

Chamberlain Greg

From: O'Malley Vincent
Sent: Wednesday 7 April 2021 17:59
To: Chamberlain Greg
Cc: Nea Christian
Subject: RE: Re. SO-N04-006.00 (Owenmore River Bridge) - Reactive Maintenance

Hi Greg,
Having reviewed the content of the email and the attachment from Atkins, I accept the reasoned determination as set out below.
Sincerely
Vincent

From: Chamberlain Greg [REDACTED]
Sent: Wednesday 7 April 2021 14:10
To: O'Malley Vincent [REDACTED]
Cc: Nea Christian [REDACTED]
Subject: FW: Re. SO-N04-006.00 (Owenmore River Bridge) - Reactive Maintenance

Vincent

Having reviewed Paul's email below and having regard to the nature of the works, I recommend that the following reasoned determination can be made:

Having performed screening for Appropriate Assessment in respect of the proposed reactive maintenance works detailed in the email received from Paul O'Donoghue dated the 6th April, 2021, and entitled Re. SO-N04-006.00 (Owenmore River Bridge) - Reactive Maintenance, I accept the recommendations of Atkins that the proposed reactive maintenance works, individually or in combination with other plans or projects, would not be likely to have a significant effect on any European site in view of the best scientific knowledge and the site's conservation objectives. I determine that an Appropriate Assessment of these proposed works is not required, as it can be excluded on the basis of objective scientific information following the screening done that the proposed works, individually or in combination with other plans or projects, will have a significant effect on any European site.

Kind Regards

Greg

From: O'Donoghue, Paul [REDACTED]
Sent: Tuesday 6 April 2021 16:42
To: Chamberlain Greg <[REDACTED]>
Cc: Nea Christian [REDACTED]; Gregan, John [REDACTED]; Jennings, Martin <[REDACTED]>
Subject: Re. SO-N04-006.00 (Owenmore River Bridge) - Reactive Maintenance

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Greg

Re. SO-N04-006.00 (Owenmore River Bridge) - Reactive Maintenance

We are requesting a Determination for a Reactive Maintenance Proposal to remediate the damage that has occurred to the south end of an aluminium post and rail east parapet, a section of the adjoining south east approach VRS (vehicle restraint system) and localised damage to south bridge expansion joint across southbound carriageway, following vehicle impact at SO-N04-006.00 (Owenmore River Bridge). Owenmore River Bridge is a three span structure, just north of Collooney, Co. Sligo, with the south span, closest to the damage, carrying the N4 across a local road.



Figure 1 Location of SO-N04-006.00 (Owenmore River Bridge) (Source: NBDC).

Description of Damage:

The aluminium parapet is a normal containment post and rail (4 rail) system, measuring 1.3m high. The parapet system is comprised of extruded rail sections fixed to supporting posts with associated connection fittings and brackets. Bolted rail cleats connect the horizontal rails to the posts. The length of damage to the parapet measured 5.45m from the south end of the parapet to the nearest rail joint located at a distance of 1m beyond the centre of the third post from the south end of the parapet. The parapet end bay post centres measured 1m and the penultimate end bay post centres measured 3m nominally. The length of damage to the bottom steel mesh angle rail extends similarly measures 5.45m to the nearest rail joint. The mesh rail is connected with brackets welded to the post baseplates.

The damage to the parapet system comprises:

- The bottom parapet rail is failed notably a 2.85m length of rail between the rail cleat connections to the third and next to end post from the south end. The rail is bent up to 300mm out of horizontal alignment between both posts with deformation to the rail also visible. The rail section is notably cracked and split open at the location of the connection brackets to both posts.
- The next to bottom intermediate rail has slightly deflected upwards and horizontally by up to 20mm maximum where some scrape marks and minor scoring to the front face of the rail was also observed.

- The bottom mesh angle rail is bent out of horizontal alignment by up to 200mm between third and next to end post from the south end. The bent rail has displaced the mesh rail joint.
- Damage to 4 No. galvanised infill mesh panels.
- Twisting of transition plate connecting end of parapet to adjoining approach VRS.

The south east approach VRS comprises an open box beam barrier system. The extent of damage to the VRS extends across 2No. rails and 2No. support posts (at nominal 2.4m centres) to a rail splice (to a third rail) located a nominal 7.2m from the end of the parapet. A rail splice is also located a nominal 2.4m from the end of the parapet connecting both rails. The rail system is displaced horizontally up to 150mm at the connection splice connecting the 2No. rails where it appears to have been impacted (and twisted the transition plate connecting the parapet and VRS system as noted above) Also, the rail/post connection has failed at the location of the post nearest the end of the parapet. The post is also out of plumb by up to 50mm. There is horizontal movement of the next to end VRS post up to 30mm.

The bridge expansion joint extending across the carriageway, where the damage is visible, comprises a nosing joint with apparent elastomeric strip seal insert (DMRB Type 4). Transverse separation cracking with debonding between the nosing material and adjoining surface was noted to the leading edge of the joint extending partially across lane 1 and the hard shoulder of the carriageway over a length of 4.5m. A localised area of breakup/cracking of nosing material under wheel tracks was noted towards the centre of Lane 1 of the carriageway. The localised area of breakup of nosing material measures in the order of 700mm long x 150mm wide nosing with the nosing material effectively broken up into 2 distinct sections at this location. With firm pressure/movement underfoot there is some slight movement of the broken up material. The edge of the seal insert is also partially exposed and unsupported where the breakup has occurred at this location. There is some minor ravelling of the adjoining carriageway surfacing.

Minor crash damage lying on top of the concrete parapet plinth and adjoining raised verge.

Damage Remediation – Proposed Scope of Works

- Replace bottom damaged parapet rails complete with rail joint (overall length 5.45m)
- Replace next to bottom damaged parapet rails complete with rail joint (overall length 5.45m)
- Replace next to bottom angle mesh rails complete with rail joint (overall length 5.45m)
- Replace 4 No. damaged galvanised infill mesh panels (overall area 7.6m²)
- Reinstate transition plate connecting end of parapet and approach VRS
- Reinstate VRS posts, rails and connections (overall length 7.2m).
- Replace damaged nosing joint material to bridge expansion joint (overall length 4.5m). Method of repair to proprietary nosing in accordance with manufacturer's specification, new material to be compatible with existing nosing material.
- Remove minor plastic/glass from top of concrete parapet plinth and adjoining footway (0.5m²).

Works will take ca. 1 week to complete, with traffic management required.

Ecology:

The bridge is a three span structure with one of the spans crossing the Unshin River; part of the Unshin River SAC (001898). The river is not an SPA at the bridge. The qualifying interests of Unshin River SAC are: -

- Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation [3260]
- Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210]
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410]
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0]
- *Salmo salar* (Salmon) [1106]
- *Lutra lutra* (Otter) [1355]

Ultimately, the Unshin enters Ballysadare Bay which is designated as Ballysadare Bay SAC (000622) / SPA (004129).

However, the works are to be undertaken on a span which is not over water, but over the embankment and adjoining local road which separates the works area from the river by ca. 30m. The works areas as can be seen on Plate 1 is above a grassy embankment which is not of ecological value (refer also to the accompanying photos). There are no records of invasive species from this location. Otter have been recorded from the Unshin in this area, but as shown below the works are well back from the river edge and should not disturb otter use of the River Unshin. There are no instream works and not emissions to the river predicted.



Plate 1 Location of works area (left) and adjoining road (right).

Atkins Findings -

This Screening for Appropriate Assessment is based on the best available scientific information. It is concluded that the proposed project poses no likely significant effects on Natura 2000 sites, either alone or in combination with other projects. Thus, it is recommended that it is not necessary for the proposed project to proceed to Appropriate Assessment.

Findings of TII Appropriate Assessment -

Can you please provide a Reasoned Determination?

Paul

Paul O' Donoghue *BSc PhD CEnV MCIEEM*
Principal Ecologist
Ireland

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