

Chamberlain Greg

From: O'Malley Vincent
Sent: Wednesday 7 April 2021 17:55
To: Chamberlain Greg
Cc: Nea Christian
Subject: RE: Re. Lurgy Bridge (DL-N56-059.00) - 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 14:12
To: O'Malley Vincent [REDACTED]
Cc: Nea Christian [REDACTED]
Subject: FW: Re. Lurgy Bridge (DL-N56-059.00) - 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. Lurgy Bridge (DL-N56-059.00) - 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 19:19
To: Chamberlain Greg [REDACTED]
Cc: Nea Christian [REDACTED]; Gregan, John <[REDACTED]>; Jennings, Martin [REDACTED]
Subject: Re. Lurgy Bridge (DL-N56-059.00) - Reactive Maintenance

CAUTION: This email originated from outside of TII. Do not click links or open attachments unless you recognise the sender and are sure that the content is safe.

Re. Lurgy Bridge (DL-N56-059.00) - Reactive Maintenance

We are requesting a Determination for a Reactive Maintenance Proposal to remediate the damage that has occurred to a steel post and rail east (downstream) parapet and northeast wingwall following vehicle impact at DL-N59-059.00 (Lurgy Bridge), refer also attached photos.

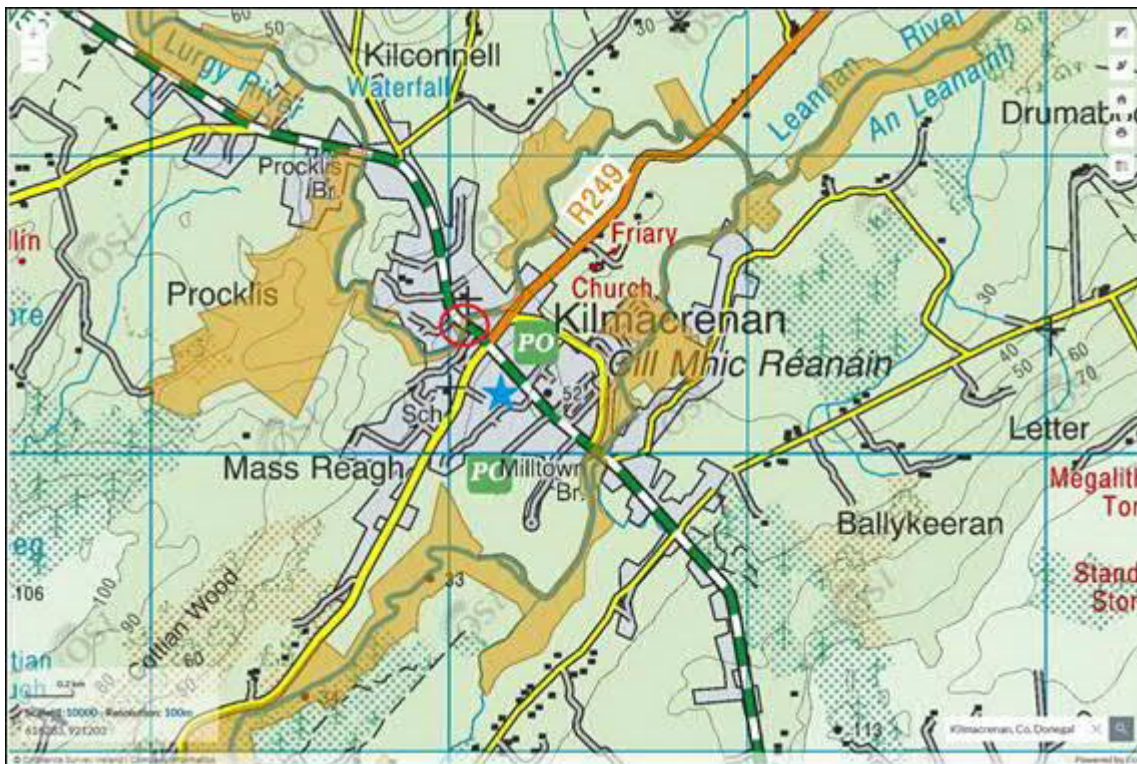


Figure 1 Lurgy Bridge, Kilmacrenan, northwest of Letterkenny (Source: NBDC).

Description of Damage:

The painted steel parapet is a 4 rail system, 1.25m high extending between end wingwalls over a length of 12.125m out over 4 bays (5 No. posts). The rails comprise 100x100 RHS with bolted rail joints close to the third post from the south end. A continuous bottom steel mesh angle rail extends the full length of the parapet and connected with a bracket under the baseplate holding down bolt assembly. The posts also comprise 100x100 RHS with post/rail bolted hexagonal connection brackets. The nominal post centres is in the order of 2.8m.

The damage to the parapet system comprises:

- The bottom parapet rail is bent out of alignment over a length of some 3.25m at the north end and displaced inwards at by up to 140mm maximum where the connection bracket to the end post at this location is badly deformed/squashed. The bottom rail is similarly bent out of alignment at the south end by up to 50mm maximum.
- A number of post/rail hexagonal connection brackets at the post locations are deformed more noticeably at the north end where 3 out 4 brackets have either deformed or displaced. Some hexagonal brackets do not mat to the post surface where they connect as they appear to have pulled away somewhat from the post surface as a result of the impact.
- There are random scrape marks throughout the surface of the rails on the traffic face (over an area of up 40% of total area) which appear to be superficial in nature with no loss of section in evidence. There is noticeable rust staining to the mesh angle rail over a length of 3m between the middle and south end of the rail.
- Infill mesh is missing to the parapet except for a panel at the south end which is damaged.

The northeast wingwall built in stone masonry complete with concrete steeple capping has been demolished to full height from approximately 150mm above adjoining footway level with the resultant debris lying largely in the watercourse below. The wingwall measures 2000m in length, 550mm wide and 1.23m high to underside of steeple

coping from adjoining footway level. The height of the steeple capping measured 360mm. The base section of the remaining wall is largely in sound condition with a couple of loose facing stones and some minor stone repairs required notably near the top of the remaining wall section.

The plaster dash finished concrete boundary wall (to adjoining church car parking area) on the immediate northeast approach to bridge has also been damaged as a result of the impact. The wall has separated at the bottom from the adjoining footway by up to 20mm and the end section of wall at the bridge has separated and dislodged and displaced inward by up to 50mm. Some horizontal separation cracking was noted to the base of this wall at the rear. Random superficial cracking was noted to the plaster finish. The extent of damage to the approach wall measures 2.8m in length extending from the bridge to the nearest footway joint on the approach. The approach wall measured 760mm high roadside, 1080mm high on the property side and 170mm thick

Vehicle crash debris and minor sections of the demolished wall was noted on top of the north east embankment. Some minor debris was noted on top of the concrete parapet plinth.

The 50km/h posted speed limit sign pole at the bridge has been badly damaged.

Debris, including that which has fallen into the river will be collected. Other than the removal of debris there are no proposed works within the river. It is not proposed to use liquid concrete in the repairs. 2 No. parapet posts to be replaced and grouting is required to the associated baseplates. Repaired approach wall is also to be re-plastered. Works will take approximately 1 week.

Damage Remediation – Proposed Scope of Works

- Replace bottom damaged parapet rails complete with rail joint (total length 12.125m)
- Replace 4 No. Hexagonal post/rail connection brackets to north end post and a total of 8No. connection brackets to the remaining 4 No. posts.
- Carry out patch painting to parapet rails and mesh angle rail (2.5m²)
- Remove defective mesh end panel. Install infill mesh to Parapet (14m²)
- Repoint base of remaining bottom section of northeast wingwall (1m²), replace some minor missing masonry (0.1m³). Rebuild northeast masonry wingwall (1.35m³) from stable base material using hand tools in lime mortars to match existing utilising existing non-defective stone masonry facings salvaged from the watercourse below and the top of embankment, or if not possible new locally sourced stone masonry to match existing wall. Complete with in-situ/precast concrete steeple capping (0.25m³).
- Rebuild 2.8m long section of damaged plaster dash finished concrete approach boundary wall (0.5m³). Seal at base of wall with adjoining footpath (2.8m)
- Remove 8m² of resultant masonry and concrete debris from watercourse, include also for other miscellaneous timber and other steel post/concrete.
- Remove metal/plastic/glass and miscellaneous stone debris from top of north east embankment (4m²), concrete parapet plinth and adjoining footway (1.5m²).
- Replace speed limit sign pole c/w sign

Ecology

Lurgy Bridge crosses the Lurgy River in Kilmacrenan. The Lurgy is a tributary of the Leannan River, which it joins ca. 1km downstream of Lurgy Bridge. The river is within Leannan River SAC (002176). The qualifying interests of the SAC are: -

- Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110]
- Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea* [3130]
- [REDACTED]
- *Salmo salar* (Salmon) [1106]
- *Lutra lutra* (Otter) [1355]
- *Najas flexilis* (Slender Naiad) [1833]

As can be seen on the accompanying photos, the works area is restricted to the road / bridge deck. While some regrouting is required this is restricted to 2 no. base plates of replaced parapet uprights. The wall to be replastered is over the riverbank rather than the river (see plate below).



Lough Fern SPA (004060) is located ca. 3.5km d/s of bridge. The qualifying interests are: - Pochard (*Aythya ferina*) [A059] and Wetland and Waterbirds [A999]. The SPA is too remote from the proposed works area to be either directly or indirectly affected by the works.



Plate 1 Works Area (left) and bridge debris in the river (right).

References

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



This email and any attached files are confidential and copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. Unless otherwise expressly agreed in writing, nothing stated in this communication shall be legally binding. The ultimate parent company of the Atkins Group is SNC-Lavalin Group Inc. Registered in Québec, Canada No. 059041-0. Registered Office 455 boul. René-Lévesque Ouest, Montréal, Québec, Canada, H2Z 1Z3. A list of Atkins Group companies registered in the United Kingdom and locations around the world can be found at <http://www.atkinsglobal.com/site-services/group-company-registration-details>

Consider the environment. Please don't print this e-mail unless you really need to.