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**Re: The review of a previous NIS and the results of an updated survey of Kileengarrif Bridge, Murroe , County Limerick.**

To whom it may concern,

Ecology Research and Solutions Limited has been engaged by Limerick County Council (henceforth “the Council”) to provide ecological advice and support for repair and upgrade works at a deteriorating bridge located in the townland of Kileengarrif 4km west of Murroe, County Limerick. The bridge had been visited by Punch Engineering Consultants a number of years ago, and a series of works had been prescribed for the bridge in order to bring it to a safe working order. On the foot of this, the proposed works set out for the bridge were assessed by Ecofact Ecology Consultants for their capacity to cause impacts to the local environment, particularly to areas protected under the Birds Directive and the Habitats Directive. The findings of this assessment are detailed in an NIS which was compiled for the works planned for the bridge in question. As over two years had lapsed since this NIS was issued to the Council, it was decided to review the NIS and update the surveys that informed it to ensure that the details contained within it, particularly the findings and mitigations, are appropriate to the current situation and the proposed works at the bridge; this decision was taken based on the information provided in the guidance document “*Advice Note on the Lifespan of Ecological Reports and Surveys*” (CIEEM, 2019).

The proposed works for Kileengarrif Bridge are summarised as follows:

①) All vegetation including trees, shrubs and the like will be removed for 10 m upstream and downstream of the bridge over a width of 10 m approximately on each bank. All efforts will be made to preserve mature and semi-mature trees, where possible and where they are not a threat to the structure of the bridge.

②) Masonry units lying in the riverbed or on the riverbanks will be taken up and set aside for reuse. Other in stream works include erosion protection using concrete, replacement of missing stone, re-setting loose stone and re-pointing works. Local areas or individual arches will be bunded using sealed sandbags. In stream works will be carried out in between 1st July to 30<sup>th</sup> September.

③) Replacement of missing stone, re-setting loose stone and re-pointing works will be carried out on the abutments, piers, arch barrels, spandrel walls, wing walls and parapets. Scaffolding will be erected in the riverbed to carry out these works.

Parapet heights will remain unaltered.

④) At road level, concrete rubbing strips will be provided at the base of both parapets to prevent the ingress of water into the structure below. Where necessary areas of road infill will be carried out using a surface course and binder (base), course of Dense Bitumen Macadam on a granular sub-base.

⑤) Other ancillary items include roadside drainage; additional traffic signs; etc.

Kileengarrif Bridge is located over the 5<sup>th</sup> order Kileengarrif River in Murroe, Co. Limerick, which is a tributary of the River Mulkear. This is located within the boundary of the Lower River Shannon SAC. Kileengarrif Bridge is located over a small unnamed road, north of the R506. The bridge site is surrounded by mostly agricultural land and improved agricultural grassland fields, as well as some one-off residential housing. The riparian area is heavily colonized by Giant Hogweed *Heracleum mantegazzium*. The bridge in question spans a lowland river of low gradient, however is quite spatey in nature owing to its origins in the high ground of the Slieve Felim and Silvermine mountains.

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, and the potential for impacts to 12 of the bird species designated within the Shannon and Fergus Estuaries SPA (Ecofact, 2020).

The stream itself is used by salmon and trout to spawn. There is no suitable spawning habitat within the footprint of the works, the closest suitable area being 30m downstream, and that is considered optimal, with more optimal spawning habitat dotted along the river. Brook, river and sea lamprey likely use the river, but again no suitable spawning or ammocoete habitat is present within the footprint of the works, only at the same area as the salmonid spawning habitat 30m d/s. Eel also use the river.

Conservation Interest	Present within or immediately downstream of the works area
Sandbanks which are slightly covered by sea water all the time [1110]	No
Estuaries [1130]	No
Mudflats and sandflats not covered by seawater at low tide [1140]	No
Coastal lagoons [1150]	No
Large shallow inlets and bays [1160]	No
Reefs [1170]	No
Perennial vegetation of stony banks [1220]	No
Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]	No
Salicornia and other annuals colonising mud and sand [1310]	No
Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritima</i> ) [1330]	No
Mediterranean salt meadows ( <i>Juncetalia maritimi</i> ) [1410]	No
Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260]	No
<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils ( <i>Molinion caeruleae</i> ) [6410]	No
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> ( <i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i> ) [91E0]	No
<i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029]	No
<i>Petromyzon marinus</i> (Sea Lamprey) [1095]	Yes
<i>Lampetra planeri</i> (Brook Lamprey) [1096]	Yes
<i>Lampetra fluviatilis</i> (River Lamprey) [1099]	Possibly
<i>Salmo salar</i> (Salmon) [1106]	Yes
<i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	No
<i>Lutra lutra</i> (Otter) [1355]	Yes

The original NIS identified the following species as being subject to Potential Impacts/Likely Significant Effects: salmon, otter, brook lamprey, river lamprey and sea lamprey, and it identifies the following habitats: floating river vegetation and estuaries. We would agree with most of these, however we would remove estuaries from this list as the bridge is over 18km from the estuary and is diluted by joining the much larger Mulkear and then the Shannon River before going into the estuary. The original NIS identifies the following potential impacts for these species: water quality, disturbance, invasive species; this finding remains unchanged.

Section 7 of the NIS outlines the mitigations to be implemented in order to protect the conservation interests of the SAC. They are as follows:

- Detailed Method Statement and CEMP
- Avoidance: limiting the footprint of the works
- Avoidance: timing of the works
- Water quality protection
- Biosecurity
- Site ecologist







## **Conclusion**

Mitigation measures proposed ensure that there are no residual impacts on the Lower River Shannon SAC. The potential impacts identified, including water quality, disturbance and invasive species, will be successfully reduced to imperceptible in scale following the implementation of the mitigation measures in this NIS. It has therefore been concluded that following an examination, analysis and evaluation of the relevant information, including in particular the nature of the predicted impacts from the proposed works, and with the implementation of the mitigation measures proposed, that the proposed works do not pose a risk adversely affecting the integrity of any Natura 2000 site, either alone or in-combination with other plans or projects.

One thing that should be noted is that the bridge may be suitable for bats, and that the project ecologist should survey the bridge when the vegetation has been removed to identify potential roost features

If there are any questions or queries please do get in touch

All the best

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