Habitats Directive Appropriate Assessment
Screening Determination - Cork County Bridge Rehabilitation Services: Ardcahan Bridge, Dunmanway, Co Cork

Cork County Council
Comhairle Contae Chorcaí

Completed by Cork County Council Ecology Office.
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This document contains the Habitats Directive screening determination of Cork County Council in respect of the Ardcahan Bridge rehabilitation works. The determination is based on the information provided in the Appropriate Assessment Screening Report and associated drawings prepared by Triturus Environmental Ltd. on behalf of Fehily Timoney and Company. The Triturus Environmental Ltd. report concludes that applying the precautionary principal, it ***cannot*** be concluded beyond reasonable scientific doubt that the proposed works, individually or in combination with other plans and projects, will not have a likely significant effect on a European site. This screening determination should be read in conjunction with the aforementioned report and drawings.

In accordance with Regulation 250 of the Planning and Development Regulations, Local Authorities are required to carry out screening for appropriate assessment of proposed development to assess, in view of best scientific knowledge, if the proposed development, individually or in combination with another plan or project is likely to have a significant effect on one or more European[1] sites. The Local Authority is required to determine that appropriate assessment of the proposed development is required if it cannot be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on one or more European sites.

These requirements derive from Article 6(3) of the Habitats Directive which states that

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

EU and National Guidance sets out two main stages to the assessment process which are as follows:

Stage One: Screening

> The process which identifies what might be likely impacts arising from a plan or project on a European site, either alone or in combination with other projects or plans and considers whether these impacts are likely to be significant. No further assessment is required where the risk of significant impacts on European sites can be objective ruled out during the screening stage.

Stage Two: Appropriate Assessment

> Where the possibility of significant impacts has not been discounted by the screening process, a more detailed assessment is required. This is called an Appropriate Assessment and requires the compilation of a **Natura Impact Statement** by the project proponent, which is a report of scientific evidence and data relating to European sites for which significant negative impacts have not been previously screened out. This is used to identify and classify any implications of the plan or project for these sites in view of their Conservation Objectives. The Appropriate Assessment must include a determination as to whether or not the project would adversely affect the integrity of any European site or sites. The plan or project may only be consented if adverse effects on the integrity of European sites can be objectively ruled out during the Appropriate Assessment process. The plan or project may not be consented on foot of an

[1]"European Site" means— (*a) a candidate site of Community importance; (b) a site of Community importance; (c) a candidate special area of conservation; (d) a special area of conservation; (e) a candidate special protection area, or (f) a special protection area*.

Appropriate Assessment, if it is found that it will give rise to adverse impacts on one or more European sites, or if uncertainty remains in relation to potential impacts on one or more European sites.

Name of the project

Cork County Bridge Rehabilitation Services: Ardcahan Bridge, Dunmanway, Co Cork

Description of the project

In summary, the rehabilitation at Ardcahan Bridge will require the following works over a 6 to 10-week period.

Temporary Site Compound: During the construction phase, the project will require 1 no. temporary compound located in agricultural land within the Bandon River SAC. The temporary compound shall be constructed with crushed rock aggregate hard standings with low dust content.

Facilities to be provided in the temporary site compound will include the following:

- Welfare facility
- Employee parking
- Contractor lock-up facility
- Bottled water for potable supply
- Water tanker to supply water used for other purposes
- Fuel storage
- Diesel generator
- Storage areas
- Waste management areas.

Temporary facilities will be removed, and the lands reinstated upon completion of the construction phase.

Corrosion Repairs & Minor Parapet Repairs:

1. To facilitate the installation of the scaffold, vegetation within a 2-meter width on either side of the bridge face will be cut back.
2. A scaffold shall be installed to allow access to the underside of the bridge arches.
3. Steel beams to be sandblasted to SA2.5 as per detail provided in Drawings P1959-ARDH-0004. Note that one operator will carry out the sandblasting using appropriate sandblasting equipment accessing the beams surface from the scaffold provided. Sandblasting equipment typically consists of a chamber in which sand and air are mixed. The mixture travels through a hand-held nozzle to direct the particles toward the surface of work.
4. Welding of additional steel plate at the bottom flange of existing steel beams as shown in Drawings P1959-ARDH-0004. One operative will carry out the welding using portable electric welding equipment accessing the beams surface from the scaffold provided.
5. A protective paint system to be applied to all exposed steel work, Hempel Hempadur Mastic 45880/1 or similar approved to be applied by brush in 2 coats of minimum 190-micron DFT (dry film thickness). One operative will paint the steel beams accessing them from the scaffold provided.
6. Steel Drip Strips will be positioned along the bottom edge of the bridge parapet on both sides of the bridge, the holes will be drilled along the bridge as per the spacing shown in drawing P1959-ARDH-0004 and bolted through with post-fixed mechanical anchors as shown in

drawings P1959-ARDH-0004. The position of these elements is shown on drawings P1959-ARDH-0004.

7. Cracking at Deck Pier interface to be injected with Epoxy Resin. Prior the injection, the crack and surrounding surface will be cleaned to allow the paste-over to bond to sound concrete. The epoxy resin will be pressure pumped locally (directly into the cracks) to close the cracks at the Deck Pier interface. The deck/pier interface is above the waterline.
8. Vegetation on the internal side of the existing parapet and drainage outlets to be cleared from structure
9. Minor repairs to missing sections of render shall be carried out along the parapet as shown in P1959- ARDH-0003. Repairs to be carried out by hand by an operator accessing the parapet surface from the deck/scaffolding level.
10. New Black PVC drainpipe to be positioned in the existing drainage outlets location and fixed in place with mortar from the deck level.
11. Scaffold to be removed

Deck Works:

1. Upon completion of the corrosion repairs it is proposed to repair the road surfacing on this bridge. A road closure and diversion will be required to facilitate these works.
2. The existing road surface shall be scarified, and the existing surface shall be removed, and the concrete surface of the bridge deck exposed.
3. Any defects encountered when deck is exposed to be repaired using an appropriate concrete repair mortar. This will only include small localised repairs with concrete repair mortar, limited to the top side of the deck.
4. A trial hole and rebar scan shall be completed to confirm deck reinforcement and strength. The trial hole will be superficial and will not penetrate the entire thickness of the deck. If this investigation is unsatisfactory, Cork County Council may introduce a weight limit to the bridge.
5. A spray applied bridge deck waterproofing system shall be installed.
6. Kerb drain (feeding to new Black PVC drainage outlet) and concrete rubbing strip to be installed by an operator accessing the area from the deck level.
7. The pavement surface shall be laid, sand asphalt followed by HRA, high friction colour contract surfacing shall be applied.

Site Context

The Ardcahan Bridge is a six-arch structure located on the upper Bandon River (20B02) with each arch spanning approx. 5-6m. The bridge is located within the Bandon River Special Area of Conservation (Site Code: 002171) on the R587 road, directly downstream of the Bandon River/Caha River (20C01) confluence, some 3km north of Dunmanway, Co. Cork.

The bridge is situated within a rural landscape dominated by improved agricultural grassland (GA1). The Bandon River at this location is approx. 25m wide and averaging 0.3-0.5m deep. Narrow strips of riparian woodland are present up and downstream of the bridge along the riverbanks.

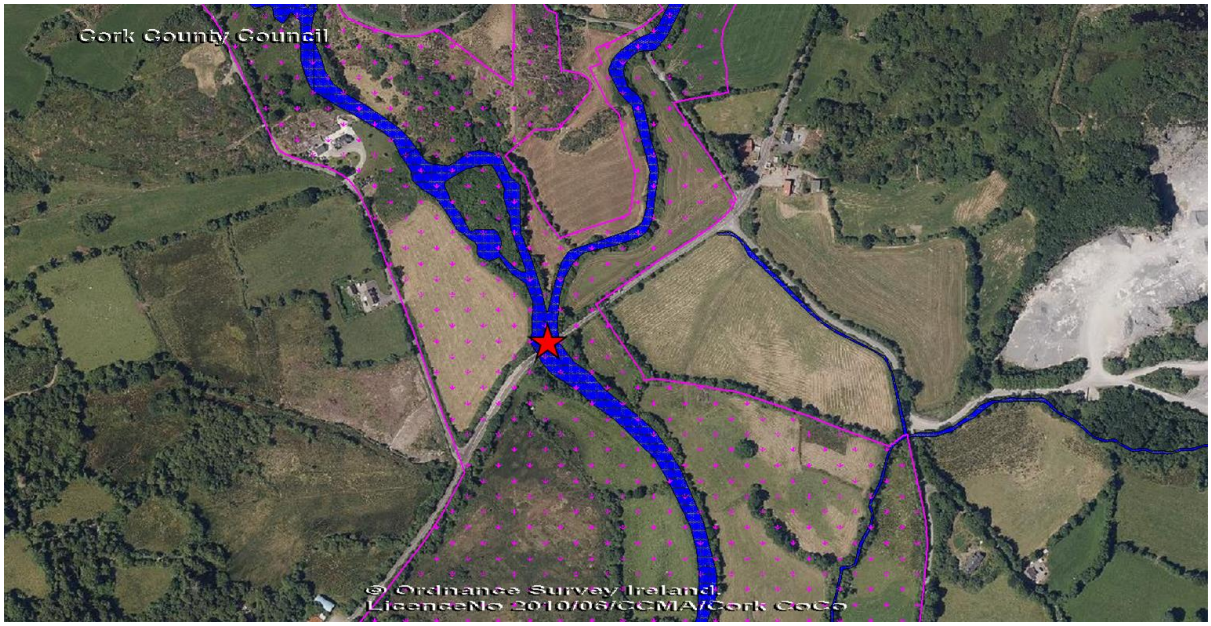

Figure 1: Site Context – Location Relative to the Bandon River Special Area of Conservation (Purple Hatching).

Name and location of EU sites subject to screening

The submitted AA Screening report identifies two EU designated site within the potential zone of influence i.e.15km of the proposed Ardcahan Bridge works area. These sites are as follows:

1. Bandon River SAC (002171) (Ardcahan Bridge lies within this European site).
2. The Gearagh SAC (000108) (13km direct distance north-west, no hydrological connectivity identified and as such this site has been screened out due to lack of direct or indirect impact identified).

The proposed development is located within the boundary of the Bandon River SAC (002171). As per the AA Screening Report by Triturus Environmental Ltd. it is considered that three of the four qualifying interest habitats and species may be impacted through water quality impacts from the proposed works;

- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]
- *Margaritifera margaritifera* (freshwater pearl mussel) [1029]
- *Lampetra planeri* (brook lamprey) [1096]

Following a precautionary approach, the construction phase of the proposed development may result in likely significant effects on the qualifying interests of the Bandon River SAC (002171) following the source-pathway-receptor model. In this respect construction works on the bridge structure could result in the deterioration of water quality within the Bandon River and direct impacts on qualifying interest water dependant species and habitats.

Is the project directly connected with or necessary to the management of the sites listed above?

No – However, the proposed works area at Ardcahan Bridge is located within Bandon River SAC (002171) and the SAC boundary extends approximately 3.5km upstream and 6.3km downstream of the bridge.

Describe how the project (alone or in combination) is likely to affect the Natura 2000 Site

The proposed works are located within the Bandon River Special Area of Conservation. Possible effects as a result of the proposed construction works include:

- Negative effects to the qualifying interest species Freshwater pearl mussel (*Margaritifera margaritifera*) which are known from the Bandon River within the footprint of the bridge repair works including under Ardcahan Bridge itself, upstream of the bridge and directly downstream of Ardcahan Bridge;
- Sediment, hydrocarbon, cement, resins, paint and other water quality inputs as a result of bridge works have the potential to have negative effects on qualifying interest species Freshwater pearl mussel (*Margaritifera margaritifera*) and Brook lamprey (*Lampetra planeri*) and qualifying interest habitats such as Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation;
- Direct loss of qualifying habitat Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion* albae) which occurs in the vicinity of Ardcahan Bridge;
- Potential for alteration hydromorphological character of river;
- Potential inadvertent release of invasive species during access and egress.

Cork County Council overall conclusion.

In accordance with Section 177S of the Planning and Development Act 2000 (as amended) and on the basis of the information contained in the AA Screening Report and other project documents which is considered adequate to undertake a screening assessment and to make a screening determination, Cork County Council is of the opinion that proposed project poses a risk of causing significant negative to the Bandon River Special Area of Conservation. This determination is made having regard to

- Location of works within the SAC;
- The nature of the proposed works;
- Hydrological connection; and
- Known occurrence of qualifying interest species and habitats within and/or in close proximity to the proposed works.

As such, this project requires the implementation of environmental controls in order to ensure the avoidance of significant effects on the Bandon River Special Area of Conservation. It is therefore determined that a Stage 2 Appropriate Assessment under Section 177V of the Planning and Development Act 2000 is required.