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Appropriate Assessment Screening for remediation works at Brooke Bridge, Monasterevin Co. Kildare.

26TH JUNE 2020

Prepared by: *Bryan Deegan (MCIEEM) of Altemar Ltd.*
On behalf of: K*ildare County Council*

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1. INTRODUCTION

An Appropriate Assessment is an assessment of the potential effects of a proposed project or plan, on its own, or in combination with other plans or projects, on one or more NATURA 2000 sites (Special Areas of Conservation (SAC) or Special Protection Areas (SPA)).

The following Appropriate Assessment Screening has been prepared by **Altemar Ltd.** at the request of Kildare County Council for remediation works at Brooke Bridge, Monasterevin Co. Kildare.

The following AA Screening examines the likely significant effects of a plan or project, either on its own, or in combination with other plans and projects, upon a Natura 2000 site and considers whether, on the basis of objective scientific evidence, it can be concluded, in view of best scientific knowledge and the conservation objectives of the relevant European sites, that there are not likely to be significant effects on any European site.

BACKGROUND TO ALTEMAR LTD.

Since its inception in 2001, Altemar has been delivering ecological and environmental services to a broad range of clients. Operational areas include residential, infrastructural, renewable, oil & gas, private industry, local authorities, EC projects and State/semi-State Departments. Bryan Deegan is the managing director of Altemar. Bryan is an environmental scientist, marine biologist and marine mammal observer with 26 years' experience working in Irish terrestrial and aquatic environments, providing services to the State, Semi-State and industry. Bryan Deegan (MCIEEM) holds a MSc in Environmental Science, BSc (Hons.) in Applied Marine Biology, NCEA National Diploma in Applied Aquatic Science and a NCEA National Certificate in Science (Aquaculture). Bryan is the sole environmental consultant that assists Inland Fisheries Ireland with assessments of in-house and external environmental assessment. Bryan Deegan carried out all elements of this Appropriate Assessment Screening.

2. BACKGROUND TO THE APPROPRIATE ASSESSMENT

The Habitats Directive 92/43/EEC (together with the Birds Directive (2009/1477/EC)) forms the cornerstone of Europe's nature conservation policy. The Directive protects over 1000 animals and plant species and over 200 "habitat types" which are of European importance. In the Directive, Articles 3 to 9 provide the legislative means to protect habitats and species of European Community interest through the establishment and conservation of an EU-wide network of conservation sites (NATURA, 2000). These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Birds Directive), Article 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect NATURA 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment:

"Any plan or project not directly connected with or necessary to the management of the [NATURA 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implication for the site and subject to the provisions of paragraph 4, the component 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."

As outlined in the EC guidance document on Article 6(4) (January 2007)[1]:

"Appropriate assessments of the implications of the plan or project for the site concerned must precede its approval and take into account the cumulative effects which result from the combination of that plan or project with other plans or projects in view of the site's conservation objectives. This implies that all aspects of the plan or project which can, either individually or in combination with other plans or projects, affect those objectives must be identified in the light of the best scientific knowledge in the field.

[1] European Commission. (2007).Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission;

Assessment procedures of plans or projects likely to affect NATURA 2000 sites should guarantee full consideration of all elements contributing to the site integrity and to the overall coherence of the network, both in the definition of the baseline conditions and in the stages leading to identification of potential impacts, mitigation measures and residual impacts. These determine what has to be compensated, both in quality and quantity. Regardless of whether the provisions of Article 6(3) are delivered following existing environmental impact assessment procedures or other specific methods, it must be ensured that:

- *Article 6(3) assessment results allow full traceability of the decisions eventually made, including the selection of alternatives and any imperative reasons of overriding public interest.*
- *The assessment should include all elements contributing to the site's integrity and to the overall coherence of the network as defined in the site's conservation objectives and Standard Data Form, and be based on best available scientific knowledge in the field. The information required should be updated and could include the following issues:*
    - *Structure and function, and the respective role of the site's ecological assets;*
    - *Area, representativity and conservation status of the priority and nonpriority habitats in the site;*
    - *Population size, degree of isolation, ecotype, genetic pool, age class structure, and conservation status of species under Annex II of the Habitats Directive or Annex I of the Birds Directive present in the site;*
    - *Role of the site within the biographical region and in the coherence of the NATURA 2000 network; and,*
    - *Any other ecological assets and functions identified in the site.*
- *It should include a comprehensive identification of all the potential impacts of the plan or project likely to be significant on the site, taking into account cumulative impacts and other impacts likely to arise as a result of the combined action of the plan or project under assessment and other plans or projects.*
- *The assessment under Article 6(3) applies the best available techniques and methods, to estimate the extent of the effects of the plan or project on the biological integrity of the site(s) likely to be damaged.*
- *The assessment provides for the incorporation of the most effective mitigation measures into the plan or project concerned, in order to avoid, reduce or even cancel the negative impacts on the site.*
- *The characterisation of the biological integrity and the impact assessment should be based on the best possible indicators specific to the NATURA 2000 assets which must also be useful to monitor the plan or project implementation."*

3. STAGES OF THE APPROPRIATE ASSESSMENT

This Appropriate Assessment screening was undertaken in accordance with the European Commission Methodological Guidance on the provision of Article 6(3) and 6(4) of the 'Habitats' Directive 92/43/EEC (EC, 2001), Part XAB of the Planning and Development Act 2000, as amended, in addition to the February 2010 publication from the Department of Environment, Heritage and Local Government; 'Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities', the European Communities (Birds and Natural Habitats) Regulations 2011 the November 2018 EU guidance on Managing Natura 2000.

In order to comply with the above Guidelines and legislation, the Appropriate Assessment process must be structured as follows:

1) Screening stage:
   - Description of the proposed project or plan;
   - Identification of NATURA 2000 sites potentially affected;
   - Identification and description of individual in combination effects likely to result from the proposed project;
   - Assessment of the likely significance of the effects identified above (in the absence of mitigation measures intended to avoid or reduce the harmful effects of the proposed development on European sites). Exclusion of sites where it can be objectively concluded that there will be no likely significant effects; and,
   - Conclusions.
2) Appropriate Assessment (Natura Impact Statement):
   - Description of the NATURA 2000 sites that will be considered further;
   - Identification and description of potential adverse effects on the conservation objectives of these sites likely to occur from the project or plan; and,
   - Mitigation Measures that will be implemented to avoid, reduce or remedy any such potential adverse effects
   - Assessment as to whether, following the implementation of the proposed mitigation measures intended to avoid or reduce the harmful effects of the proposed development on European sites, in accordance with the judgment of the CJEU in case C-323/17, given that the Court has observed in cases C-387/15 and C-388/15 (Orleans and Others), that Article 6 of the Habitats Directive does not contain any reference to the concept of mitigation measures, making provision for conservation measures, preventive measures and compensatory measures in Articles 6(1), 6(2) and 6(4), respectively it can be concluded, beyond all reasonable scientific doubt, that there will be no adverse impact on the integrity of the relevant European Site in light of its conservation objectives
   - Conclusions.
3) Alternative Solutions
   If mitigation intended to avoid or reduce the harmful effects of the proposed development on European sites is possible that enables a risk to be avoided fully, then, subject to other necessary approvals, the project or plan may proceed. If mitigation measures are insufficient, or are not actually practicable and achievable to avoid the risk entirely, then, in the light of a negative assessment, the plan or project may not proceed. A wider search for alternative solutions may need to be considered – Stage 3. [2]
4) Imperative Reasons of Overriding Public Interest (IROPI)/Derogation. (: Stage 4 is the main derogation process of Article 6(4) which examines whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project that will have adverse effects on the integrity of a NATURA 2000 site to proceed in cases where it has been established that no less damaging alternative solution exists. The extra protection measures for Annex I priority habitats come into effect when making the IROPI case.

[2] (DoEHLG, 2009) Appropriate Assessment of Plans and projects in Ireland: Guidance for planning authorities.

4. SCREENING STAGE ASSESSMENT

MANAGEMENT OF THE SITE

The plan or project is not directly connected with, or necessary to, the management of NATURA 2000 sites.

DESCRIPTION OF THE PROPOSED PROJECT

Brooke Bridge (Figures 1 and 2) carries the L7049 local road over a River (name unknown), North of Monasterevin, Co Kildare. The existing structure is a single span stone masonry arch bridge. The bridge spans a length of 3.2m in total with a maximum width of 6.35m. The arch facing walls, parapets and spandrels are rubble and square cut limestone while the arch barrel is made up of rubble masonry (Figures 3, 4 & 5).

Remediation of the bridge will include but is not limited to the following:

- Replacement of soft grass verges with concrete rubbing strips
- Installation of stainless steel drainage integrated into concrete rubbing strip
- Raising of the existing road surface above the arch barrel by circa 100mm
- De-vegetation of parapet/spandrel walls and repointing of joints as a result
- Repair of missing/ damaged sections of the parapet wall and copping
- De-vegetation of embankments
- Replacement of masonry in abutments and arch barrel including repointing of joints
- Stitch repair to crack in abutment and arch
- Installation of fencing
- Removal of material that has built up in the riverbed upstream, bridge span and downstream.

Further information is seen in Appendix I.

An AA Screening was requested by Kildare County Council to assess the potential impact of the development on Natura 2000 sites and in particular the River Barrow and River Nore SAC.

Figure 1. Proposed development site.

Figure 2. Proposed development site and downstream connection.

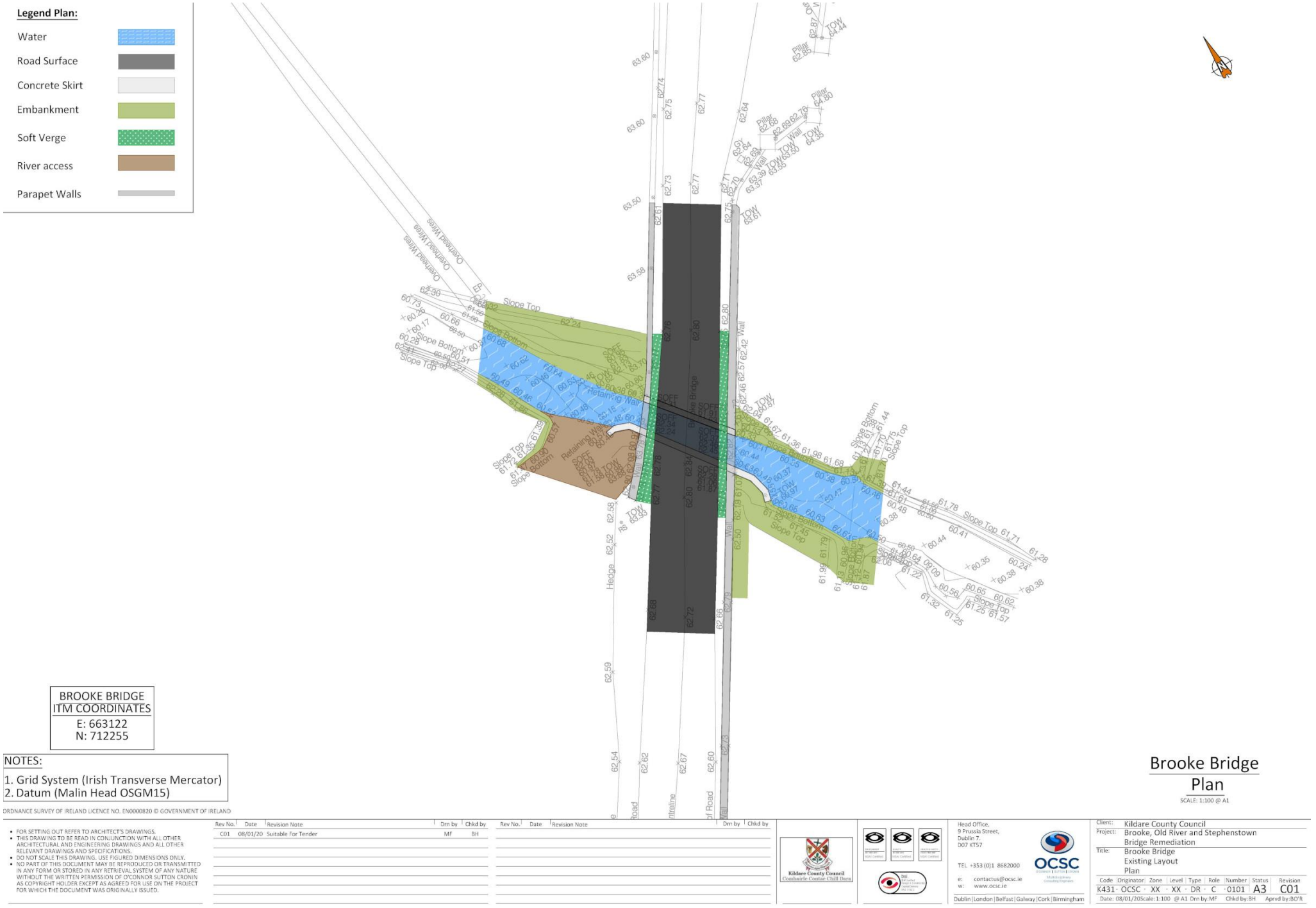

Figure 3. Proposed site layout

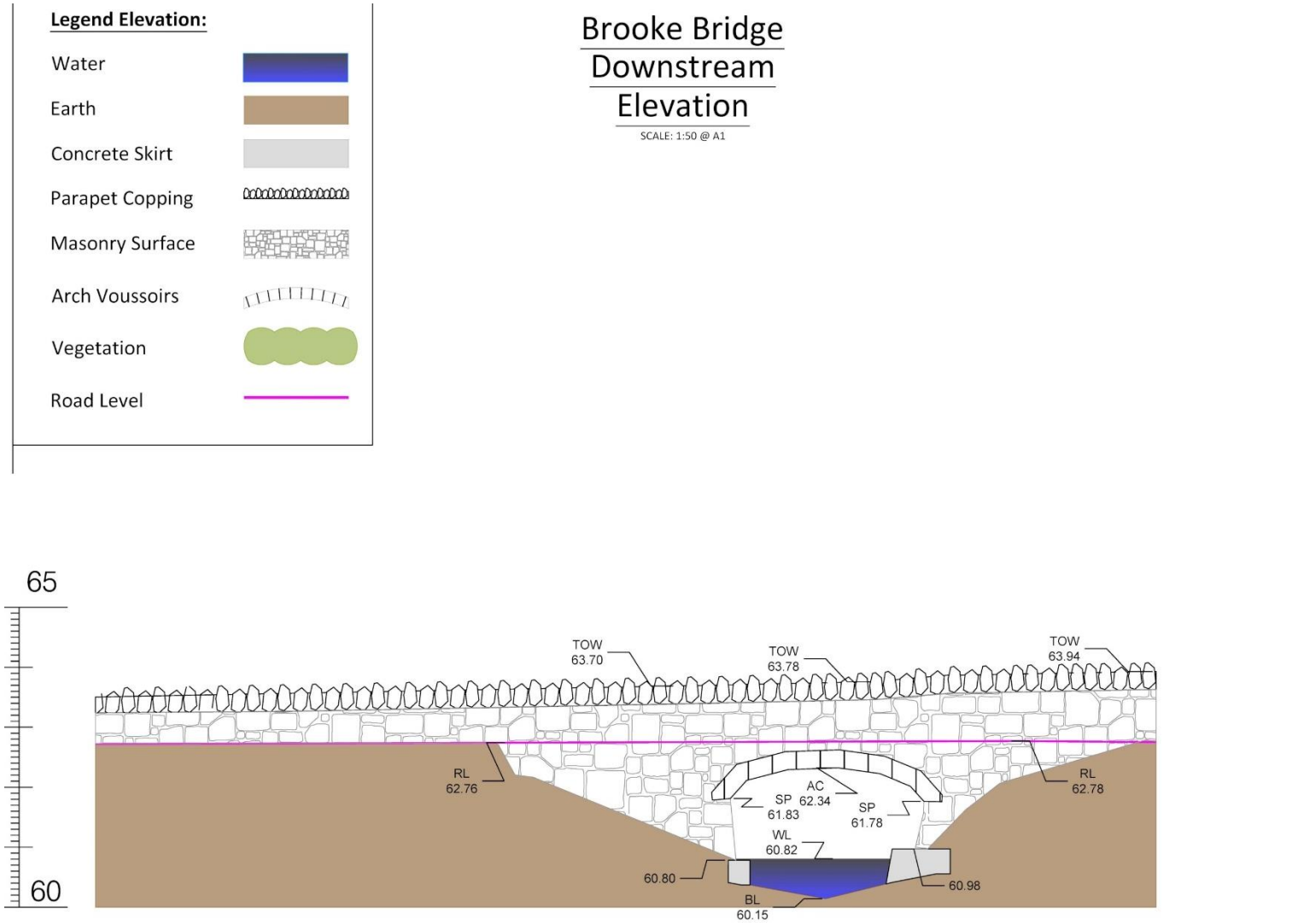

Figure 4. Downstream elevation.

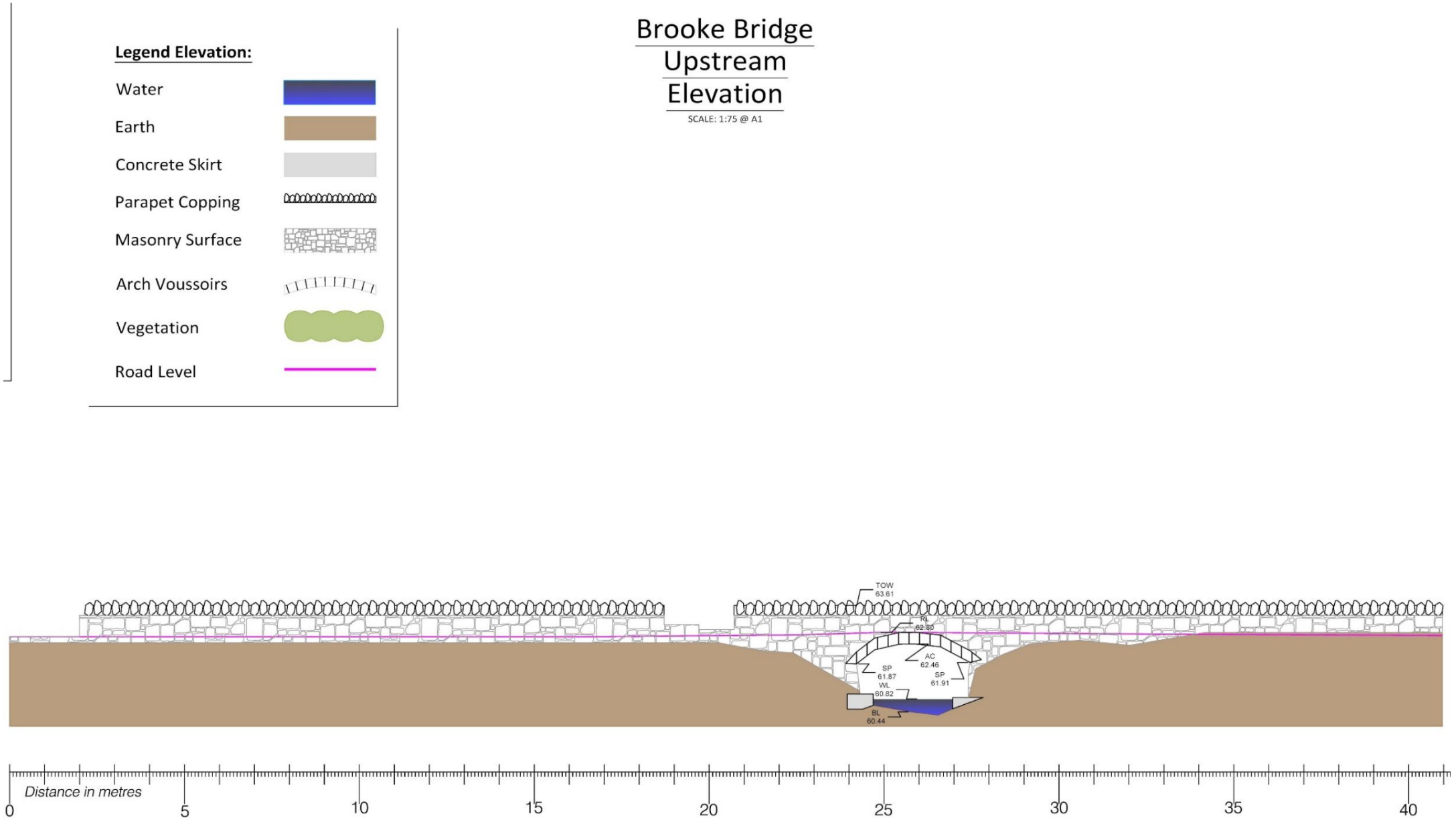

Figure 5. Upstream elevation.

SITE DESCRIPTION

A site visit was carried out on the 24th June 2020 by Bryan Deegan (MCIEEM). The site layout is seen in Figure 3, 4 and 5. Brook Bridge has undergone significant damage which has resulted in rubble from the bridge entering the watercourse (Plates 1 & 2). It should be noted that this watercourse is approximately 1.5m wide and is not seen on Ordinance Survey of Ireland Discovery mapping or on the EPA Waterframework Directive geospatial dataset for rivers and streams. However, it is felt that the watercourse is substantial enough that it should be registered on these datasets. The watercourse travels in a westerly direction, goes under the Barrow Navigation Canal and then joins the Figile River 660m to the west of the bridge. It should be noted that 884m downstream of this connection with the Figile River, the River Barrow and River Nore SAC commences (Figure 6). There is a direct pathway from the works to this SAC.

As outlined in the River Barrow Catchment Survey[3] "*Six sites were surveyed in the Figile catchment during July 2015. Fish species encountered included three-spined stickleback, roach, perch, nine-spined stickleback, dace, stone loach, pike, brown trout, roach x bream hybrids, European eel, lamprey sp. and minnow. Salmonid densities and distribution throughout the catchment were poor. Brown trout were only present at two of the survey sites while salmon were absent from all sites. The lower gradient nature and poor habitat in the river does not provide suitable spawning and nursery areas for salmonids*."

Plate 1. Damage to the bridge.

During the site visit it was observed that the bed of the river contained gravels but, these were heavily silted and that these would not form a salmonid spawning area due to the lack of interstitial spaces in the gravel. Instream vegetation was absent primarily as a result of heavy tunnelling by trees (cover picture). As seen in plate 3 mammal passes are present. A single otter footprint was noted on the south east corner of the bridge beside the mammal pass. There was a paucity of instream biodiversity. However, a single juvenile salmonid was noted.

Based on an assessment of NPWS data the site is within a catchment with "previous records of *Margaritifera,* but current status unknown"

[3] http://wfdfish.ie/wp-content/uploads/2017/06/barrow_report_2015.pdf

Plate 2. Parts of the bridge within the stream.

Plate 3. Mammal Passes under the bridge.

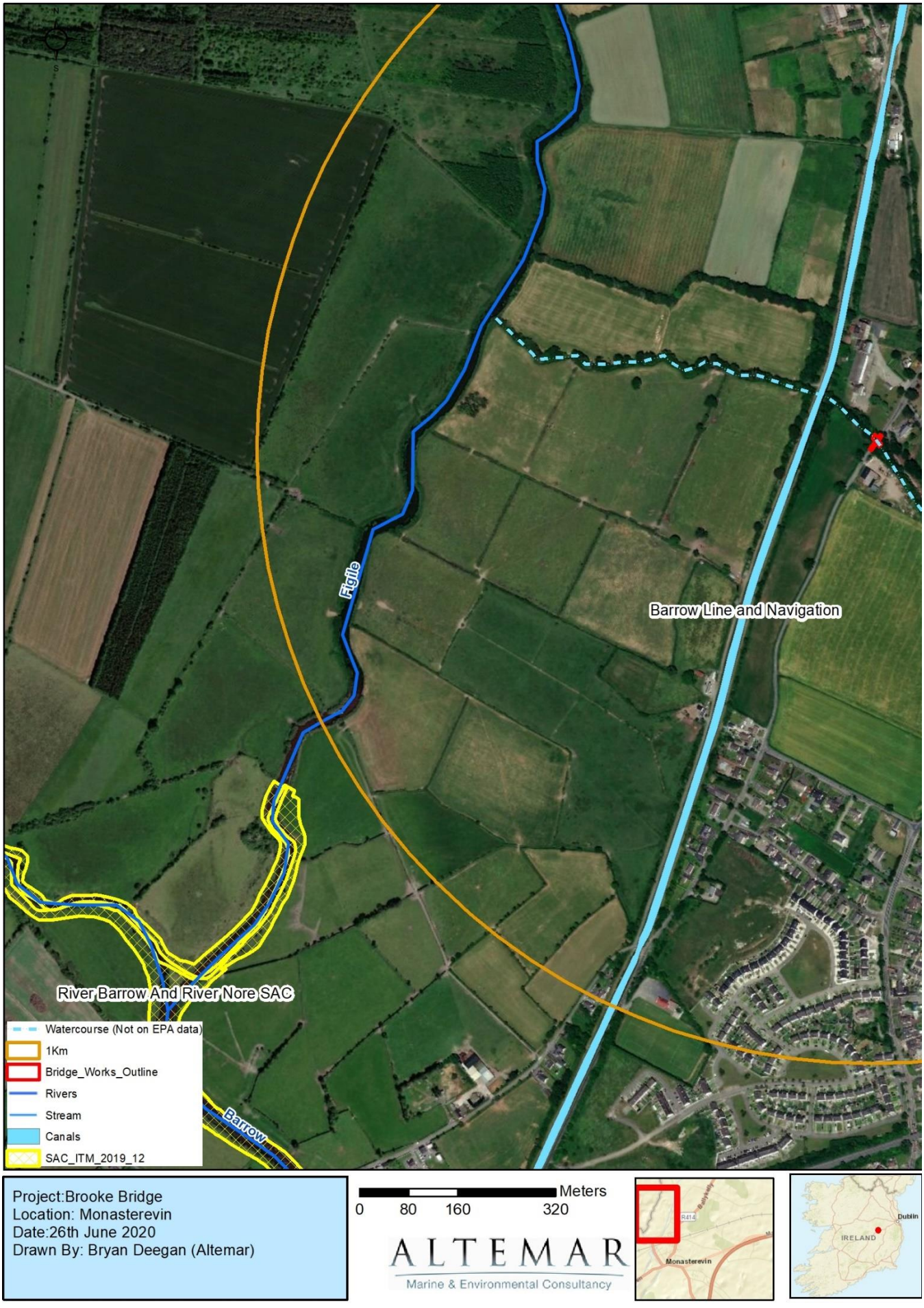

Figure 6. Location of the proposed development in relation to the River Barrow and River Nore SAC.

IDENTIFICATION OF NATURA 2000 SITES/SPECIES POTENTIALLY AFFECTED.

The proposed project is not within a NATURA 2000 site. The distance from the proposed works to Natura 2000 sites are seen in Table 1 and seen in Figures 8 and 9.

Table 1. Linear distances of the proposed site to Natura 2000 sites

Natura 2000 Site	Distance
Special Protection Areas *<15km* None. *>15km with hydrological connection* None -No SPA's are located upstream or downstream of the proposed works.	
Special Areas of Conservation River Barrow and River Nore SAC IE002162 (direct pathway)	1.1km (1.5km via watercourses)
Pollardstown Fen SAC IE000396 (No pathway) Mountmellick SAC IE002141	13.0 km 14.1 km
>15km with hydrological connection None	

The screening of NATURA 2000 sites within 15km, their features of interest and the Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in adverse effects (without mitigation measures) on each NATURA 2000 site and features of interest, are seen in Table 2. No SPA's are within 15km (Figure 8) and no effects are foreseen on SPA's beyond 15km. SAC within 15km are seen in Figure 8.

Table 2. Screening of NATURA 2000 sites within 15km of the proposed development.

NATURA CODE	NAME	Screened In/Out	Details/Reason
Special Areas of Conservation			
IE002162	River Barrow and River Nore SAC	**Out**	**Conservation Objectives:** 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. 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. **Features of Interest** Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Reefs [1170]

NATURA CODE	NAME	Screened In/Out	Details/Reason
			Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] Water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitricho-Batrachion vegetation [3260] European dry heaths [4030] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] Petrifying springs with tufa formation (Cratoneurion) [7220] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0] *Vertigo moulinsiana* (Desmoulin's Whorl Snail) [1016] *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] *Austropotamobius pallipes* (White-clawed Crayfish) [1092] *Petromyzon marinus* (Sea Lamprey) [1095] *Lampetra planeri* (Brook Lamprey) [1096] *Lampetra fluviatilis* (River Lamprey) [1099] *Alosa fallax fallax* (Twaite Shad) [1103] *Salmo salar* (Salmon) [1106] *Lutra lutra* (Otter) [1355] *Trichomanes speciosum* (Killarney Fern) [1421] *Margaritifera durrovensis* (Nore Pearl Mussel) [1990] **Source/Pathway/Receptor links between the works and the Natura 2000 site, with the potential to result in significant adverse effects.** The proposed works are located (1.1km) from the SAC (Figures 9 & 10). Works are proposed on a bridge that lies over a stream with a direct pathway to this SAC. In addition, instream works are proposed which involves the removal of silt in the bed of the stream. This will cause considerable resuspension of particulate material with the potential for significant downstream effects on the SAC in the absence of mitigation measures. In the absence of mitigation significant effects cannot be ruled out on the aquatic/instream features of interest of this SAC that are located downstream of the works. **Significant effects are likely in the absence of mitigation measures. Natura Impact Statement is required.**
IE000396	Pollardstown Fen SAC	**Out**	**Conservation Objectives** 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. Features of Interest (7210) Calcareous fens with *Cladium mariscus* and species of the Caricion davallianae* (7220) Petrifying springs with tufa formation (Cratoneurion)* (7230) Alkaline fens (1013) Geyer's Whorl Snail (*Vertigo geyeri*) (1014) Narrow-mouthed Whorl Snail (*Vertigo angustior*) (1016) Desmoulin's Whorl Snail (Vertigo moulinsiana)

NATURA CODE	NAME	Screened In/Out	Details/Reason
			Potential Impact This SAC is 13.0 km from the proposed development site. There are no direct hydrological or uninterrupted green infrastructure connections to the SAC. No impact is foreseen on any of the features of interest of this site. As a result, no impact on this SAC or its conservation objectives is foreseen. **No significant effects likely**
IE0002141	Mountmellick SAC	**Out**	**Conservation Objectives** 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. Feature of Interest (1016) Desmoulin's Whorl Snail (*Vertigo moulinsiana*) **Potential Impact** This SAC is 14.1 km from the proposed development site. There are no direct hydrological or uninterrupted green infrastructure connections to the SAC. No impact is foreseen on any of the features of interest of this site. As a result no impact on this SAC or its conservation objectives is foreseen. **No significant effects likely**

NATURA CODE	NAME	Screened In/Out	Details/Reason
Special Protection Areas			
	All SPA's	**Out**	No SPA's are located within 15km of the proposed development or have a direct hydrological connection to the proposed development. (Figure 8). **No significant effects are likely**

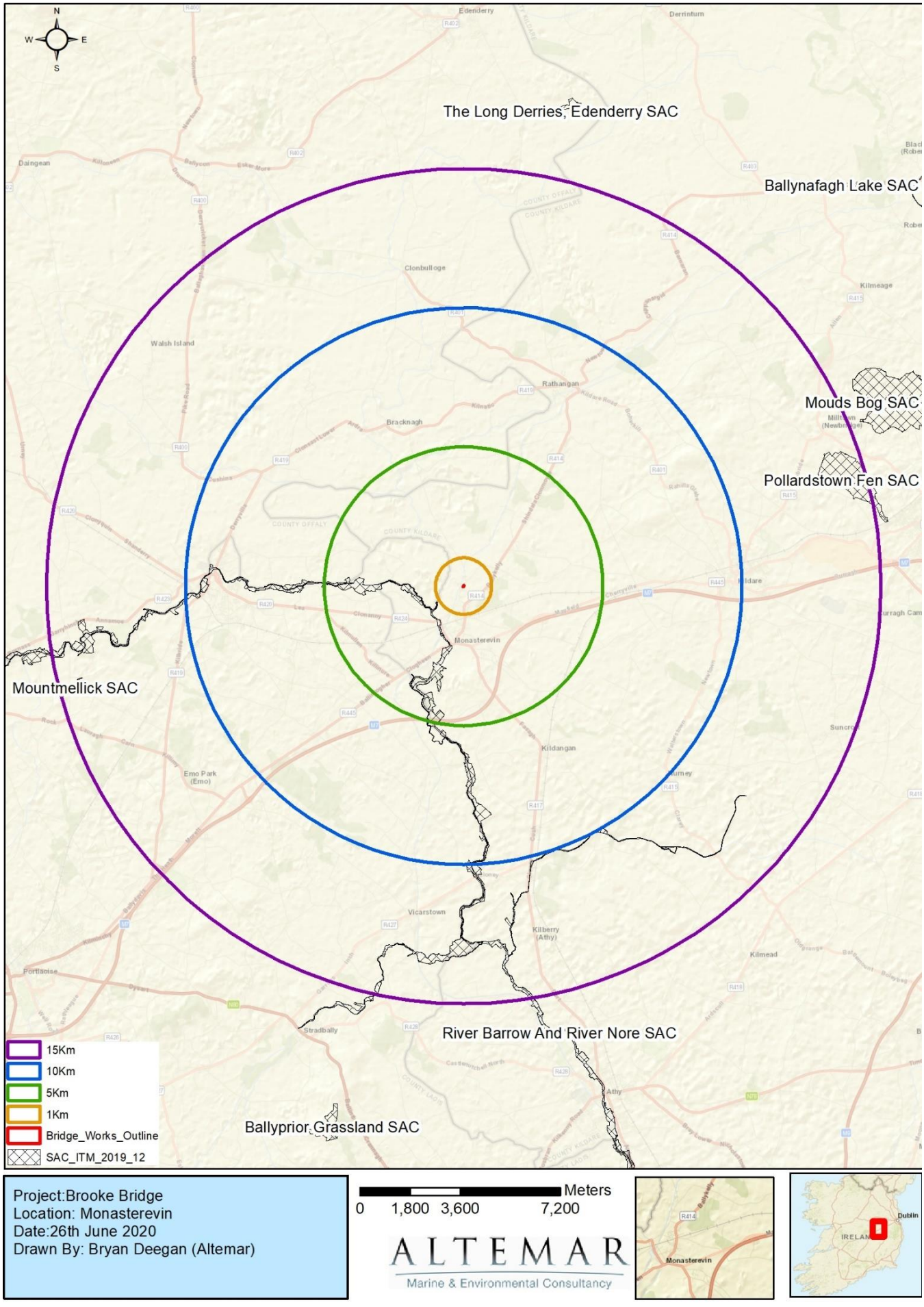

Figure 7. Special Areas of Conservation located within 15km from the proposed works.

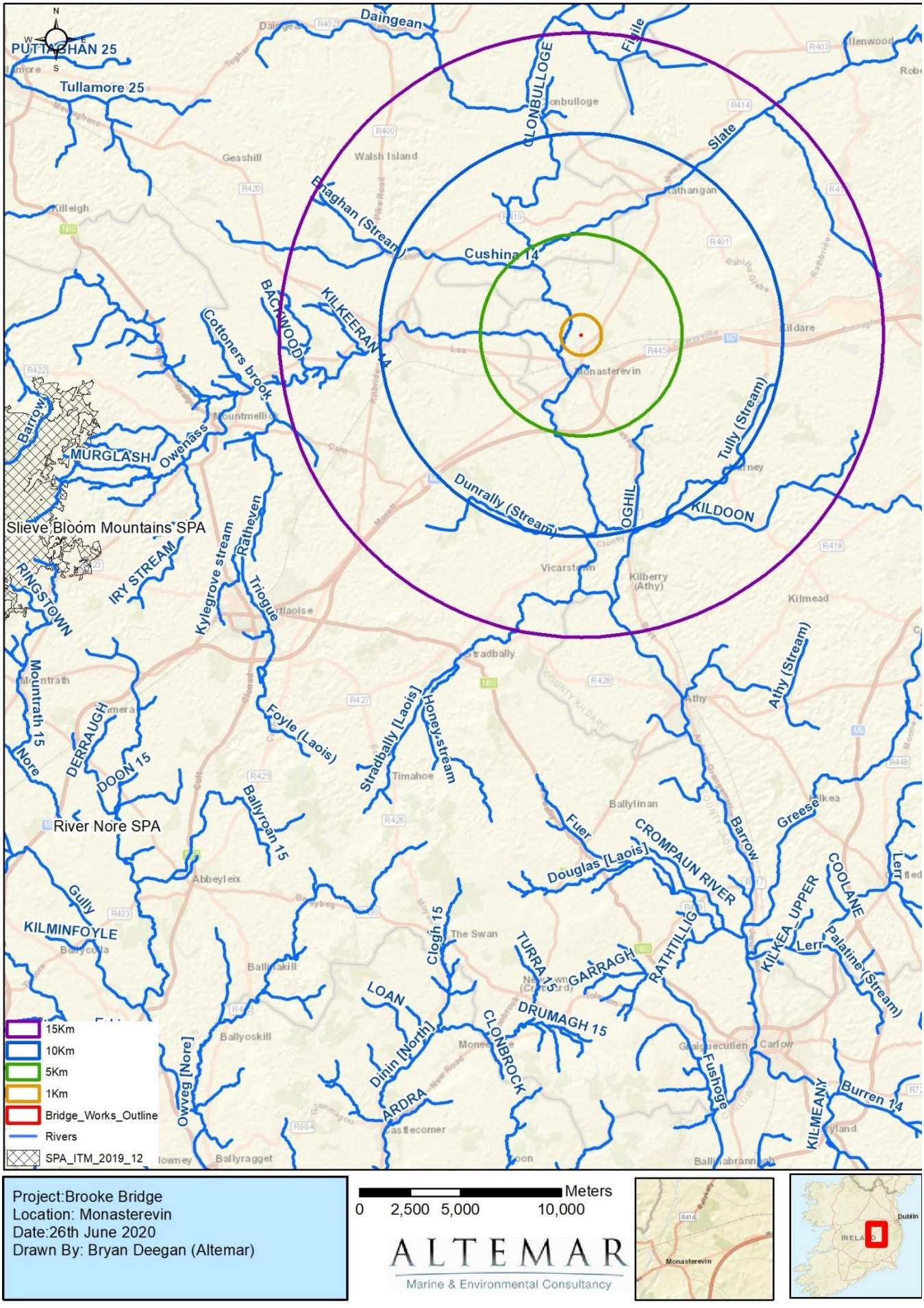

Figure 8. Special Protection Areas within 15km of the proposed development (None).

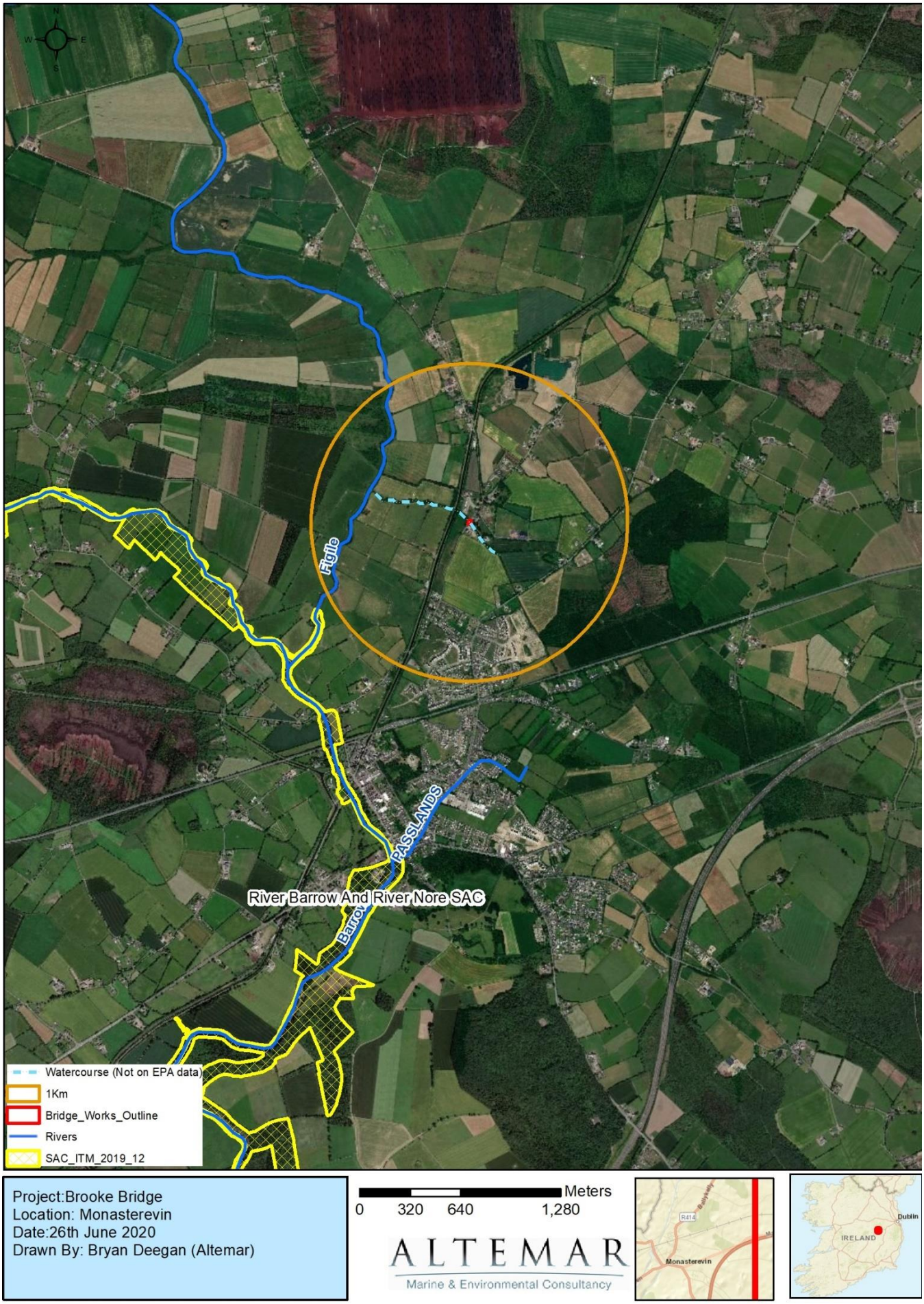

Figure 9. Proximity of the proposed development to the River Barrow and River Nore SAC.

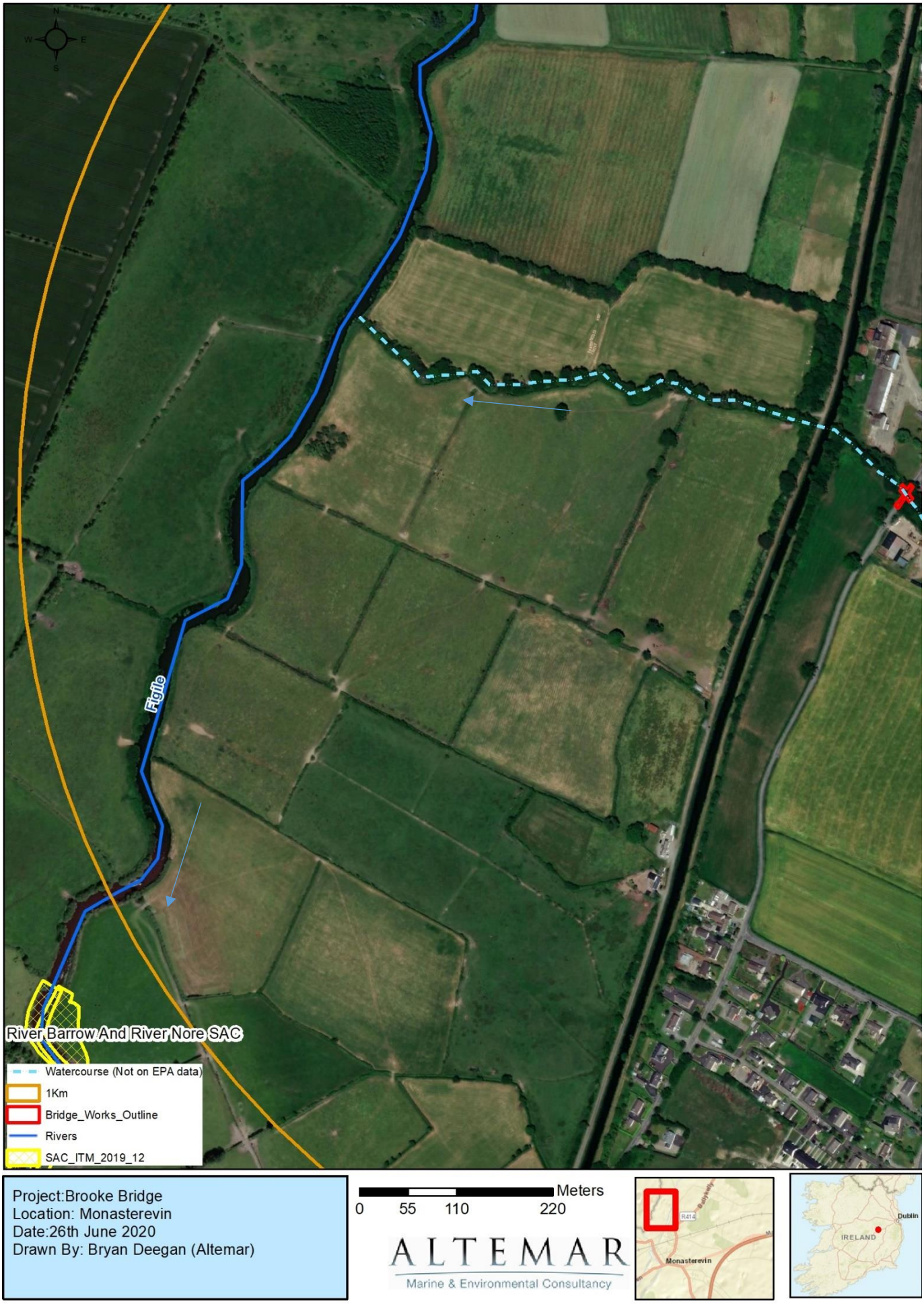

Figure 10. Special Areas of Conservation and watercourses located within the vicinity of the proposed works.

IN-COMBINATION EFFECTS

Based on a search of www.myplan.ie proximate to the bridge permission was granted for the development of a distillery and visitor centre (with ancillary café, maturation facilities and other associated ancillary development) (5,106 sqm total gross floor area) at Ballykelly Mills, Monasterevin, Co. Kildare, W34 HY03 [a Protected Structure (Ref. B21-04)] on a site of 2.13 hectares (of which 0.96 hectares is public road), approximately, at Millfarm, Coolsickin or Quinsborough, Ballykelly and Oldgrange. The site is principally bounded by: agricultural lands to the north; partly by the Local Road L1002, a residential dwelling (W34 E409) and the Local Road L7049 to the east; the Brook Stream to the south; and the Grand Canal to the west. Part of the site (to facilitate site servicing) extends along the public road (L7049) in the townlands of Millfarm, Ballykelly and Oldgrange. The development will consist of the removal of 3,489 sqm of floor area comprising the internal floors of Blocks A1, A2, B1, B2, C1 and C2 and the demolition of a number of structures (891 sqm in total) associated with the previous use of the premises, including: a lean-to shed/structure (identified as Block A3) (103 sqm); a single-storey office building (identified as Block A4) (53 sqm); a grain intake shed including its associated grain elevator (identified as Block D1) (198 sqm); a detached single storey flat-roofed control room (identified as Block D2) (17 sqm); a two-storey derelict detached house (identified as Block F) (106 sqm); an agricultural shed (identified as Block G) (118 sqm); an agricultural shed (identified as Block H) (32 sqm); a lean-to shed/structure (identified as Block I) (76 sqm); a single-storey flat-roofed shed (identified as Block J) (22 sqm); a weighbridge office (identified as Block K) (54 sqm); weighbridge kiosk (identified as Block L1)

(6 sqm); a concrete-walled flat-roofed structure (identified as Block N) (52 sqm); and a concrete-walled flat-roofed structure (identified as Block O)

(54 sqm). The total demolition / floor area removal comprises 4,380 sqm. The development will also consist of the removal of ancillary fabric across the site including: grain elevators; site fencing and gates; mass concrete slabs, remnants of previous structures and a service yard (identified as Block E); a weighbridge (identified as Block L2); tarmac; signage (with the exception of the 'Minch Norton & Co. Ltd.' sign located on eastern elevation of existing grain intake shed (identified as Block D1), which is to be relocated within the proposed development).

A NIS was submitted and mitigation measures are required. During the site visit works had commenced on the development and mitigation measures were in place to prevent down stream impacts.

No other developments were located within proximity of the proposed works.

No in combination effects are foreseen from developments/ works proposed or currently undergoing development.

AA SCREENING CONCLUSIONS

An initial screening of the proposed works, using the precautionary principle (without the use of any mitigation measures) and the Source/Pathway/Receptor links between the proposed works and Natura 2000 sites with the potential to result in significant effects on the conservation objectives and features of interest of the Natura 2000 sites was carried out in Table 1. Based on best scientific knowledge and objective information and assessment, the possibility of significant effects caused by the proposed project was excluded for the following Natura 2000 sites.

Special Protection Areas

(No SPAs within 15km or with direct hydrological connection) There is no direct or indirect pathway to SPAs.

Special Areas of Conservation

- Pollardstown Fen SAC IE000396 (No pathway)
- Mountmellick SAC IE002141 (No pathway)

The project is limited in scale and extent and the potential zone of influence is restricted to the immediate vicinity of the proposed development with potential for downstream impacts. The River Barrow and River Nore is 1.1km from the works with a direct pathway. Works are proposed on a bridge that lies over a stream with a direct pathway to this SAC. In addition, instream works are proposed which involves the removal of silt in the bed of the stream. This will cause considerable resuspension of particulate material with the potential for significant downstream effects on the SAC in the absence of mitigation measures. In the absence of mitigation significant effects cannot be ruled out on the aquatic/instream features of interest of this SAC that are located downstream of the works.

Acting on a strictly precautionary basis, NIS is required in respect of the effects of the project on the River Barrow and River Nore SAC (downstream impacts) because it cannot be excluded on the basis of best objective scientific information following screening, in the absence of control or mitigation measures that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the named European Site/s.

An NIS or Stage 2 Appropriate Assessment is not required for the effects of the project on all other listed Natura sites above because it can be excluded on the basis of the best objective scientific information following screening that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the European Site/s.

DATA USED FOR THE AA SCREENING

NPWS site synopses and Conservation objectives of sites within 15km were examined. The most recent SAC and SPA boundary shapefiles were downloaded and overlaid on Bing road map and satellite imagery.

REFERENCES

The following references were used in the preparation of this AA screening report.

1. Department of Environment Heritage and Local Government Circular NPW 1/10 and PSSP 2/10 on Appropriate Assessment under Article 6 of the Habitats Directive – Guidance for Planning Authorities March 2010.
2. Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities, Department of the Environment, Heritage and Local Government 2009; http://www.npws.ie/publications/archive/NPWS_2009_AA_Guidance.pdf
3. Managing NATURA 2000 Sites: the provisions of Article 6 of the Habitats Directive 92/43/EEC, European Commission 2000; http://ec.europa.eu/environment/nature/Natura2000/management/docs/art6/provision_of_art6_en.pdf
4. 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; http://ec.europa.eu/environment/nature/Natura2000management/docs/art6/Natura_2000_assess_en.pdf
5. Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission; http://ec.europa.eu/environment/nature/Natura2000/management/docs/art6/guidance_art6_4_en.pdf
6. Guidance document on the implementation of the birds and habitats directive in estuaries and coastal zones with particular attention to port development and dredging; http://ec.europa.eu/environment/nature/Natura2000/management/docs/guidance_doc.pdf
7. The Status of EU Protected Habitats and Species in Ireland. http://www.npws.ie/publications/euconservationstatus/NPWS_2007_Conservation_Status_Report.pdf
8. Managing Natura 2000 sites The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/Provisions_Art_._nov_2018_endocx.pdf
9. EC, 1992. COUNCIL DIRECTIVE 92/43/ EEC of 21May1992 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31992L0043&from=EN
10. NPWS, 2016. Site Synopsis. River Barrow and River Nore SAC Site Code: 002162. https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002162.pdf
11. NPWS, 2017. River Barrow and River Nore SAC Site Code: 002162. Standard Natura 2000 Data Form https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF002162.pdf
12. NPWS (2011) Conservation Objectives.. River Barrow and River Nore SAC Site Code: 002162 https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002162.pdf
13. NPWS (2020) Conservation objectives for Pollardstown Fen SAC [000396]. Generic Version 7.0. Department of Culture, Heritage and the Gaeltacht. https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000396.pdf
14. Citation:NPWS (2020) Conservation objectives for Mountmellick SAC [002141]. Generic Version 7.0. Department of Culture, Heritage and the Gaeltacht.

Works Requirement Scoping Document

The following are listed items considered to be included in the Works Requirements.

i. This Works Requirements Scoping Document;
ii. TII's Specification for Road Works;
iii. The Appendices to the Specification contained in this document.

1 PRELIMINARY PARTICULARS

1.1 The name, nature and location of the Works

The Kildare Bridge Remediation 2019 consists of renewal works to a number of structures located throughout County Kildare. The nature of the works includes but is not limited to the following: the replacement of the existing grass verges with concrete rubbing strips, road resurfacing work, provision of scour protection, masonry repair, repointing and de-vegetation works. The bridge identification and registration numbers are as follows:

- Brooke Bridge KE-L7049-002.00
- Old River Bridge KE-L3002-001.00
- Stephenstown Bridge KE-R412-001.00

1.2 A general description of the Works – Brooke Bridge

Brooke Bridge is a single span stone masonry arch bridge, spanning a length of 3.2m in total with a width of 6.35m. The arch facing stone, arch barrels, spandrels and parapets are rubble and square cut limestone masonry. The joints between the masonry are filled with a lime mortar and are between 10-25mm in width. Remediation of the bridge will include but is not limited to the following:

- Replacement of soft grass verges with concrete rubbing strips
- Installation of stainless steel drainage integrated into concrete rubbing strip
- Raising of the existing road surface above the arch barrel by circa 100mm

- De-vegetation of parapet/spandrel walls and repointing of joints as a result
- Repair of missing/ damaged sections of the parapet wall and copping
- De-vegetation of embankments
- Replacement of masonry in abutments and arch barrel including repointing of joints
- Stitch repair to crack in abutment and arch
- Installation of fencing
- Removal of material that has built up in the riverbed upstream, bridge span and downstream

The full scope of the works and the obligations of the contractor are to be ascertained by reference to the Contract Documents and Drawings as a whole.

APPENDIX 1/7: Site Extent and Limitations on Use

1) Site Specific Works Hours

Mon to Friday	08:00 to 18:00
Saturday	Restricted Working
Sunday	Restricted Working

- Works outside of normal hours or during restricted period are subject to prior notice and agreement by the Employer and Stakeholders.
- Access and Egress must be maintained to all residents throughout the duration of the works. The Contractor must obtain written agreement from each owner/occupier prior to restricting access to that premises.
- Refer to section 5.1 of the scoping document and section 1/17 in the Appendix to the Specifications document
- Agreement required from both KCC and An Garda Siochana prior to any relaxation of working hours

2) Extent of the Site

a) The extents of the Site are defined by:
   i) Any further land acquired by or conveyed to the Employer (from any person, including the Contractor) from time to time for the purposes of the execution and completion of the Works;
   ii) Further lands designated as Public Road as per the Roads Act 1993, beyond the extent of the lands described above which shall be required to facilitate utility diversions and to provide Traffic Signs, Road Markings and Road Studs and the like; and

b) Areas required for the installation alteration and removal of plant for statutory or other bodies. The use of these areas will be limited by the terms of the way-leaves acquired

c) The Contractor will also make provision for carrying out work as required under the Contract, for example Accommodation Works, river regrading, embankment clearing and the like.

d) In addition, and subject to the agreement of the Client and approval of the Employer's Representative, the extent of the Site shall include areas required for traffic control measures by the Contractor in compliance with Appendix 1/17, 1/18, 1/19 and 1/20 of the Specification, as and when necessary.

e) The Contractor shall be fully responsible for all traffic management associated with the works. Detailed traffic management proposals shall be submitted to the Employer's Representative for acceptance.

f) The Extent of the Site for the installation of plant for statutory or other bodies outside the site boundaries will be limited by the terms of the wayleaves acquired by statutory or other bodies for execution of the works, should such works be required.

g) The Contractor shall take account of the requirement to prevent trafficking of the newly laid surface course until cured and achieved strength to accept loading.

h) The Contractor is limited in the use of access routes by means of public roads to the site as stated in Appendix 1/19 and this Appendix 1/7.

i) The Contractor shall ensure the safe passage of all road users using public roads within the Extent of the Site, and at traffic management interfaces, at all times. Details of all proposed diversions shall be agreed in advance with the Employer's Representative in accordance with Appendix 1/17.

3) Limitations on the Use of the Site.

a) The site shall be used solely for the construction and completion of the Works.

b) The Contractors use of the site shall be limited by the constraints and limitations set out in the Works Requirements and taking account of the risks and hazards identified in the PHSP.

c) The Contractor shall maintain adequate routes for traffic, pedestrians and cyclists. This should take account of the loading requirements of each business affected by the scheme and the requirement for pedestrian and mobility impaired access to be maintained to all retail and domestic premises on the street.

d) The Contractor's attention is drawn to the Special Requirements listed in the Contract relating to Landowners and Publicly and Privately owned Utility Companies, Privately Owned Services and the Local Authorities.

e) The Contractor shall not use areas of land within a temporary right of access, for any purpose other than the construction and maintenance of the Works.

f) The Contractor shall ensure that all areas of land, which have been temporarily occupied, are reinstated to the satisfaction of the affected landowner, occupier and the relevant Authority.

g) Access for pedestrians, cyclists and vehicular traffic is to be maintained along the route as per the Conditions of Contract.

h) Prior to entering parcels of land not acquired in their entirety, the Contractor shall erect suitable fencing (either permanent or temporary) taking into account adjacent land usage.

i) When carrying out accommodation Works on land not made available by the Employer for the Works, the Contractor shall minimise the area of land occupied to that, which is essential for the safe construction, and maintenance of such part of the Works.

j) Accommodation Works and works to lands behind the proposed boundary walls and fences are to be completed as soon as possible so that inconvenience to the property owners is minimised. No site accommodation is to be erected on such lands or close to entrances to such lands unless otherwise agreed with the Landowner.

k) Unless otherwise agreed with the Employer's Representative, the Contractor shall, at all times, maintain access to all properties affected by the permanent or temporary works.

l) The Contractor's attention is drawn to Appendix 1/9 of the Specification concerning limitations on noise and vibration. The normal working hours shall be Monday to Friday between 0800 and 1800 hours at Annes Bridge, Clonard Bridge, Cornmill and Stoneyford Bridge. Exceptionally, the Employer's Representative's consent for work outside these hours may be given after necessary consultation and written approval. Ten days' notice shall be required from the Contractor when seeking such consent.

m) The Contractor shall be responsible for overall security of the entire Site.

n) The Contractor shall ensure that all paving materials and other loose materials which could be used for anti-social purposes are removed from the street and secured behind fencing or in the compound every night.

4) Protected Structures

a) The Contractor shall take all due care when working in close proximity to the protected structures within the Site and is legally obliged to prevent it becoming endangered through damage. This obligation also applies to all fixtures and features forming part of the interior and exterior of the protected structure. Part IV of the Planning and Development Act 2000 describes the protection given to these structures.

b) Any person who, without lawful authority, causes damage to a protected structure shall be guilty of an offence.

c) The Contractor's attention is drawn to Appendix 24/1 of the Specification concerning requirements of working on protected structures. The Contractor shall allow free safe unimpeded access to protected structures for stabilisation and repair for the duration of the Contract.

5) In River Works

a) The Contractor shall not block any river channel or span at any time. All temporary scaffolding to be provided as part of the Contractor's temporary works shall be designed to keep supports in the river to the minimum number possible. Where in-stream working is required to facilitate the works, the Contractor shall comply with the requirements of the local Inland Fisheries Ireland office Board and with the mitigation measures presented below. The Contractor shall present a method statement for all in-stream working to IFI at least 2 weeks prior to the planned commencement of the works. The Contractor shall note that in-stream works are not normally permitted before the end of April and after the end of September.

6) Existing Services

a) Full information has been provided to the Contractor, as part of the Background Information, in relation to the extent of existing known services within the site extents. The Contractor must, and have included for within the Contract Sum, have allowed for hand-digging around existing services.

b) The existing services, as shown in the Background Information, are contained within a variety of different types of ducting and pipework. The materials of the ducting and pipework varies from PE, uPVC, Wavin and Concrete. The Contractor shall have provided for, within the Contract Sum, for working around and hand digging around these services and for providing due care so as not to damage, break or alter the existing service ducting and/or pipework.

c) The Contractor must liaise with all relevant 3rd Parties and Utility Providers is relation to their services, ducting and chambers prior to any alterations to same. The Contractor must ensure that there are no service disruptions to any existing service resulting from the Contractor's works.

7) Construction Compounds

a) The Contractor shall be responsible for making all private arrangements for providing any land required for offices and other temporary site facilities. The Contractor shall provide in his Waste Management Plan details of his foul sewerage collection, storage and disposal arrangements.

8) Environmental Mitigation Measures – General

a) The mitigation measures are presented in the Table below and overleaf. The Contractor shall ensure compliance with the specified mitigation measures.

Potential Impact	Mitigation Measure
General	- Prior to any works commencing, all personnel involved with the bridge rehabilitation works will receive an on-site induction relating to bridge operations and the ecological issues relevant to each bridge location. - The site agent will ensure that the engineer setting out the works is fully aware of the ecological constraints and mitigation requirements. - The team engineers will then ensure the crews in their area are aware of these requirements. - All matters relating to the bridge operations will be reported on a regular basis to the site agent for ongoing review. - Any incident or observation of anything that may be considered as

Potential Impact	Mitigation Measure
	causing or likely to cause disturbance or damage to the local ecological systems will be reported to the site agent immediately. - The site agent will take immediate action to prevent or limit the impact and will notify the Client contact of the incident and the actions taken. - The amount of bare ground created by excavation and vegetation removal will be minimised. - Direct crossing of watercourses will be carried out outside of the salmonid spawning season and the times that early life stages of salmonid fish will be present. Overall, no in stream work will be undertaken during the period October to June (inclusive) unless agreed in advance with Inland Fisheries Ireland (IFI), the National Parks and Wildlife Service (NPWS) and where appropriate, Waterways Ireland & Waterways NI.
Pollution of watercourses	- The works area either side of any watercourse crossing will be fenced with "Terram" or equivalent geo-textile fencing, secured to the ground to prevent the wash-out of suspended solids from the site to the watercourse. Where possible, this will be set back from the riparian corridor of the watercourse to allow the retention of a buffer-zone of riparian vegetation along the watercourse, - Release of suspended solids to all surface waters will be controlled by interception (e.g. silt traps) and management of site run-off. Any surface water run-off will be treated appropriately to ensure that suspended solids levels are minimised. Suitable precautions will also be taken to ensure that oil, and other polluting materials associated with construction sites, does not enter local watercourses. Silt fences/Sandbags/straw bales or other methods approved by the Client/NPWS/IFI must be used where required to protect sensitive watercourses. - All plant, equipment, access scaffolding and footwear, etc used within watercourses must be thoroughly cleaned prior to arrival on site to prevent the spread of invasive aquatic species such as Zebra Mussel, alien cray fish, invasive flora etc, and disease such as crayfish fungal plague). A sign off sheet must be maintained to confirm cleaning, - The Contractor shall prevent any silting/erosion of water courses and pollution of the water that may adversely affect the quality or appearance of the water or cause obstruction or interference with the flow, - Establish site boundaries markings to safeguard features of interest/value - All culverts installed will be embedded, as per IFI recommendations, to allow for the retention of the existing riparian features and avoidance of impacts to the bed of the river.

Potential Impact	Mitigation Measure
Pollution of watercourses Cont'd	- Mortar and concrete, when mixed on site, shall be mixed on the carriageway and at a distance of at least 10m away from the watercourse and in small batches in water tight containers of not greater than 15 litres in capacity. The exact locations are to be designated in the Contractor's Method Statement, - Tools and equipment are not to be cleaned in watercourses, - When working under the soffit of the bridge structures, all access platforms shall be provided with sealed trays to collect all dust and concrete debris; no debris shall be permitted to access the watercourses. All waste associated with the bridge works is to be disposed off in a licensed tip off site. No debris shall be left in or adjacent to the site. The Contractor's proposals in this regard shall be detailed in his Method Statement, - Chemicals used shall be stored in sealed containers in the Contractor's vans or bunded area prior to use, - The chemicals shall be applied in such a way as to avoid any spillage or leakage. All excavated material is NOT to be temporarily stored adjacent to water courses or drains. - All works under each structure are to be carried out in such a manner as to avoid, where at all possible, physical disturbance to river beds. Temporary gangways shall be erected between river banks and working platforms to avoid the need for walking through watercourses Water Quality Monitoring: Baseline suspended solids will be determined for the watercourse. Baseline monitoring must be conducted prior to, during and post works to ensure there is no perceptible increase over the baseline suspended solids level. Multiple silt fence/curtains at the source of the siltation (at bridge works areas), with a methodology that would allow for accumulated silt removal without silt entering the streams leading to the pearl mussel populations, by staged removal of silt fencing will be required. Temporary construction access platforms will be provided with sealed trays to collect all dust, chemicals and masonry debris from entering the watercourse. All plant will be well maintained with any fuel or oil drips attended to on an ongoing basis. Absorbent sheeting will be placed below any areas of potential contamination. Drip trays and spill kits will be available on site. All contaminated materials will be disposed of at a suitably licensed facility.
Fuel/Lubricant spillage from equipment	- Fuelling and lubrication will not be conducted within 50m of watercourse, - Storage areas, machinery depots and site offices will be located at least 50m from the watercourses,

Potential Impact	Mitigation Measure
Fuel/Lubricant spillage from equipment Cont'd	- Foul drainage from the site offices and facilities will be properly treated and removed to a suitable treatment facility, - Spill kits will be made available close to streams and all staff will be properly trained on correct use, - All fuels, lubricants and hydraulic fluids will be kept in secure bunded areas at a minimum of 50m from watercourses. The bunded area will accommodate 110% of the total capacity of the containers within it. Containers will be properly secured to prevent unauthorised access and misuse. An effective spillage procedure will be put in place with all staff properly briefed. Any waste oils or hydraulic fluids will be collected, stored in appropriate containers and disposed of offsite in an appropriate manner, - All plant shall be well maintained with any fuel or oil drips attended to on an ongoing basis - Any minor spillage during this process will be cleaned up immediately. Should any incident occur, the situation will be dealt with and coordinated by the nearest supervisor who will be responsible for instructions by the site agent.
Concrete	- Disposal of raw or uncured waste concrete will be controlled to ensure that watercourses or other sensitive areas will not be impacted, - Demolition and removal of masonry and concrete elements will be undertaken in such way as to prevent any debris falling into the watercourses. A sealed working platform – CRASH DECK - will be provided at each structure to contain the demolition product. At each location the crash deck will be fully boarded out and effectively screened and sealed on all edges to ensure that no demolition products enter the watercourse. Debris will be removed from the crash deck at the end of each working day to avoid the build up of material on the crash deck. - The crash decking described above for the removal of the structural deck will be modified to provide retention of the demolition product from the abutment wall partial demolitions as required.
Noise and vibration from use of equipment	- Bridge Works at watercourses shall make a 'short-start' to activities to allow salmon and other fish to move away before the full intensity of works begins. - Work will be undertaken during daylight hours, starting no earlier than two hours after dawn and finishing no later than two hours before dusk, between March and October; and to start no earlier than one hour after dawn and finish one hour before dusk from November to February; and shall not continue for periods of more than 12 hours, to prevent disturbance to nocturnal species.
Exhaust emissions from equipment	- Vehicles and plant shall be properly maintained and shall not be left idling when not in use

Potential Impact	Mitigation Measure
Contaminated surface and/or groundwater	- Excess surface water runoff will be controlled by bunding, sheeting and sand bags to ensure it does not enter any watercourse or drains. - Sandbags or hay bales will be used to bund off relevant areas. Sediment from the works areas will be collected and bagged for controlled disposal together with any residual material. Sandbags/hay bales will be removed off site immediately after works have been completed.
Vegetation and soil protection measures	- Excavation and vegetation removal will be minimised. Any proposed excavation and vegetation removal is to be agreed with the client prior to works commencing. All excavated material and removed vegetation shall be stored at least 10m form water features. - Appropriate matting will be required, as necessary.

In addition to the mitigation measures above the Contractor shall implement the methodologies presented in the following documents:

- *Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes.*
- *Guidelines for the Treatment of Otters during the Construction of National Road Schemes.*
- *Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads.*
- *Guidelines for the Treatment of Bats during the Construction of National Road Schemes.*
- *Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites* (Eastern Regional Fisheries Board)
- *Control of Water Pollution form Construction Sites* (CIRIA C532)