



Comhairle Cathrach
& Contae **Luimnigh**

Limerick City
& County Council

Ballinloughnane Bridge, Co. Limerick

**Outline Construction & Environmental
Management Plan**

October 2023



**An Roinn Iompair
Turasóireachta agus Spóirt**

Department of Transport,
Tourism and Sport



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1 Introduction

Limerick City & County Council (LCCC) proposes to carry out repair works to Ballinloughnane Bridge in County Limerick as part of their LCCC 2023 Bridge Rehabilitation Scheme. The bridge at Ballinloughnane has been identified by LCCC following condition surveys carried out by LCCC Engineers. PUNCH Consulting Engineers (PUNCH) have been engaged by LCCC to assess and design as appropriate a structural repair scheme for the nominated bridge structures.

Contractor (TBC) have been appointed to carry out the proposed works at Ballinloughnane Bridge. The proposed repairs have been reviewed on site with a representative of Contractor (TBC) and they have estimated that the works will be completed in 120 days. Further details of the proposed works are outlined on PUNCH drawing 201156-PUNCH-23-XX-DR-S-0002.

The Bridge site located on the Galey River is within the Lower River Shannon SAC and the Stack's to Mullaghareirk Mountains, West Limerick hills and Mount Eagle SPA. The Screening for Appropriate Assessment Report identified the potential for impacts on the Lower River Shannon SAC due to water quality, disturbance and invasive species impacts (Ecofact, 2020). No potential for impacts was identified on the SPA, as there is no suitable breeding habitat for Hen harrier in the immediate vicinity of the bridge.

The contractor will prepare and submit a detailed construction and environmental management plan for approval by the Local Authority and the appointed Project Ecologist in advance of mobilizing to site. The Construction Environmental Management Plan will be a live document that will be updated by the Contractor as required throughout the project lifecycle.

This document has been prepared for the Competent Authority in relation to the proposed project and provides a site-specific Outline Construction and Environmental Management Plan for the proposed works.

2 Bridge Location & Description

The bridge is located on a third order stream; one of the two headwater streams which make up the Galey River, both known as the Galey River. The bridge site is surrounded by commercial non-native forestry plantations, scrub, wet grassland and improved agricultural grassland and bog habitats in the upper reaches of the catchment.

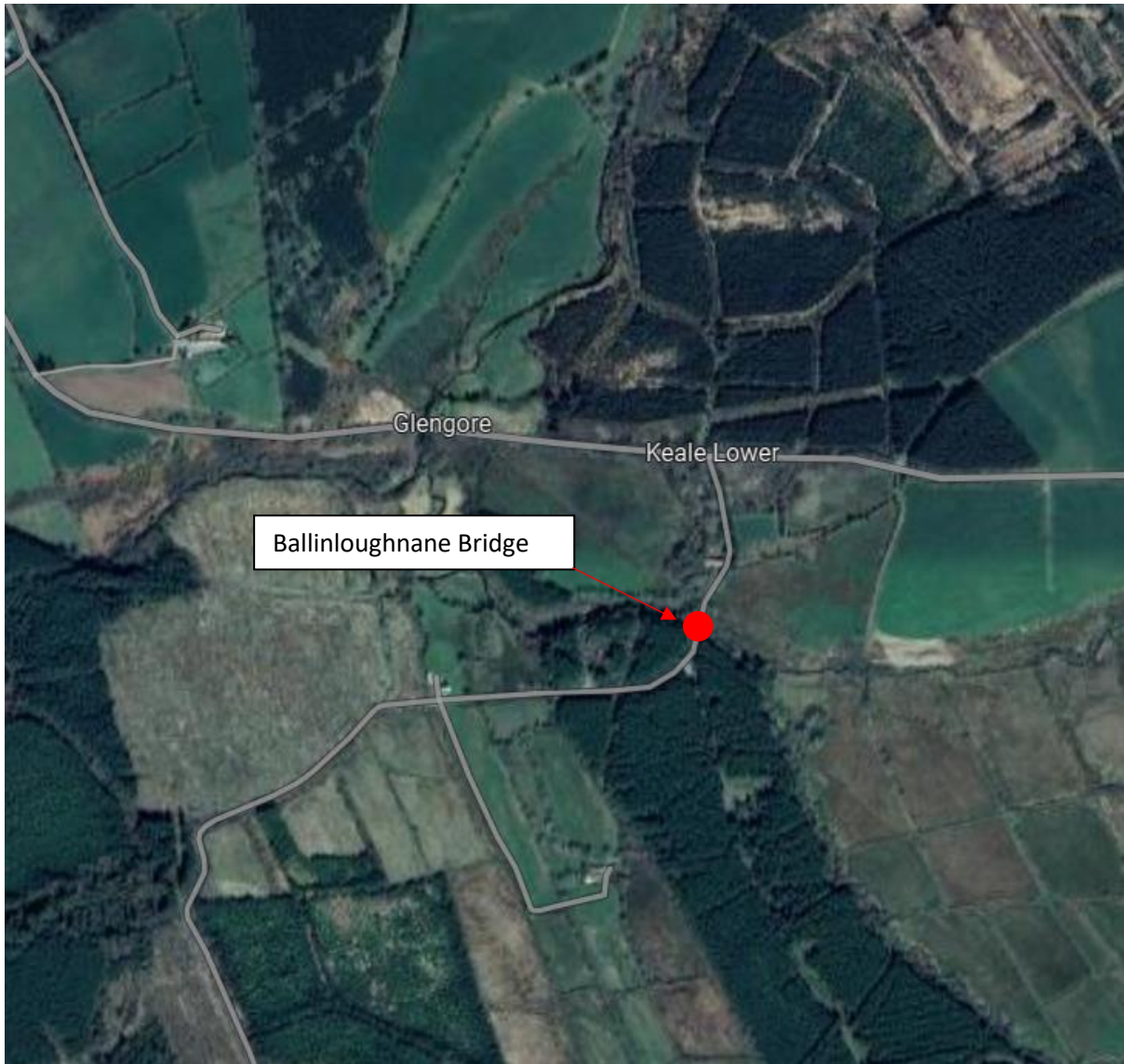


Figure 1: Site Location

3 Proposed Works

The proposed works include the rehabilitation of an existing bridge which consists of a reinforced concrete and steel beam slab (jack-arch) supported on mass concrete abutment walls. The proposed works involves the removal of the bridge deck and its replacement with a precast concrete bridge beam and in-situ concrete deck construction. The abutments will be retained in position and used to support new concrete bench seating's for the bridge beams.

- All vegetation including trees, shrubs and the like, will be removed for 10 m upstream and downstream of the bridge over a width of 30 m approximately. All efforts will be made to preserve mature and semi-mature trees, where possible.
- The composite bridge deck, concrete slab and steel beams will be removed. The top level of the abutments will be removed to a predetermined level and excavated behind to expose the natural rock bed. Mass concrete will be poured behind the abutment walls to form the bearing for the reinforced bench seatings.
- The precast concrete beams will be lowered into place on the bench seatings to form the core of the new bridge structure. A reinforced concrete deck will be poured above the beams. Reference shall be made to Inland Fisheries Ireland publication "Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters", to protect the quality of the river below.
- The width of the bridge will be increased to allow for widening of the road over and to offset the parapets beyond the edges of the carriageway.
- The remaining excavations will be backfilled with acceptable fill material to road formation level. The roadway will be reinstated using a surface course and binder (base), course of Dense Bitumen Macadam on a granular sub-base.
- Insitu reinforced concrete upstands for the parapet rails and raised plinths will be cast at the road edges on the bridge structure.
- Other ancillary items associated with the bridge construction include; proprietary galvanised steel parapets; road side drainage; traffic signs; etc.

4 Construction & Environmental Management Plan

4.1 Outline Construction Methodology

It will be the responsibility of the contractor to prepare and submit a detailed construction and environmental management plan for approval from the Local Authority. The Construction Environmental Management Plan will be a live document that will be updated by the contractor as required throughout the project lifecycle.

The Contractor (TBC) has estimated that the works will be completed in 120 days. The proposed works will be undertaken during low level water periods.

The timing of the works will be in accordance with the requirements of Inland Fisheries Ireland (IFI) for work in rivers as given in the IFI *“Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters”* and agreed with IFI in advance of commencement.

To undertake the rehabilitation works to the river bed, the following methodology is envisaged;

- Existing traffic will be diverted away from the site.
- All vegetation including trees, shrubs and the like will be removed for 10 m upstream and downstream of the bridge over a width of 30 m approximately. All efforts will be made to preserve mature and semi-mature trees, where possible.
- The composite bridge deck, concrete slab and steel beams, will be removed. The top level of the abutments will be removed to a predetermined level and excavated behind to expose the natural rock bed. Mass concrete will be poured behind the abutment walls to form the bearing for the reinforced bench seatings.
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- The width of the bridge will be increased to allow for widening of the road over and to offset the parapets beyond the edges of the carriageway.
- The remaining excavations will be backfilled with acceptable fill material to road formation level. The roadway will be reinstated using a surface course and binder (base), course of Dense Bitumen Macadam on a granular sub-base.
- In situ reinforced concrete upstands for the parapet rails and raised plinths will be cast at the road edges on the bridge structure.
- Other ancillary items associated with the bridge construction include; proprietary galvanised steel parapets; road side drainage; traffic signs; etc.

4.2 Environmental Considerations

A Natura Impact Statement (NIS) was developed following the findings of the Appropriate Assessment Screening required for the Bridge Site, as it lies within the curtilage of the Lower River Shannon SAC. The Contractor will be required to develop a Construction Environmental Management Plan (CEMP) to ensure full compliance with measures outlined in the NIS.

A non-exhaustive list of such environmental measures would include for:

- The procurement of a contractor with extensive and demonstrable experience in instream works and bridge works.
- Liaison with both the National Parks & Wildlife Service (NPWS) and Inland Fisheries Ireland (IFI) to be undertaken prior to the commencement of the works to ensure their requirements are satisfied under the Contractor's construction methodology.
- All mitigation measures will be completed in conjunction with NPWS and IFI in advance of the works, e.g. translocation of fish species by electrofishing with appropriate licencing.
- Referencing the weather forecast to ensure the works are timed to coincide with appropriately low water levels and prevent the need for temporary water management measures.
- Either an independent ecological clerk of works, or else a Local Authority Ecologist, is to be appointed to monitor the works.
- When materials are been delivered to the site compound or works area, all material such chemical admixtures, oils and lubricants will be transported in sealed containers to negate the potential of river water contamination.

Note: Refer to the NIS for a full schedule of environmental measures to be addressed as part of the Contractors CEMP.

4.3 Disposal of Water, Wastewater and Sewage

All site facilities during construction will be located entirely within the site. The facilities will include canteen, toilet block and drying room for all staff/workers. These facilities will be mobile and all arising waste material will be transported to a suitable waste disposal facility.

4.4 Control of Fuels & Lubricants

If required to provide fuel to the relevant items of plant on site, a certified double skinned metal fuel tank with integrated pump, delivery hose, meter, filter and locking mechanism will be situated in a secure area on the construction site. It will be situated within a bund. This tank will be certified for lifting when full.

Sand piles and emergency clean up spill kits will be readily available in the event of a fuel spill. A hazardous bin will also be available to contain any spent sand or soak pads.

New metal gerry cans with proper pouring nozzles will be used to move fuel around the site for the purposes of refuelling items of small plant on site.

Drip trays will be used under items of small plant at all times. Any waste oils etc. contained in the drip trays or the bunded area will be emptied into a waste oil drum, which will be stored within the bund.

Metal gerry cans and any other items of fuel containers will be stored in certified metal

bunded cabinets. Any gas bottles will be stored in a caged area at a secure location on the site. All will be properly secured at point of work.

4.5 Site Compound

The main site compound will not be located within 5m of the river and will be located on dry land.

4.6 Traffic Management Procedures

Existing traffic will be diverted away from the site.

4.7 Working Hours

The proposed hours of work on site will be 07:00 hrs to 18:00 hrs Monday to Friday unless otherwise agreed with the Local Authority. All outside of hours work will first be agreed in writing with the Local Authority.