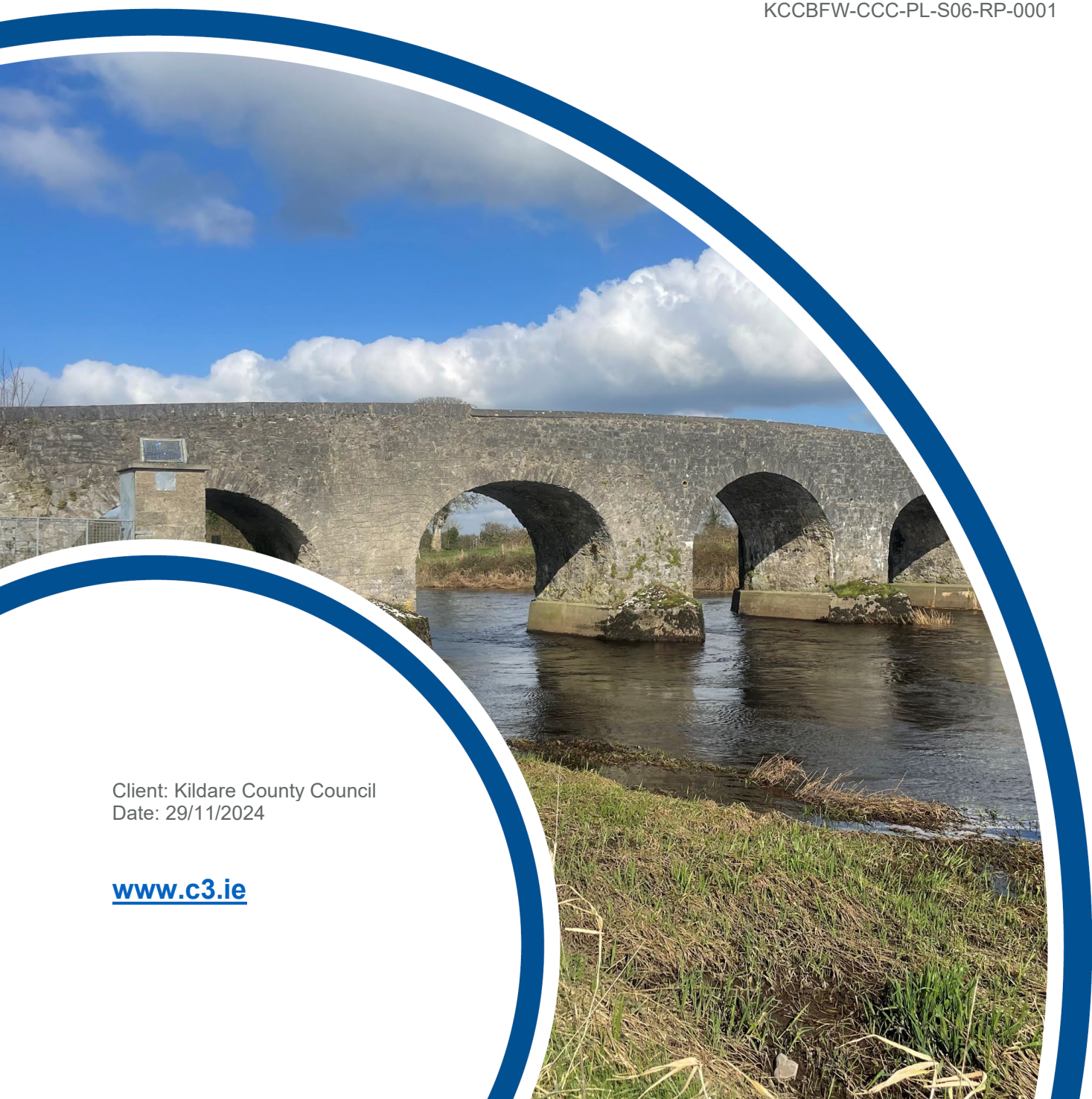


# BRIDGE REHABILITATION WORKS AT PASS BRIDGE, PASSLANDS, MONASTEREVIN

An Bord Pleanála Section 177AE Application Project Report

KCCBFW-CCC-PL-S06-RP-0001



Client: Kildare County Council  
Date: 29/11/2024

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Issue and revision record

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Detailed Change Log

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## 1. INTRODUCTION

This report provides information to inform an An Bord Pleanála Section 177AE Submission under the Planning and Development Act, 2000, (as amended) for proposed rehabilitation works to Pass Bridge, Passlands, Monasterevin, County Kildare. Pass Bridge is located on the River Barrow and lies within the River Barrow and River Nore Special Area of Conservation (SAC).

Pass Bridge is a five-arch masonry bridge, also known as Ballagh Bridge and previously Essex Bridge, carries a minor road, the R424, over the River Barrow north of Monasterevin. It was built c.1750 of roughly coursed, undressed limestone blocks, and is the earliest surviving bridge in the locality of Monasterevin. The proposed rehabilitation and remediation works to the bridge will include vegetation clearance from the parapets, spandrels and carriageway verges, some repointing and mortar repairs where there are localised masonry defects and cracking, reconstruction of a missing section of parapet coping and repair to a cracked cut-water and a collapsed abutment at the west side of the north face.

Pass Bridge is included in both the Record of Protected Structures (B21-02 in Appendix 6 of the Kildare County Development Plan 2023–2029) and the Record of Monuments and Places (RMP KD021-006---) and is therefore protected by both the National Monuments Acts 1930–2014 and the Planning and Development Acts 2000 (as amended).

The River Barrow and River Nore SAC Natura 2000 site (site code 002162) is selected for alluvial wet woodlands and petrifying springs, priority habitats on Annex I of the E.U. Habitats Directive, 1992. The site is also selected as a SAC for old oak woodlands, floating river vegetation, estuary, tidal mudflats, Salicornia mudflats, Atlantic salt meadows, Mediterranean salt meadows, dry heath and eutrophic tall herbs, all habitats listed on Annex I of the E.U. Habitats Directive. As well as habitats, the SAC has been selected due to the presence of invertebrate, fish and mammal species which are listed under Annex II of the EU Habitats Directive, including freshwater pearl mussel, freshwater crayfish, Atlantic salmon, twaite shad, the three Irish Lamprey species - sea, brook and river, the Desmoulin's whorl snail and Eurasian otter.

In March 2024, Clandillon Civil Consulting (CCC) carried out an Engineering Inspection of Pass Bridge. The overall condition rating of the Bridge is 3 – Significant Damage. The following defects were recorded:

- Damaged parapet and missing capping stones
- Cracked cutwater
- Soft verges
- Vegetation growth in masonry and missing pointing
- Arch Cracking
- Flood relief span partial abutment collapse

Proposed rehabilitation works include the following:

- Cutwater and parapet reconstruction
- Soft verge replacement
- Flood relief span abutment construction
- Arch cracking monitoring

## 2. PROJECT PARTICULARS

|  |   |
|--|---|
| Client                                     | Kildare County Council,<br>Áras Chill Dara,<br>Devoy Park,<br>Naas,<br>Co Kildare.<br>W91 X77F                    |
| Design Team / Civil & Structural Engineers | Clandillon Civil Consulting Ltd<br>Osprey Business Centre,<br>Devoy Quarter,<br>Naas,<br>Co. Kildare.<br>W91 W0D0 |
| PSDP                                       | Clandillon Civil Consulting Ltd<br>Osprey Business Centre,<br>Devoy Quarter,<br>Naas,<br>Co. Kildare.<br>W91 W0D0 |



## 3. PLANNING CONTEXT

### 3.1 Kildare County Development Plan 2023-2029 (as varied) and Monasterevin Local Area Plan 2016-2022

The Kildare County Development Plan 2023-2029 was elected for adoption on 9<sup>th</sup> December 2022 by the elected Members of Kildare County Council and took effect from 2<sup>th</sup> January 2023. Monasterevin Local Area Plan 2016-2022 (as amended) is currently in place and the Monasterevin Local Area Plan 2025-2031 is currently under review. Policies, Actions and Objectives from each plan relevant to the proposed project are summarised in the subsections below:

#### 3.1.1 Land-Use Zoning

Pass Bridge is included in both the Record of Protected Structures (B21-02 in Appendix 6 of the Kildare County Development Plan 2023–2029) and the Record of Monuments and Places (RMP KD021-006----) and is therefore protected by both the National Monuments Acts 1930–2014 and the Planning and Development Acts 2000 (as amended).

Pass Bridge is located along the development boundary for the Monasterevin Local Area Plan 2016-2022. As such, it is subject to the policies and objectives set out therein. The bridge is not shown in the Plan as being zoned but is surrounded by lands zoned as Open Space and Amenity.

#### 3.1.2 Resilient Economy and Job Creation (Kildare CDP Chapter 4)

- RE O140 Support the development and marketing of the Barrow Blueway, including the Barrow Blueway Economic Plan, and facilitate related commercial opportunities throughout the county, subject to compliance with the Habitats Directive. Considering the River Barrow is a designated European Site, all developments within and adjacent to the Barrow Blueway should be subject to AA screening and where applicable Stage 2 AA.
- RE O142 (a) Recognise the importance of Monasterevin as a Blueway arrival town in Kildare and invest resources into developing the town into a heritage and nature tourism destination. (b) Seek to facilitate linkages between the Blueway and the nearby Ballykelly Mills and the proposed Umeras Peatlands Park
- RE P22 Work with stakeholders including the OPW, the Heritage Council, the Arts Council, local communities and businesses to support and promote the development of heritage and cultural tourism in County Kildare
- RE O157 Ensure heritage assets (built and natural) that are the focus for tourism development, are appropriately managed and their special interest conserved from potential adverse effects from visitors or development in general and that best practice standards in relation to the environmental management of tourism enterprises are adhered to.
- RE O158 Support and promote, with the co-operation of landowners, public access to heritage sites and features at appropriate locations whilst ensuring heritage related development does not result in negative impacts on the fabric or setting of Kildare's heritage assets.

#### 3.1.3 Sustainable Mobility and Transport (Kildare CDP Chapter 5)

- TM P6 Maintain and improve the capacity, safety and function of the regional road network (as finance becomes available) and to ensure that it is planned for and managed to enable the sustainable economic development of the county and wider area while encouraging a shift towards more sustainable travel and transport in accordance with the Core Strategy, the Spatial

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Planning and National Roads Guidelines (2012) and the Draft Transport Strategy for the Greater Dublin Area 2022-2042.

### **3.1.4 Infrastructure and Environmental Services (Kildare CDP Chapter 6)**

- IN O57 Assess applications for developments, having regard to the impact on the quality of surface waters and any targets and measures set out in the River Basin Management Plan and any subsequent local or regional plans. Where developments have the potential to impact the water quality of surface waters and/or any of the targets and measures set out in the River Basin Management Plan (RBMP), such a project should be subject to AA screening and where applicable, Stage 2 AA.

### **3.1.5 Built and Cultural Heritage (Kildare CDP Chapter 11)**

Any person (including a landowner) proposing to carry out, or to cause or to permit the carrying out of, any work at or in relation to a Recorded Monument must give notice in writing to the Minister for Housing, Local Government and Heritage two months before commencing that work. A similar level of protection applies to monuments included in the Register of Historic Monuments, established under Section 5 of the National Monuments (Amendment) Act 1987, but this contains many fewer monuments than the Record of Monuments and Places.

- AH P2 Protect and enhance archaeological sites, monuments and where appropriate and following detailed assessment, their setting, including those that are listed in the Record of Monuments and Places (RMP) or newly discovered archaeological sites and/or subsurface and underwater archaeological remains.
- AH O2 Manage development in a manner that protects and conserves the archaeological heritage of County Kildare, avoids adverse impacts on sites, monuments, features or objects of significant historical or archaeological interest and secures the preservation in-situ or by record of all sites and features of historical and archaeological interest, including underwater cultural heritage. The Council will favour preservation in – situ in accordance with the recommendation of the Framework and Principles for the Protection of Archaeological Heritage (1999) and the Council will seek and have regard to the advice and recommendations of the Department of Housing, Local Government and Heritage.
- AH O5 Require the preservation of the context, amenity, visual integrity and connection of the setting of archaeological monuments. As a general principle, views to and from archaeological monuments shall not be obscured by inappropriate development. Where appropriate, archaeological visual impact assessments will be required to demonstrate the continued preservation of an archaeological monument's siting and context.
- AH O6 Secure the preservation in-situ or by record of:
  - the archaeological monuments included in the Record of Monuments and Places as established under section 12 of the National Monuments (Amendment) Act, 1994
  - any sites and features of historical and archaeological interest including underwater cultural heritage and protected wrecks
  - any subsurface archaeological features including those underwater, that may be discovered during the course of infrastructural/development works in the operational area of the Plan.
  - Preservation relates to archaeological sites or objects and their settings.
- AH O7 Contribute towards the protection and preservation of the archaeological value of underwater or archaeological sites associated with rivers and associated features.



- AH P6 Protect, conserve and manage the archaeological and architectural heritage of the county and to encourage sensitive sustainable development in order to ensure its survival, protection and maintenance for future generations.
- AH O20 Conserve and protect buildings, structures and sites contained on the Record of Protected Structures of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest.
- AH O21 Protect the curtilage of protected structures or proposed protected structures and to refuse planning permission for inappropriate development that would adversely impact on the setting, curtilage, or attendant grounds of a protected structure, cause loss of or damage to the special character of the protected structure and/or any structures of architectural heritage value within its curtilage. Any proposed development within the curtilage and/or attendant grounds must demonstrate that it is part of an overall strategy for the future conservation of the entire built heritage complex and contributes positively to that aim.
- AH O23 Require an Architectural Heritage Assessment Report, as described in Appendix B of the Architectural Heritage Protection, Guidelines for Planning Authorities (2011), to accompany all applications with potential for visual or physical impacts on a Protected Structure, its curtilage, demesne and setting. This report should be prepared by a person with conservation expertise that is appropriate to the significance of the historic building or site and the complexity of the proposed works.
- AH O32 Ensure that new development will not adversely impact on the setting of a protected structure or obscure established views of its principal elevations.
- AH O33 Promote best practice and the use of skilled specialist practitioners in the conservation of, and any works to, protected structures. Architectural Heritage Impact Assessment reports should make reference to the DHLGH Advice Series on how best to repair and maintain historic buildings. The AHIA report should summarise the principal impacts on the character and special interest of the structure or site and describe how it is proposed to minimise these impacts. It may also describe how the works have been designed or specified to have regard to the character of the architectural heritage
- AH O43 Ensure that national guidelines and the principles of conservation best practice are followed in assessing the significance of a Protected Structure and in considering the impact of proposed development on the character and special interest of the structure, its curtilage, demesne and setting.

### **3.1.6 Biodiversity and Green Infrastructure (Kildare CDP Chapter 12)**

- BI P1 Integrate in the development management process the protection and enhancement of biodiversity and landscape features by applying the mitigation hierarchy to potential adverse impacts on important ecological features (whether designated or not), i.e. avoiding impacts where possible, minimising adverse impacts, and if significant effects are unavoidable by including mitigation and/or compensation measures, as appropriate. Opportunities for biodiversity net gain are encouraged.
- BI O6 Apply the precautionary principle in relation to proposed developments in environmentally sensitive areas to ensure that all potential adverse impacts on a designated NHA or Natura 2000 Site arising from any proposed development or land use activity are avoided, remedied, or mitigated
- BI P2 Seek to contribute to maintaining or restoring the conservation status of all sites designated for nature conservation or proposed for designation in accordance with European and national legislation and agreements. These include Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Natural Heritage Areas (NHAs), Ramsar Sites and Statutory Nature Reserves.

- BI O9 Avoid development that would adversely affect the integrity of any Natura 2000 site and promote favourable conservation status of habitats and protected species including those listed under the Birds Directive, the Wildlife Acts and the Habitats Directive, to support the conservation and enhancement of Natura 2000 Sites including any additional sites that may be proposed for designation during the period of this Plan and protect the Natura 2000 network from any plans and projects that are likely to have a significant effect on the coherence or integrity of a Natura 2000 Site.
- BI O10 Ensure an Appropriate Assessment Screening, in accordance with Article 6(3) and Article 6(4) of the Habitats Directive, Section 177A of the Planning and Development Act (2001-2022) or any superseding legislation and with DEHLG guidance (2009), is carried out in respect of any plan or project not directly connected with or necessary to the management of a Natura 2000 site to determine the likelihood of the plan or project having a significant effect on a Natura 2000 site, either individually or in combination with other plans or projects and to ensure that projects which may give rise to significant cumulative, direct, indirect or secondary impacts on Natura 2000 sites will not be permitted (either individually or in combination with other plans or projects) unless for reasons of overriding public interest.
- BI O11 Support the establishment of conservation measures and the preparation and implementation of management plans for the conservation of Natura 2000 sites by NPWS, as required by Article 6(1) of the Habitats Directive.
- BI O15 Ensure that any new development proposal does not have a significant adverse impact on rare and threatened species, including those protected under the Wildlife Acts 1976 and 2012, the Birds Directive 1979 the Habitats Directive 1992 and the Flora Protection Order species and any species listed under the national red lists or that could be listed on a national red list.
- BI O16 Ensure appropriate species and habitat avoidance and mitigation measures are incorporated into all new development proposals.
- BI O22 Identify and protect areas of high nature conservation value (including but not limited to SAC/SPA/pNHA) and support the landscape features which act as ecological corridors/networks and stepping-stones, such as river corridors, hedgerows, and road verges so as to minimise the loss of habitats and features of the wider countryside which are of major importance for wild fauna and flora in accordance with Article 10 of the Habitats Directive.
- BI P7 Recognise and promote inland waters, natural environmental assets and to protect rivers, streams and other watercourses and, wherever possible, maintain them in an open state capable of providing suitable habitats for fauna and flora while discouraging culverting or realignment.
- BI O37 Ensure the protection of rivers, streams and other watercourses and, wherever possible, maintain them in an open state capable of providing suitable habitats for fauna and flora while discouraging culverting or realignment. Endeavour to re-open previously culverted streams and watercourses through any future development/redevelopment proposals.
- BI O39 Consult with Inland Fisheries Ireland (IFI) and Waterways Ireland in relation to any development (greenfield development or redevelopment of brownfield sites) that could potentially impact on the aquatic ecosystems and associated riparian habitats while taking account of 'Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites' (IFI, 2004) and 'Planning for Watercourses in the Urban Environment' (IFI, 2020).
- BI O58 Require all development proposals to address the presence or absence of invasive alien species on proposed development sites and (if necessary) require applicants to prepare and submit an Invasive Species Management Plan where such species exist, in order to comply with the provisions of the European Communities (Birds and Natural Habitats) Regulations 2011-2015.

### 3.1.7 Landscape, Recreation and Amenity (Kildare CDP Chapter 13)

- LR P3 Protect, sustain and enhance the established appearance and character of all important views and prospects.
- LR O32 Avoid any development that could disrupt the vistas or have a disproportionate impact on the landscape character of the area, particularly upland views, river views, canal views, views across the Curragh, views of historical or cultural significance (including buildings and townscapes), views of natural beauty and specifically those views listed in Tables 13.5 – 13.7 of this plan.
- LR O34 Control development that will adversely affect the visual integrity of distinctive linear sections of water corridors and river valleys and open floodplains.
- LR A10 Develop a strategy for the Barrow & Rye Valleys to enhance and protect their historical, ecological, and amenity value, in cooperation with the relevant stakeholders.

### 3.1.8 Monasterevin Local Area Plan 2016-2022

Pass Bridge is located within the within the River Barrow and River Nore SAC (Code 002162). Policy NH 2 of the Monasterevin Local Area Plan states the following in relation to the protection of Natura 2000 sites:

*“To ensure that any development proposal within the vicinity of or having an effect on a designated site, or adjacent to/within an SAC provides sufficient detail illustrating how it will limit any possible impact upon the designated site and will include proposals for appropriate amelioration. All plans or projects must undergo an Appropriate Assessment Screening under Article 6 of the Habitats Directive and a full AA will be carried out where necessary. In all such cases the National Parks and Wildlife Section of the DAHG shall be consulted.”*

The following policy/objective of the Local Area Plan is applicable to Pass Bridge:

- BH 4 - “To protect and preserve those built heritage items listed in Table 14 and shown on Maps 4(A) and 4(B) of this Local Area Plan”.

The proposed works will not alter the bridge structure. The proposed works will not adversely impact on the historic urban context and the overall setting of the bridge on the River Barrow. The alterations proposed require localised invasive work, but these have been designed to minimise impact both visual and physical using appropriate materials compatible with the historic masonry structure. The proposed works will not have an adverse impact on the heritage special interest value of the protected structure.

### 3.1.9 Natural Heritage Considerations

A Natura Impact Statement has been prepared and accompanies this Section 177AE Application. The NIS assesses the likely significant effects on the Natura Site arising from the proposed rehabilitation works. The mitigation measures proposed within the NIS are considered to be sufficient to ensure that potential impacts regarding water quality, invasive species and disturbance are minimised. From the evidence presented in the NIS, it is concluded that the potential direct, indirect and cumulative impacts that may arise from the proposed works do not have the potential to affect the integrity of the River Barrow and River Nore SAC.

The proposed works do not meet the threshold requirements for the provision of an Environmental Impact Assessment Report (EIAR) as set out in the Planning and Development Regulations 2001 (as amended) and Planning and Development Act, 2000 (as amended). An EIA Screening Report accompanies this application.

## 3.2 The Architectural Heritage Protection Guidelines for Planning Authorities, 2004

Aspects of the guidelines in relation to the proposed project are discussed. The project is not located within an ACA, does incorporate works on an historic bridge and it should be noted that no new buildings or structures are proposed. The works include rehabilitation of the bridge only.

### 3.2.1 Works to Bridges

Section 14.2 provides guidance in relation to the protection of bridges stating:

*“There is a rich heritage of bridges throughout the country that requires careful consideration when any repair or alteration work is proposed.”*

*“Bridges which are protected structures may include road, rail and canal bridges, aqueducts, viaducts and footbridges. They may incorporate features of special interest including abutments, parapets, cut-waters, refuges, balustrades, string courses, railings, lamp standards, plaques and paving. Where such features exist they should be identified and conserved.”*

Further, it is stated that:

*“Proposals to reinforce, widen or infill sections of a bridge which is a protected structure, resulting in the concealment of any part of it, should be treated with caution. Where reinforcement is proven to be unavoidable, efforts should be made to ensure that the least possible structural and visual damage is caused to the bridge.”*

*“Proposals to reinforce, widen or infill sections of a protected bridge will require alterations to the character and quality of the structure. Where the impacts are likely to be substantial and would damage the character and integrity of the protected structure to an unacceptable extent, alternative solutions should be explored.”*

Proposed works at Pass Bridge will not conceal any part of the bridge, materials will complement and match the existing features and will not alter the character or quality of the structure.

### 3.2.2 Maintenance and Repair Works

Sections 19.4 and 4.13.5 of the guidelines, while not specific to bridges are applicable and state:

*“Repairs should be carried out only after careful analysis of the problems that have led to deterioration so as to ensure that the repairs are appropriate and have a relatively long life.”*

*“Regular maintenance to keep a building weathertight; the securing but not the replacement of existing elements of windows and doors; clearance of gutters and downpipes; refixing of loose slates; repainting of previously painted surfaces; repair and maintenance works carried out in accordance with the Department of the Environment and Local Government Conservation Guidelines; minor alterations to services (but excluding the installation of major services such as lifts and air-conditioning).”*

On the basis of the above, the proposed works will not conceal any part of the bridge or damage the character or integrity of the structure. The bridge's condition was thoroughly investigated, and the rehabilitation works required, where necessary will have regard to good conservation practices. The routine maintenance which includes repair and maintenance works, vegetation removal and repointing, is considered under the Guidelines to be exempted development not requiring planning permission.

## 4. EXTENT OF PROPOSED WORKS

### 4.1 Site Location

The site of the proposed works is Pass Bridge, Passlands, Monasterevin, County Kildare. Pass Bridge is located on the River Barrow and lies within the River Barrow and River Nore Special Area of Conservation (SAC). The bridge is a five-arch masonry bridge, also known as Ballagh Bridge and previously Essex Bridge, carries a minor road, the R424, over the River Barrow north of Monasterevin. It was built c.1750 of roughly coursed, undressed limestone blocks, and is the earliest surviving bridge in the locality of Monasterevin.

Pass Bridge is included in both the Record of Protected Structures (B21-02 in Appendix 6 of the Kildare County Development Plan 2023–2029) and the Record of Monuments and Places (RMP KD021-006----) and is therefore protected by both the National Monuments Acts 1930–2014 and the Planning and Development Acts 2000 (as amended).

### 4.2 Project Justification

Pass Bridge is both a Protected Structure and is listed on the National Inventory of Architectural Heritage (NIAH) as being of Regional Significance. Structures with a Regional Rating are those that make a significant contribution to the architectural heritage of their region. They also bear comparison with similar structures in other regions in Ireland. Increasingly, structures that warrant protection make a significant contribution to the architectural heritage of their locality. The River Barrow and Nore are also a Special Area of Conservation (SAC-002162), a Natura 2000 site established under the EU Habitats Directive (European Directive 92/43/EEC).

The NIAH appraises the bridge as follows:

*“Pass Bridge is a fine stone bridge that forms an imposing feature on the River Barrow and is one of a group of bridges on the section of that river that passes through County Kildare – the bridge is of considerable interest as the earliest surviving bridge in the locality of Monasterevin. The construction of the arches that have retained their original shape is of technical and engineering merit. The bridge exhibits good quality traditional stone masonry. The bridge is of considerable historical and social significance as a reminder of the road network development in Ireland in the mid eighteenth century”.*

The works will consist of:

- Cutwater and parapet reconstruction
- Soft verge replacement
- Devegetation and repointing of masonry
- Flood relief span abutment reconstruction
- Arch cracking monitoring

### 4.3 Proposed Works Extents

A detailed inspection of the bridge was carried out in March 2024 by Clandillon Civil Consulting which informed the preliminary and detailed design and scope of the proposed works. Refer to Appendix F (KCCBFW-CCC-ST-S06-RP-S-0001 Construction Methodology) for a copy of the report.

The proposal includes a range of rehabilitation works to Pass Bridge necessary to prolong the service life of the structure.



The proposed works include the following:

- **Cutwater and Parapet Reconstruction:** Damage to the 1st pier cutwater and parapet was recorded during the engineering inspection. The damage to both elements is likely to be associated with vehicle impact. Part of the parapet coping approx. 6m long is missing and loose stones are visible in the stream. It is proposed to recover the collapsed stone from the stream as much as possible and reconstruct the parapet coping and the cracked cutwater section to its original geometry. Strap pointing should be used to match the original with NHL 3.5 mortar.
- **Soft Verge Replacement:** Soft verges were recorded on both sides of the structure. As a result of water ingress through the permeable verges defects are evident on the soffit of all arches such as water staining and calcite accumulations which could lead to further masonry deterioration. It is proposed to replace the soft verges with an impermeable raised rubbing strip.
- **Devegetation and Repointing of Masonry:** During the Engineering Inspection masonry areas were recorded with loose, friable or missing masonry pointing as well as being covered in vegetation which may cause further masonry degradation. It is proposed to remove the vegetation in the affected areas, remove loose pointing and reinstate any missing pointing with mortar in the areas subject to water saturation as outlined in the design drawings.
- **Flood Relief Span Abutment Construction:** During the Engineering Inspection, additional defects were recorded in the flood relief span on the northern approach to the bridge. Vegetation, missing pointing and soft verges were noted as well as the localised collapse of the south abutment. Reconstruction of the abutment and repointing of the arch barrel is proposed.
- **Arch Cracking:** Arch longitudinal cracking was recorded during the inspection of the Bridge arches. Similar cracking was recorded during the previous inspection undertaken in 2015. No immediate intervention is proposed to remediate the cracks. Monitoring of the cracking is recommended.

All the aforementioned details are included on the drawings contained in Appendix E.

## 4.4 Timescale for the Completion of the Works

It is anticipated that works will be carried out between the period of July and September in accordance with Inland Fisheries Ireland's 'Guidelines on the Protection of Fisheries During Construction Works in and Adjacent to Waters'. Works will take place outside the salmonid closes season and will not be undertaken during hours of darkness to avoid potential disturbance of Otter foraging and commuting. Works will be undertaken outside the lamprey spawning season. The anticipated construction time for the works is approximately 2 months.

## 4.5 Existing Environment

Pass Bridge is a five-arch masonry bridge, also known as Ballagh Bridge and previously Essex Bridge, carries a minor road, the R424, over the River Barrow north of Monasterevin. It was built c.1750 of roughly coursed, undressed limestone blocks, and is the earliest surviving bridge in the locality of Monasterevin. The proposed rehabilitation and remediation works to the bridge will include vegetation clearance from the parapets, spandrels and carriageway verges, some repointing and mortar repairs where there are localised masonry defects and cracking, reconstruction of a missing section of parapet coping and repair to a cracked cut-water and a collapsed abutment at the west side of the north face.

Pass Bridge is included in both the Record of Protected Structures (B21-02 in Appendix 6 of the Kildare County Development Plan 2023–2029) and the Record of Monuments and Places (RMP KD021-006----) and is therefore protected by both the National Monuments Acts 1930–2014 and the Planning and Development Acts 2000 (as amended).



The River Barrow and River Nore SAC Natura 2000 site (site code 002162) is selected for alluvial wet woodlands and petrifying springs, priority habitats on Annex I of the E.U. Habitats Directive, 1992. The site is also selected as a SAC for old oak woodlands, floating river vegetation, estuary, tidal mudflats, Salicornia mudflats, Atlantic salt meadows, Mediterranean salt meadows, dry heath and eutrophic tall herbs, all habitats listed on Annex I of the E.U. Habitats Directive. As well as habitats, the SAC has been selected due to the presence of invertebrate, fish and mammal species which are listed under Annex II of the EU Habitats Directive, including freshwater pearl mussel, freshwater crayfish, Atlantic salmon, twaite shad, the three Irish Lamprey species - sea, brook and river, the Desmoulin's whorl snail and Eurasian otter.

The EPA monitor biological water quality in this stretch of the River Barrow with a station located at Pass bridge (Station Code S14BO11000). This site was rated as being Q3-4 (Moderate) in 2017. The Monasterevin Waste Water Treatment Plant is located on the right bank of the river downstream of Monasterevin Bridge which is south of Pass Bridge.

## 4.6 Design Drawings

Refer to the following drawings in Appendix E:

| Drawing Number              | Drawing Name   |
|-----------------------------|--|
| KCCBFW-CCC-ST-S06-DR-S-0001 | Passlands (Pass) Bridge Site Location and Layout             |
| KCCBFW-CCC-ST-S06-DR-S-0002 | Passlands (Pass) Bridge Existing Defects Plan and Elevations |
| KCCBFW-CCC-ST-S06-DR-S-0003 | Passlands (Pass) Bridge Existing Defects Sections            |
| KCCBFW-CCC-ST-S06-DR-S-0004 | Passlands (Pass) Bridge Defects Photos                       |
| KCCBFW-CCC-ST-S06-DR-S-0005 | Passlands (Pass) Bridge Rehabilitation Works Sheet 1 of 2    |
| KCCBFW-CCC-ST-S06-DR-S-0006 | Passlands (Pass) Bridge Rehabilitation Works Sheet 2 of 2    |
| KCCBFW-CCC-ST-S06-DR-S-0007 | Passlands (Pass) Bridge Site Location Map                    |
| KCCBFW-CCC-ST-XX-DR-S-0001  | Rehabilitation Works Design Notes                            |
| KCCBFW-CCC-ST-XX-DR-S-0002  | Rehabilitation Works Standard Details Sheet 1 of 2           |
| KCCBFW-CCC-ST-XX-DR-S-0003  | Rehabilitation Works Standard Details Sheet 2 of 2           |

## 4.7 Construction Phase(s)

Should this project proceed to construction stage and given the Construction (Rehabilitation) Methodology contained within Appendix F. The works required for completion of the rehabilitation works to the bridge are as follows:

### 4.7.1 Cutwater and Parapet Reconstruction

It is proposed to recover the collapsed stone from the stream as much as possible and reconstruct the parapet coping and the cracked cutwater section to its original geometry. Strap pointing should be used to match the original with NHL 3.5 mortar.

The following is the methodology for the reconstruction of the cutwater and parapet:

- Refer to section 6 of the Construction (Rehabilitation) Methodology (Appendix F) for plant & equipment details before the commencement of works;
- Access to the stream for stone recovery and falsework installation will be by the shortest route - from the north-west bank;
- Temporary damming will be used such as sandbags in conjunction with plastic sheeting, and marine plywood to divert the river flow from the works area. If pumping is required to dewater the works area silt bags will also be used. The site ecologist will monitor suspended solids downstream of the works;
- An appropriate-size excavator will be used to recover the loose stone from the stream;
- Remove sandbags and silt trenches and reinstate the stream flow in the affected area;
- Install an approved scaffolding system and netting to access the damaged section and protect the stream pollution from falling debris and rebound materials;
- Marked the cutwater stones and reduced the cracked cutwater to the sound masonry. Stone will be removed from the falsework and cleaned away from the stream and stored safely on site;
- All removed and surplus materials will be disposed of safely off-site;
- Reconstruct the cutwater with the original fabric and NHL 3.5 mortar. Strap pointing should be used to match the existing. Any new stones required to complete the reconstruction will be approved by the Employer's representative in advance of the works;
- Remove scaffolding and stream protection measures;
- Reinstall embankment and fencing as required and agreed with the land owner in advance of the works;

#### **4.7.2 Soft Verge Replacement**

It is proposed to replace the soft verges with an impermeable raised rubbering strip using the following methodology:

- Implement temporary traffic control measures during the works;
- Remove soft verges to the design depth using suitable machinery;
- Construct soft verges as per the design detail KCCBFW-CCC-ST-XX-DR-S-0002 (Appendix E);
- Reinstall road surfacing to the new rubbering strip;
- Remove temporary traffic control measures.

#### **4.7.3 Devegetation and Repointing of Masonry**

It is proposed to remove the vegetation in the affected areas, remove loose pointing and reinstate any missing pointing with NHL 3.5 or NHL 5 mortar in the areas subject to water saturation as outlined in the design drawings (Appendix E). Strap pointing should be used in the areas where this pointing is currently present such as spandrel walls and cutwaters. Normal joint pointing should be used on the inner faces of the parapets. Repointing type should be agreed upon with the Employer's Representative in advance of the works.

The following is the methodology for the vegetation removal and masonry repointing:

- For repointing/vegetation removal in the spandrel walls and cutwaters over water, a bridge unit is proposed with adequate debris protection measures;

- For other areas with difficult access, temporary scaffolding could be used. Appropriate debris protection measures should be employed such as debris netting, and temporary lining to avoid material entering the stream/ ground.
- Repointing should be carried out as outlined in Standard Details drawings and Notes illustrated in Figure 9 of the Construction (Rehabilitation) Methodology and Appendix E Drawings.

#### **4.7.4 Flood Relief Span Abutment Reconstruction**

During the Engineering Inspection on 23/04/24, additional defects were recorded in the flood relief span on the northern approach to the bridge. Vegetation, missing pointing and soft verges were noted as well as the localised collapse of the south abutment.

The following is the proposed methodology for the abutment reconstruction:

- No water or flow was present during the inspection. The flood relief span repairs should be carried out only during dry periods;
- Collapsed stones should be recovered, cleaned and stored safely;
- Appropriate machinery should be used to expose the abutment foundation stone and remove any soft sediments in the span;
- Appropriate debris protection measures should be installed to avoid the contamination of the stream bed;
- The abutment should be reconstructed with the original stone and NHL 5 mortar;
- Repointing of the arch barrel will be carried out during the abutment repair stage;
- Remove stream protection measures and reinstate the stream bed level;
- Any obstruction restricting the flow in the relief span should be removed such as pallets, gates etc.

#### **4.7.5 Arch Cracking**

Arch longitudinal cracking was recorded during the inspection of the Bridge arches. Similar cracking was recorded during the previous inspection undertaken in 2015. No immediate intervention is proposed to remediate the cracks and monitoring should be undertaken.

### **4.8 Emissions/ Discharges During Construction**

No discharges or emissions to land or river will be arising from the proposed works.

### **4.9 Operations Phases**

There are no operational requirements for the proposed works, aside from routine maintenance and monitoring of the observed arch cracking.

### **4.10 Mitigation Measures**

The main mitigation measures are as set out in the Construction (Remediation) Methodology Report (Appendix G) and the Natura Impact Statement (NIS) (Appendix C). In addition to which a site ecologist will be appointed for the duration of the works. The site ecologist will work with the contractor to ensure that their site-specific method statement complies with the relevant mitigation measures necessary to protect the qualifying interests of the Natura 2000 site.

## **4.11 Flood Risk Assessment**

The proposed rehabilitation works will not have any impact upon the freshwater courses within the vicinity of the works. The proposed works will not give rise to any flooding or impact adversely upon adjoining lands.

## **4.12 Hydrological/ Hydrogeological Impact**

The proposed rehabilitation works will not have any hydrological or hydrogeological impact upon the site location.

## **4.13 Assessment of Landscape Status and Visual Impact**

Given that no new structures or buildings are proposed, and the height of the bridge will remain as per the existing condition, no visual impact will occur. The height, form, scale and/or ridgeline of the bridge will not be altered as a result of the proposed works. Similarly, the materials and conservation methods proposed will ensure the integrity and character of the bridge and wider area is maintained.

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## **5. LIAISON WITH STAKEHOLDERS AND PRESCRIBED BODIES**

As part of its obligations, Kildare County Council has consulted with various stakeholders during the design phase of these works.

Prior to this Section 177AE Application, the following statutory bodies provided information via publicly available (online) sources.

- National Parks and Wildlife Service (NPWS)
- Inland Fisheries Ireland (IFI)
- Office of Public Works (OPW)
- Environmental Protection Agency (EPA)
- National Monuments Service
- Kildare County Council

The following prescribed Bodies will be formally notified of this application:

- The Arts Council
- An Taisce
- National Parks and Wildlife Services
- Waterways Ireland
- Department of Environment, Climate and Communications
- Department of Housing, Local Government and Heritage
- Department of Transport
- Environmental Protection Agency
- Fáilte Ireland
- Health and Safety Authority
- Inland Fisheries Ireland
- The Heritage Council
- National Transport Authority
- The Office of Public Works
- Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media
- Transport Infrastructure Ireland
- Laois County Council
- Development Applications Unit.

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## **6. SITE RULES & RESTRICTIONS**

### **6.1 Site Rules**

The following is a non-exhaustive list of specific site rules which are to be developed by the successful tenderer:

- The works will take place in accordance with a Construction Environmental Management Plan (CEMP).
- The Contractor will be required to implement a traffic management plan to manage safe access and egress of construction vehicles from the site.
- The Contractor shall develop a temporary site compound.
- A site ecologist will be appointed for the duration of the rehabilitation works.
- Plant and equipment will be confirmed by the appointed contractor. The Contractor will confirm the plant required to undertake the protection measures set out in the Construction (Remediation) Methodology (appendix F) and in agreement with Inland Fisheries Ireland and Kildare Co Co prior to any works being undertaken.
- Mandatory that all site personnel have a valid Safe Pass and are inducted on the Health and Safety and Environmental issues.
- Control of access to the site and the prevention of unauthorised entry.
- Arrangements for personal protection measures for employees, visitors and other Contractors and sub-contractors.
- Arrangements for spillages.
- Arrangements for training of employees in health, safety and welfare at work and how to deal with environmental issues.
- Arrangements to ensure that other contractors and sub-contractors provide evidence of their health and safety and environmental policies to ensure compliance with site rules.
- Arrangements for ensuring that all visitors to site comply with the site rules.
- Emergency procedures to deal with accidents.

### **6.2 Site Restrictions**

The following site restrictions will apply at Pass Bridge:

- No item of plant or equipment (including stores or offices) shall be placed or parked in the SAC
- Works will take place outside the salmonid closed season.
- Works will not be undertaken during hours of darkness to avoid disturbance of Otter foraging and commuting.
- Works will be undertaken outside the lamprey spawning season.
- Restrictions on Working Hours shall be determined as a condition of planning or as set out by the Local Authority
- Restrictions on Access

The Contractor shall ensure that access to and from all properties adjoining the site shall not be unreasonably restricted during the construction works. The maintenance of access shall be the responsibility of the principal contractor.



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## **7. UNFORESEEN CIRCUMSTANCES**

Should unforeseen circumstances arise including those relating to environmental concerns, the issues must be raised with and submitted to the Employers Representative and Site Ecologist as soon as possible after the event. If significant design changes are subsequently required, environmental implications arising are to be submitted to Clandillon Civil Consulting and Kildare County Council ( or Employers Representative). Design changes can only be implemented by the written approval of the Employers Representative prior to commencement of any works affected by the change in design.

Environmental issues arising during the course of construction from design changes, control measures, unsafe practices, incidents and accidents, amendments to the contractors CEMP and information for the Safety and Health File will be examined at site meetings.

Significant changes to the scope of works, must be reviewed/approved by the Employers Representative. Any hazard discovered but not removed during the construction period must be recorded and a copy of the records sent to the Project Supervisor Design Process (PSDP) as soon as possible before practical completion.

# APPENDIX A - PRELIMINARY DESIGN REPORT

[www.c3.ie](http://www.c3.ie)





## APPENDIX B - APPROPRIATE ASSESSMENT (AA) SCREENING

[www.c3.ie](http://www.c3.ie)



# APPENDIX C - NATURA IMPACT STATEMENT (NIS)



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## **APPENDIX D - ENVIRONMENTAL IMPACT ASSESSMENT (EIA) SCREENING**

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## APPENDIX E - DRAWINGS



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# **APPENDIX F - CONSTRUCTION (REHABILITATION) METHODOLOGY REPORT**



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# APPENDIX G - ARCHITECTURAL & CULTURAL HERITAGE IMPACT ASSESSMENT REPORT



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