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Appropriate Assessment Stage 2: Natura Impact Statement

Passlands Bridge (KE-R424-B-010) repair at Monasterevin, Co. Kildare.

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1 Introduction

Flynn Furney Environmental Consultants have been commissioned by Clandillon Civil Consultants and Kildare County Council for the provision of a Natura Impact Statement (NIS) for the repair of the Passlands bridge (KE-R424-B-010) in Monasterevin, Co. Kildare.

The current authors completed an AA screening report. This report concluded that the risk of a Likely Significant Effect (LSE) upon the qualifying interests of the River Barrow and River Nore SAC could not be definitively ruled out at the screening stage. As such, a Natura Impact Statement is required.

This stage 2 Appropriate Assessment (AA) (Natura Impact Statement (NIS)) is used to determine whether the proposed development would adversely affect the integrity of these European sites. This involves the identification of potential LSE to habitats and or species which form the qualifying interests of these European sites. This report assesses the significance of potential LSE on their conservation status. Negative impacts on the integrity of these habitats or species will require implementing avoidance or mitigation measures to avoid progression to stages 3 and 4. Appropriate Assessment process as defined by the Planning and Development Acts 2000 to 2020.

2 Description of Proposed Works

The project involves the rehabilitation of the Passlands Bridge (KE-R424-B-010) over the River Barrow (IE_EA_07B040400). Proposed works on the bridge are likely as follows:

- **Repointing:** Removing deteriorated mortar from the joints between bricks or stones and refilling them with new mortar.
- **Crack Repair:** Methods may include injecting cracks with epoxy or installing tie rods or steel plates to reinforce the affected area.
- **Stone Replacement:** Damaged or eroded stones are removed and replaced with new stones that match the originals in terms of size, material, and appearance.
- **Addressing Any Water Issues:** Water seepage can be tackled by repairing cracks, clearing drainage channels, and applying waterproofing materials. Vegetation growth on the bridge should also be removed as it can trap moisture and damage the masonry.
- **Metal Component Repairs:** Metal bridge railings, expansion joints, and other components may require repair or replacement to ensure safety and functionality.

The main structural problem requiring repairs is the Masonry repairs needed for the damaged section of the upstream parapet, and stitching repairs are required for the adjacent cutwater.

3 Potential Impacts and Effects

This section examines the potential impacts to Annex I habitats and Annex II species for whom LSE were identified in the AA Screening Report.

3.1 Potential water quality impacts

A worst-case scenario could possibly occur, in which the proposed works would result in a significant detrimental change in the water quality, either alone or in combination with other projects or plans, as a result of indirect pollution sources during clearance or maintenance works.

Water quality impacts have the potential to negatively impact on a range of riverine species, which may directly and indirectly affect Annex I species associated with the SAC.

Releases of sediment/fines to the watercourse could negatively impact gravel spawning beds and water quality, which are important to the above species in bold, namely Freshwater Pearl Mussels, fish species, and the Otter that feeds on them. No Otter holts or evidence were found during the survey, though they are likely present in the river system.

Habitat loss and fragmentation, caused by activities such as soil movement and riverbanks' damage, can significantly impact the white-clawed crayfish (QI). These actions could lead to the loss of adequate burrowing areas within the footprint of the maintenance works. Moreover, silt and pollutants runoff into the River Barrow can degrade surface water quality, which can affect the white-clawed crayfish, which rely on clean, well-oxygenated waters. The effects of such runoff are especially concerning for local watercourses or surface water bodies, given the sensitivity of the river barrow to both pollutants and silt overload and its poor water quality (WDF Q-value: 3).

3.2 Spread of Crayfish Plague

The Crayfish plague is a highly infectious disease caused by the water mould *Aphanomyces astaci*, which severely affects the native White-clawed crayfish. Originating from non-native crayfish species, the disease is almost always fatal to native species. It spreads rapidly through water, direct contact, and contaminated equipment, with infected crayfish dying within days to weeks. The spread of the crayfish

plague can significantly decline native, white-clawed crayfish populations and create over-competition with non-native crayfish species. The disease can further spread downstream and to other water bodies if equipment that comes into contact with infected water is not properly disinfected.

3.2.1 Cumulative Impacts and Effects

A search of the Kildare County Council planning registers was carried out on the 19th of June, 2024. Nearby projects were considered for any in combination or cumulative impacts. In the immediate vicinity, there are a few live development projects that have either received approval or are currently under consideration.

(Planning Reference: DZ24A/0017) the planning area is situated 2 km away. The development was registered on 12/01/2024 and plans the development of 8 two-story dwellings (2 and 3-bed, detached, semi-detached, and terraced) within the existing Ferns Bridge development in Monasterevin, County Kildare. This project, on a 0.23-hectare site, includes all associated site development works and follows previous permits under Refs. 15/1104, 21/267, and 15/1041. The development is located at Ferns Walk, Ferns Bridge, and will not have cumulative impacts as it is situated on the banks of the Grand Canal with no connectivity to the SAC.

It is important to note that these projects, while contributing to the local landscape, have no direct connection to each other and other major developing applications near the proposed Greenway are still on holdup to this date (19th of March 2024).

3.3 Qualify Interests of European Sites and Potential for Impacts

In general, all European sites aim to maintain or restore the favourable conservation status of all quality interests within European sites.

Favorable conservation status of habitat is achieved when:

- its natural range, and the area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

A range of QI species of the River Barrow and River Nore SAC have been identified as ppossibily at risk do to the proposed development. These are detailed below in Table 1.

Table 1: Qualifying Interest and Likely Significant Effect Identified

Qualifying Interest	Nature of Potential Likely Significant Effect Identified
White-clawed Crayfish (*Austropotamobius pallipes*) [1092]	Potential water quality impacts during construction. Potential Spread of Crayfish Plague
Brook Lamprey (*Lampetra planeri*) [1096]	Potential water quality impacts during construction.
River Lamprey (*Lampetra fluviatilis*) [1099]	
Twaite Shad (*Alosa fallax fallax*) [1103]	
Salmon (*Salmo salar* Salmon) [1106]	
Otter (*Lutra lutra*) [1355]	

4 Mitigation Measures

A review of the proposed works' elements indicates potential adverse effects on the qualifying interests of the River Barrow and River Nore SAC in the absence of avoidance and mitigation measures. Mitigation measures are designed to ensure compliance with the Habitats Directive Article 6 requirements.

Mitigation is prescribed to address the impacts such that adverse effects on site integrity of the European site do not occur. Mitigation measures are set out in accordance with the European Commission guidance on the 'Assessment of plans and projects significantly affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, (2001).

Mitigation measures are generally aimed at addressing possible risks to water quality from the construction phase of the proposed development. These have been prepared with regard to the following guidance documents:

- IFI (2016) Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters. Inland Fisheries Ireland, Dublin;
- CIRIA Guidelines Control of water pollution from construction sites –Guide to Good Practice (C532); and
- Control of water pollution from linear construction projects. Technical Guidance (C648)

4.1 General Mitigation Measures

- If over one year passes between the date of surveys (15th of March 2024) and the proposed work, further preconstruction surveys should be carried out.
- Site preparation and construction must be confined to the project site only and should adhere to all standard best practice measures. Work areas shall be kept to the minimum required to carry out the proposed works, and the area should be clearly marked out in advance of the proposed works.
- All site staff should be briefed regarding the environmental sensitivity of the site. A Toolbox talk should be held to inform site staff of best practices required in these areas.
- Efficient construction practices and sequences shall be employed on site, and this will minimise soil erosion, clearance and potential pollution of local watercourses with soil and sediment. Unnecessary vegetation clearance shall be avoided, and only areas necessary for repair work shall be cleared.
- In order to protect water quality, all site preparation and construction works shall conform to all guidelines within the document Inland Fisheries Ireland Requirements for the Protection of Fisheries Habitats during Construction and Development Works and River Sites (www.fisheriesireland.ie) and the updated guidelines entitled Guidelines on Protection of Fisheries During Construction Works in And Adjacent to Waters (2016).

4.2 Severe Weather Events

Works should be considerate of severe weather events and should be suspended if any of the following conditions are forecast or occur:

- 10 mm/hr (i.e. high-intensity local rainfall events);
- >25 mm in a 24-hour period (heavy frontal rainfall lasting most of the day) or
- > Half monthly average rainfall in any seven days.

Prior to works being suspended, the following control measures shall be completed:

- Secure all open excavations;
- Provide temporary or emergency drainage to prevent back-up of surface runoff; and,
- Avoid working during heavy rainfall and for up to 24 hours after heavy events to ensure drainage systems are not overloaded.

4.2.1 Management of Suspended Solids and Other Polluting Materials

- Materials and equipment to implement the Spill Response and control Plan (for example, spill kits and booms) must be available adjacent to all watercourses. These should be in clearly marked response points that can be accessed by all staff.
- Any diesel or fuel oils stored on site must be bunded to 110% of the capacity of the storage tank. Fuel tank design and installation must follow best practice guidelines BPGCS005, oil storage guidelines.
- Drip trays will be utilized on-site for pumps and equipment situated within 25m of the watercourse, and spill kits will be available at these locations for the duration of the contract. Any used spill kits will be disposed of using a hazardous waste disposal contractor and in accordance with all relevant EU and Irish waste management legislation;
- No storage of equipment should take place within 15 meters of the River
- All hazardous substances on-site shall be controlled within an enclosed storage compound that shall be locked when not in use to prevent theft and vandalism;
- No refuelling should occur within 25m of the river.
- Concrete mixing will not occur within 25m of the water course

- No washings or waste materials of any kind can be directed into the nearby drains or into the river (including concrete washout)
- No stockpiling of excavated material should take place anywhere on the site, given the steeply sloping nature of the banks. All excavated material should be removed from the site immediately.
- All excavation equipment should be in good working order and checked daily for any hydraulic leaks/oil leaks. It should not be used unless in good working order.
- Any area of exposed soil left after the works are completed should be replaced with an appropriate native hedge row species at the end of the project.

4.3 Control of the Spread of Crayfish Plague

Disinfect Equipment: Thoroughly clean and disinfect all equipment, including boots, fishing gear, and boats, after use in any water body. Use appropriate disinfectants such as Virkon Aquatic or a bleach solution (2%).

Dry Equipment: Ensure all equipment is dried completely for at least 48 hours before being used in a different water body. Crayfish plague spores can survive in damp conditions but not in dry environments.

Avoid Transfer of Water: Do not transfer water, plants, or animals between water bodies. Always empty and clean bait buckets and containers away from any water sources.

Check, Clean, Dry Campaign[1]Follow the 'Check, Clean, Dry' steps:

- **Check:** Remove any visible plants, mud, or animals from equipment and clothing.
- **Clean:** Wash equipment thoroughly, paying special attention to crevices.
- **Dry:** Dry everything for as long as possible.

5 Residual Impacts

An overview of the potential Impacts and Effects and the mitigation measures proposed for possibly

[1] https://invasives.ie/biosecurity/check-clean-dry/

affected European sites are presented above. Taking account of the relative ease of implementation of these mitigation measures and the limited scale of the proposed development, there can be a high level of confidence in their efficacy and success. It is considered that there is no potential for residual adverse effects on these Annex I habitats, Annex II species or the overall habitat quality and integrity of the River Barrow and River Nore SAC or any other connected European site as a result of the proposed development.

5.1 Natura Impact Statement & Conclusion

This NIS has reviewed the impacts arising from the proposed project and found that following a Stage 1 Screening Assessment, it was determined that without implementing mitigation measures, significant effects could impact the integrity of the River Barrow and River Nore SAC could not be definitively ruled out. Therefore, a Stage 2 NIS was carried out. This concluded:

Based on the assessment of the proposed development alone and in combination with other projects and plans, including the implementation of mitigation measures, it can be concluded that no adverse effects on the site's integrity will arise in view of the site's conservation objectives.