated in a manner that will improve living standards and facilitate social and cultural development for the population of County Monaghan without jeopardising the ability of future generations to do likewise. The Strategic Objectives of this Plan are as follows:

- To develop to its full potential each part of County Monaghan in economic, social and environmental terms.
- To sustain traditional settlement patterns while developing the role and function of each town, village and settlement throughout the County in accordance with the settlement strategy.
- To realise the potential of County Monaghan in the context of its strategic location along the border, adjacent to the eastern economic corridor and to improve linkages and communications between Monaghan and its neighbouring counties.
- To support balanced economic development throughout the county by delivering improved infrastructure and services.
- To protect and nurture the County's rich natural resources, heritage, tourism assets and amenities along with the environmental quality of the natural and built environment in both the urban and rural areas.
- To plan for greater social inclusion and to improve the quality of life of all who live and work in County Monaghan.
- To provide a framework for the management and regulation of development and use of land will guide day to day planning decisions.
- To maintain the strategic capacity and safety of the national road network and to safeguard the investment in national roads.

The Management Plan also states that:

Implementing the Habitats Directive for Natura 2000 sites and to recognise that projects that may have an adverse impact on the designated sites will not be permitted unless for imperative reasons of overriding public interest.

The formal process of appropriate assessment has been carried out as part of the preparation of this Plan. Stage 1 involved the screening for appropriate assessment where it was concluded that the Plan could, in the absence of mitigation, result in adverse impacts on the Natura 2000 network. A stage 2 appropriate assessment was carried out. Any risk to the conservation objectives of the Natura 2000 network have been addressed by the inclusion of mitigation measures that will prioritise the avoidance of impacts in the first place and mitigate impacts where these cannot be avoided. With mitigation measures incorporated it is considered that the Plan will not have a significant adverse effect on the integrity of the Natura 2000 network.

Farmers and landowners may also undertake general agricultural operations in areas adjacent to the proposed works and along the river, which could potentially give rise to impacts of a similar nature to those arising from the proposed works. This could potentially result in additional increased risk to water quality. Many agricultural operations are periodic, not continuous in nature, and qualify as Activities Requiring Consent (ARCs) that require consultation with the NPWS in advance of the works, e.g. reclamation, infilling or land drainage within 30m of the river, removal of trees or any aquatic vegetation within 30m of the river, and harvesting or burning of reed or

³ Monaghan County Development Plan 2019-2025- <https://monaghan.ie/planning/wp-content/uploads/sites/4/2019/04/Monaghan-County-Development-Plan-2019-2025-%E2%80%93-Written-Statement.pdf>

willow (NPWS, 2022a). Agricultural operations must also comply with the European Communities (Environmental Impact Assessment) (Agriculture) Regulations, 2011 (as amended) in relation to:

- Restructuring of rural land holdings,
- Commencing use of uncultivated land or semi-natural areas for intensive, and
- Land drainage works on lands used for agriculture.

A Natura Impact Statement (NIS) is required under Regulation 9 if it is likely to have a significant effect on a Natura 2000 site. The drainage or reclamation of wetlands is controlled under the Planning and Development (Amendment) (No. 2) Regulations, 2011 and the European Communities (Amendment to Planning and Development) Regulations, 2011. Therefore, the in-combination effects of agricultural operations and the proposed works are not likely to be significant.

Near the proposed works, projects that have been granted planning permission include retention of existing developments, typically extensions to domestic dwellings, or the construction of new domestic dwellings or extensions to such dwellings. Regarding potential impacts to water quality, these projects will have to comply with the EPA's Code of Practice for Wastewater Treatment Systems for Single Houses (EPA, 2009, 2018). These developments have conditions attached to their planning permission relating to sustainable development, such as siting of septic tanks, foul surface water and effluent drainage facilities, and clean surface water run-off drainage facilities. Therefore, it is not anticipated that the developments that have been granted permission or any operational developments in the surrounding area will have any significant effects in combination with the proposed works.

7. Conclusion

This Appropriate Assessment Screening Report has examined the details of the proposed works on Horseshoe Bridge in County Monaghan and the Natura 2000 sites and UK Protected Sites in their Zone of Influence. It has analysed the potential impacts of the proposed works on the receiving natural environment and evaluated their effects, both individually and in combination with other plans and projects, in view of the conservation objectives of the relevant Natura 2000 sites. This report has been prepared in line with the Habitats Directive, as transposed into Irish Law by the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended), relevant case law and guidance from the European Commission, the Department of the Environment, Heritage and Local Government and the Office of the Planning Regulator, on the basis of objective information and adhering to the precautionary principle.

Following the assessment detailed in this report, it can be concluded beyond reasonable scientific doubt that the proposed development will not, either individually or in combination with other plans or projects, give rise to any impacts which would constitute significant effects on Slieve Beagh SPA (site code: 004167) or any other Natura 2000 sites or any UK Protected Sites, in view of their conservation objectives.

Therefore, it is the recommendation of the authors of this report that Monaghan County Council, as the competent authority in this case may determine that Appropriate Assessment is not required in respect of the proposed works. Should the scope of the proposed works change, a new Appropriate Assessment Screening Report and final determination will be required.

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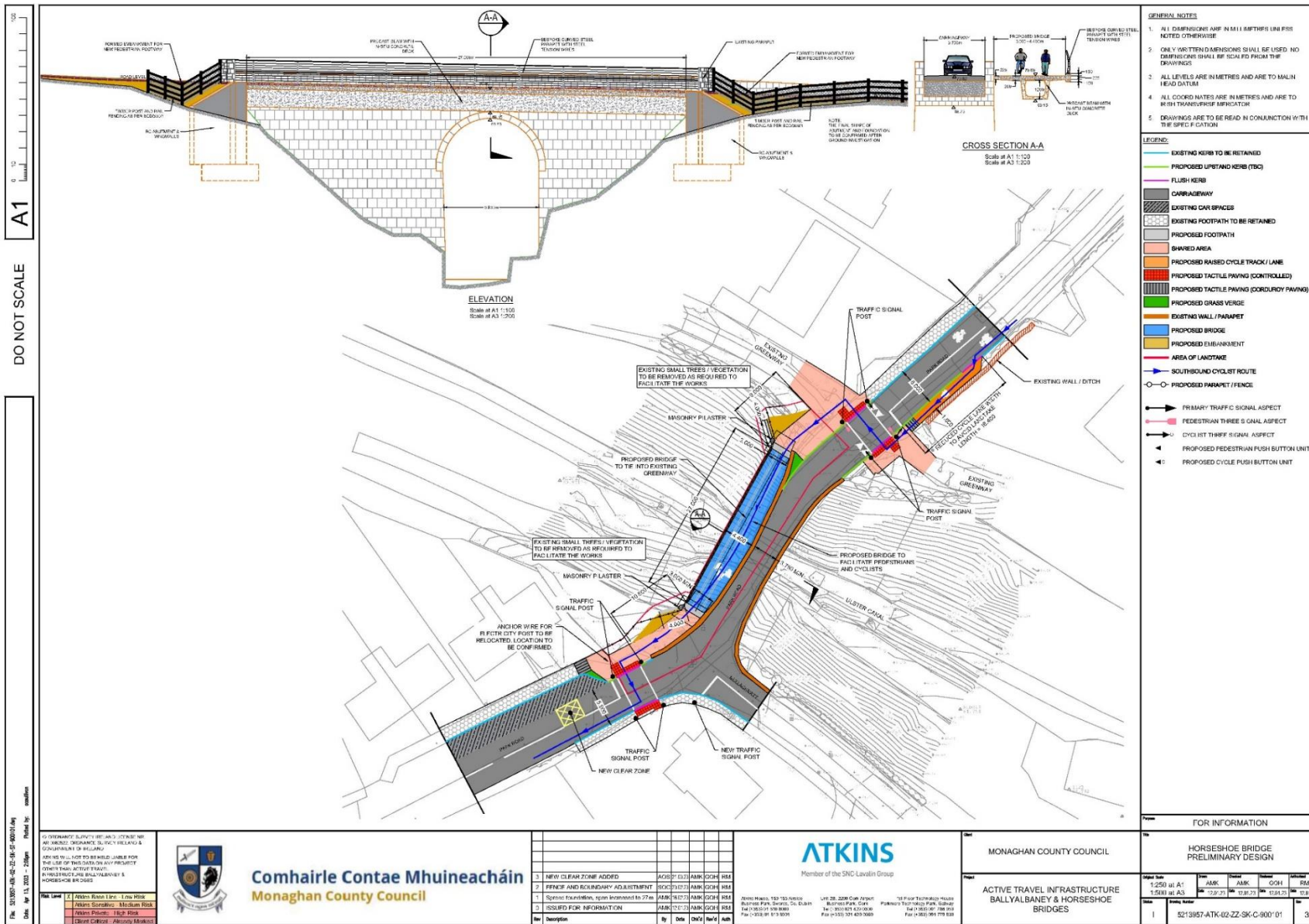
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Appendices



Appendix A. Preliminary Design Drawing



A1

DO NOT SCALE

<p>5213957-DG-0045-Rev 2.00000.dwg Date: 10/10/2023 12:28:00 Project No: 5213957</p>	<p>COMHAIRLE BALLYALBANEY & HORSESHOE BRIDGES PRELIMINARY DESIGN</p>
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Comhairle Contae Mhuineacháin
Monaghan County Council

No.	Description	By	Date	CHK'd	Rev'd	Auth
3	NEW CLEAR ZONE ADDED	AGB	01/10/2023	AMK	GGH	RM
2	FINISH AND BOUNDARY ADJUSTMENT	BOC	01/10/2023	AMK	GGH	RM
1	SPREAD FOUNDATIONS, REINFORCEMENT TO 27m	AMK	01/10/2023	AMK	GGH	RM
0	ISSUED FOR INFORMATION	AMK	01/10/2023	AMK	GGH	RM



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Client	MONAGHAN COUNTY COUNCIL
Project	ACTIVE TRAVEL INFRASTRUCTURE BALLYALBANEY & HORSESHOE BRIDGES

FOR INFORMATION					
Project No.	1:250 at A1	1:250 at A3	1:250 at A3	1:250 at A3	1:250 at A3
Date	10/10/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023
Sheet No.	1	2	3	4	5
Sheet Title	5213957-ATK-02-ZZ-SK-C-000'01				
Sheet Count	3				

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