



An  
Bord  
Pleanála

## Inspector's Assessment

### ABP-307674-20

<b>Development</b>	Repair and strengthening work to existing weir and incorporation of a rock ramp fish pass.
<b>Location</b>	Lower Tinnahinch Weir on the River Barrow, off the R705 in the townland of Tinnahinch, Co. Carlow
<b>Planning Authority</b>	Carlow County Council
<b>Planning Authority Reg. Ref.</b>	19/289
<b>Applicant(s)</b>	Waterways Ireland.
<b>Type of Application</b>	Permission.
<b>Planning Authority Decision</b>	Grant Permission
<b>Type of Appeal</b>	Third Party V. Decision
<b>Appellant(s)</b>	Canoeing Ireland and Others.
<b>Observer(s)</b>	None.
<b>Date of Site Inspection</b>	9 <sup>th</sup> May 2023
<b>Inspector</b>	Mary Crowley

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## 1.0 Background

- 1.1. In July 2020 the Board received a third-party appeal from Canoeing Ireland and Others against the decision of Carlow County Council to grant permission to Waterways Ireland subject to 10 no conditions for the following development (as per public notices) on the boundary between Carlow and Kilkenny County Council administrative areas.

*Remedial repair and strengthening work to existing weir which will incorporate a rock ramp fish pass in front of the existing weir. The fish pass will require the lowering of a section of the existing weir. A Natura Impact Statement (NIS) will be submitted with the application.*

- 1.2. The portion of the site within Carlow County Council comprises a section of the eastern riverbank out into the middle of the river. A concurrent application was also lodged by Waterways Ireland to Kilkenny County Council for the western portion of the site, from the centre of the river to the lands on the western riverbank (PA Reg. Ref.19/507) for *remedial repair and strengthening work to existing weir which will incorporate a rock ramp fish pass in front of the existing weir. The fish pass will require the lowering of a section of the existing weir. A Natura Impact Statement (NIS) was submitted with the application.* Kilkenny County Council granted planning permission subject to 11 no conditions in June 2020. This decision was not appealed.
- 1.3. In March 2021 the previous Planning Inspector having considered the appeal prepared a report for the Board with a recommendation to grant planning permission subject to conditions. The Inspectors report included an Appropriate Assessment as the proposed works would have both a direct and indirect impact on the River Barrow and River Nore SAC during the construction phase by reason of in-stream works.
- 1.4. In September 2021 the Board decided to defer the case and directed that it be referred back to the Planning Inspector for review of the Appropriate Assessment. As documented on the appeal file the Planning Inspector is currently on extended leave and therefore the case was referred to the Inspectorate Ecologist for review, who in turn prepared a memorandum for the Board. This memo provided further clarification in relation to the Appropriate Assessment and recommended that with the incorporation of minor amendments and suggested changes that the conditioned

measures will *ensure the protection of the conservation objectives of the River Barrow and River Nore SAC.*

- 1.5. In July 2022 the Board considered the report and memorandum on file and *decided to defer the case for consideration at a further Board meeting and to direct that the file be assigned to a new Inspector for a de novo assessment* as it noted the Inspector was on extended leave. Accordingly, the file was referred to me (Mary Crowley SPI) for assessment only.

## 2.0 Development Plan

- 2.1. I note that the scheme was previously considered with reference to the Carlow County Council Development Plan 2015 – 2021. This development plan has been superseded by the **Carlow County Development Plan 2022-2028** that came into effect on the 4<sup>th</sup> July 2022. Policies and objectives relevant to this appeal are set out below:

### **Chapter 10 Natural & Built Environment**

**Policy NH P1:** *Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Carlow in recognition of its importance as a non-renewable resource, a unique identifier, and as a natural resource asset.*

**Policy NH P2:** *Ensure, as far as is practicable, that development does not adversely impact on wildlife habitats and species, and that biodiversity is conserved for the benefit of future generations in the interests of sustainability. This will include moving towards no net loss of biodiversity from plans adopted by and projects granted permission/authorised by the Council*

**Policy NS P1:** *Support the conservation and enhancement of Natura 2000 Sites, and to protect the Natura 2000 network from any plans and projects that are likely to have a significant effect on the coherence or integrity of a Natura 2000 Site, in accordance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines*

**Objective NS O1:** *Strictly protect areas designated or proposed to be designated as Natura 2000 sites, including any areas that may be proposed for designation or designated during the period of this Plan*

**Policy ITH P1:** *Protect and conserve buildings, structures and features of industrial and transport heritage, such as historic mills, mill races, **weirs**, warehouses, bridges, canals and lock gates, railway structures, etc., and to promote their retention, sensitive maintenance, repair, and restoration (emphasis added)*

### **Chapter 11 Tourism and Recreation**

It is stated that *the Barrow remains a bustling river accommodating many activities including walking, cycling, fishing, boating and **canoeing** (emphasis added).*

**Policy HT P11:** *Maximise, enhance and support opportunities for the use of the County's uplands and waterways, including the Blackstairs Mountains, the River Barrow and the River Slaney, as tourism and recreational amenities, and engage with relevant agencies, bodies, and key stakeholders in this regard, including Fáilte Ireland, Waterways Ireland, National Parks and Wildlife Service, and local communities, to develop the infrastructure, quality and amenity of these natural assets.*

**Policy HT P13:** *Continue to work closely with Fáilte Ireland, Waterways Ireland, and neighbouring Local Authorities, to promote and enhance the tourism and recreational potential of the River Barrow.*

**Policy HT P15:** *Facilitate infrastructure to enable increased tourism activity associated with water-based activities on the County's waterways, such as boating, cruising, kayaking, angling, and other sustainable water-based interests.*

## **3.0 Assessment**

- 3.1. This assessment is based on the plans and particulars submitted with the planning application on the 22<sup>nd</sup> July 2019, as amended by further plans and particulars submitted by way of further information on the 20<sup>th</sup> March 2020 together with details, plans and particulars submitted throughout the appeal process to date.
- 3.2. Having regard to the information presented by the parties to the appeal and in the course of the planning application and my inspection of the appeal site, I consider the

key planning issues relating to the assessment of the appeal can be considered under the following general headings:

- Principle
- Design & Safety Concerns
- Other Issues
- Appropriate Assessment

### **3.3. Principle**

- 3.3.1. The applicants, Waterways Ireland, intend to carry out weir repair, weir strengthening works and fish passage improvement works at the Lower Tinnahinch Weir. Waterways Ireland in partnership with Inland Fisheries Ireland (IFI), with subsequent approval from the Department of Communications, Climate Action and Environment, have designed a rock ramp fish pass which would improve fish passage upstream and downstream of the weir while still retaining the weir structure.
- 3.3.2. The weir is currently in a state of disrepair. There are a number of sections which have collapsed and it is in danger of further collapse. Waterways Ireland depend on the weir to maintain a sufficiently deep navigable channel for boats upstream of the weir and along the associated canal. In addition the Lower Tinnahinch Weir has been identified by Inland Fisheries Ireland as an obstacle to fish migration and free movement of all fish over all periods of the year, which is non-compliant with Section 116 of the 1959 Fisheries (Consolidation) Act and the requirements of The European Habitats Directive. It is stated that the River Barrow is a major salmonid river containing stocks of wild salmon, twaite shad, sea lamprey, brook lamprey, river lamprey, sea trout and brown trout. Inland Fisheries Ireland is particularly concerned with the negative impact of the existing weirs in terms of fish stock management and diversity on the second biggest river in Ireland.
- 3.3.3. I refer to the Planning Report submitted with the application which details a number of engineering solutions, which have been considered in addressing the structural condition of the weir and the fish passage requirements at the weir. The solutions considered various strengthening methods and include the construction of 'in-channel' fish pass structures downstream of the weir obstacle, as well as solutions involving

the construction of 'off-channel' facilities, such as a by-pass channel or river diversion around the weir. The options were evaluated in terms of best practise, constructability, cost, durability, environmental impact and future maintenance. It was concluded that the preferred option for remedial works to the weir is:

**A combination of masonry repair and repointing coupled with cementitious grouting to the core of the weir.**

3.3.4. Based on these findings, the preferred option for a fish pass at the weir is:

**A provision of a partial width rock ramp type fish pass construction downstream of the existing weir.**

3.3.5. It is stated that the design has incorporated lessons from other recent similar projects and represents the best, most up to date approach to weir remedial works and fish pass design in Ireland.

3.3.6. It is evident that the weir is part of the architectural and industrial heritage of the river corridor and is an integral part of the Barrow navigation system. It is in disrepair and has been subject to erosion and has large sections of stone missing. The weir has been identified by Inland Fisheries Ireland as a significant obstacle to the free movement of fish. The proposed development will strengthen and repair the weir, ensuring its continued functionality and protection/conservation into the future. The proposed development, through the provision of a rock ramp, will contribute to the protection of endemic fish species by accommodating their passage upstream and downstream of the weir. This will encourage the recovery of fish stock and the enhancement of biological diversity in the River Barrow.

3.3.7. Having regard to the documented condition of the weir together with obstacles identified to migration and free movement of fish it is considered that the proposed works are necessary and that the detail of works proposed are acceptable in principle subject to the acceptance or otherwise of site specifics / other policies within the development plan and government guidance.

#### **3.4. Design & Safety Concerns**

3.4.1. There is one third party appeal from Canoeing Ireland, the national governing body of the sport who also *have letters of notice on objections from the following companies:*



- Pure Adventure
- Go with the Flow
- GoPaddle.ie

3.4.2. The appeal was accompanied by the submissions lodged with the Planning Authority. The issues raised relate to “safety concerns” and may be summarised as follows:

- The River Barrow is a magnet for all types of users and this is one of the most used sections of river in the country. Canoeing Ireland was not consulted on the design of the weir repairs or the construction of the rock ramp. It cannot be ascertained from the plans if this structure will be safe for members use. There is no evidence of a safety audit for users.
- The new fish pass which is the first of its type on the Barrow will make the Tinnahinch weir un-runnable in open boats.

3.4.3. As set out in the current Development Plan the Barrow is a bustling river accommodating many activities including canoeing. While the use of the Lower Tinnahinch Weir by canoeists is accepted together with the clear policies and objectives of the Development Plan to both promote the recreational potential of the River Barrow and to engage with relevant agencies, bodies, and key stakeholders to develop the infrastructure, quality and amenity of these natural assets, it remains that the works proposed are necessary to protect migratory fish. While not a requirement in the planning process, I consider that it would have been of benefit to all parties if Canoeing Ireland, and / or other interested groups, were consulted as part of the initial design process. However as stated this is not a legislative requirement but rather good practise and the absence of such a collaboration is not therefore an impediment to the granting of planning permission in this instance.

3.4.4. I agree with the comments of the previous Inspector that while *it would be preferable if the works did not impact on existing open boat users, I also accept that that there are many competing factors associated with the proposed works to the existing weir and new fish pass, including the preservation and protection of the existing weir, the need to protect migratory fish and the need to cater for the use of the river by canoes and kayaks, and the local economy through tourism and water skills training related outdoor businesses which rely on the use of the river by visitors.* I further agree that

the potential loss of a relatively short section of the river channel to water based activities, particularly when the adjoining canal provides an alternative route is an acceptable compromise considering the significant ecological advantages associated with the enhanced riverine connectivity which will improve the passage of fish upstream and downstream of the weir.

- 3.4.5. It is clearly evident that the existing weir is a serious obstacle to fish movement as a result of the existing poor structural conditions of same. The applicant, Waterways Ireland, a prescribed / state body has consulted with and has the support of the relevant prescribed bodies including the Inland Fisheries Ireland and Department of Culture, Heritage and Gaeltacht in reaching a design solution that would fully meet the requirements of the Fisheries Act 1959. While I do not believe that it is the intention to disadvantage any users of this section of the River Barrow it remains that the free run or migration of all fish at all periods of the year is both a necessity and a priority particularly given the sensitive ecological context of the site. While the appellants arguments are both valid and merited, a refusal based on the design and safety of the scheme cannot be supported in this instance. It is recommended that permission be granted subject to conditions.
- 3.4.6. With regard to the specific requirements of Canoe Ireland to carry out a safety audit I consider that ideally such an audit should have been prepared in advance and that same should have informed the design of the project. However, I am satisfied that this can be dealt with by way of condition whereby the developer shall provide a recreational water user safety audit statement in advance of works commencing for written agreement with the Planning Authority.

### 3.5. Other Issues

- 3.5.1. **Development Contribution** – The Planning Authority in their notification of decision to grant permission did not include a Section 48 condition. Carlow County Council has adopted a Development Contribution Scheme under Section 48 of the Planning and Development Act 2000 (as amended); Development Contribution Scheme 2017 – 2021. Exemptions or reductions do not apply in this case. It is therefore recommended that should the Board be minded to grant permission that a suitably

worded condition be attached requiring the payment of a Section 48 Development Contribution in accordance with the Planning and Development Act 2000.

- 3.5.2. **Underwater Archaeology** – I refer to the Underwater Archaeological Impact Assessment submitted with the application. The submission of this report aligns with the requirements of the Department of Culture, Heritage and Gaeltacht. The report recommends that further archaeological assessment in advance of construction is not required. However, it is recommended that archaeological monitoring of ground/riverbed disturbances during construction be undertaken, with the proviso to resolve fully any archaeological material observed at that point. In particular, archaeological monitoring is required during the construction of the new fish-pass; the removal of masonry from the weir structure being required to facilitate this component of the proposed work. This conclusion aligns with the later report and recommendation of the Department of Culture, Heritage and Gaeltacht. It is recommended that should the Board be minded to grant permission that a suitably worded condition be attached.

#### 4.0 **Appropriate Assessment**

- 4.1. The application was accompanied by an AA Screening Report, NIS, Ecological Impact Assessment, Fisheries Assessment on Selected Weir Sites on The River Barrow and a Planning Report. A Construction & Environmental Management Plan (CEMP) was also prepared in relation to this development. It considers all the environmental commitments and mitigation measures that are set out in the NIS and Ecological Impact Assessment and provides a comprehensive plan for their implementation and monitoring during construction, operation and decommissioning of the proposed development.
- 4.2. Having reviewed the documents and submissions on file including the Natura Impact Statement submitted with the Planning Application and by way of further information I am satisfied that the information available allows for a complete examination and identification of any potential significant effects of the development, alone, or in combination with other plans and projects on European sites.

## **5.0 Stage 1 Screening for Appropriate Assessment**

### **5.1. Description of proposal and local site characteristics**

- 5.1.1. The proposed works involve the repair and upgrade of the existing Tinnahinch Lower weir, Ballynakill, along the Barrow navigation system in order to maintain its structural stability. The works will involve repairs to the weir, including a proposed new fish pass and upgrading of existing fish pass, scour protection to the riverbank and the establishment of a rock-ramp on the southern side of the weir. A detailed Construction Methodology together with details of the Construction Site Management Plan as incorporated in to the project design are set out in detail in the NIS.
- 5.1.2. The existing weir is necessary to maintain the Barrow navigation system which Waterways Ireland have a statutory obligation to manage. However, weirs are often a barrier to migratory fish. This proposed rock ramp fish pass fulfils the dual function of maintaining the essential navigation infrastructure and facilitating fish passage. Currently, the weir provides an obstacle to lamprey passage upstream and a partial barrier to salmonids. The construction of the rock ramp will help improve lamprey passage past the weir and although salmon, brown trout and eel are found throughout the Barrow catchment, the rock ramp will also help to further improve passage for those species.

### **5.2. Identification of Relevant European Sites**

- 5.2.1. The European Sites considered to be within the likely Zone of Impact are as follows:
- 1) River Barrow and River Nore SAC (002162) – the project is within this SAC
  - 2) Blackstairs Mountains SAC (000770) – 8.5km
  - 3) Slaney River Valley SAC (000781) – 12.4km
  - 4) Thomastown Quarry SAC (002252) – 12.4km
  - 5) River Nore SPA (004233) – 8.1km

### 5.3. Assessment of Likely Effects

5.3.1. The main work element that could have the potential for significant impact on European Sites are as follows:

- Site preparation works
- Machinery access to the works locations
- Shallow excavation
- Instream and bankside works

5.3.2. In relation to the following European Sites

- 1) Blackstairs Mountains SAC (000770)
- 2) Slaney River Valley SAC (000781)
- 3) Thomastown Quarry SAC (002252)
- 4) River Nore SPA (004233)

5.3.3. There will be no direct effects as the proposed development is located entirely outside these designated sites. Hydrologically the designated sites are not linked to the proposed development and will not be affected by emissions or drainage effects from the construction or operation of the proposed development. There is no potential for direct or indirect effects. No complete impact source-pathway-receptor chain was identified during the Screening Assessment. Significant effects on these European Site resulting from the proposed development can be excluded and they are therefore 'screened out'.

### 5.4. River Barrow and River Nore SAC (Site Code: 002162)

5.4.1. The River Barrow and River Nore SAC consists of the freshwater stretches of the Barrow and Nore River catchments extending from the Slieve Bloom Mountains to the estuary and tidal elements in Creadun Head, Watertord passing through eight counties (Carlow, Kildare, Kilkenny, Laois, Offaly, Tipperary, Waterford and Wexford).

5.4.2. This SAC is of considerable conservation significance for the following reasons:

- *Ornithological importance:* This SAC supports Kingfisher, a nationally important bird population listed in Annex I of the EU Birds Directive. One SPA

(River Nore), designated under the EU Birds Directive, is also located within the SAC; and,

- This SAC supports multiple species listed on Annex II of the EU Habitats Directive, including Otter, River Lamprey and Salmon.
- Species rich habitats (Annex I of the EU Habitats Directive) including estuaries, alluvial forests, petrifying springs, and intertidal mudflats and sandflats can be found within this SAC.

5.4.3. Land use within the SAC is primarily agricultural, principally grazing and silage production. Fishing is also a main tourist attraction along stretches of the main rivers and their tributaries. Other recreational activities such as boating, golfing, and walking also occur within the SAC.

5.4.4. The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. The site-specific conservation objectives are to **maintain** the favourable conservation condition of:

- Desmoulin's whorl snail
- White-clawed crayfish
- Estuaries
- Mudflats & Sandflat's not covered by seawater at low tide
- Salicornia and other annuals colonizing mud and sand
- Killarney fern
- Water courses of plain to montane levels
- European Dry Heaths
- Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
- Petrifying springs with tufa formation

5.4.5. And to **restore** the favourable conservation condition of

- Sea Lamprey
- Brook Lamprey

- River Lamprey
- Twaite Shad
- Atlantic Salmon
- Atlantic salt meadows
- Otter
- Mediterranean salt meadows
- Nore freshwater pearl mussel
- Old sessile oak woods
- Alluvial forests

5.4.6. The main threats to the SAC and current damaging activities include high inputs of nutrients into the river system from agricultural run-off and sewage plants, along with over-grazing, invasion of non-native species and land reclamation (NPWS, 2011).

5.4.7. In terms of potential significant effects the works would have direct impacts on habitat both through permanent removal and temporary disturbance of sections of the riverbed. The uncontrolled release of sediment and other pollutants during construction could impact on water quality and potentially result in a decline both in habitat quality and in the extent and distribution of spawning/nursery beds. There is also potential for habitat fragmentation for freshwater species that have been recorded in the River Barrow (Salmon, Brook and River Lamprey, and Otter). The partial damming of the river and construction along the riverbank during site investigation/main construction works may temporarily deter these species from moving within the river corridor preventing them from reaching habitat upstream/downstream of the works.

5.4.8. Consequently, the potential for likely significant effects on this European Site cannot be excluded at this stage and the proposed development and is therefore 'screened in' for Appropriate Assessment.

## 5.5. Screening Conclusion

5.5.1. The proposed development was considered in light of the requirements of Section 177U of the Planning and Development Act 2000 as amended. Having carried out

Screening for Appropriate Assessment of the project, it has been concluded that the project individually (or in combination with other plans or projects) could have a significant effect on River Barrow and River Nore SAC (002162), in view of the site's Conservation Objectives, and Appropriate Assessment is therefore required.

## 6.0 Stage 2 Appropriate Assessment

- 6.1.1. As identified in the Screening for AA above there is a potential for direct and indirect effects on one European site as a result of the proposed development during the construction and operational phase given that the proposed works are located within the boundary of the River Barrow and River Nore SAC (002162).
- 6.1.2. As set out above detailed site specific conservation objectives have been published for the site, with the overall objective being to maintain or restore the favourable conservation condition of the Annex 1 habitats(s) and/or the Annex 11 species for which the SAC is selected.

## 6.2. Ecological Baseline Description

- 6.2.1. In terms of qualifying habitats, it is noted in the NIS that there are no examples of any of the Annex 1 habitats within the development area. Therefore there are no potential impacts on the qualifying terrestrial habitats of the SAC as they are not present in the works area or are otherwise excluded due to their remoteness or lack of connectivity with the site. The remaining 4 no. water dependent habitats (Estuaries, Floating River Vegetation, Hydrophilous Tall Herb Communities and Alluvial Forests) have the potential to be impacted via hydrological connections, in the absence of mitigation.
- 6.2.2. With regard to qualifying species there are no records of Killarney Fern or Desmoulin's Whorl Snail from this area. The Desmoulin's Whorl snail are not within the possible zone of influence. The 8 no. water dependent species with the potential to be impacted by the proposed works include *Freshwater Pearl Mussel*, *White-clawed Crayfish*, *Brook*, *River and Sea Lamprey*, *Twaite Shad*, *Salmon* and *Otter*. These qualifying interests are either found within the proposed works area or a potential source-pathway-receptor has been identified.



### 6.3. Potential Impacts

6.3.1. The qualifying interests and potential pathways for effects on the identified QIs of the River Barrow and River Nore SAC are described as follows:

Qualifying Interest	Potential for Adverse Effects
Estuaries	<p>Direct effect on this habitat are not anticipated as this habitat does not extend to the proposed instream works location. Emissions to surface water, with the potential to result in reduced water quality, was identified as a potential indirect effect during the construction phase</p> <p><b>Indirect – Construction Related</b></p>
Mudflats & Sandflats not covered by seawater at low tide	No effect
Salicornia & other annual colonizing mud and sand	No effect
Atlantic salt meadows	No effect
Mediterranean salt meadows	No effect
Watercourses of plain to montane level with the Ranunculion Fluitantis and Callitriche – Batrachian vegetation	<p>This occurs in a separate river catchment. No direct effects on this habitat have been identified as this habitat was not recorded at the proposed instream works location. The full extent of this habitat is not known and therefore on a precautionary basis, emissions to surface water, with the potential to result in reduced water quality where the habitat may occur downstream, was identified as a potential indirect effect during the construction phase.</p> <p><b>Indirect – Construction Related</b></p>
European Dry Heaths	No effect
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	<p>No direct effects on this habitat have been identified as this habitat was not recorded within the development footprint. Emissions to surface water, with the potential to result in reduced water quality and the spread of invasive species were</p>

	<p>identified as potential indirect effects during the construction phase.</p> <p><b>Indirect – Construction Related</b></p>
Petrifying spings with tufa formation	No effect
Old sessile oak woods with Ilex and Blechnum in the British Isles	No Effect
Alluvial forests with Alnus glutinosa and Fraxinus excelsior	<p>No direct adverse effects on this habitat have been identified. The habitat is located entirely outside the development footprint. There will be no drainage effects or loss of woodland associated with the development. Emissions to surface water, with the potential to result in reduced water quality, and the spread of invasive species were identified as potential indirect effects during the construction phase.</p> <p><b>Indirect – Construction Related</b></p>
Otter	<p>This species occurs in the Barrow Catchment. Signs of this species were recorded at Tinnahinch during the fisheries survey. Otter are likely to utilise the River Barrow and wider area for commuting and foraging purposes. No breeding or resting places for Otter were recorded at or within close proximity to the proposed works location. Direct effects on the species are not anticipated. Disturbance during the operational phase is not anticipated. There is the potential for the proposed rock ramp to affect fish passage upstream of the weir during its operation which has the potential to impact on otter prey species.</p> <p><b>Indirect – Construction &amp; Operation Related</b></p>
Freshwater Pearl Mussel	<p>There are no known populations of Pearl Mussel from the River Barrow. Populations for which the SAC are designated occur in tributaries of the Barrow. In acknowledgement of the historic Pearl Mussel records (1912 – 1973) the potential for adverse effects on pearl mussel species is considered further on a precautionary basis. The only pathway that would allow</p>

	<p>potential adverse effects to occur is through water pollution as a result of the proposed works.</p> <p><b>Indirect – Construction &amp; Operation Related</b></p>
White-Clawed Crayfish	<p>Species was not recorded at the site. Although the site provided suitable habitat to support crayfish in the deeper glide and pool runs where marginal boulder and cobble would provide refugia and food. No direct adverse effects on this species have been identified. Taking a precautionary approach, emissions to surface water, with the potential to result in reduced water quality, and the spread of invasive species were identified as potential indirect effects during the construction phase.</p> <p><b>Indirect – Construction &amp; Operation Related</b></p>
Sea Lamprey, Brook Lamprey & River Lamprey	<p>No larval sea lamprey was recorded at the site. Lampreta species are found throughout the Barrow system but it is not known if sea lamprey currently pass the weir at Tinnahinch as river and brook lamprey are indistinguishable. Suitable spawning habitat was identified downstream of the proposed works area and is entirely outside of the proposed development footprint. A small area of good quality nursery habitat was identified outside of the proposed works footprint, downstream of the weir. Emissions to surface water, with the potential to result in reduced water quality, was identified as a potential indirect effect during the construction phase.</p> <p><b>Direct &amp; Indirect – Construction &amp; Operation Related</b></p>
Atlantic Salmon	<p>The survey found that habitat suitability for Atlantic Salmon and Brown Trout (salmonids) was good across the majority of the site and Atlantic Salmon were recorded in good numbers. Excellent spawning habitat occurs downstream of the proposed works and entirely outside of the proposed development footprint. Emissions to surface water, with the potential to result in reduced water quality, was identified as a potential indirect effect during the construction phase.</p> <p><b>Direct &amp; Indirect – Construction &amp; Operation Related</b></p>

Desmoulins Whorl Snail	<p>There are two known sites for this species within the SAC: Borris Bridge, Co. Carlow and Boston Bridge, Kilnaseer, Co. Laois. The site at Boris Bridge is located within the Barrow catchment, upstream of the proposed development, while the site in Boris Bridge is located in a separate surface water catchment with no identifiable connectivity with the proposed project. On a precautionary basis, emissions to surface water, with the potential to result in reduced water quality downstream should unknown populations of the species occur in these areas, was identified as a potential indirect effect during the construction phase.</p> <p><b>Indirect – Construction &amp; Operation Related</b></p>
Twaite Shad	<p>The species is only known from the River Barrow up as far as the weir at St Mullins. This structure is an impassable barrier to the species (NPWS 2013). There is no potential for this species to occur at any of the proposed instream works locations. Direct effects on the species are not anticipated. Emissions to surface water, with the potential to result in reduced water quality, was identified as a potential indirect effect during the construction phase.</p> <p><b>Indirect – Construction &amp; Operation Related</b></p>
Killarney Fern	No effect
Nore Peral Mussel	No effect

#### 6.4. Mitigation Measures

- 6.4.1. The potential pathways for effects on the QIs of River Barrow and River Nore SAC are described in the preceding section. The measures described in the NIS and CEMP are designed to ensure that the proposed development does not prevent or obstruct any of the QIs interests from maintaining / restoring favourable conservation status.

#### 6.5. Potential for Direct Effects on the European Site During Construction

#### 6.6. Habitat Loss and Disturbance

6.6.1. The QIs identified in the above sections with the potential direct effects by reason of the proposed development:

- Lamprey Species
- Salmon

6.6.2. Targeted fisheries surveys identified suitable spawning habitat for salmon and lamprey species and suitable nursery habitat for lamprey species at the proposed development site.

6.6.3. The proposed development has been designed to avoid these areas and the proposed development will not directly impact spawning or nursery habitat. There will be no impediment to river channel connectivity upstream and downstream of the proposed works area. The works will be undertaken in two phases to maintain river channel flow through the weir at all times during the construction phase. Furthermore, the works will be temporary in duration and the construction phase will last approximately five weeks. In addition to the above, disturbance related impacts will be avoided through the following measures;

- Works will only be undertaken outside of the spawning season (1<sup>st</sup> October-June 30<sup>th</sup>) and once the sandbag dam is in place, electrofishing will be carried out by IFI to remove any fish species inside the dam. These are detailed further below and in the Construction Environmental Management Plan (CEMP). Works will be done in accordance with Inland Fisheries Ireland (2016) "Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters"

## **6.7. Potential for Indirect Effects on the European Site During Construction**

### **6.8. Emissions to Surface Water**

6.8.1. Emissions to surface water was identified as a potential indirect effect on the following QIs of the River Barrow and River Nore SAC;

- Estuaries
- Water courses of plain to montane levels with the *Ranunculus fluitans* and *Callitriche-Batrachion* vegetation

- Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*
- Desmoulin's Whorl Snail
- Freshwater Pearl Mussel
- White-clawed Crayfish
- Sea Lamprey
- Brook Lamprey
- River Lamprey
- Twaite Shad
- Salmon
- Otter

6.8.2. The construction of the rock ramp has the potential to release sediment into the River Barrow and the use of machinery has the potential to result in hydrocarbons being released into the environment through spills or leakages. The proposed works are temporary in duration and a suite of proposed pollution prevention measures for protection of surface water quality, described below and in the CEMP, will ensure that there will be no adverse effects on surface water quality.

6.8.3. All elements of the project have been considered with regard to size and scale of the works proposed, materials to be used, storage of materials and pollution prevention measures. All elements outlined are incorporated into the Construction Environmental Management Plan (CEMP) and will be adhered to by the contractor for the entirety of the project. The proposed weir repair works and rock ramp construction will be monitored by Waterways Ireland throughout the construction phase of the development.

#### 6.9. **Site Set-Up Mitigation**

- Prior to commencement, a toolbox talk will be given to the Contractor to ensure that they comply with the requirement for the protection of the environment and to minimise disruption to users of the waterway.

- Prior to the outset of works a double contained sandbag dam will surround the works area. The enclosed area will be electrofished by IFI and then dewatered using a silt buster. This will allow works to be undertaken in the dry.
- A silt curtain and oil boom will be installed on the outer side of the dam to prevent sedimentation and hydrocarbons entering the watercourse during excavation and repair activities. The silt curtain and oil boom will effectively prevent sediment and oils being carried further downstream during construction activities. An example of silt curtain and oil boom specifications are provided in the NIS.

## 6.10. Earthworks and Instream Works

6.10.1. The proposed works will involve scraping back and small-scale excavation of loose rubble and silt on the river bed and the creation of a rock ramp immediately downstream of the weir. Excavations may also be required for the installation of scour protection rock armour on the western river bank. This creates the potential for sediment and/or nutrient run-off, especially if soil is stored in an unconsolidated state for a period of time. Suspended solids or nutrients resulting from the decomposition of organic material could potentially enter the adjacent River Barrow.

### Mitigation

- The site will be secured as per the construction methodology
- Prior to the outset of works Inland Fisheries Ireland will be notified and no instream works shall be carried out during the closed season for instream works (October 1st to June 30th).
- As per the conclusions of the hydrology report it is recommended that works commence in early July, as July has the lowest average maximum daily flow.
- Prior to, and during the course of the proposed rock ramp construction works, accurate short and long-term rainfall forecast will be obtained from Met Eireann and forecasts will be regularly checked by construction staff. If a heavy rainfall event is forecasted, that may result in a flood event at the site the works shall be postponed. All sandbags and machinery will be removed from the site prior to any flood event
- Automated turbidity metres will be installed upstream and downstream of the proposed works area for suspended solids and this will be monitored regularly by

a suitably qualified ecologist. If the downstream reading differ significantly from the upstream reading than all works will be halted until the source of the problem is rectified.

- No direct discharges to water will be made.
- Water will be pumped out from the works area using a submersible pump and through a dewatering silt bag or siltbuster. The clean discharge will be released over land where possible before entering the watercourse.
- The silt bag or siltbuster will allow the water to flow through the geotextile fabric and will trap any of the finer silt and sediment remaining in the water.
- The dewatering silt bag or siltbuster are proposed for the treatment of water pumped from excavations or during dewatering of instream areas prior to discharge.
- Excavation and infilling will be carried out in small progressive stages.
- Excavations will be carried out using a suitably sized excavator and excavation depths and volumes will be minimised.
- Access will be from the nearest public road or laneway and a barge will be employed to move the excavator to Phase 2
- Temporary stockpiles will be secured with silt fencing and covered during heavy rainfall events.
- Excavated river bank material will be re-used on completion of the bank reinforcement works where feasible in order to recreate the profile of the bank or will be disposed of to a licensed waste disposal site.
- Bio-security measures such a washing of vehicles, plant and equipment prior to mobilisation and de-mobilisation will be adhered to as detailed in the biosecurity measures set out below.
- Outside working hours, plant machinery will be parked on the access track a minimum distance of 10m from the watercourse.
- The instream works will be undertaken in line with *Guidelines on protection of fisheries during construction works in and adjacent to waters* (IFI 2016). This



document sets out issues of concern in terms of construction impacts and their prevention. It also provides guidance on timing of works.

## **6.11. Hydrocarbons**

6.11.1. The use of hydrocarbons during the works leads to the potential for pollution to enter the River Barrow. Leaks in poorly maintained plant and machinery could lead to hydrocarbon dispersal over the site. Leaks in fuel storage tanks and spillages during refueling operations could lead to larger releases of hydrocarbons into the environment.

### **Mitigation**

6.11.2. The use of machinery at the site carries the potential for accidental hydrocarbon contamination of the area, by fuel spillages or oil leaks for example. The works will be carried out in accordance with the following measures to avoid such impacts:

- A mobile fuel bowser will be used to transport fuel to the site daily and the fuel will be stored on-site
- When not in use, all valves and fuel trigger guns from fuel storage containers will be locked.
- All plant refuelling will take place on site using mobile fuel bowsers. Only dedicated trained and competent personnel will carry out Rathoe operations. Plant refuelling will take place as far as practicable from watercourses. A spill kit and drip tray shall be on site at all times and available for all refuelling operations. Equipment shall not be left unattended during refuelling. All pipework from containers to pump nozzles will have anti siphon valves fitted.
- Oil booms and oil soakage pads will be kept on site to deal with any accidental spillage
- Strict procedures for plant inspection, maintenance and repairs shall be detailed in the contractor's method statements and machinery shall be checked for leaks before arrival on site.
- All site plant will be inspected at the beginning of each day prior to use.
- Defective plant shall not be used until the defect is satisfactorily fixed.
- All major repair and maintenance operations will take place off site.

- Care will be taken at all times to avoid contamination of the environment with contaminants other than hydrocarbons, such as uncured concrete or other chemicals.
- The plant refuelling procedures described above shall be detailed in the contractor's method statements.

#### 6.12. **Waste Management Mitigation**

- All waste will be collected in skips and the site will be kept tidy and free of debris at all times.
- Waste oils and hydraulic fluids will be collected in leak-proof containers and removed from the site for disposal or recycling.
- All construction waste materials will be stored within the confines of the site, prior to removal from the site to a permitted waste facility.

#### 6.13. **Disturbance to Fauna**

6.13.1. Disturbance was identified as a potential indirect effect on the following QIs of the River Barrow and River Nore SAC;

- Otter

6.13.2. No otter holts were recorded in the vicinity of the proposed development during ecological surveys undertaken, however, otter are known to occur in the area. The development is likely to result in increased levels of noise and activity around the river and bank during the works period. Species present along the river corridor are likely to be habituated to human activity given that works are proposed adjacent to the canal channel.

#### **Mitigation**

- A pre-commencement otter survey will be undertaken to ensure there are no new holts where the species has taken up residence within the 150m of the proposed development since the otter surveys completed in 2018.
- During the construction phase, noise control measures, hours of operation lie. dusk and dawn is high faunal activity time and selection of plant items will be considered in relation to disturbance of animals.
- No construction activity will take place within the hours of darkness.

- All plant and equipment for use will comply with the Construction Plant and Equipment Permissible Noise Levels Regulations (SI 359/1996).
- Operating machinery will be restricted to the proposed development site boundary.
- No works will be undertaken outside the construction footprint.

#### 6.14. Invasive Species

6.14.1. The spread of invasive species was identified as a potential indirect effect on the following QIs of the River Barrow and River Nore SAC

- Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*
- White-clawed Crayfish

6.14.2. Himalayan balsam was recorded along both river banks at the proposed development site and crayfish plague has been recorded from the Barrow catchment. Due to the legislative requirements to control the spread of noxious weeds and non-native invasive plant species, it is important that any activities associated with the planning, construction and operation of the developments comply with the requirements of the Wildlife Acts, 1976-2012. Regulations 49 and 50 of the European Communities (Birds and Natural Habitats) Regulations 2011 (S. 477 of 2015) include legislative measures to deal with the dispersal and introduction of Invasive Alien Species (IAS), which are listed in the Third Schedule of the regulations.

6.14.3. The introduction and/or spread of invasive species such as Himalayan Balsam, Giant Rhubarb or Rhododendron for example, could result in the establishment of invasive alien species and this may have negative effects on the surrounding environs.

#### Mitigation

6.14.4. The following control measures address potential effects associated with the construction phase of the project for the management of Invasive Species

- Any soil, topsoil or stone material required as part of the construction works should be sourced from a stock/quarry that has been screened for the presence of any invasive species by Waterways Ireland Environmental Staff or an independent Ecologist.

- All machinery will be thoroughly cleaned and disinfected using Virkon 1% biocide prior to arrival and departure from the site to prevent the spread of invasive species such as Asian Clam, Zebra Mussel, Crayfish plague. This process will be detailed in the contractor's method statement.
- Machinery to be used instream will be checked for all invasive species and disinfected prior to and after commencing works within the river to avoid the spread of invasive species.
- All areas where Himalayan Balsam is present will be walked in advance of the proposed works.
- Any identified plants will be hand-picked and left in a clearly defined, fenced area on the verge of the track, covered with hessian material and left to decompose. If plants are picked when seed pods are present, the plant head will be covered with a bag prior to picking to avoid seed dispersal.
- Landscaped areas will be seeded with grass immediately after completion of the works. It is essential to establish vegetation quickly after control measures have been applied. A dense grass sward tends to discourage Himalayan Balsam seed germination.
- All machinery working in areas that are contaminated with Himalayan Balsam will be thoroughly cleaned down before moving off-site.

## 6.15. **Mitigation Conclusion**

6.15.1. The pathways that would allow potential adverse effects to occur were considered in the design of the scheme and a range of measures, as outlined above and in the Construction Environmental Management Plan (CEMP), are in place to avoid, remedy or reduce potential adverse effects on surface water quality during construction.

## 6.16. **Potential for Effects on the European Site During Operation Phase**

6.16.1. The proposed rock ramp structure will be constructed using appropriately sized material and built in accordance with international guidance on rock ramp design which will ensure that the rock ramp remains stable during its operation. The rock fill apron at the foot of the rock ramp will stabilise the structure along with strengthening of the

existing weir toe. The proposed scour protection on the right bank will prevent the erosion of the bank, especially in times of very high flow, as this is where flow velocity will be concentrated in flood events. The hydrological modelling undertaken found that there will be no measurable impacts on the existing flow regime upstream or downstream of the proposed rock ramp in terms of water level fluctuations, flow volumes or changes to flow velocities. Therefore, the design of the proposed fish pass will not have an adverse effect on the spawning gravels and soft sediment areas downstream of the proposed rock ramp.

6.16.2. The rock ramp will operate across a range of flow rates and with flow being maintained at all times. The facility for upstream migration will operate across the optimal flow ranges for salmon, brown trout, coarse fish and eel. Although the rock ramp will not accommodate passage of all fish species all of the time, it will mimic natural river conditions. The steps of the rock ramp will create areas of lower velocity with boulders acting as refugia areas as fish pass up each step. Notches at each step will also help fish to climb in times of low flow. To further enhance lamprey and eel passage, part of the weir face will be fitted with tiles and bristles to allow those species to migrate upstream past the weir during periods of low flow. The proposed rock ramp will be an improvement on the existing situation where a small notch fish pass in the weir is the only feature aiding upstream migration of fish.

6.16.3. There will be no impact during the operational phase of the weir as the installation of the rock ramp will not alter the hydrology of the river significantly such that it impacts the habitat where it occurs further downstream. The proposed upgrade of the weir will be an improvement on the existing situation and will have a positive impact on migratory fish and otter. Post construction monitoring will be undertaken by IFI through a recognised scientific study which assesses the passability of different fish species through the barrier according to WFD111 methodology (IFI, 2016). This survey will monitor fish species through the new rock ramp and may be repeated for a number of years afterwards. Overall the proposed development will improve fish passage within the SAC while not altering significantly the hydrological conditions of the river and maintaining navigation in the River Barrow.

6.16.4. No mitigation necessary

## 6.17. Residual Impacts

6.17.1. The proposed development has the potential to negatively affect water quality and habitat integrity during construction and operation and, therefore, there is the potential for the conservation objectives of the River Barrow and River Nore SAC (002162) to be negatively affected. The design of the scheme has been developed with an overall objective of avoiding adverse effects on the ecologically sensitive sites. Mitigation measures will be implemented (as described) reducing the risk of negatively affecting water quality in the receiving surface water environment and habitat integrity thus ensuring that the receiving environment is protected and the conservation objectives of the above Natura site are not negatively affected by the proposed development. There are therefore, no residual direct or indirect impacts associated with the proposed development that could adversely affect the integrity of the River Barrow and River Nore SAC (002162).

## 6.18. In-Combination Effects

6.18.1. The proposed development was considered in combination with other developments and activities in the area that could result in cumulative impacts on European Sites. It is noted that the NIS considered the Kilkenny County Development Plan 2014 – 2020 and Carlow County Development Plan 2015 – 2021. These have since been superseded.

- **Kilkenny City and County Development Plan 2021-2027**

This plan has been subject to Appropriate Assessment (AA) and Strategic Environmental Assessment (SEA) and acknowledges the importance of maintaining the county's biodiversity while at the same time promoting infrastructure and tourism. The plan includes measures for promoting its waterways along with maintaining the ecology of its inland waters and rivers.

- **Carlow County Development Plan 2022-2028**

I refer to Section 2.0 of this report above. This plan has also been subject to AA and SEA. The Plan has a number of policies in relation to Natural Heritage and enhancement of biodiversity. It also describes policies and objectives for the

protection of inland waterways, rivers, lakes and canals including the protection of biodiversity and the enhancement of the natural heritage.

- **Other larger infrastructural projects in the area**

- 1) The Carlow Flood Relief Scheme undertaken as part of the OPW Major Flood Relief Schemes programme and completed in 2013.
- 2) OPW; The Minor Flood Mitigation Works and Coastal Protection Scheme: 2009-2017

- **Waterways Ireland Applications**

- 1) Minor wall repairs works at three locations along the Barrow in County Carlow; Royal Oak Railway, Bagnelstown and Ballinabranagh. All will be subject to an Ecological Impact Assessment and AA.
- 2) Bank repair works and associated jetty upgrades at five locations along the Barrow; 27<sup>th</sup> Lock Lower, Ardreich Lock, Maganey Bridge, Rathellin Lock and Lower Tinnahinch Lock. All have been subject to an Ecological Impact Assessment and AA.

- **Existing Weirs on the Barrow System**

There are numerous barriers to fish migration in the form of weirs on the Barrow system. The larger the number of barriers to be negotiated in an upstream migration the greater will be the energy expenditure of the fish. Energy loss immigration, with enforced additional expenditure in traversing barriers reduces energy available for gamete generation (eggs and sperm) and may impact on sexual performance. Upstream migrating adult fish passing through rock ramp fish passage facilities with built-in resting areas and location of low velocity, combined with overall low gradient in the design, will encounter less-energetic passage situations as a result of the construction of the rock ramp at Tinnahinch. The proposed works will therefore have a positive effect on fish migration in their own right and cannot therefore contribute to any cumulative negative effect when considered cumulatively with the other weirs on the River Barrow.

6.18.2. While it is considered highly unlikely that there is any potential for cumulative impacts, the implementation of the stated mitigation measure will ensure that there is no potential for adverse effects on Natura 2000 sites. Therefore, it is concluded that there

will not be any significant in-combination contribution by the proposed development to possible adverse effects on the River Barrow and River Nore SAC.

## 6.19. **Conclusions**

6.19.1. In relation to specific QIs the following can be concluded:

### 6.20. **White Clawed Crayfish**

- Boulders and cobble associated with the rock-ramp will increase the area of potential refuges for freshwater crayfish.
- Research is lacking investigating the impacts of rock-ramps on crayfish but the rock ramp will be an improvement on the current use of the weir.
- Although crayfish will be unlikely to pass upstream during high flow conditions, the proposed rock-ramp will improve the ability of crayfish to pass the weir during periods of lower flow.
- Overall this will be an improvement to the current conditions. The operation of the weir will therefore enhance potential crayfish habitat and increase the chances of passage upstream and downstream of the weir, therefore having a positive impact.
- Post implementation of avoidance and preventive measures the residual effects on the River Barrow and River Nore SAC will be negligible.

### 6.21. **Sea Lamprey, Brook Lamprey & River Lamprey**

- Direct adverse effects on this species have been avoided through the design of the scheme.
- Flow rates and pool dimensions of the proposed rock ramp and lamprey mats will allow sea lamprey upstream passage for part of the year.
- Sea lamprey can already pass Tinnahinch Lower weir but at very low numbers.
- The proposed rock ramp and weir modifications will increase the ability of sea lamprey to migrate upstream and therefore have a positive impact on the species.
- Post implementation of avoidance and preventive measures the residual effects on the River Barrow and River Nore SAC will be negligible.

### 6.22. **Atlantic Salmon**



- Flow rates and pool dimensions of the proposed rock ramp will allow Atlantic salmon upstream passage for most of the year.
- Salmonids can already pass Tinnahinch Lower weir but the proposed rock ramp will increase the ability of salmon to migrate upstream and therefore have a positive impact on the species.
- Post implementation of avoidance and preventive measures the residual effects on the River Barrow and River Nore SAC will be negligible.

#### 6.23. **Twaite Shad**

- Twaite shad are not known to migrate upstream past St. Mullins weir, south of the proposed development site. Shad in Ireland tend to be restricted to the lower reaches of rivers, remaining in areas with tidal influence. However, should that obstacle at St. Mullins be removed in the future, and the species migrate further upstream, shad will be able to utilise the rock ramp to migrate upstream under the appropriate conditions.
- Flow rates, pool dimensions and notch sizes of the proposed rock ramp will allow shad upstream passage for some of the year.
- As the channel is wide and unshaded by vegetation it is well lit and provides suitable conditions for migrating shad.
- The rock ramp will therefore have a positive impact on this species.
- Post implementation of avoidance and preventive measures the residual effects on the River Barrow and River Nore SAC will be negligible.

#### 6.24. **Otter**

- The design of the scheme has been developed with an overall objective of minimising the impact on ecologically sensitive sites and will not result in the loss or fragmentation of any otter habitat.
- The operation of the rock ramp will have a positive impact on otter as it will increase the potential for upstream passage of migratory fish species which are prey for otter.
- Post implementation of avoidance and preventive measures the residual effects on the River Barrow and River Nore SAC will be negligible.

6.24.1. Based on the above, it can be concluded in view of best scientific knowledge, on the basis of objective information that the proposed development will not adversely affect the maintenance of favourable conservation status for this QI listed below within the River Barrow and River Nore SAC

- 1) Estuaries.
- 2) Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation
- 3) Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
- 4) Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*
- 5) White-Clawed Crayfish
- 6) Sea Lamprey
- 7) Brook Lamprey
- 8) River Lamprey
- 9) Atlantic Salmon
- 10) Freshwater Pearl Mussel
- 11) Desmoulin's Whorl Snail
- 12) Twaité Shad
- 13) Otter

6.24.2. With regards to conditions to be attached to any grant of planning permission I refer to the report of the Inspectorate Ecologist (6th May 2022) and note the recommendations to amend / omit a number of conditions as set out in the previous inspectors report. These recommendations have been incorporated into the conditions set out below.

6.24.3. I am satisfied that a full examination of the potential impacts has been analysed and evaluated using the best scientific knowledge. The potential for significant effects on the River Barrow & River Nore SAC was identified. Appropriate Assessment has demonstrated that where potential adverse effects were identified in view of the

conservation objectives of this site, key design features and detailed mitigation measures have been prescribed to remove risks to the integrity of the European site.

6.24.4. I am satisfied based on the information available that if the key design features and mitigation measures are undertaken, maintained and monitored as detailed in the NIS adverse effects on the integrity of the River Barrow & River Nore SAC will be avoided

6.24.5. I consider it reasonable to conclude on the basis of the information on the file, which I consider adequate in order to carry out Appropriate Assessment, that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the River Barrow & River Nore SAC or any other European site, in view of the site's Conservation Objectives. This conclusion is based on a complete assessment of all aspects of the proposed project and there is no reasonable doubt as to the absence of adverse effects.

## 7.0 Recommendation

7.1. It is recommended that permission be **GRANTED** subject to conditions for the reasons and considerations set out below.

## 8.0 Reasons and Considerations

8.1.1. Having regard to:

- a) The location of the proposed scheme, the established nature of the existing Lower Tinnahinch Weir, the detailed nature, scale and form of the development and its location within the River Barrow and River Nore SAC
- b) The specific operational considerations at the site whereby the existing weir has been identified by Inland Fisheries Ireland as an obstacle to fish migration and free movement of all fish over all periods of the year, which is non-compliant with Section 116 of the 1959 Fisheries (Consolidation) Act and the requirements of the European Habitats Directive
- c) The conservation objectives, qualifying interests and special conservation interests for the River Barrow and River Nore SAC (Site Code 002161)

- d) The information submitted in relation to the potential impacts on habitats, flora and fauna, including the Natura Impact Statement and Construction & Environment Management Plan
- e) Mitigation measures which are proposed for the construction and operation phases of the development.
- f) The provisions of the Carlow County Development Plan 2022-2028
- g) The written submissions and observations received in relation to the proposed development,
- h) The Inspectorate Ecologist's assessment, and the report and recommendation of the previous Senior Planning Inspector

It is considered that, subject to compliance with the conditions set out below, the proposed repair and strengthening works to the existing weir and proposed rock ramp fish pass would not have significant negative effects on the environment or on the archaeological heritage of the area. The proposed development would be in accordance with the stated objectives of the Carlow County Development Plan 2022-28 *to support the conservation and enhancement of Natura 2000 Sites, and to protect the Natura 2000 network from any plans and projects that are likely to have a significant effect on the coherence or integrity of a Natura 2000 Site, in accordance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines.* It would constitute a significant improvement in terms of the protection of endemic fish species by accommodating their passage upstream and downstream of the weir and would, therefore, be in accordance with the proper planning and sustainable development of the area.

## 9.0 Conditions

1.	The development shall be carried out and completed in accordance with the plans and particulars lodged with the application as amended by the further plans and particulars submitted on the 20 <sup>th</sup> day of March 2020 and by the further plans and particulars received by An Bord Pleanála, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior
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	<p>to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.</p> <p><b>Reason:</b> In the interest of clarity</p>
2.	<p>a) Prior to commencement of development, mitigation measures specified in the CEMP for the protection of fisheries habitat and water quality shall be submitted and agreed with Inland Fisheries Ireland and submitted to the Planning Authority.</p> <p>b) The creation of a dry working environment and all works within it shall be conducted from the 1<sup>st</sup> July to the 30<sup>th</sup> September inclusive. No site investigation, excavation or construction shall take place between October 1<sup>st</sup> and June 30<sup>th</sup> in any year.</p> <p>c) Full regard shall be had to Inland Fisheries Ireland’s published guidelines for construction works near waterways (Guidelines on Protection of Fisheries during construction works in and adjacent to waters, 2016).</p> <p>d) A programme of water quality monitoring shall be prepared in consultation with the contractor, and relevant statutory agencies and the programme shall be implemented thereafter. Details of such monitoring shall be submitted to and agreed in writing with the planning authority.</p> <p><b>Reason:</b> In the interests of protecting the environment, the protection of European Sites and in the interest of public health.</p>
3.	<p>a) Monitoring of the construction phase shall be carried out by a suitably qualified Ecologist to ensure that all environmental and ecological mitigation measures contained in the documentation which accompany the application are fully implemented. The Ecologist shall be present during site construction works. Upon completion of works, an ecological report of the site works shall be prepared by the appointed Ecologist and submitted to the planning authority for agreement in writing.</p> <p>b) A designated member of the developers staff shall interface with the Planning Authority or members of the public in the event of complaints or queries in relation to environmental or ecological matters. Details of the name and contact details and the relationship to the developer of this</p>

	<p>person shall be available at all times to the Planning Authority on request whether requested in writing or by a member of staff of the Planning Authority at the site.</p> <p><b>Reason:</b> In the interests of nature conservation and the protection of terrestrial and aquatic biodiversity.</p>
4.	<p>A monitoring programme will be arranged by Waterways Ireland and carried out by Inland Fisheries Ireland to ensure that the fish pass is operating effectively for all target species across the range of river flows for which the pass was designed. This shall be undertaken in line with standard methodology within 2 years of the construction of the fish pass and no longer than 4 years post construction. Results shall be made publicly available by Waterways Ireland.</p> <p><b>Reason:</b> In the interests of nature conservation and the protection of aquatic biodiversity.</p>
5.	<p>a) A detailed Traffic Management Plan shall be submitted to and agreed in writing with Carlow County Council in consultation with Kilkenny County Council prior to commencement of development.</p> <p>b) All necessary measures shall be undertaken by the contractor to prevent the spillage or deposit of clay, rubble or other debris on adjoining roads during the course of the works.</p> <p><b>Reason:</b> In the interest of traffic safety and to protect the amenities of the area.</p>
6.	<p>Prior to commencement of work on site the developer shall submit a recreational water user safety audit for written agreement with the Planning Authority.</p> <p><b>Reason:</b> In the interest of public safety and to protect the amenities of the area.</p>
7.	<p>A pre-construction survey for Otter(s) will be undertaken in advance of any works at the site to confirm the baseline and in line with best practise. In the unlikely event of an otter holt being found, measures shall be implemented</p>

	<p>to ensure the protection of this species in consultation with the National Parks and Wildlife Services.</p> <p><b>Reason:</b> In the interests of biodiversity and to safeguard the ecological amenities of the area.</p>
8.	<p>The applicant and any agent acting on its behalf shall facilitate the preservation, recording, protection or removal of archaeological materials or features that may exist within the site.</p> <p>In this regard, the applicant shall:</p> <p>(a) employ a suitably qualified archaeologist prior to commencement of the development who shall assess the site and monitor all site investigations and other excavation works, and</p> <p>(b) undertake an Underwater Archaeological Impact Assessment in advance of any works. The assessment shall be carried out in accordance with the requirements of the Department of Culture, Heritage and the Gaeltacht and shall include the following: detailed desktop study and archaeological assessment to include intra-riverine assessment and if necessary, a dive survey. The assessment shall include survey and recording of the area of the river that will be impacted and adjacent areas,</p> <ul style="list-style-type: none"> <li>i. a metal detection survey,</li> <li>ii. the nature and location of any archaeological material on the site,</li> <li>iii. the impact of the proposed development on such archaeological material A report containing the results of the assessment and any recommendations to mitigate any negative impacts shall be submitted to the Underwater Archaeological Unit for consideration in advance of any works commencing on the site.</li> </ul> <p>(c) where necessary provide arrangements, acceptable to the Department of Culture Heritage and the Gaeltacht for the recording and removal of any archaeological material which it is considered appropriate to remove.</p>

	<p><b>Reason:</b> In order to conserve the archaeological heritage of the site and to secure the preservation and protection of any remains that may exist within the site.</p>
9.	<p>The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.</p> <p>Reason: It is a requirement of the Planning and Development Act 2000, as amended, that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission.</p>

I confirm that this report represents my professional planning assessment, judgement and opinion on the matter assigned to me and that no person has influenced or sought to influence, directly or indirectly, the exercise of my professional judgement in an improper or inappropriate way.

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**Mary Crowley**

**Senior Planning Inspector**

**15<sup>th</sup> May 2023**