



An
Bord
Pleanála

Inspector's Report ABP-300422-17.

Development

Remedial works to Ardfinnan Bridge and alterations to traffic arrangements at Ardfinnan Bridge.

Ardfinnan Bridge is a Protected Structure

Location

Ardfinnan, Co. Tipperary.

Local Authority

Tipperary County Council.

Type of Application

Application for approval made under Section 177(AE) of the Planning and Development Act, 2000 (Local Authority development requiring Appropriate Assessment)

Prescribed Bodies

Transport Infrastructure Ireland
Dept. of Transport, Tourism & Sport
Heritage Council
Dept. of Communications, Climate Action & Environment

Department of Culture, Heritage and
the Gaeltacht

Department of Housing, Planning and
Local Government

An Chomhairle Ealaíon

Fáilte Ireland

An Taisce — the National Trust for
Ireland

Inland Fisheries

Waterways Ireland.

Observer(s)

144 Observers noted.

Date of Site Inspection

22nd February, 2018 & 9th April, 2018

Inspector

A. Considine.

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1.0 Introduction

- 1.1. Tipperary County Council is seeking approval from An Bord Pleanála to undertake remedial works to the bridge and alterations to traffic arrangements on Ardfinnan Bridge, Ardfinnan, Co. Tipperary. The bridge lies within the Lower River Suir SAC, Site Code 002137, which is a designated European site. There are three other designated European sites SACs within 15km of the proposed works (see further analysis below). A Natura Impact Statement (NIS) and application under Section 177AE was lodged by the Local Authority on the basis of the proposed development's likely significant effect on a European site.
- 1.2. Section 177AE of the Planning and Development act 2000 (as amended) requires that where an appropriate assessment is required in respect of development by a local authority the authority shall prepare an NIS and the development shall not be carried out unless the Board has approved the development with or without modifications. Furthermore, Section 177V of the Planning and Development Act 2000 (as amended) requires that the appropriate assessment shall include a determination by the Board as to whether or not the proposed development would adversely affect the integrity of a European site and the appropriate assessment shall be carried out by the Board before consent is given for the proposed development.
- 1.3. The proposed development was initially submitted to An Bord Pleanála on the 4th day of December, 2017. The development was re-advertised, to include that Ardfinnan Bridge is a protected structure, on the 16th day of March, 2018 and the final date for receipt of submissions was the 3rd day of May, 2018.

2.0 Proposed Development

- 2.1. The description of the proposed development, as advertised is as follows:
 - Remedial works to Ardfinnan Bridge consisting of:
 - Repair and repointing of masonry throughout the bridge extents;
 - Scour repairs to the bridge, immediately upstream and downstream of the bridge, and sections of the concrete wall on the northwest embankment;

- Replacement of failed section of gabion wall on the southern bank downstream of Ardfinnan Bridge.
- Alterations to the traffic arrangement at Ardfinnan Bridge as follows:
 - The introduction of a pedestrian pathway on the downstream side of the bridge, delineated by line marking, colour surfacing and flexible posts. This pathway will accommodate safe passage of pedestrians over the bridge;
 - This restriction on the carriageway will necessitate restriction of traffic flow over the bridge to a traffic signal controlled arrangement, allowing alternating one-way traffic to cross the bridge;
 - Associated traffic signals, detectors, line-marking and localised civil works to allow installation of the revised traffic arrangement on both approaches to Ardfinnan Bridge;

At Ardfinnan Bridge, (Ardfinnan and Commons Townlands) Co. Tipperary. Ardfinnan Bridge is a protected structure (Record of Protected Structure Ref S205).

2.2. The application included the following accompanying documents:

- Description of the proposed works
- Planning drawings
- Environment / Ecology Reports:
 - Natura Impact Statement
 - Ecological Impact Assessment
 - Aquatic Ecology Impact Assessment
 - Construction Environmental Management Plan
- Underwater Scour Inspection Report
- Underwater Archaeological Report
- Structural Investigation Report
- Preliminary Health & Safety Plan
- Preliminary Traffic Management Plan

- Waste Management Plan.

3.0 Site and Location

- 3.1. Ardfinnan is located approximately 12km to the south west of the town of Clonmel, and 7km south of Cahir in the south of County Tipperary. The town developed along the banks of the River Suir and has a variety of amenities including a large area of open space along the river bank, amongst other community facilities.
- 3.2. Ardfinnan Bridge is a 13 no. span arch road bridge on the Regional Road, the R665 which connects Clonmel, Co. Tipperary to the north east, with Mitchelstown, Co. Cork to the south west. The Bridge spans the River Suir at Ardfinnan, Co. Tipperary and connects the two areas of the village centre, north and south of the river. The bridge was rebuilt in circa 1800, when it shows evidence of having been widened.
- 3.3. The Bridge has operated as a two way carriageway up until the County Council reduced it to a single lane with traffic lights in 2016 following the preparation of a report on the condition of the bridge. The bridge is a Protected Structure, ref S205 in the South Tipperary County Development Plan, is also a National Monument, ref CT 20 and is listed on the National Inventory of Architectural Heritage (NIAH) ref no. 22126003. The description of the bridge is as follows:

‘Thirteen-arch road bridge over River Suir, rebuilt c.1800, showing evidence of widening to east elevation, but likely to incorporate medieval and/or seventeenth-century fabric. Irregular arches, varying between round and segmental and of varying heights, with cut-stone V-cut-waters to west elevation. Three dry round overflow arches to south end, and segmental arch over millstream to east side of north end. Rubble limestone walls with cut limestone voussoirs, rendered soffits, rubble limestone parapet walls with flat capstones, render coping to south end of west parapet, and rectangular drainage holes with lintels to carriageway. Large pipe carried across east elevation.’

Appraisal

This remarkably long bridge striding across a broad expanse of the River Suir, is a notable feature of Ardfinnan and the surrounding countryside. The closely-spaced arches and relatively flat surface give it a strong horizontal

emphasis helping to visually as well as practically connect the two sides of the town. It appears to have been extended at either end, to accommodate the millstream to the north and the flood plain to the south. The carefully cut masonry to the cut-waters and voussoirs shows the skill of the stone-cutters and masons involved in the construction, and provides textural contrast to the rubble limestone of the walls. The bridge is at a spot which has been spanned since at least 1311.

4.0 Planning History

None

5.0 Legislative and Policy Context

5.1. The EU Habitats Directive (92/43/EEC):

This Directive deals with the Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union. Article 6(3) and 6(4) require an appropriate assessment of the likely significant effects of a proposed development on its own and in combination with other plans and projects which may have an effect on a European Site (SAC or SPA).

5.2. European Communities (Birds and Natural Habitats) Regulations, 2011

These regulations consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats)(Control of Recreational Activities) Regulations 2010, as well as addressing transposition failures identified in CJEU judgements.

5.3. National nature conservation designations:

The Department of Culture, Heritage and the Gaeltacht and the National Parks and Wildlife Service are responsible for the designation of conservation sites throughout the country. The three main types of designation are Natural Heritage Areas (NHA), Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) and the latter two form part of the European Natura 2000 Network.

European sites located in proximity to the subject site include:

- The Lower River Suir SAC, Site Code 002137

5.4. **Planning and Development Acts 2000 (as amended):**

Part XAB of the Planning and Development Acts 2000-2017 sets out the requirements for the appropriate assessment of developments which could have an effect on a European site or its conservation objectives.

- 177(AE) sets out the requirements for the appropriate assessment of developments carried out by or on behalf of local authorities.
- Section 177(AE) (1) requires a local authority to prepare, or cause to be prepared, a Natura impact statement in respect of the proposed development.
- Section 177(AE) (2) states that a proposed development in respect of which an appropriate assessment is required shall not be carried out unless the Board has approved it with or without modifications.
- Section 177(AE) (3) states that where a Natura impact assessment has been prepared pursuant to subsection (1), the local authority shall apply to the Board for approval and the provisions of Part XAB shall apply to the carrying out of the appropriate assessment.
- Section 177(V) (3) states that a competent authority shall give consent for a proposed development only after having determined that the proposed development shall not adversely affect the integrity of a European site.
- Section 177AE (6) (a) states that before making a decision in respect of a proposed development the Board shall consider the NIS, any submissions or observations received and any other information relating to:
 - The likely effects on the environment.
 - The likely consequences for the proper planning and sustainable development of the area.
 - The likely significant effects on a European site.

5.5. EU (Environmental Impact Assessment and Habitats) (2) Regulations 2011:

Article 6 of the EU (Environmental Impact Assessment and Habitats) (2) Regulations 2011 de-exempts Part 8 requirements for local authority development where there is an appropriate assessment requirement.

5.6. Development Plan:

5.6.1. The South Tipperary County Development Plan 2009 as varied and extended is the relevant plan pertaining to the subject site. Chapter 7 of the Plan deals with Landscape, Water Quality & Heritage and the following policy objectives are considered relevant:

- Policy LH6: Natura 2000 Sites and Protected Species
- Policy LH8: Inland Waters and Riparian Zones
- Policy LH13: Protected Structures
- Policy LH16: Archaeology and Cultural Heritage

5.6.2. In addition, the Ardfinnan Settlement Plan, 2017 is relevant. In terms of Services & Infrastructure, the settlement plan states that is a specific objectives:

- **SO 9:** To ensure the protection of protected structures, historic buildings and buildings / structures of archaeological significance.
- **SO 10:** To support the expansion of public infrastructure within the village.
- **SO 11:** The Council will investigate the feasibility of installing a public footpath across the bridge to calm traffic and to enhance pedestrian safety or an alternative pedestrian access across the River Suir subject to funding being approved.

6.0 The Natura Impact Statement

6.1. Tipperary County Council's application for the proposed development was accompanied by an Appropriate Assessment Screening and Natura Impact Statement (NIS) which scientifically examined the proposed development and the European sites. The NIS identified and characterised the possible implications of the proposed development on the European sites, in view of the site's conservation objectives, and provided information to enable the Board to carry out an appropriate assessment of the proposed works.

6.2. The AA Screening exercise examined the potential impacts on four European Sites, which are located within 15km of the proposed development. The AA concluded as follows:

- As there are no source-receptor pathway links between the proposed development, significant impacts are not anticipated at the following sites:
 - Blackwater River (Cork/Waterford) SAC, Site Code 002170, located approximately 11.6km to the south
 - Galtee Mountains SAC, Site Code 000646, located approximately 12.6km to the northwest
 - Nier Valley Woodlands SAC, Site Code 000668, located approximately 12.8km to the east.
- It is not possible to exclude the possibility of significant impacts on the following Natura site, arising in the absence of mitigation, during construction within and adjacent to the river which could potentially affect aquatic qualifying interests within the lands downstream:
 - Lower River Suir SAC, Site Code 002137.

6.2.1. Chapter 4 of the submitted document seeks to examine the potential for significant effects arising from the proposed development on the integrity of the Lower River Suir SAC, in light of its conservation objectives. The chapter provides details of the qualifying interests potentially exposed to risk and their conservation objectives.

- 6.2.2. Chapter 5 provides for an appraisal of potential impacts including mitigation measures and deals with the potential effect of the proposed development in combination with other potential sources.
- 6.2.3. Chapter 6 concluded that, subject to the implementation of best practice and the recommended mitigation measures, there would be no adverse impacts on the integrity of any European sites within the Natura 2000 network.
- 6.2.4. Section 7 of the document provides references and there are two appendices as follows:
- Appendix 1: Table of Mitigation with Respect to Site-Specific Conservation Objectives of the Lower River Suir SAC
 - Appendix 2: Schedule of Ecological Mitigation from the Construction and Environmental Management Plan

6.3. The NIS was accompanied by:

- Ecological Impact Assessment
The purpose of the EcIA is to establish the ecological baseline within the subject lands, evaluate the ecological features present and assess the potential impacts resulting from the proposed development.
Mitigation measures are recommended to prevent water quality impacts, to maintain habitat quality at the bridge and downstream, to prevent the accidental introduction of pathogens and invasive species, to prevent the mortality of Key Ecological Receptors during the construction and to ensure legal compliance with protect species legislation. In addition, measures have been proposed to remove barriers to aquatic species migration at Ardfinnan Bridge.
After mitigation, the potential for significant effects has been reduced to non-significant levels for all key ecological receptors.
- Aquatic Ecology Impact Assessment
The purpose of the Aquatic EcIA is to establish the aquatic ecological baseline within the river waters in the vicinity of Ardfinnan Bridge and includes surveys of spawning lampreys, white-clawed crayfish, freshwater pearl mussel, salmon and general macroinvertebrates.

Impacts during construction and operational phases are identified and assessed, including both direct and indirect impacts, as well as cumulative impacts. Mitigation measures are indicated as being proposed in the Construction Environmental Management Plan to reduce the potential for significant effects on the Lower River Suir SAC and its conservation interests.

7.0 Consultations

In accordance with the provisions of Section 177AE(4)(b), a number of prescribed bodies were notified of the proposal and copies of the application and the accompanying Natura Impact Statement were circulated to the following bodies:

- Transport Infrastructure Ireland
- Dept. of Transport, Tourism & Sport
- Heritage Council
- Dept. of Communications, Climate Action & Environment
- Department of Culture, Heritage and the Gaeltacht
- Department of Housing, Planning and Local Government
- An Chomhairle Ealaíon
- Fáilte Ireland
- An Taisce — the National Trust for Ireland
- Inland Fisheries
- Waterways Ireland.

Responses were received from the following prescribed bodies:

7.1. Transport Infrastructure Ireland:

The TII responded to the proposed development advising that there are no national road interactions to address and therefore, TII has no specific observations to make on the proposed development.

7.2. Department of Culture, Heritage and the Gaeltacht:

The DAU responded to the proposed development with the following observations:

The report notes no objections to the proposed development in terms of archaeology, subject to pre-works further information being submitted and agreed. With regards to nature conservation, the report requires that further information be submitted in terms of the following:

- Whether starwort species (*Callitriche* spp) were present and / or identified in addition to stream water crowfoot *Ranunculus penicillatus*
- Whether the Ecological Clerk-of-Works will have the authority to stop works if a biosecurity breach, or pollution or siltation event, is likely to occur.
- Whether the duties of the Ecological Clerk-of-Works will include:
 - to check each bag of gravel for use as damming material for its content
 - to ensure that the silt curtain is properly emplaced, weighted and of suitable material and provide photographic evidence of its effective functioning during in-stream machinery works.
- Whether a post-works monitoring report of the condition of the downstream habitat will be produced.
- Whether a resurvey for crayfish plague will be carried out prior to works commencing, and if found to be present, whether all machinery, equipment, clothing and materials will be thoroughly cleaned, dried and disinfected before leaving the site.

The submission concludes that the AA may need to include reference to the above, if the NIS is not up-dated.

7.3. Inland Fisheries Ireland

Inland Fisheries Ireland responded to the proposed development with the following observations:

- The bridge at Ardfinnan has long been identified as an obstruction to the free movement of fish particularly during low flow conditions. This is due to the existing step on the downstream side of the bridge where fish have to jump to

enter the bridge proper.

Section 116 of the Fisheries Consolidation Act of 1959 outlines the responsibility of weir owners in relation to fish movement and the WFD also outlines connectivity in water courses as being of major importance.

The proposed remedial works will do nothing to improve the fish passage across the entire width of the river. A preferred option would be to construct a sloping exit from the bridge downstream at a gradient of 1 in 30 similar to the minor rockramp proposed for the right bank. This would both protect the structural integrity of the bridge and provide a fish pass structure across the entire river width.

Two fish passes as proposed are considered to be totally inadequate for the main channel of the River Suir.

- The proposal to work on the downstream section in a live river is confusing and these sections should be worked on in dry conditions also.

The use of gabion baskets as described in Section 5.0 of the work requirements is not outlined in the drawings and the finished invert level is not indicated, similarly the use of grout injected sacks placed in the scour holes has no finished level indicated on the drawings, therefore more detail is required if this system is to be used.

The construction of a mass concrete beam on the upstream side of the scour zones as indicated on the drawings, while dimensions are given, no finished levels are provided or levels relating to this structure are provided.

- In terms of the likely significant effects of the development on the European Site, the IFI considers that the development if carried out as described will be further engineering manipulation of the river bed. There will be no improvements for fish movement or fisheries habitat.

While disturbance of the site during construction can be mitigated, the long-term result will be a concrete sill on the bed of a river upstream and a concrete gabion on the bed of the river downstream.

This is not conducive with the spirit of the Water Framework Directive and it is requested that more appropriate fish friendly solutions are adopted for the long term structural and environmental solutions to this project.

7.4. Public Submissions:

7.4.1. Following the initial publishing of the public notice for the proposed works, 143 public submissions were made to the Board. The details of third parties who made submissions are provided in Appendix 1 to this report.

7.4.2. The issues raised by third parties are summarised as follows:

- People rushing to make the green light puts mass goers and school children at risk.
- Queuing traffic, particularly during the busy harvest time, as well as farmers trying to access Bretts puts pedestrians and motorists at risk.
- The traffic lights have caused serious disruption to local business due to waiting times and delays at the traffic lights. Income has dropped dramatically since the temporary lights were erected.
- Impact on residents, local farmers and tourists due to waiting times and delays at the traffic lights.
- Increased instances of littering from motorists stopped at lights which will impact on Ardfinnan Tidy Town efforts.
- Tipperary County Council failed to actively engage and communicate effectively with the local community. This will be evidenced by the number of objections to the proposed development and the large numbers who attended a protest march.
- The local community would be happy with Option 2 as proposed by the County Council, ie, a cantilever walkway attached to the outside of the bridge (suspended over the river).
- The layout of Ardfinnan provides for the local primary school, the church, the Co. Council yard, community hall and a number of businesses being located in very close proximity to both sides of the bridge. This is why traffic lights as a solution to pedestrians crossing the bridge will not provide safety for all road users.
- Ardfinnan is a commuter route which creates high volumes of traffic.

- Motorists feel vulnerable waiting for the traffic lights to turn green, particularly when it's dark due to inadequate lighting. There have been thefts from stationary cars waiting for lights to change.
- The proposed painted walkway on the bridge with bollards is not a safe solution.
- Flooding has been reasonably well managed in the village in recent years. The proposal to put the sediment from the river bank, to facilitate the repairs to the bridge, onto the green area will increase the flooding to an area that floods on a regular basis.
- The proposed development, and in particular the location of traffic lights, will require cars to delay in the area which is prone to flooding and which is located 1.5m below the flood bank adjoining the road.
- Tipperary County Councils application to the Board has not referred to the flood issues.
- Tipperary County Council has focused entirely on pedestrian safety on the bridge and ignored all the negative implications of the proposal on all other road users.
- The €800,000 pledge to fix Ardfinnan Bridge should be sufficient to repair the bridge and construct a safe crossing for pedestrians.
- If the lights fail, which they do on occasion, you cannot see over the bridge to see on-coming traffic.
- The development will ruin the aesthetics and beauty of Ardfinnan Village and the proposed bollards will result in a visual impact on the beautiful bridge.
- Issues raised in relation to the decision making process for the bridge and no consideration has been given to the residents or community views.
- The development if permitted, will result in a serious accident and possible loss of life.
- The placement of permanent traffic lights will have a visual impact on the aesthetics of the village.

- Tillage farmers who supply grain to Brett Brothers invariably end up queuing for access to the yard to deposit grain. This queuing area for tractors/trailers/lorries correspond to where the proposed traffic lights will be positioned.
- The creation of a walkway narrows the area for a combine harvester. The proposal, including the use of bollards, would be a potential accident hazard.
- Impact of the lights on businesses and their income. Passing trade is no longer stopping and people are avoiding the village.
- Impacts on the ability of emergency services to get to incidents affected.
- Loss of two disabled parking spaces in the submitted plans.
- The development will impact on the use of the green across from the school which is used for PE classes and the GAA club training.
- The development will increase environmental pollution, particularly noise pollution in front of the school as traffic builds and moves off.
- The current situation on the bridge is not blind friendly or wheelchair friendly and has robbed people with disabilities of their independence. A wheelchair and a buggy could not pass on a 1.5m wide path.
- The bridge carries 3,500 cars/vehicles daily as it is a gateway to numerous areas on the tourist trail.
- The development will be a danger to wildlife in terms of pollution and traffic. Noise will impact on the nesting area for swans, and on insects for fish species.
- There have been a number of recent burst pipes at the Clonmel side of the bridge which could be caused by the extra weight at the one time, with vehicles going through.
- The sight lines from bends in the road to the traffic lights do not meet the minimum RSA requirements.
- It is impossible to clean areas in the vicinity of the bridge and the lights have put volunteers at risk when working for Ardfinnan Tidy Towns.

- The development puts pressure on bus drivers.
- Procedural issues raised in terms of information provided on the proposed development to prescribed bodies.
- Inadequate consideration of alternative options for the provision of separate pedestrian bridge or pedestrian bridge supported by Ardfinnan Bridge.
- The preference of the local population was misrepresented during pre-application consultations with the National Monuments Service.
- Inadequate consideration of works carried out by the River Suir Blueway in summer 2017.
- There have been works carried out on the river banks as part of flood barrier construction, which would have destroyed any archaeological features.
- There are double standards in comparison to other similar developments by the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, the National Monument Service and the Development Applications Unit in response to the pre-planning process inquiry.
- Examples of footbridges being attached to existing bridges are provided in a number of the submissions, including Macroom Bridge, Barry's Bridge, Thurles and Bridge at Carrick on Shannon, Co. Leitrim.

7.4.3. Following the re-advertising of the proposed development, no further submissions were received by the Board.

8.0 Assessment

Under the provisions of Section 177AE of the Planning & Development Act, 2000 as amended, the Board is required to consider the proposed development in terms of the following:

- (a) The likely consequences for the proper planning and sustainable development of the area
- (b) The likely effects on the environment and
- (c) The likely significant effects of the proposed development on any European sites.

8.1. The likely consequences for the proper planning and sustainable development of the area:

8.1.1. The proposed development comprises two parts as follows:

1. seeking to carry out remedial works to Ardfinnan Bridge which will include the repair and repointing of masonry, scour repairs to the bridge and sections of the concrete wall on the northwest embankment and the replacement of failed sections of gabion wall on the southern bank.
2. Alter the traffic arrangements on the bridge.

8.1.2. The proposed development primarily provides for remedial works to improve the structure of Ardfinnan Bridge. Policy LH13: Protected Structures, of the South Tipperary County Development Plan 2009 as varied and extended, is relevant in this instance in that it seeks 'to encourage the sympathetic restoration, re-use and maintenance of protected structures thereby ensuring their conservation and protection.' The Ardfinnan Settlement Plan, 2017 further supports the CDP in objective SO9, which seeks 'to ensure the protection of protected structures, historic buildings and buildings / structures of archaeological significance'.

8.1.3. The Board will note the submission of a number of reports which provide details of the current condition of the structure of the bridge. The Underwater Archaeological Impact Assessment Report provides details of impacts arising from the proposed remedial works and details of mitigation measures. The Construction

Environmental Management Plan notes that a Conservation Consultant will advise on specific details and inspect works to the bridge, reporting as appropriate.

8.1.4. In terms of the principle of the proposed development, I am reasonably satisfied that the remedial works would generally be in accordance with the requirements of the policy objectives contained in the South Tipperary County Development Plan 2009 as varied and extended and the Ardfinnan Settlement Plan, 2017.

8.1.5. Further to the above, the Ardfinnan Settlement Plan also provides for policy, SO 11, which states that ‘the Council will investigate the feasibility of installing a public footpath across the bridge to calm traffic and to enhance pedestrian safety across the River Suir subject to funding being approved.’ It is clear that the proposed works will accord with this stated objective as the provision of a footpath on the bridge is an objective of the settlement plan.

8.1.6. In terms of the proposed development, and in particular with regard to the proposed alterations to traffic arrangements on the bridge, I consider it reasonable to refer to the ‘The Design Manual for Urban Roads & Streets’ (DMURS), DoTTS, March, 2013. This Manual replaces DMRB in respect of all urban roads and streets and it does not differentiate between public and private urban streets, where a 60kph speed limit or less applies. The implementation of DMURS is obligatory and divergence from same requires written consent from relevant sanctioning authority (NRA, NTA or DTT&S). The Manual seeks to address street design within urban areas (i.e. cities, towns and villages) and it sets out an integrated design approach.

8.1.7. The Manual seeks to address street design within urban areas (i.e. cities, towns and villages). It sets out an integrated design approach. What this means is that the design must be:

- a) Influenced by the type of place in which the street is located, and
- b) Balance the needs of all users.

DMURS sets out a road user priority hierarchy as follows:

- 1 Pedestrians;
- 2 Cyclists
- 3 Public transport
- 4 Car user.

The key design principles for roads include –

- Integrated streets to promote higher permeability & legibility;
- Multi-functional, placed-based, self-regulations streets for needs of all users;
- Measuring of street quality on the basis of quality of the pedestrian environment
- Greater levels of connectivity;
- Catering for and promotion of higher levels of pedestrian movement;
- A higher level of integration between users to calm traffic and increase ease of movement for vulnerable users.

8.1.8. Section 4.3 of DMURS deals with Pedestrian and Cyclist Environment, and provides that a minimum footway of 1.8m is required in areas of low pedestrian activity. The Manual encourages that in a retrofit situation, increasing footpath widths should be a priority, accommodated by narrowing vehicular carriageways. DMURS provides detailed standards for appropriate road widths - 2.5m to 3m per lane on local streets and a 3.25m standard for arterial and link route lanes.

8.1.9. In terms of the proposed development, Ardfinnan Bridge has an existing road surface width of 6.3m, which accommodates two-way traffic, with an elevated lip 340mm wide on the downstream side of the bridge. The proposed development will result in a vehicular surface of 4.41m in width with a proposed 1.46m pedestrian walkway with 230mm flexible posts to be located at 5m centres to separate the two surfaces. The proposal, notwithstanding the intentions of the Local Authority, does not comply with the requirements of DMURS as it relates to the provision of footways. Given the nature of the road, being a Regional Road, I would consider it inappropriate to further reduce the vehicular carriageway to accommodate a correct width footway. In terms of the proposals for Ardfinnan Bridge, cyclists would have to share the existing road surface. In addition to the above The National Cycle Manual, (NCM) 2011, also seeks to promote cycling as a sustainable form of transport. Section 7.2 of the Cycle Manual provides Width Calculator and having regard to the context of Ardfinnan Bridge, there is a requirement to provide 2.9m cycle lane.

8.1.10. The Board will note the third party submissions in relation to this issue and in particular, the nature of agricultural vehicles using the bridge particularly during harvest time. It is submitted that an independent footbridge would satisfy all of the requirements for pedestrian safety and would mean that the bridge could retain its two way traffic. While I have no comments to make in relation to this proposal, I would accept that such a proposal would appear to address all issues of safety for all road users. Certainly, in its current form, the proposed alterations to the traffic arrangements on Ardfinnan Bridge do not accord with national guidance.

8.1.11. I am satisfied that the principle of the proposed remedial works to Ardfinnan Bridge is acceptable and would generally accord with the wider policies and objectives of the South Tipperary County Development Plan 2009 as varied and extended. In addition, I consider that subject to appropriate mitigation, the proposed development will not give rise to significant adverse impact on heritage, archaeology and will not detract from the wider amenities of the area. I consider, therefore, that the proposal is acceptable and accords with the proper planning and sustainable development of the area.

8.1.12. However, I do not consider that the proposed alterations to traffic management over Ardfinnan Bridge are acceptable as they do not comply with the minimum requirements of national guidance. In this regard, this element of the proposed development would not, if permitted, accord with the proper planning and sustainable development of the area.

8.2. The likely effects on the environment

8.2.1. Having regard to the nature of the proposed development, it is considered that the most significant potential for environment impacts arising relate to impacts on the water quality of the River Suir and the flora and fauna supported by the river. The Board will note that the River Suir comprises part of the Lower River Suir SAC, Site Code 002137. Matters relating to appropriate assessment are discussed further below in section 8.6 of this report.

Biodiversity

8.2.2. In terms of the likely effect of the proposed remedial works on the local biodiversity of the area, and not including issues of Appropriate Assessment, the

proposed development has the potential to impact on the water quality of the river during the in-water works to the bridge. The Board will note that a significant amount of vegetation clearance has already occurred on the bridge. In addition, accidental spillages or the introduction of alien species on machinery could also have an impact.

8.2.3. As part of the application, the applicant submitted a Construction Environmental Management Plan which sets out a schedule of ecological mitigation measures to address any potential for impacts to water quality, as well as advising that all works will be undertaken with reference to a number of guidelines. In terms of impacts on habitats, the Plan also includes restrictions for works in-stream and restricted access to the watercourse. In principle, I am satisfied that subject to best practice and implementation of the proposed control and mitigation measures as described within the various reports submitted in support of the proposed development, the likelihood of pollutants entering the water is low and it is not expected that the works proposed will give rise to water pollution, or significant impacts on habitats.

8.2.4. In terms of potential impacts on biodiversity, the Board will note that the Ecological Impact Assessment, submitted with the application identified a number of species which were found at the site during the field work surveys, which may be impacted by the proposed works as follows:

- **Otters:** A single otter was observed in the river during a survey on the 1st June 2017, but no holts or couch sites are located within proximity to the development site. It is submitted that otters readily habituate to human presence and that the proposed works will be undertaken during a short window. In terms of impacts on the otter, it is submitted that in the absence of mitigation, siltation of the river bed and / or an accidental pollution incident, has the potential to temporarily reduce the availability of prey species for the otter. However, it is not considered that the proposed works will significantly impact on the otter and given their wide range of prey, if sedimentation or a pollution incident occurred, the impact would not be significant.
- **Bats:** A desk study recorded seven roosts within 10km of the subject site, the closest being 8.1km to the north. This roost includes common

pipistrelle and brown long-eared bat. During a survey in May and June, 2017, seven of Ireland's nine bat species were recorded at Ardfinnan Bridge, with most activity attributed to common pipistrelle and soprano pipistrelle. No evidence of roosting bats was noted during inspections of the Bridge. However, cracks within spans 8 and 10 of the bridge appear to present opportunities for roosting bats. Access to these cracks was not possible during the surveys due to high water and therefore the presence of a roost within the bridge cannot be entirely ruled out. In the absence of mitigation, there is potential for significant impacts arising where repointing and infill of cracks could result in the direct loss of a bat roost and in the worst case scenario, the mortality of roosting bats.

In terms of mitigation, it is submitted that endoscope surveys will be undertaken to determine the presence or not of any roosting bats within the bridge. Once satisfied that there are no bats within the cavities or crevices, they will be blocked using cloth to prevent access. A single deep crevice within the bridge structure will be retained for use by bats. If bats are encountered during construction works, the works will be suspended until the appropriate ecologist is satisfied. In addition, two bat boxes will be mounted on or beneath the bridge in order to provide roosting opportunities. After implementation of mitigation measures, it is considered that the potential impact of the development on bats will be insignificant.

- **Birds:** Twenty three species of bird were recorded within the subject site during a survey in 2017, including a Kingfisher on the 10th May, 2017, although there is no suitable habitat for them to nest within the vicinity of the bridge. Up to seven mute swans were observed feeding and roosting immediately downstream of Ardfinnan Bridge. Other species observed include, grey wagtail, dipper, barn swallow, house martin, swift and barn owl. In terms of impacts, noise, vibration and increased human presence associated with the construction of the proposed development is likely to result in a disturbance impact to the local breeding bird populations. The proposed works are to be carried out to the end of the breeding season, and will be limited to the immediate vicinity of the bridge, it is considered that the risk of disturbance is low. However, as birds, their nests, eggs and

unfledged young are protected under the Wildlife Acts, as amended, mitigation measures are proposed.

Mitigation measures include the maintenance of vegetation along the river bank adjacent to the bridge to discourage nesting before works commence. Prior to the commencement of works, a breeding bird survey will be carried out. Should nesting birds be encountered, a licence from the NPWS for the destruction of the nest in order to facilitate works within a timeframe already restricted by aquatic receptors, will be applied for.

8.2.5. Having regard to the short-term nature of the proposed remedial works, it is considered that subject to good environmental practice and subject to the implementation of the mitigation measures as presented, it is not expected that the proposed development will have a significant negative impact on the local ecology.

Archaeology & Architectural Heritage:

8.2.6. Ardfinnan Bridge is a 13 no. span arch road bridge on the Regional Road, the R665 which connects Clonmel, Co. Tipperary to the north east, with Mitchelstown, Co. Cork to the south west. The Bridge spans the River Suir at Ardfinnan, Co. Tipperary and connects the two areas of the village centre, north and south of the river. The bridge was rebuilt in circa 1800, when it shows evidence of having been widened. Ardfinnan Bridge is a protected structure and the Board will note that previous works have been carried out in terms of repairs and maintenance.

8.2.7. An inspection of the bridge in 2013 identified a number of defects and the most recent assessment in 2016 sought to appreciate the level of further deterioration / degradation of the bridge structure. The assessment concluded that the bridge is in reasonably good condition and sought to identify and quantify all necessary remedial works required to prevent loss of service. The most significant defects identified are as follows:

- Scour on downstream side of bridge
- Scour on upstream side of bridge front of apron
- Bulging of spandrel wall between Spans 2 and 3 upstream side
- Tilting of the parapet wall between Spans 2 and 3 downstream side
- Longitudinal cracks on the underside of arch barrel in Spans 1, 2 and 3

- Loss of mortar, stone and crown of V-cut-waters due to river action and plant growth
- Repointing required throughout the bridge at multiple locations.

The Detailed Structural Bridge Report, submitted as part of the application, also notes that the traffic management configuration currently enacted on the bridge, ie the signalised one-way system, provides partial mitigation to the likely cause of the observed parapet deflections and arch separation on the downstream side of the bridge. In addition, a report which contains the findings of an inspection of the bridge and a determination of the current condition of the bridge sub structural units was also submitted. The Underwater Bridge Inspection Report, Punch Consulting Engineers, 2016, also made recommendations for repairs. Appendix C of that report includes a Defects Table while Appendix B includes a number of photographs.

8.2.8. The proposed works will improve the structural condition and stability of Ardinnan Bridge and will protect the long term use of the bridge. The proposed development is in keeping with Policy LH13 of the South Tipperary County Development Plan, 2009, as varied and extended, which seeks to encourage the sympathetic restoration, re-use and maintenance of protected structures thereby ensuring their conservation and protection. The Construction Environmental Management Plan also provides details as to how the works will be undertaken on the bridge and it is noted that a Conservation Consultant will be employed to advise on specification details and to inspect works to the bridge, reporting as appropriate.

8.2.9. The works are to be carried out in accordance with best conservation practice as set out in in the Architectural Heritage Protection Guidelines for Planning Authorities. I am generally satisfied that the proposed remedial works will be beneficial in the long term to Ardfinnan Bridge and subject to compliance with mitigation measures proposed, the works will not adversely impact the archaeological or architectural heritage of the area.

Roads & Traffic

8.2.10. In terms of the potential impacts on roads and traffic, the proposed development will see the current traffic controls retained should permission for the development be granted. The Board will note that the primary concern of all of the third party objections relate to this issue. The local community is not satisfied that the

works, which will include the provision of a pedestrian walkway, is acceptable and in particular, the signalised one way system. From the submissions, it is clear that the community would want the bridge to be returned to a two way road. It is further clear that the local community would prefer a separate pedestrian / cycle way to be provided, attached to the bridge with the bridge retained for traffic. I note the submission from the Local Authority that funding is not available for such a proposal. I would note that there are no objections in principle from third parties, to the proposed remedial works to the bridge.

8.2.11. During my site inspections, I attended in Ardfinnan at various times of the day, including the morning school drop off time. It is clear that there is frustration from drivers on the bridge waiting for lights to change. I have read all of the submissions made against this element of the development. I would agree that the current situation, ie the lack of any pedestrian facilities on the bridge, is not ideal and certainly dangerous.

8.2.12. In terms of the proposed development, I am satisfied that the current situation will continue while the works are being carried out. In this regard, I consider that the inconvenience will not be exacerbated and will ensure that there is no significant additional loss of amenity in the area. I am further satisfied that while the construction period will result in some additional traffic and restrictions on the bridge, the duration of the works will be short and therefore acceptable. I will discuss issues relating to the proposed amendments to the traffic regime on the bridge further below in this report.

Visual Amenity

8.2.13. In terms of the potential impacts of the remedial works on the visual amenity of the wider area, I am satisfied that no significant issues arise. The works to the bridge as proposed, would appear to be in accordance with best conservation practice as provided for in the Architectural Heritage Protection Guidelines for Planning Authorities.

8.2.14. I have a concern in terms of the proposals with regard to the amendments to the traffic arrangements however. The Board will note that the current temporary situation on the bridge includes the provision of large barrier type additions which have a significant, and negative in my opinion, impact on the visual amenity of

Ardfinnan Bridge. In terms of the proposed alterations to the traffic arrangements on the Bridge, it is intended to introduce a pedestrian pathway, which will be delineated by line marking, coloured surfacing and the installation of flexible posts. While I would consider the proposed development to have a lesser visual impact, and would certainly provide for safer pedestrian passage across Ardfinnan Bridge, the Board will note the high level of objection from the local community. As part of the proposed works, Ardfinnan Bridge will be reduced to a signalised one way system, eliminating the two way system the local community has enjoyed for many many years. I will discuss this issue further below in Section 8.2 of this report. However, I consider that in principle, the proposed development will not significantly impact on the visual amenity of the bridge or the surrounding area.

8.3. The likely significant effects on a European site:

The areas addressed in this section are as follows:

- Compliance with Articles 6(3) of the EU Habitats Directive
- The Natura Impact Statement
- Appropriate Assessment

8.4. Compliance with Articles 6(3) of the EU Habitats Directive:

The Habitats Directive deals with the Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union. Article 6(3) of this Directive requires that any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. The competent authority must be satisfied that the proposal will not adversely affect the integrity of the European site.

8.5. The Natura Impact Statement:

- 8.5.1. The application was accompanied by an NIS which described the proposed development, the project site and the surrounding area. The NIS contained a Stage

1 Screening Assessment which concluded that a Stage 2 Appropriate Assessment was required on the basis that it was not possible to exclude the possibility of significant impacts on the Lower River Suir SAC arising, in the absence of mitigation. The NIS outlined the methodology used for assessing potential impacts on the habitats and species within the European Site which the potential to be affected by the proposed development. It predicted the potential impacts for the Lower River Suir SAC, and its conservation objectives, suggested mitigation measures, assessed in-combination effects with other plans and projects and identified any residual effects on the European site and its conservation objectives.

8.5.2. The NIS was informed by the following studies, surveys and consultations:

- A desk top study.
- An examination of aerial photography and maps.
- A number of on-line resources including the National Parks & Wildlife Service, Environmental Protection Agency, Water Framework Directive Ireland and the Geological Survey of Ireland.
- A number of surveys of the proposal site and surroundings which included
 - habitats,
 - fisheries
 - freshwater pearl mussel, white-clawed crayfish and aquatic micro-invertebrates
 - breeding bird
 - bats
 - aquatic and riparian habitats
 - aquatics – spawning
- The NIS was also accompanied by:
 - An Ecological Impact Assessment
 - An Aquatic Ecological Impact Assessment

8.5.3. The report concluded that, subject to the implementation of the recommended mitigation measures, detailed in the report, the integrity of the European Site will not be adversely affected.

8.5.4. Having reviewed the NIS and the supporting documentation, I am satisfied that it provides adequate information in respect of the baseline conditions, clearly identifies the potential impacts, and uses best scientific information and knowledge. Details of mitigation measures are provided and they are summarised in the two appendices of the NIS with Appendix 1 dealing with Mitigation with Respect to Site-Specific Conservation Objectives of the Lower River Suir SAC (002137) and Appendix 2 providing a schedule of Ecological Mitigation from the Construction and Environmental Management Plan. I am satisfied that the information is sufficient to allow for appropriate assessment of the proposed development.

8.6. Appropriate Assessment:

8.6.1. Appropriate Assessment (AA) considers whether the plan or project alone or in combination with other projects or plans will adversely affect the integrity of a European site in view of the site's conservation objectives and includes consideration of any mitigation measures necessary to avoid, reduce or offset negative effects. This determination must be carried out before a decision is made or consent given for the proposed development. Consent can only be given after it has been determined that the proposed development alone or in combination with other plans and projects would not adversely affect the integrity of a European site in view of the site's conservation objectives.

8.6.2. Guidance on appropriate assessment is set out in the European Commission's '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' (European Commission 2002) and in the Department of the Environment's 'Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities', (December 2009, revised February 2010).

8.6.3. I consider that the development as proposed, comprising remedial works to Ardfinnan Bridge and alterations to traffic arrangements at Ardfinnan Bridge, is not

directly connected with or necessary to the management of any European Site. The following assessment sets out to:

- Identify of European Sites which could be potentially affected using the Source Pathway Receptor Model
- Identify the Conservation Objectives for these sites
- Examine the Predicted Impacts on sites and assess whether these impacts would likely be significant.
- Assess likely significant impacts against the conservation objectives. Assess whether these impacts would be likely to be significant
- Consider cumulative and in-combination effects
- Consider Mitigation
- Assess Residual Effects
- Appropriate Assessment Conclusion

8.6.4. The NIS submitted in support of the proposed development, examined the potential impacts on 4 European Sites within 15km of the subject site. The European sites considered for Stage 1 screening include:

European site (SAC/SPA)	Qualifying Interests	Distance
Lower River Suir SAC, Site Code 002137	(* indicates a priority habitat under the Habitats Directive) [1029] Freshwater Pearl Mussel <i>Margaritifera margaritifera</i> [1092] White-clawed Crayfish <i>Austropotamobius pallipes</i> [1095] Sea Lamprey <i>Petromyzon marinus</i> [1096] Brook Lamprey <i>Lampetra planeri</i> [1099] River Lamprey <i>Lampetra fluviatilis</i> [1103] Twaite Shad <i>Alosa fallax fallax</i> [1106] Atlantic Salmon <i>Salmo salar</i>	Within the subject site

European site (SAC/SPA)	Qualifying Interests	Distance
	<p>[1330] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)</p> <p>[1355] Otter <i>Lutra lutra</i></p> <p>[1410] Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p> <p>[3260] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation</p> <p>[6430] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels</p> <p>[91A0] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</p> <p>[91E0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> Alno-Padion, Alnion incanae, Salicion albae) *</p> <p>[91J0] <i>Taxus baccata</i> woods of the British Isles *</p>	
<p>Blackwater River (Cork / Waterford) SAC, Site Code 002170</p>	<p>(* indicates a priority habitat under the Habitats Directive)</p> <p>[1029] Freshwater Pearl Mussel <i>Margaritifera margaritifera</i></p> <p>[1092] White-clawed Crayfish <i>Austropotamobius pallipes</i></p> <p>[1095] Sea Lamprey <i>Petromyzon marinus</i></p> <p>[1096] Brook Lamprey <i>Lampetra planeri</i></p>	<p>11.6km to the south</p>

European site (SAC/SPA)	Qualifying Interests	Distance
	<p>[1099] River Lamprey <i>Lampetra fluviatilis</i></p> <p>[1103] Twaite Shad <i>Alosa fallax</i></p> <p>[1106] Atlantic Salmon <i>Salmo salar</i></p> <p>[1130] Estuaries</p> <p>[1140] Mudflats and sandflats not covered by seawater at low tide</p> <p>[1220] Perennial vegetation of stony banks</p> <p>[1310] <i>Salicornia</i> and other annuals colonising mud and sand</p> <p>[1330] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)</p> <p>[1355] Otter <i>Lutra lutra</i></p> <p>[1410] Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p> <p>[1421] Killarney Fern <i>Trichomanes speciosum</i></p> <p>[3260] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation</p> <p>[91A0] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</p> <p>[91E0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> Alno-Padion, Alnion incanae, Salicion albae)*</p>	

European site (SAC/SPA)	Qualifying Interests	Distance
	[91J0] <i>Taxus baccata</i> woods of the British Isles*	
Galtee Mountains SAC, Site Code 000646	(* indicates a priority habitat under the Habitats Directive) [4010] Northern Atlantic wet heaths with <i>Erica tetralix</i> [4030] European dry heaths [4060] Alpine and Boreal heaths [6230] Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)* [7130] Blanket bogs (*if active bog) [8110] Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>) [8210] Calcareous rocky slopes with chasmophytic vegetation [8220] Siliceous rocky slopes with chasmophytic vegetation	12.6km to northwest
Nier Valley Woodlands SAC, Site Code 000668	(* indicates a priority habitat under the Habitats Directive) [91A0] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	12.8km to east

8.6.5. The submitted NIS concluded, having regard to the information and submissions available, nature, size and location of the proposed development and its likely direct, indirect and cumulative effects, the source pathway receptor principle and sensitivities of the ecological receptors, only one European Site was considered relevant to include for the purposes of screening for Stage 2 appropriate assessment

on the basis of likely significant effects, being the Lower River Suir SAC, Site Code 002137.

8.6.6. Based on my examination of the NIS report and supporting information, the NPWS website, aerial and satellite imagery, the scale of the proposed development and likely effects, separation distance and functional relationship between the proposed works and the European sites, their conservation objectives and taken in conjunction with my assessment of the subject site and the surrounding area, I would concur with the conclusion of the applicants NIS, that a Stage 2 Appropriate Assessment is required for only one of the four European sites referred to above, being the Lower River Suir SAC, Site Code 002137.

8.6.7. The remaining three sites can be screened out from further assessment because of the scale of the proposed works, the nature of the Conservation Objectives, Qualifying and Special Conservation Interests, the separation distances and the lack of a substantive hydrological or ecological pathways between the proposed works and the European sites. It is therefore reasonable to conclude that on the basis of the information on the file, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on European Site Blackwater River (Cork/Waterford) SAC, Site Code 002170, Galtee Mountains SAC, Site Code 000646 and Nier Valley Woodlands SAC, Site Code 000668, in view of the sites conservation objectives and a Stage 2 Appropriate Assessment is not therefore required for these sites.

8.7. Relevant European Site: The Lower River Suir SAC, Site Code 002137

8.7.1. The River Suir rises on Benduff in the Devils Bit Mountain to the north west of the town of Templemore, Co. Tipperary. The river is 184km in length and is Ireland's third largest river. The river flows through a number of counties including Tipperary, Kilkenny and Waterford, and flows through a number of towns in Co. Tipperary including Thurles, Clonmel and Carrick-on-Suir where it becomes tidal, before discharging to the sea at Waterford. The Suir catchment extends into county Limerick and Cork also. The river divides the town of Ardfinnan and is bridged by the Ardfinnan Bridge, which is the subject of the proposed remedial works under assessment by the Board.

8.7.2. The Lower River Suir SAC consists of the freshwater stretches of the River Suir immediately south of Thurles, the tidal stretches as far as the confluence with the Barrow / Nore immediately east of Cheekpoint in Co Waterford and many tributaries including the Clodiagh in Co Waterford, the Lingaun, Anner, Nier, Tar, Aherlow, Multeen and Clodiagh in Co Tipperary. The Lower River Suir contains excellent examples of a number of Annex I habitats, including the priority habitat alluvial forest and Yew woodland. The SAC is of particular conservation interest for the presence of a number of Annex II animal species including Freshwater Pearl Mussel (both *Margaritifera margaritifera* and *M. margaritifera* subsp. *durrovensis* occur), White-clawed Crayfish, Salmon, Twaite Shad (*Alosa fallax fallax*), three species of Lampreys – Sea Lamprey, Brook and River Lamprey and Otter. The Lower River Suir SAC is one of only three known spawning grounds in the country for Twaite Shad.

Conservation Objectives

8.7.3. The Conservation Objectives for the Lower River Suir SAC, notes that the overall aim of the habitats directive is to maintain or restore the favourable conservation status of habitats and species of community interest. A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at the site. The NPWS has prepared specific attributes and targets for the qualifying interests protection of habitats and species associated with the Lower River Suir SAC.

Favourable conservation status of a habitat is achieved when:

- its natural range, and 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.

Qualifying Interests

8.7.4. The Natura Impact Statement, submitted in support of the proposed development, sought to examine the evidence and data collected in order to determine whether or not qualifying features of the Lower River Suir SAC should be selected for further assessment in terms of the potential for significant impact arising from the proposed works to Ardfinnan Bridge. There are 15 Qualifying Interests, including both habitats and species, associated with the Lower River Suir SAC. It is considered that seven Qualifying Interests¹ are relevant in terms of the proposed development given that they would be vulnerable to a pollution incident either directly or indirectly. The remaining qualifying features were screened out on the basis of distance, scale and nature of works and a lack of connection in terms of source-pathway-receptor. I consider this reasonable and acceptable.

8.7.5. The relevant Qualifying Interests include:

- White-Clawed Crayfish
- Sea Lamprey
- Brook Lamprey
- River Lamprey
- Twaite Shad
- Atlantic Salmon
- Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation

¹ Full details of Conservation Objectives for the relevant Qualifying Interests, including attributes and targets, are included in Appendix 2 of this report.

Potential direct effects:

8.7.6. The submitted NIS predicts the following potential effects arising from the proposed development:

- Impacts on water quality arising from construction in and adjacent to waters;
- Reduction in habitat quality for qualifying interest species (related to the above);
- The introduction of pathogens and invasive species during the construction phase;
- Loss of qualifying interest habitat or mortality of qualifying interest species arising from construction practices; and
- Existing barriers to the passage of aquatic qualifying interest species at Ardfinnan Bridge will be removed.

Potential indirect effects:

8.7.7. In terms of indirect effects, I consider the following to be potentially relevant:

- The introduction of pathogens and non-native / invasive species during the construction phase;
- Potential for spillages containing elevated solids or pollutants;
- Sedimentation from dry work areas once re-watered could travel downstream. Excessive sedimentation could impact White-clawed Crayfish, all three lamprey species, Twait shad and Atlantic Salmon;

8.7.8. Having regard to all of the available information, I am satisfied that the proposed development has the potential to have a significant effect on the Lower River Suir SAC, in the absence of mitigation, in terms of the following:

- Impact on water quality
- Impact on habitat
- Impact on species.

Impact on water quality

8.7.9. The main risk to water quality arises primarily during the construction phase of the works when there is potential for accidental discharge of polluting substances, including hydrocarbons, fuel and oils as well as those substances required for the carrying out of repair works to the bridge, including sand, cement, grout and mortar. There is also potential for the in-stream works, including the use of machinery, to introduce pathogens and invasive species to the River Suir, including Asian river clam, zebra mussel, aquatic macrophytes and waterweeds, and all of which are subject to restrictions in Sections 49 and 50 of the Birds and Habitats Regulations, 2011.

8.7.10. Sedimentation arising from the proposed works has the potential to travel downstream, once the dry areas are re-watered. The river currently supports a number of species which are considered sensitive to sedimentation including the White-clawed Crayfish, all three lamprey species, Twaite shad and Atlantic Salmon. In addition, increased footfall, and the use of machinery, within the river area, has the potential to increase sedimentation potentially covering spawning habitats.

Impact on habitats

8.7.11. The proposed works has the potential to significantly impact on the habitats in the vicinity of the bridge. The construction works will involve the installation of sand bags in the vicinity of the 'water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation', which is located immediately upstream of Ardfinnan Bridge. These works are likely to result in the loss of individual plants or stems and leaves in proximity to the bridge apron. There is also potential for sedimentation to affect the habitat.

8.7.12. The conservation objective² for this habitat is to 'maintain its favourable conservation condition' which is defined by a list of attributes and targets. A number of the attributes associated with the habitat are reliant on both water quality and the hydrological regime as well as being sensitive to sedimentation. The target for the habitat is to have no decline in the habitat distribution and maintain area as stable or increasing, subject to natural processes.

² See Appendix 2 of this report

8.7.13. The NIS submits that no significant impacts are predicted as the in-stream vegetation at this location is not considered likely to correspond to high-conservation value habitat. It is further submitted that the loss will not be permanent and that the area will recolonise following the completion of works.

Impact on Species

8.7.14. During the construction phase of the development, there is potential for both short term and long term impacts on the species of the SAC, including the habitats they depend on to survive. In particular, salmon, white-clawed crayfish and lamprey occur within or adjacent to the area the subject of the proposed development and therefore, there is potential for both disturbance and/or mortality of species, particularly during the construction phase. It is the stated conservation objective to restore the favourable conservation condition of all three species of lamprey, the Twaité Shad and the Atlantic Salmon in the Lower River Suir and to maintain the favourable conservation condition of the White-clawed Crayfish.

8.7.15. The proposed in-stream works are to be restricted to the period between mid-July and the end of September in order to address the migrating season and to prevent a barrier to breeding Atlantic Salmon who migrate upstream to the same area each year, from October to June. In addition, works will not occur during the sea lamprey spawning period during May and June.

8.7.16. The development also proposes the removal of the fish prior to construction by electrofishing, including dewatering of the stream. It is noted from the NIS that significant numbers of lamprey ammocoetes are likely to be present, which will have to be removed prior to dewatering. An Ecological Clerk of Works will be responsible for surveys for protected aquatic fauna and a licenced ecologist will be present on site during dewatering and re-watering of coffer dams.

8.7.17. The Board will note TII guidance states that dewatering is not an option where species are protected under the Habitats Directive in significant numbers, and also settlements pond are required to minimise the potential environmental impacts. I have a concern that the NIS has not adequately address the matter of the lamprey in sufficient detail in this regard, and nor has there been any mention of settlement ponds to be provided.

8.7.18. The Board will note the proposal to construct two fish passes downstream of the bridge to improve passage opportunities for species. Inland Fisheries Ireland has also commented on this issue. I will discuss this issue further below in terms of mitigation measures.

Potential in-combination effects:

8.7.19. In terms of considering the potential significance of cumulative effects arising from the proposed works to Ardfinnan Bridge, I would note that there are a number of sources of pollution which discharge into the Lower River Suir along its full length. Such source pressures include wastewater treatment plant discharges and agricultural pollution in the immediate vicinity, with more industrial and urban discharges arising at other points along the river. A number of these discharges are likely controlled by licence and monitored.

8.7.20. The most recent EPA Q rating of the Lower River Suir at Ardfinnan was Q4. The survey carried out as part of this current application, resulted in a Q rating of Q3-4 and the survey noted that the algal growths and siltation in the river were extensive and excessive. The introduction of pathogens and invasive species would have potential to have an effect the Lower River Suir in the absence of mitigation. There is potential for in-combination effects arising in terms of the Blueway development which included the construction of a slipway in proximity to Ardfinnan Bridge and other developments along the Lower River Suir SAC to support the Blueway development.

8.7.21. In particular, it is noted that there has been an outbreak of crayfish plague in the River Suir between Clonmel and Carrick-on-Suir, which has a 100% mortality rate. In the absence of clear mitigation measures, the works proposed, including the use of equipment in and adjacent to the water, could potentially give rise to a significant cumulative effect. Mitigation measures, which include high-pressure steam cleaning of all items of plant and equipment to be used in and adjacent to the water, together with the treatment of all personal protection equipment prior to use in and adjacent to the water are proposed and restriction of access to the watercourse is proposed.

Mitigation measures:

8.7.22. In terms of mitigation, Chapter 5 of the NIS provides details. In addition, Appendix 1 provides a detailed Table of Mitigation with Respect to Site-Specific Conservation Objectives of the Lower River Suir SAC (002137) and Appendix 2 Schedule of Ecological Mitigation from the Conservation and Environment Management Plan. In addition, the Ecological Impact Assessment, at Chapter 7, provides further mitigation measures in relation to habitats, fish and aquatic invertebrates, otters, bats, and birds. This chapter of the EclA also considers the potential effects of invasive species and includes mitigation measures in this regard.

8.7.23. I consider the following mitigation measures to be of note in terms of the Lower River Suir SAC site:

- Ecological Clerk of Works will be employed on site and will attend prior to and during in-stream works to inspect KER species and to translocate species if necessary under licence;
- Timing of works to avoid the annual close season for Salmonids and will take place between mid-July and the end of September to avoid impacting emerging sea lamprey ammocoetes;
- Site compound will be contained within the Tipperary County Council yard and all potentially polluting materials will be contained within bunds. Spill kits will be available and method statements for dealing with accidental spills will be provided;
- Access to watercourse will be restricted to designated personnel and no plant or vehicles will be allowed enter the water.
- Biosecurity measures proposed in the Construction Environmental Management Plan will be strictly adhered to;
- Re-watering of coffer dams will be controlled;
- A designated wash down area will be used for the cleaning of equipment or plant;
- Refuelling and maintenance will take place at a designated bunded area;
- Silt fencing will be actively managed;

- Compliance with legislation protecting bats and birds.
- Introduction of fish passages.

8.7.24. The Board will note the suggested condition put forward by Inland Fisheries Ireland in terms of fish passages. It is submitted by IFI that the bridge at Ardfinnan has long been identified as an obstruction to the free movement of fish particularly during low flow conditions. This is due to the existing step on the downstream side of the bridge where fish have to jump to enter the bridge proper.

8.7.25. The proposed development includes the provision of two fish passes at Spans 4 and 12, in order to import passage opportunities for fish at Ardfinnan Bridge. The proposed pass at span 12 will be installed on the left bank, and will comprise an eel board which will extend upstream under the bridge to a slow flow area. The second will be installed on the right bank and will comprise a small rock ramp which will extend under the arch. This will involve back-filling with rock and cobble to create a gentle slope to allow lampreys, eels and crayfish to pass through the bridge arch.

8.7.26. The IFI considers that the proposed remedial works will do nothing to improve the fish passage across the entire width of the river. The IFI preferred option would be to construct a slopping exit from the bridge downstream at a gradient of 1 in 30 similar to the minor rock ramp proposed for the right bank. It is submitted that this would both protect the structural integrity of the bridge and provide a fish pass structure across the entire river width. The IFI are not satisfied that the fish passes, as proposed, are adequate for the main channel of the River Suir and would not improve the situation in terms of fish passage as suggested at Ardfinnan Bridge.

8.7.27. I have considered this issue carefully and would conclude that the works sought by the IFI would significantly impact on the river bed as it would involve back-filling with rocks and cobbles across the full width of the bridge, to create the gentle slope required. Should the Board be minded to consider this proposal, further information would be required and the Natura Impact Statement and Appropriate Assessment would be required to be updated to take account of the additional works within the SAC.

Residual effects:

8.7.28. The NIS submitted in support of the proposed development concludes that subject to the implementation in full of the mitigation measures indicated, no residual effects are anticipated. In arriving at this conclusion, it is acknowledged that:

- Some levels of sedimentation will occur even with adherence to mitigation. This will be temporary and limited in scale as a maximum of two spans will be worked on at any one time.

- While mitigation measures are proposed to prevent the loss or mortality of qualifying interest species, there will be a background level of mortality of juveniles during damming and the in-stream element of works.

I have raised concerns above in terms of the potential impacts on lamprey, given the expected significant numbers of lamprey ammocoetes likely to be present and which will have to be removed prior to dewatering. However, having regard to the mitigation measures proposed, together with the proposal to dewater a maximum of two spans at any one time and that an Ecological Clerk of Works, who will be responsible for surveys for protected aquatic fauna, and a licenced ecologist will be present on site during dewatering and re-watering of coffer dams, I am generally satisfied that there is no significant impact on the species attributes or targets indicated in the conservation objective.

- The main threats to habitats are from direct loss during construction, or pollution of the watercourse resulting in changes to structure and function of aquatic habitats downstream. Loss of vegetation would be confined to loss of leaves and floating stems.

Having regard to the very small area involved in terms of the proposed works to Ardfinnan Bridge, I am generally satisfied that there is no significant impact on the habitat area attributes or targets indicated in the conservation objective.

- The proposed works do not include excavation of river substrates and there is no potential for removal of aquatic rootstocks.

8.7.29. Overall, I am generally satisfied that the mitigation measures proposed are appropriate to address the identified risks to the qualifying interests associated with

the Lower River Suir SAC site, and if implemented in full, would be sufficient to avoid significant impacts arising with regard to water quality, habitats or species associated with the SAC.

NIS Omissions:

8.7.30. None noted.

Suggested Related Conditions:

8.7.31. Should the Board be minded to approve the proposed works, I consider that the Project Ecological Clerk-of-Works and the Licenced Ecologist who will be present during the course of the dewatering and re-watering phases of the development should have power to cease operations in the event of incident which has potential to impact on the habitats and species of the SAC.

Conclusion:

8.7.32. I am satisfied that the proposed development individually or in combination with other plans or projects would not adversely affect the integrity of this European site in light of its conservation objectives subject to the implementation of mitigation measures outlined above.

8.8. Appropriate Assessment Conclusions:

I consider that it is reasonable to conclude on the basis of the information on the file, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, that the proposed development, individually or in combination with other plans and projects would not adversely affect the integrity of the European site, Lower River Suir SAC, Site Code 002137, or any other European site, in view of the site's Conservation Objectives.

A Construction Environmental Management Plan, which incorporates all mitigation measures indicated in the Natura Impact Statement, the Aquatic Ecology Impact Assessment, Ecological Impact Assessment and the Underwater Archaeological Impact Assessment, should be agreed between the County Council and the relevant statutory authorities prior to the commencement of any works on the bridge.

9.0 Recommendation

8.6.1 On the basis of the above assessment, I recommend that the Board **approve** the proposed bridge remedial works to Ardfinnan Bridge for the reasons and considerations below and subject to conditions requiring compliance with the submitted details and with the mitigation measures as set out in the NIS.

I recommend that the Board **do not approve** the proposed alterations to the traffic arrangements on the bridge on the basis that the proposed alterations do not comply with the minimum requirements of The Design Manual for Urban Roads & Streets' (DMURS), DoTTS, March, 2013 and if permitted, would not result in an appropriate level of pedestrian safety on the bridge.

REASONS AND CONSIDERATIONS

In coming to its decision, the Board had regard to the following:

- (a) the EU Habitats Directive (92/43/EEC),
- (b) the European Union (Birds and Natural Habitats) Regulations 2011-2015,
- (c) the likely consequences for the environment and the proper planning and sustainable development of the area in which it is proposed to carry out the proposed development and the likely significant effects of the proposed development on a European Site,
- (d) the conservation interests and conservation objectives of the Lower River Suir Special Area of Conservation (site code: 002137),
- (e) the policies and objectives of the South Tipperary County Development Plan 2009 as varied and extended and the Ardfinnan Settlement Plan 2017,
- (f) the nature and extent of the proposed Ardfinnan Bridge rehabilitation works as set out in the application for approval,
- (g) the information submitted in relation to the potential impacts on habitats, flora and fauna, including the Natura impact statement,
- (h) the submissions and observations received in relation to the likely effects on the environment, and on the likely significant effects of the proposed development on a European Site, and
- (i) the report and recommendation of the person appointed by the Board to make a report and recommendation on the matter.

Appropriate Assessment:

The Board agreed with the screening assessment and conclusion carried out in the Inspector's report that the Lower River Suir Special Area of Conservation (site code: 002137) is the only European Site in respect of which the proposed development has the potential to have a significant effect.

The Board considered the Natura impact statement and associated documentation submitted with the application for approval, the mitigation measures contained therein, the submissions and observations on file, and the Inspector's assessment. The Board completed an appropriate assessment of the implications of the proposed development for the affected European Site, namely the Lower River Suir Special Area of Conservation (site code: 002137), in view of the site's conservation objectives. The Board considered that the information before it was adequate to allow the carrying out of an appropriate assessment.

In completing the appropriate assessment, the Board considered, in particular, the following:

- i) the likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects,
- ii) the mitigation measures which are included as part of the current proposal, and
- iii) the conservation objectives for the European Site.

In completing the appropriate assessment, the Board accepted and adopted the screening and the appropriate assessment carried out in the Inspector's report in respect of the potential effects of the proposed development on the aforementioned European Site, having regard to the site's conservation objectives.

In overall conclusion, the Board was satisfied that the proposed development, by itself or in combination with other plans or projects, would not adversely affect the integrity of the European Site, in view of the site's conservation objectives.

Proper Planning and Sustainable Development:

1. It is considered that, subject to compliance with the conditions set out below, the proposed remedial works to Ardfinnan Bridge would provide an improved bridge structure and would not:
 - a) have significant negative effects on the environment or the community in the vicinity,
 - b) give rise to a risk of pollution,
 - c) be detrimental to the visual or landscape amenities of the area,
 - d) seriously injure the amenities of property in the vicinity,
 - e) adversely impact on the cultural, archaeological and built heritage of the area and
 - f) would not interfere with the existing land uses in the area.

The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

2. Notwithstanding the above, the Board is not satisfied that the proposal for pedestrian facilities and alterations to traffic management over Ardfinnan Bridge are acceptable, as the proposed alterations do not comply with the minimum requirements of Design Manual for Urban Roads & Streets (DMURS), DoTTS, March 2013 and would not result in an appropriate level of pedestrian safety. In this regard, this element of the proposed development would not, if permitted, accord with the proper planning and sustainable development of the area.

Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application except where otherwise may be required in order to comply with the following conditions.

Reason: In the interest of clarity.

2. Prior to the commencement of development, the local authority shall agree with the relevant statutory agencies a Construction Environmental Management Plan, incorporating all mitigation measures indicated in the Natura Impact Statement. The mitigation measures identified in the Natura Impact Statement shall be implemented in full by the local Authority.

Reason: In order to minimise the impact of construction activities on species and habitats of conservation interest in the interest of proper planning and sustainable development of the area.

3. All repair works to the protected structure shall be carried out under the supervision of a qualified professional with specialised conservation expertise and in accordance with best conservation practice as detailed in “Architectural Heritage Protection: Guidelines for Planning Authorities” issued by the Department of the Environment, Heritage and Local Government in 2011. The repair works shall retain the maximum amount possible of surviving historic fabric in-situ, and shall be designed to give rise to minimum interference with the fabric of Ardfinnan Bridge.

Reason: To ensure that the character and integrity of the protected structure is maintained and that Ardfinnan Bridge is protected from unnecessary damage and loss of fabric.

4. The local authority shall engage the services of a project Ecological Clerk-of-Works and Licenced Ecologist for the duration of the bridge remedial works to monitor the site set up and construction of the proposed development in accordance with the mitigation measure proposed. On completion of the works, an audit report of the site works shall be prepared by the appointed person

within a period of three months, which shall be maintained on record by the local authority.

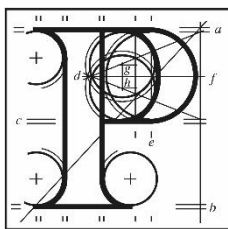
The Project Ecological Clerk-of-Works and Licenced Ecologist shall have 'Cease Works' powers.

Reason : In the interest of clarity and nature conservation, to prevent adverse impacts on the European sites and to ensure the protection of the Annex 1 habitats and Annex 11 species and their Qualifying Interests for which the sites were designated.

5. Tipperary County Council and any agent acting on its behalf shall ensure that all plant and machinery used during the works should be thoroughly cleaned and washed before delivery to the site to prevent the spread of hazardous invasive species and pathogens.

Reason: In the interest of the proper planning and sustainable development of the area and to ensure the protection of the European sites.

A. Considine
Planning Inspector
10th May 2018



An
Bord
Pleanála

**Inspector's Report -
Appendices
ABP-300422-17.**

Appendix 1

**Observers following the public notice of works on
30th November, 2017**

Appendix 2

**Qualifying Interests, including both habitats and
species, associated with the Lower River Suir SAC,
considered to be vulnerable to a pollution incident
either directly or indirectly**

**10.0 Appendix 1 - Observers following the public notice of works on 30th
November, 2018**

1. Triona Murphy
2. John O'Neill & Associates
3. Frank Murphy
4. John Murphy
5. Triona Murphy
6. Margaret Egan
7. Councillor Richie Molloy
8. Dudley Berry
9. Brett Brothers Limited C/O Sean
Brett
10. Maria Fitzgerald
11. Will Nugent
12. Des Fitzgerald
13. Elaine Egan
14. Tess O'Donnell
15. Mrs. M. Sullivan
16. Andrew Osmont
17. Josephine Carey
18. John Maher
19. Sharon Halley
20. Jim & Rita Nugent
21. Kathleen Cunningham
22. Anne Fitzgerald
23. Donal Boyle
24. Paul Burke
25. Mary Coffey
26. Marie Savage
27. Patrick Shine
28. Janet Gleeson
29. Jake Mooney
30. Jimmy Lambert
31. Jackie & Ger Cunningham
32. Josephine Lambert
33. Pearl Casey
34. Joe Lambert
35. Sonya Morrissey
36. Eamon & Sinead O'Mahony
37. Maurice & Aidan MacNamara
38. Mack Hygiene Services Ltd
39. Aidan Quirke
40. Annette Jordan
41. Cait Lonergan
42. Nuala O'Mahony
43. Aidan & Mary O'Mahoney
44. Peggy Kennedy
45. Martin Cunningham
46. Martin Egan
47. Vinny Carroll
48. Thomas & Peggy Scanlan
49. Colm & Anne Marie Flynn
50. Peggy O'Gorman
51. Bill & Marie Tyrrell
52. John Nugent
53. Brendan Ward

54. Ciaran Walsh
55. Scoil Naisunta Ard Fhionain
56. Michael Ryan
57. Pakie Ryan
58. Deirdre Egan
59. Bobby Carrigan
60. Steefan Grace
61. Laressa Cahill
62. Michael Shone
63. Celine & Joe Ryan
64. Sean Barret
65. Daniel Griffin
66. Lynn Carrigan
67. Kieran Savage
68. Marie Lonergan
69. Inland Fisheries Ireland
70. Eddie Lonergan
71. Jane O'Mahoney
72. Patreece Ryan
73. Liam Myles
74. Josephine English
75. John English
76. Karen Burke & Michael Murphy
77. Maggie Moloney
78. Pat & Noreen Quinn
79. Frances Ryan
80. Michael Hennessy
81. Glenda & Liam Myles
82. Tara Ryan
83. John & Patricia Feeney
84. Michael & Michelle Dempsey
85. Breda Hennessy & Others
86. Stephen O'Brien
87. Mark Egan
88. Ardfinnan Tidy Towns
89. Collette O'Brien
90. John O'Neill
91. Tommy Myles
92. Sean Coughlan
93. Anna Maria & Kevin Gallagher
94. Barbara Hyland
95. Ardfinnan Ladies Football Club
96. Patrick Ryan
97. Sean Mulligan
98. Ardfinnan Parish Pastoral Council
99. Michael Keane
100. Edmond Gough
101. Edmond & Patricia Shine
102. Liam & Patricia Burke
103. Anthony O'Halloran
104. Noel Coffey
105. Keith & Niamh Savage
106. Jennifer O'Brien
107. Alan O'Brien
108. John & Julia Condon
109. Paul Marsh
110. Cllr. Michael Anglim Jnr
111. Ardfinnan GAA Club
112. Kieran Cunningham

113. Cumann Luth Chleas Gael Ard
Fhionan
114. Flynn's Xpress Stop
115. Michael & Marie Burke
116. Paul Cunningham
117. Louise Boyle
118. Richard Murphy
119. Kay Boyle
120. Noel & Babs McNamara
121. Ardfinnan Community Council
122. Mattie McGrath TD
123. Jerry O'Mahoney
124. Derek O'Mahoney
125. Nora & John Kinahan
126. Nora Ryan
127. Eddie Darmody
128. Tim O'Mahoney
129. Thomas O'Mahoney
130. Simone McLoughlin
131. David Quinn
132. Cllr. Martin Lonergan
133. Eamonn Mullane
134. Marie Burke
135. Ardfinnan Community
Playschool
136. IFA South Tipperary County
Executive
137. Sarah Jane Burke
138. Burkes Foodstore
139. Pat Quirke
140. Karen Burke & Michael Murphy
141. Catherine Savage
142. Nigel Carrigan
143. Development Applications Unit
144. Edward O'Brien.

11.0 Appendix 2 – Ref: Section 8.7.5, Page 38 of Report

Qualifying Interests, including both habitats and species, associated with the Lower River Suir SAC, considered to be vulnerable to a pollution incident either directly or indirectly

1092 White-clawed Crayfish <i>Austropotamobius pallipes</i>		
Conservation Objective		
To maintain the favourable conservation condition of White-clawed Crayfish in Lower River Suir SAC, which is defined by the following lists of attributes and targets:		
Attribute	Measure	Target
Distribution	Occurrence	No reduction from baseline. See Map 7
Population Structure: recruitment	Occurrence of juveniles and females with eggs	Juveniles and / or females with eggs in all occupied tributaries
Negative indicator species	Occurrence	No alien crayfish species
Disease	Occurrence	No instances of disease
Water Quality	EPA Q value	At least Q3-4 at all sites sampled by EPA
Habitat quality: heterogeneity	Occurrence of positive habitat features	No reduction habitat heterogeneity or habitat quality

1095 Sea Lamprey <i>Petromyzon marinus</i>		
Conservation Objective		
To restore the favourable conservation condition of Sea Lamprey <i>Petromyzon marinus</i> in Lower River Suir SAC, which is defined by the following lists of attributes and targets:		
Attribute	Measure	Target
Distribution: Extent of anadromy	Percentage of river accessible	Greater than 75% of main stem length of rivers accessible from estuary

Population Structure of juveniles	Number of age / size groups	At least three age / size groups present
Juvenile density in fine sediment	Juveniles /m ²	Juvenile density at least 1/m ²
Extent and distribution of spawning habitat	m ² and occurrence	No decline in extent and distribution of spawning beds
Availability of juvenile habitat	Number of positive sites in 3 rd order channels (and greater), downstream of spawning areas	More than 50% of sample sites positive

1096 Brook Lamprey *Lampetra planeri*

1099 River Lamprey *Lampetra fluviatilis*

Conservation Objective

To restore the favourable conservation condition of Brook Lamprey *Lampetra planeri* in Lower River Suir SAC, which is defined by the following lists of attributes and targets:

Attribute	Measure	Target
Distribution	Percentage of river accessible	Access to all water courses down to first order streams
Population Structure of juveniles	Number of age / size groups	At least three age / size groups of brook/river lamprey present
Juvenile density in fine sediment	Juveniles /m ²	Mean catchment juvenile density of brook/river lamprey at least 2/m ²
Extent and distribution of spawning habitat	m ² and occurrence	No decline in extent and distribution of spawning beds
Availability of juvenile habitat	Number of positive sites in 2 nd order channels (and greater), downstream of spawning areas	More than 50% of sample sites positive

1103 Twaite Shad *Alosa fallax fallax***Conservation Objective**

To restore the favourable conservation condition of Twaite Shad in Lower River Suir SAC, which is defined by the following lists of attributes and targets:

Attribute	Measure	Target
Distribution: Extent of anadromy	Percentage of river accessible	Greater than 75% of main stem length of rivers accessible from estuary
Population Structure: age classes	Number of age classes	More than one age class present
Extent and distribution of spawning habitat	m ² and occurrence	No decline in extent and distribution of spawning habitats
Water quality: oxygen levels	Milligrams per litre	No lower than 5mg/l
Spawning habitat quality: Filamentous algae; macrophytes; sediment	Occurrence	Maintain stable gravel substrate with very little fine material, free of filamentous algal (macroalgae) growth and macrophyte (rooted higher plants) growth

1106 Atlantic Salmon *Salmo salar***Conservation Objective**

To restore the favourable conservation condition of Atlantic Salmon in Lower River Suir SAC, which is defined by the following lists of attributes and targets:

Attribute	Measure	Target
Distribution: Extent of anadromy	Percentage of river accessible	100% of river channels down to second order accessible from estuary
Adult spawning fish	number	Conservation limit (CL) for each system consistently exceeded

Salmon fry abundance	Number of fry/5m minutes electrofishing	Maintain or exceed 0+ fry mean catchment wide abundance threshold value. Currently set at 17 salmon fry/5 minutes sampling
Out-migrating smolt abundance	Number	No significant decline
Number and distribution of redds	Number and occurrence	No decline in number and distribution of spawning redds due to anthropogenic causes
Water Quality	EPA Q value	At least Q4 at all sites sampled by EPA

3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation

Conservation Objective

To maintain the favourable conservation condition of [3260] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation in Lower River Suir SAC, which is defined by the following lists of attributes and targets:

Attribute	Measure	Target
Habitat Area	Kilometres	Area stable or increasing, subject to natural processes
Habitat distribution	Occurrence	No decline, subject to natural processes
Hydrological regime: river flow	Metres per second	Maintain appropriate hydrological regime
Hydrological regime: groundwater discharge	Metres per second	Maintain appropriate hydrological regime
Hydrological regime: tidal influence	Daily water level fluctuations - metres	Maintain natural tide regime
Substratum composition: particle size range	Millimetres	Maintain appropriate substratum particle size range, quantity and

		quality, subject to natural processes
Water Quality	Various	Maintain appropriate water quality to support the natural structure and functioning of the habitat
Typical species	Occurrence	Maintain typical species in good condition, including appropriate distribution and abundance
Floodplain connectivity	Hectares	Maintain floodplain connectivity necessary to support the typical species and vegetation composition of the habitat
Fringing habitats	Hectares	Maintain marginal fringing habitats that support the typical species and vegetation composition of the habitat.