

Department of Public Expenditure and Reform

## River Ilen (Skibbereen) Drainage Scheme

### Environmental Impact Statement Recommendations to DPER

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Sherwood House, Sherwood Avenue, Taylor's Hill, Galway  
Suite 11, Groundfloor, The Mall, Beacon Court, Sandyford, Dublin 18

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## 1 INTRODUCTION

### 1.1 BACKGROUND

Environmental Impact Assessment (EIA) is the process by which the anticipated effects on the environment of a proposed development or project are measured. An EIS is the produce of assembled information which examines the positive and negative effects of a particular project on the environment and where necessary identifies mitigation measures to minimise this effect. The EIS is only one component of the information that may be required to aid in the decision making process of EIA. Supplementary information may be used including consultation with statutory bodies and the public, further information requests, public inquiries and technical reporting to provide a complete picture of the project and its potential effects.

Ryan Hanley hbridge

ave been commissioned by the Department of Public Expenditure and Reform (DPER) to provide a review of the EIS and associated documentation which will inform the Minister in carrying out an Environmental Impact Assessment of the River Ilen (Skibbereen) Drainage Scheme. As part of the review process Ryan Hanley have reviewed the EIS and associated amendments along with supplementary documentation and additional information as requested and made recommendations.

### 1.2 SCOPE OF SERVICES

As part of this commission Ryan Hanley have carried out the following tasks in order to provide the appropriate advice to the Minister:

- Review of EIS, Addendum to EIS, Appropriate Assessment Screening and supporting documentation;
- Review of responses to further information requested by Ryan Hanley and received from RPS;
- Provision of recommendations to the Minister to accept the EIA and for the Minister to prepare conditions for the granting of the proposed scheme and if relevant, to provide any recommendations regarding reasons for the refusal of the proposed scheme.

### 1.3 INFORMATION MADE AVAILABLE TO RYAN HANLEY FOR REVIEW

Information used as part of the review process included the following documentation:

- Environmental Impact Statement Vol I NTS
- Environmental Impact Statement Vol II Main body
- Environmental Impact Statement Vol III Appendices
- Environmental Impact Statement Addendum
- AA Screening Report
- AA Screening Report – Addendum
- Exhibition Report Part 1 to 4
- Response to further information as requested by Ryan Hanley
- SI Location Reports
- Contract Documents: Particular Specifications including detail design drawings
- Flood Risk Assessment and Management Study Hydrology Report
- Flood Risk Assessment and Management Study Hydrology Addendum Report
- Flood Risk Assessment and Management Study Hydraulic Analysis Report

## 1.4 REVIEW METHODOLOGY

Ryan Hanley has assessed all of the information provided to it by the DPER. The information has been assessed and reviewed by our in-house experts. The review was carried out through:

- A high level review to ensure compliance with the requirement of the EIA Directive
- Identification of additional Information requirements
- A detailed appraisal of the assessment of methodologies and their conclusions
- Provision of recommendations for conditions to the permit, where relevant.

Ryan Hanley's review assumes that the baseline assessment and/or modelling conducted as part of the EIS is accurate. The scope of the current commission does not identify a requirement to comment upon the accuracy of the data or data sources/websites/literature.

## 1.5 BACKGROUND TO THE PROPOSED SCHEME

RPS were appointed by Cork County Council, in conjunction with the OPW, in February 2011 to complete a study to identify appropriate flood risk alleviation measures for the town of Skibbereen, Co. Cork and to prepare a Flood Risk Assessment and Management Plan (FRAMS). This scheme was progressed following severe flooding in Skibbereen in November 2009 and December 2009. Prior to November 2009, the most severe flood event affecting Skibbereen occurred in August 1986.

Following detailed assessment of the flood risk in Skibbereen and evaluation of potential options for Flood Risk Management a Preferred Option was identified. An EIS for the River Ilen (Skibbereen) Drainage Scheme was published in 2013. The proposed scheme went for public exhibition for a 4 week period where the public and interested parties were invited to submit observations on the scheme as exhibited. Following on from the public consultation and the availability of updated site investigation data and updated topographical surveys a number of amendments were made to the Drainage Scheme. As a result, an assessment of the proposed amendments to the Drainage Scheme was undertaken by RPS and is documented in an Addendum to the EIS. The Addendum to the EIS identifies any new impacts, mitigation measures and monitoring required as a result of the amendments to the scheme.

## 1.6 DESCRIPTION OF THE PROPOSED SCHEME

The proposed design is based on Primary and Secondary Flood Risk Management Measures and is made up of flood defences, river regrading, culverting and channel rehabilitation.

The proposed height of the flood defences will typically be 500 mm above the predicted 0.5% Annual Exceedance Probability (AEP) event, often referred to as the 200-year flood event, levels as determined by hydraulic modelling completed as part of the Skibbereen FRAMS. The Scheme includes the provision of open U shaped channels, culverts, sheet piling, modifications of the main channel of the Ilen, regrading of the main channel of the Ilen, flood walls and embankments, pumping stations and strengthening works to existing masonry arch structure.

## 2 REVIEW OF EIS AND ASSOCIATED DOCUMENTATION

### 2.1 INTRODUCTION

The information provided in the form of an EIS and Addendum, responses to Ryan Hanley queries along with all technical supporting documentation including the works requirements for the construction of the contract (currently out to tender) and detailed design drawings for the scheme support the findings and conclusions of the EIS.

Ryan Hanley's review of River Ilen (Skibbereen) Drainage Scheme EIS is set out as follows:

### 2.2 SUBMISSIONS FROM THE PUBLIC AND PRESCRIBED BODIES

Prescribed Bodies were contacted during the EIS process and at scoping stage as outlined within the EIS Report. Prescribed Bodies were further contacted at Exhibition stage in April 2013 and at Confirmation Stage in August 2015 setting out the Scheme proposal for Skibbereen. There were no objections to the proposal identified. Consultation as to the detailed design is ongoing with Inland Fisheries Ireland and included as a requirement in the Contract Documentation (Tender Stage) for the project. Prescribed bodies include those listed in Part 3 Article 13 of the Planning and Development Regulations 2001 – 2015.

Submission from the Public were made during the consultation period of 11<sup>th</sup> April 2013 to 30<sup>th</sup> May 2013. Exhibition Stage Report 2014 details submissions made from both the public and statutory bodies at this time and individual responses to those submissions.

#### Recommendations

The applicant will seek confirmation from the DAHG on both built heritage and natural heritage to confirm that there are no objections or specific requirement for the proposed development.

**Reason:** In the interest of conservation of natural and built heritage.

The applicant will seek confirmation of no objection or a submission of project requirements from Inland Fisheries Ireland (IFI) to be included as necessary in the final conditions of this report.

**Reason:** In the interest of the aquatic environment and fisheries

### 2.3 RECOMMENDATIONS FOR EIS AND SUPPORTING DOCUMENTATION

#### 2.3.1 GENERAL FINDINGS

The EIS and Addendum Report have been reviewed. The reports have been laid out in accordance with EC (Environmental Impact Assessment) Regulations 1989 to 2001, and the recommendations of the Environmental Protection Agency's (EPA) *Draft Guidelines on the Information to be contained in Environmental Impact Statements (2002)* and *Advice Notes on Current Practice (on the preparation of Environmental Impact Statements)* (EPA, 1998) and in accordance Schedule 6 of the Planning and Development Regulation 2001, relating to the information to be contained in an EIS. A suite of mitigation measures have been provided throughout the EIS, EIS Addendum, AA Screening and supporting documentations.

#### Recommendations:

The OPW shall make available to project staff and contractors, a 'Schedule of Commitments' containing all proposed mitigation measures outlined in the various documents, which have been submitted as part of the planning application, responses to consultations (Public and Statutory) and any other recommendation made as part of the review process.

**Reason:** To protect humans and the environment, including Natura 2000 sites.

### 2.3.2 DESCRIPTION OF THE PROPOSED DEVELOPMENT

The proposed development is described in detail in Chapter 3 of the EIS and again in the EIS addendum where changes has been made. Further information is available as part of the Exhibition Reports and detailed design drawings submitted as part of the Works Requirements. The information provided is largely sufficient in detail, further detail was requested as part of the review process by Ryan Hanley Limited. No deficiencies are identified in the design and no further design recommendations are made.

**Recommendations:** None

### 2.3.3 CONSIDERATION OF ALTERNATIVES

In order to ensure the best possible design and ensure avoidance of environmental impacts as much as is feasible a consideration of alternative is made prior to the preparation of the EIS. Schedule 6, Part 1 (d) of the Planning and Development Regulations 2001 – 2015 identify the requirements for consideration of alternatives. A summary of the alternatives is discussed in the EIS and is considered to comply with the regulatory requirements. The proposed development examined a number of alternatives by a Preliminary Option Screening Process and subsequently, Multi Criteria Analysis. The assessment allowed the designer to deliver the preferred option resulting in the proposed development which met with the objectives of the project with consideration of the environmental effects.

**Recommendations:** None

### 2.3.4 RECOMMENDATIONS FOR COMMUNITY AND SOCIO ECONOMICS

In general, assessment of impacts on community and socio economics is satisfactory. There will be a short term moderate negative impact on the local community during construction phase while in the long term it is considered that there will be a significant positive impact as a result of reduced flood risk.

In order to minimise the impact on the local community during construction phase the following additional mitigation measures has been identified:

**Recommendation:**

The contractor will ensure that access will be provided for vulnerable users (e.g. pedestrians and cyclists) at the location of JFK Bridge during construction phase.

**Reason:** To ensure access within and between communities is maintained.

### 2.3.5 AQUATIC ECOLOGY

The methodology outline and assessment of impact on Aquatic Ecology is generally satisfactory and in line with current regulations and guidance.

A U shaped channel will be constructed as part of the development in the Caol Stream (Caol 1). No details of the possible construction methodology is provided within the EIS, Addendum or the Works Requirements. The

duration of construction period is also not identified within the EIS or Addendum Reports. There is potential for the construction process to have an impact on the movement of salmonid species during the construction phase should works be required to be carried out by over pumping. The contract documents identify restrictions on the timing of instream works as part of Works Specifications. The mitigation of a 5 month working period will minimise the impact on fisheries.

Regrading of the Ilen River is proposed at JFK Bridge, the nature of such works will potentially have an impact on water quality, fish movement and salmonid populations. In addition the proposal will require some ongoing maintenance. The net benefit of regrading works is limited to a reduction of water surface elevation upstream of the bridge by up to 88mm when compared with the existing condition. While justification regarding works is not provided in consideration of alternatives (increased height of flood wall), mitigation measures have been provided to minimise the impact on the aquatic environment.

Instream works on the Caol and the Ilen River will potentially result in the movement of silt. IFl has restricted silt plumes to not more than 60% of the width of the watercourse in order to prevent significant impacts. It is acknowledged that silts plumes are likely to result as part of the works, however every effort should be made to minimise silt plumes to below 60% if possible.

**Recommendations:**

No instream works will be permitted between September and March inclusive.

**Reason:** For the protection of fisheries

Mitigation measures identified within EIS 7.5.2 Operation (page 7-22) State *“input from a qualified fisheries/aquatic engineering specialist with experience in the design of instream structures is required into the design of culverts.....”* This measure shall be amended where appropriate to ensure inclusion of open culverts / U shaped Channels.

**Reason:** For the protection of fisheries

At Pre-construction phase the Method Statements for all instream works will be completed in detail and in agreement with IFl.

**Reason:** For the protection of fisheries

Best practice silt control measures shall be put in place at construction phase to prevent direct discharge of silt laden run-off to receiving waters. These silt control measure may include double silt curtains and bunding, silt busters or equivalent. The design of silt control measures shall be subject to a flood risk assessment.

**Reason:** For the protection of fisheries

### **2.3.6 TERRESTRIAL FLORA AND FAUNA**

The methodology outline and assessment of impact on Terrestrial Ecology is generally satisfactory and in line with current best practice and guidance. All impacts on terrestrial flora and fauna have been mitigated against.



Mitigation measures outlined within the EIS, EIS Addendum and associated documents provide protection to the terrestrial flora and fauna environment.

**Recommendations:** None

### 2.3.7 LANDSCAPE AND VISUAL

The methodology outlined and assessment of impact on Landscape and Visual is generally satisfactory and in line with current best practice and guidance. Historically the River Ilen has not been regarded as a landscape attribute and has had little influence on the streetscape of the town. The Skibbereen Urban Landscape Characterisation Area has been classed as being of low sensitivity. Most landscape and visual impacts are reserved for construction phase and are temporary in nature. Submissions and consultation with affected members of the public was carried out during consultation phase. The amended design as assessed in the EIS Addendum includes changes made as a result of consultation and mitigates against visual negative impacts at a number of locations by the provision of glass floodwalls.

**Recommendations:**

Landscape Rehabilitation Plans will be finalised in consultation with Cork County Council.

**Reason:** For the protection of landscape amenity and urban planning

During site excavation topsoil will be correctly stripped and store for subsequent use in landscape reinstatement where feasible

**Reason:** For the protection of visual amenity

Every effort will be made to retain trees and hedgerows, especially where such trees are of good quality – unless such trees would be adversely or directly impacted by the proposed works.

**Reason:** for the protection of visual amenity

A Landscape Rehabilitation Plan will include measures for the treatment and / or avoidance of spread of invasive species.

**Reason:** For the protection of visual amenity

All hard and soft landscaped areas shall be managed for a minimum of 12 months post construction, seeding or planting that fails or is considered defective within this period shall be replaced / made good.

**Reason:** For the protection of visual amenity

### 2.3.8 AIR QUALITY AND CLIMATE

The EIS and associated documentation sufficiently addresses air and quality impact. Impact prediction is largely limited to construction phase. A Dust Minimisation Plan with a suite of appropriate measures has been

included within the EIS report. A Traffic Management Plan will minimise emissions from construction traffic as identified within the EIS.

**Recommendations:** None

### 2.3.9 NOISE AND VIBRATION

The EIS and associated documentation sufficiently addresses Noise and Vibration impact. Impact prediction is largely limited to construction phase and is not predicted to exceed limits set by the NRA assessment guideline criteria. It is also proposed to carry out noise monitoring during construction; where noise levels are exceeded further mitigation will be employed. Vibration levels are predicted to be below thresholds set. Vibration monitoring will be carried out.

**Recommendations:** None

### 2.3.10 CULTURAL HERITAGE

The methodology outlined and assessment of impact on Cultural Heritage is generally satisfactory and in line with current best practice and guidance. The EIS and associated documentation has identified that there will be no significant impact on listed archaeology and architectural heritage. Mitigation measures are provided for avoidance of unknown sites and sites of cultural heritage (architectural heritage) interest i.e. double arched road bridge at Showgrounds 4. There is no requirement for additional mitigation measures.

**Recommendations:** None

### 2.3.11 SOILS, GEOLOGY, HYDROLOGY AND HYDROGEOLOGY

The study area is within an urbanised environment with no significant hydrological, geological or soils constraints. The study does not identify any flood risk to the site during construction phase.

There is no information on potential construction methods for the Caol Stream (Caol 1). A document of methodology regarding flow control / diversions and assessment of flood risk at construction phase would benefit the current review. The Works Requirements for the project specify that the Contractors works proposal shall not increase flood risk and the contractor will be required to assess the risk. All such proposal are subject to approval of the Employers Representative for the construction contract.

#### **Recommendations**

Construction works on the Caol Stream will be designed to ensure no risk of flooding occurs. Method Statements will be made available pre construction for approval.

**Reason:** Protection from flood risk.

### 2.3.12 MATERIAL ASSETS

The methodology outlined and assessment of impact on Material Assets is generally satisfactory and in line with current best practice and guidance. Significant material assets which will be impacted by the proposed

development are largely private lands and gardens. Overall the scheme will have a positive impact on material assets for the town of Skibbereen due to reduced risk of flooding. Land owners directly impacted by the scheme have been consulted with directly. Exhibition Reports detail all submissions made by land owners during the consultation phase; where possible, amendments to the design have been made to minimise the impact on land owners and are included within the EIS Addendum Report. Impact on utilities, roads and waste have been assessed and mitigation measures proposed.

**Recommendations:** None

### 2.3.13 INTERACTIONS

The interrelationship between the aforementioned factors has been assessed as part of the EIS and EIS Addendum. No additional mitigation measures are proposed as a result of this review in consideration of interactions.

**Recommendations:** None

## 2.4 SCREENING FOR APPROPRIATE ASSESSMENT

A Screening for Appropriate Assessment has been carried out and presented in the AA Screening Report and Addendum. The report is carried out in line with the requirements of Article 6(3) of the EU habitats Directive (Directive 92/43/EEC) and the Planning and Development Regulations 2001 – 2015. There is no anticipated impact on any designated European sites. The closest European Sites is Roaringwater Bay and Islands SAC which lies approximately 7.5 km downstream of the town. Mitigation measures are provided within the AA Screening Report and the AA Screening Addendum Report which identify standard construction management and pollution control measures. These mitigation measures will be included within a ‘Schedule of Commitments’ for the scheme.

## 3 SUMMARY AND CONCLUSION

Having regard to the EIS, EIS Addendum, associated technical reports, detailed design and Works Contracts and considering the Environmental Impact Assessment of the proposed River Ilen (Skibbereen) Drainage Scheme, Ryan Hanley have made an assessment of the reports and are satisfied that the assessment is adequate and provides mitigation measures to ensure minimisation of environmental impact. The following recommendations have been identified in this report and are summarized below as recommendations to the Minister to condition into the approval should they see fit:

- The OPW shall seek confirmation from the DAHG on both built heritage and natural heritage to confirm that there are no objections or specific requirement for the proposed development.

Reason: In the interest of conservation and natural and built heritage

- The OPW obtain a statement of no objection or of the project requirements from Inland Fisheries Ireland (IFI) to be included as necessary in the final conditions for the project.

Reason: In the interest of the aquatic environment and fisheries

- The OPW shall make available to project staff and contractors, a ‘Schedule of Commitments’ containing all proposed mitigation measures outlined in the various documents, which have been submitted as part of the planning application, responses to consultations (Public and Statutory) and any other recommendation made as part of the review process.

Reason: To protect humans and the environment, including Natura 2000 sites.

- The contractor will ensure that access will be provided for vulnerable users (e.g. pedestrians and cyclists) at the location of JFK Bridge during construction phase.

Reason: to ensure access within and between communities.

- No instream works will be permitted between September and March inclusive.

Reason: For the protection of Fisheries

- Mitigation measures identified within EIS 7.5.2 Operation (page 7-22) State “input from a qualified fisheries/aquatic engineering specialist with experience in the design of instream structures is required into the design of culverts.....” This mitigation measure shall be amended to include open culverts / U shaped Channels.

Reason: Reason: For the protection of fisheries.

- At Pre-construction phase the Method Statements for all instream works will be completed in detail and in agreement with IFI.

Reason: For the protection of fisheries.

- Best practice silt control measures shall be put in place at construction phase to prevent direct discharge of silt laden run-off to receiving waters. There silt control measure may include double silt curtains and bunding, silt busters or equivalent. The design of silt control measures shall be subject to a flood risk assessment.

Reason: For the protection of fisheries.

- Landscape Rehabilitation Plans will be finalised in consultation with Cork County Council.

Reason: For the protection of landscape amenity and urban planning.

- During site excavation topsoil will be correctly stripped and stored for subsequent use in landscape reinstatement where feasible

Reason: For the protection of visual amenity.

- Every effort will be made to retain trees and hedgerows, especially where such trees are of good quality – unless such trees would be adversely or directly impacted by the proposed works.

Reason: For the protection of visual amenity.

- A Landscape Rehabilitation Plan will include measures for the treatment and / or avoidance of spread of invasive species.

Reason: For the protection of visual amenity.

- All hard and soft landscaped areas shall be managed for a minimum of 12 months post construction, seeding or planting that fails or is considered defective within this period shall be replaced / made good.

Reason: For the protection of visual amenity.

- Construction works on the Caol Stream will be designed to ensure no risk of flooding occurs. Method Statements will be made available pre construction for approval.

Reason: Protection from flood risk.