An Roinn Turasóireachta, Cultúir,
Ealaíon, Gaeltachta, Spóirt agus Meán
Department of Tourism, Culture,
Arts, Gaeltacht, Sport and Media

24th May 2021

Mr. Vincent O'Malley,
Transport Infrastructure Ireland,
[redacted]

via email to: [redacted]

Re: Submission of Natura Impact Statement to the Minister for Tourism, Culture, Arts, Gaeltacht, Sport and Media pursuant to the requirements of Regulation 42(9)(c) of the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended).

Ballycomey Culvert (KK-N78-005.50), Co. Kilkenny

Dear Mr. O'Malley,

The Department is in receipt of your email dated 12th April 2021 in respect of Ballycomey Culvert (KK-N78-005.50), Co. Kilkenny and has reviewed the Natura Impact Statement (NIS) referred to the Minister in this regard.

Proposed works

Ballycomey Culvert is a single span masonry arch bridge that has been extended with a concrete pipe culvert on the western side with a diameter of 1.3 m and a length of 12.5 m. The masonry arch barrel measures 2.4 m in width and 8.4 m in length. The bridge carries the N78 over the Ballycomey Stream, 2 km south of Castlecomer, Co. Kilkenny. The Ballycomey Stream flows into the River Dinin 160 m downstream of the structure. The River Dinin flows into the River Nore a further 14.5 km downstream. The Ballycomey Culvert is 160 m upstream of the River Barrow and River Nore SAC. The outlet of the pipe is higher than the riverbed level under the masonry arch bridge, and high velocity flows have led to significant scour of the riverbed and at the base of the north abutment.

The following works are proposed as part of the project:

- Removal of vegetation from within 1 m from structure on western embankments. The vegetation consists of ivy growing on the structure and small ash trees (50 m^2)
- Removal of vegetation from wingwalls and spandrel walls on eastern side. (15 m^2)
- Repointing of wingwalls and spandrel walls (15 m^2)
- The arch barrel is in good condition however previous repair work is poor quality and this should be made good. Repointing is required, as necessary.
- Installation of concrete base. A scour hole has developed below the concrete pipe outlet as a result of high velocity flows. The hole is 4 m x 2.2 m x 800 mm and extends to the

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90 North King Street, Smithfield, Dublin 7, D07 N7CV
[redacted]

north abutment which is undermined. A concrete base will be constructed under the masonry arch section of the structure (20.58 m^2). The base will ramp up to the invert level of the concrete pipe. Stone and debris will be removed, and a level surface will be created. The concrete will be poured directly onto the riverbed and will be between 250 mm and 450 mm thick. The new concrete bed will have stones of a similar size to those already on the riverbed set in to reduce flow velocity.

- Repointing of abutments (10 m^2)
- Repair of scour damage at the north abutment (5 m x 1 m x 1.5 m deep (7 m^3)).
- There is currently no edge protection on the eastern side of the structure. A masonry parapet will be constructed on top of the spandrel wall following vegetation clearance. The footway will be extended to the base of the new parapet. The new parapet will tie in to a new safety barrier.
- Rubbing strip to be installed on western verge to replace vegetated verge.
- The western block parapet will be dismantled and reconstructed with masonry to meet the adjoining boundary walls.
- Scour protection around the inlet. This area was not accessible during the principal inspection; however it is likely that due to the angle and velocity of the stream some scouring around the pipe has occurred

The NIS states (page 2) that at a meeting to discuss the installation of concrete linings to corrugated steel culverts on 21/01/2019, IFI requested that baffles be installed where gradients were greater than 3%. It is not stated whether any remediation works such as those proposed by IFI will take place and this should be clarified and included in the NIS assessment if necessary.

European sites

The Department agrees that there is only one European site within the likely zone of impact, River Barrow and River Nore SAC [002162].

Baseline data

Given that the main adverse effects from the proposed project are related to water quality, the Department considers that baseline water quality data should be presented and reference should be made to water quality requirements of Qualifying Interest species and habitats within the projects zone of influence.

It is unclear whether the culvert structure is currently creating a barrier to Qualifying Interest aquatic species such as Atlantic salmon, lamprey species and white-clawed crayfish. This should be specified.

It is unclear whether the current structure is providing a barrier to otter movement, particularly in times of high flow. Cylindrical culverts fill rapidly after rainfall, leading to high water speeds. Otters are disinclined to use water-filled culverts without dry pathways. It is not stated whether any provision for otter has been made in the existing culvert structure. It is noted that the N78 is a national road and the bridge is located on a straight section where vehicles may build up speed, making otter vulnerable to road traffic collision at this point.

[redacted]

The NIS states that the Qualifying Interest habitat 'Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho- Batrachion* vegetation [3260]' is present at the location of the works. The Department considers that further details, such as the specific location of the habitat and its species composition, must be provided.

Pressures on/Threats to the Site

The Department considers that all threats and pressures to the River Barrow and River Nore SAC should be listed in the NIS.

Evaluation against Conservation Objectives

The NIS states that 'regard was had to the Attributes and Targets which define each site-specific Conservation Objective'. However table 5.2 lists generic conservation objectives and therefore effects were not linked to specific attributes and targets.

Assessment of Adverse Effects

Otter

The NIS states that the proposed works will create a temporary barrier for commuting otters during construction phase. The duration of the works should be given so that the severity of the barrier can be determined. Table 5.1 'Works elements and potential to lead to adverse effects' has discounted potential for adverse effects from removal of vegetation on the western embankments. However, the Department considers that, in the absence of adequate surveying in this area, disturbance to otter holts cannot be discounted and advises that this should be considered further as the proposed project will take place within the main otter breeding season (May to August). Consideration of disturbance to breeding otter should be considered in the wider area as well as within the project footprint. TII guidelines[1] state that no works should be undertaken within 150m of any holts at which breeding females or cubs are present.

Aquatic species

It should be noted that a conservation objective for a number of water-dependent qualifying interest species is to restore the favourable conservation condition of the SAC by ensuring accessibility to the river system. In the case of Atlantic Salmon, this is defined by the target '100% of the river channels down to second order accessible from estuary'. For Brook Lamprey, the target is 'Access to all watercourses down to first order streams' and for River Lamprey the target is ''greater than 75% of main stem and major tributaries down to second order accessible

[1] https://www.tii.ie/tii-library/environment/construction-guidelines/Guidelines-for-the-Treatment-of-Otters-prior-to-the-Construction-of-National-Road-Schemes.pdf

from estuary'. It is unclear whether the proposed works will increase or decrease any barrier effect of the existing culvert. The gradient of the concrete ramp should be provided as well as evidence that it will not impede fish and crayfish passage.

Mitigation

Water quality

The Department considers that water quality impacts are likely to result from this project in the absence of mitigation and notes that the majority of mitigation outlined in Section 8 of the NIS relates to the protection of water quality. The Department considers that physiochemical trigger values for cessation of operations must be included. These should be based on the requirements of water dependent Qualifying Interests as outlined in conservation objective attributes and targets and should consider baseline water quality within the project's zone of influence. It should be explicitly stated that no herbicide will be used on this project, including to treat tree stumps.

The advice of this Department is that complete project details, including detailed mitigation measures need to be provided in order to allow an adequate appropriate assessment to be undertaken. Further details of the following water quality mitigation measures must be provided;

- The silt trap into which water will be pumped, its capacity and proven effectiveness. The predicted volume of water to be pumped based on stream flow data should also be provided along with monitoring requirements to ensure effective functioning.
- Any details to be included in the proposed Method Statement which will be relied on as mitigation and are not already included in the NIS.
- The Department considers that physiochemical monitoring is required downstream of the works and should be included in the NIS. Specific monitoring points should be specified.
- Details of the mobile catch net or plastic sheeting will be used to prevent mortar and/or wet concrete falling into the river channel.
- Details of the flume which will be constructed to carry the stream through the structure including the screen at the inlet to prevent fish and debris entering it.
- Consideration should be given to removal of fish and crayfish prior to dewatering by electrofishing for example.
- The NIS states that it is likely that the repairs to the spandrel walls, wingwalls and abutments will be carried out while the riverbed is dewatered, however this may not be the case. Mitigation for both scenarios should be clearly outlined in the NIS.

Otter

The mitigation section of the NIS states that the area inside the dam will be fitted with a ramp to allow otter to escape and that otter will be prevented from entering pipes by using screens, silt bags or other capping. However, this may mean that commuting otters will be directed onto a national road to re-join the stream. This should be clarified and if this is the case, the possibility

of road casualties should be assessed. The existing culvert may be a barrier to otter movement, particularly, if the stream is prone to high flows in the culvert. It is not clear whether the proposed works will increase this barrier effect.

[redacted]

Assessment of In-combination Effects

The Department notes that the project is location adjacent to Erin's Own GAA club and the Castlecomer Business Park. The cumulative impacts of these developments on water quality, including surface water run-off from car parking areas, should be assessed in combination with the proposed project.

Other Ecological Impacts

In addition to Appropriate Assessment, in the interests of biodiversity protection, the Department recommends that the following surveys should take place prior to the commencement of this project; breeding bat and nesting bird surveys

Yours sincerely,

Gerry Clabby
Head of Ecological Assessment
[redacted]