

MWP

**Screening for Environmental Impact
Assessment Report
Bantry Mill Culvert Upgrade Project**

Cork County Council

November 2024

Contents

1.	Introduction	4
2.	Purpose of the Screening	5
3.	Legislative Context for the project.....	5
4.	Methodology for Annex III Criteria Assessment.....	8
4.1	Characteristics of proposed development	8
4.2	Location of proposed development	8
4.3	Type and characteristics of potential impacts	9
5.	Site Location and Description	9
6.	Project Characteristics.....	13
6.1	Description of the Scheme	13
6.2	Construction phase.....	13
6.3	Operational Phase	16
6.4	Environmental Context of Project Site	16
7.	Annex III Criteria Assessment.....	17
7.1	Characteristics of Project	17
7.1.1	The Size of the Proposed Development.....	17
7.1.2	Cumulative Effects	17
7.1.3	Excavations	18
7.1.4	The Use of Natural Resources, in Particular Land, Soil, Water and Biodiversity	18
7.1.5	The Production of Waste	19
7.1.6	Pollution and Nuisances.....	19
7.1.7	The Risk of Major Accidents and/or Disasters	19
7.1.8	The Risks to Human Health.....	19
7.2	Location of Projects	20
7.2.1	The Existing and Approved Land-Use.....	20
7.2.2	The relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground.....	20
7.2.3	The Absorption Capacity of the Natural Environment	20
7.2.3.1	Wetlands, riparian areas, river mouths	20
7.2.3.2	Coastal Zones and the Marine Environment	20
7.2.3.3	Mountain and Forest Areas.....	23
7.2.3.4	Nature Reserves and Parks.....	23
7.2.3.5	Areas classified or protected under legislation; Natura 2000 areas designated by Member States pursuant to Directive 92/43/EEC and Directive 2009/147/EC	23
7.2.3.6	Areas in which there has already been a failure to meet the environmental quality standards, laid down in Union legislation and relevant to the project, or in which it is considered that there is such a failure. 23	
7.2.3.7	Densely Populated Areas.....	24
7.2.3.8	Landscapes and Sites of Historical, Cultural or Archaeological Significance	24
7.3	Types and Characteristics of Potential Impacts	25
7.3.1	Population and Human Health	25
7.3.2	Biodiversity	26
7.3.3	Land & Soil	27
7.3.4	Water	28
7.3.5	Air Quality and Climate	29
7.3.6	Material Assets	30
7.3.7	Cultural Heritage	31
7.3.8	The Landscape	32
7.3.8.1	The Interaction Between the Factors Referred to Above.....	32
8.	Conclusion.....	33
8.1	Conclusion of the EIA Screening	33
8.2	Reasons for Conclusion	33
8.3	Measures Available to Reduce Effects.....	33

Tables

Table 1: Part 2 of Schedule 5 projects and their applicability to this development.....	6
Table 2: List of granted and/or on-going planning applications within the vicinity of the proposed culvert upgrade works.....	17
Table 3: Results of surface water physico-chemical analysis test	21
Table 4: Likely significant effects to population and human health.....	25
Table 5: Likely significant effects to land and soil	27
Table 6: Likely significant effects to water.....	28
Table 7: Likely significant effects on air quality and climate	29
Table 8: Likely significant effects to material assets	30
Table 9: Likely significant effects on the cultural heritage	31
Table 10: Likely significant effects on the landscape	32

Figures

Figure 1: Site Location.....	10
Figure 2: Site Layout.....	11
Figure 3: Proposed Bantry Mill Culvert Upgrade Project Sections	12
Figure 4: Water sampling locations in relation to proposed upgrade works at Bantry, Co. Cork	21

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1. Introduction

A Part 8 Planning Application is being lodged by Cork County Council (CCC) hereafter referred to as “the Applicant” for the Bantry Mill Culvert Upgrade Project (BMCUP) hereafter referred to as “the proposed development”.

The purpose of the BMCUP is to upgrade the existing Mill River culvert within Bantry town and remove the existing foul connections to the culvert and change these to discharge into an independent foul network.

The proposed development is summarised as follows:

- Reconstruction of a new Mill River Culvert along Bridge Street and New Street and Wolfe Tone Square and connection to the existing Mill River Culvert;
- Repair and upgrade works to the Mill River Culvert;
- Road and footpath reinstatement works;
- Reconstruction of Wolfe Tone Square architectural feature to facilitate tie in of new culvert;
- Construction of new services and utilities to Wolfe Tone Square, New Street, and Bridge Street

MWP has been engaged by CCC to undertake a Screening for Environmental Impact Assessment (EIA) of the project to accompany the application.

A Stage 1 Screening for Appropriate Assessment (AA) Report has been prepared and submitted as a standalone document with the Part 8 Application. The assessment concluded that no significant impacts to Natura 2000 sites are likely to occur as a result of the proposed works.

2. Purpose of the Screening

The purpose of this Screening for EIA report is to detail findings from a desktop assessment of the proposed development in Bantry to establish the likely effects on the environment and advise if an EIA would be appropriate for the proposed development. Under EU and Irish legislation, EIA is required for certain prescribed projects and is required for others which are likely to have significant impacts on the environment, by reason of their nature, extent or location. This legislation is examined in the following section.

3. Legislative Context for the project

EIA requirements derive from Council Directive 85/337/EEC (as amended by Directives 97/11/EC, 2003/35/EC and 2009/31/EC) and as codified and replaced by Directive 2011/92/EU of the European Parliament and the Council on the assessment of the effects of certain public and private projects on the environment. Directive 2014/52/EU, (hereafter referred to as the 'EIA Directive') amends Directive 2011/92/EU. The EIA Directive requires an environmental assessment to be carried out prior to development consent being granted for projects considered likely to have a significant effect on the environment.

The EIA Directive lists those projects that require a mandatory EIA (Annex I), and those projects for which an assessment must be undertaken to determine if they are probable to result in likely significant effects (Annex II). For Annex II projects, individual Member States can choose to institute specific thresholds or project specific considerations, or a combination of both approaches to arrive at a decision regarding the requirement to undertake an EIA.

Annex II developments that do not exceed the thresholds for the mandatory requirement to prepare an EIA are categorised as sub-threshold and must be assessed on a case-by-case basis to determine whether or not they are likely to have significant effects on the existing environment. The likelihood of a significant environmental effect is the principle matter around which consideration of the requirement for an EIA is based. Annex III, of the EIA Directive, sets out the criteria to be examined when carrying out a sub-threshold assessment. These criteria include the characteristics of projects, location of projects, and type and characteristics of the potential impact.

Annex IIA has been inserted to the 2014 EIA Directive requiring certain additional information be provided by the applicant or developer for the purposes of screening sub-threshold development for environmental impact assessment:

"1. A description of the project, including in particular:

(a) a description of the physical characteristics of the whole project and, where relevant, of demolition works;

(b) a description of the location of the project, with particular regard to the environmental sensitivity of geographical areas likely to be affected.

2. A description of the aspects of the environment likely to be significantly affected by the project.

3. A description of any likely significant effects, to the extent of the information available on such effects, of the project on the environment resulting from:

(a) the expected residues and emissions and the production of waste, where relevant;

(b) the use of natural resources, in particular soil, land, water and biodiversity.

4. The criteria of Annex III shall be taken into account, where relevant, when compiling the information in accordance with points 1 to 3.”

Therefore, in order for a project to be subjected to an assessment of its environmental effects, in accordance with the procedural requirements of the EIA Directive it must be:

1. A project of a type listed in Annex I; or
2. A project of a type listed in Annex II which either meets thresholds or criteria set by the Member State; or
3. A project of a type listed in Annex II which is under the threshold, but following case by case examination, is likely to have significant effects on the environment.

Schedule 5 of the Planning and Development Regulations 2001 (as amended) transposes Annex I and Annex II of the EIA Directive into Irish law under Parts 1 and 2 of the Schedule, respectively. It sets out the classes of development that require EIA. EIA is mandatory for development of a class set out in Schedule 5 Part 1 and for classes of development, which exceeds a limit, quantity or threshold set for that class of development. The proposed development does not fall within any of the mandatory classes for EIA listed under Part 1.

Table 1 provides a summary of the Part 2 projects and their applicability to this development (potentially relevant activities which may be applicable are indicated in bold and have been expanded and shown using italics).

Table 1: Part 2 of Schedule 5 projects and their applicability to this development

Part 2 of Schedule 5		Relevant to Project Development Site
1	Agriculture, silviculture and aquaculture	No
2	Extractive Industry	No
3 (a)	Energy Industry Industrial installations for the production of electricity, steam and hot water (projects not included in Annex I) with a heat output of 300 megawatts or more	No
4	Production and processing of metals	No
5	Mineral Industry	No
6	Chemical Industry	No
7	Food Industry	No
8	Textile, Leather, Wood and Paper Industries	No
9	Rubber Industry	No
10	Infrastructure Projects	No
(f)	(i) Inland-waterway construction not included in Annex I, which would extend over a length exceeding 2 kilometres; (ii) Canalisation and flood relief works, where the immediate contributing sub-catchment of the proposed works (i.e. the difference between the contributing catchments at the upper and lower extent of the works) would exceed 100 hectares or where more than 2 hectares of wetland would be affected or where the length of river channel on which works are proposed would be greater than 2 kilometres.	No
11	Other Projects	No
12	Tourism and Leisure	No
13	Any change or extension of projects listed in Annex I or this Annex, already authorised	No

Part 2 of Schedule 5		Relevant to Project Development Site
14	Works of demolition carried out in order to facilitate a project listed in Part 1 or Part 2 of this Schedule where such works would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.	No
15	Any project listed in this Part which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development, but which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.	See Section 7

This project is for a Part 8 Planning Application for a Culvert Upgrade. The class of activity most similar is 10 (f) (ii). It is clear that the proposed development falls short of this threshold.

Schedule 5 Part 2 Category 15 of the above Regulations includes a requirement for EIA for: *“Any project listed in this Part which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development but which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.”*

Where the proposed development does not meet, or exceed, the applicable threshold, the likelihood of the proposed development having significant effects on the environment may need to be considered. The discretionary (or sub-threshold) requirements are based on an assessment of the likely significant environmental effects of the proposed development.

Schedule 7 of the Planning and Development Regulations 2001 (as amended), sets out the criteria for assessing whether or not a development would or would not be likely to have ‘significant’ effects on the environment. Schedule 7 transposes Annex III of the EIA Directive.

To determine whether a development is likely to have a ‘significant effect(s)’ on the environment, it is necessary to consider the criteria listed in Schedule 7.

This is transposed into Irish Law as Schedule 7A of the Planning and Development Regulations 2001 (as amended).

The criteria are grouped under three headings and are used to help in the screening process to determine whether a development is likely to have a significant effect on the environment. The criteria are grouped under three headings:

1. Characteristics of proposed development;
2. Location of proposed development; and
3. Type and characteristics of potential impacts.

4. Methodology for Annex III Criteria Assessment

The EIA Screening was completed by reviewing the proposal against the criteria included in Annex III of the EIA Directive (2014/92/EU). The criteria are grouped under three headings and are used to help in the screening process to determine whether a development is likely to have a significant effect on the environment. The criteria are outlined here below.

4.1 Characteristics of proposed development

The characteristics of the projects must be considered, with particular regard to:

- a. the size and design of the whole project;
- b. the cumulation with other existing and/or approved projects;
- c. the use of natural resources, in particular land, soil, water and biodiversity;
- d. the production of waste;
- e. pollution and nuisances;
- f. the risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge;
- g. the risks to human health (for example due to water contamination or air pollution).

4.2 Location of proposed development

The environmental sensitivity of geographical areas likely to be affected by projects must be considered, with particular regard to:

- a. the existing and approved land use;
- b. the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground;
- c. the absorption capacity of the natural environment, paying particular attention to the following areas:
 - I. wetlands, riparian areas, river mouths;
 - II. coastal zones and the marine environment;
 - III. mountain and forest areas;
 - IV. nature reserves and parks;
 - V. areas classified or protected under legislation; Natura 2000 areas designated by Member States pursuant to Directive 92/43/EEC and Directive 2009/147/EC;
 - VI. areas in which there has already been a failure to meet the environmental quality standards, laid down in Union legislation and relevant to the project, or in which it is considered that there is such a failure;
 - VII. densely populated areas;

- VIII. landscapes and sites of historical, cultural or archaeological significance.

4.3 Type and characteristics of potential impacts

The potential likely significant effects of projects on the environment must be considered in relation to criteria set out in points 1 and 2 of this Annex, and having with regard in particular to the impact of the project on the factors specified in Article 3(1), taking into account:

- a. the magnitude and spatial extent of the impact (for example geographical area and size of the affected population likely to be affected);
- b. the nature of the impact;
- c. the transfrontier transboundary nature of the impact;
- d. The magnitude intensity and complexity of the impact;
- e. the probability of the impact;
- f. the expected onset, duration, frequency and reversibility of the impact;
- g. the cumulation of the impact with the impact of other existing and/or approved projects;
- h. the possibility of effectively reducing the impact.

Article 3(1) of the Directive states:

The environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a project on the following factors:

- a. population and human health;
- b. biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;
- c. land, soil, water, air and climate;
- d. material assets, cultural heritage and the landscape;
- e. the interaction between the factors referred to in points a) to d).

5. Site Location and Description

Bantry is located 85km west of Cork City as shown in **Figure 5-1**. The Culvert runs down Bridge Street and New Street and Wolfe Tone Square. A project description is provided in **Section 6**, below.

6. Project Characteristics

6.1 Description of the Scheme

The nature and extent of the proposed development comprises:

- Reconstruction of a new Mill River Culvert along Bridge Street and New Street and Wolfe Tone Square and connection to the existing Mill River Culvert at chainage 80m; This includes:
 - A new Mill River Culvert of internal dimensions 5.2m wide, 1.5m high which will be constructed from a tie in at Wolfe Tone Square, at Chainage 80m, to William Street, at Chainage 242m;
 - A new Mill River Culvert of internal dimensions 3.6m wide, 1.5m high which will be constructed from William Street junction at Chainage 242m to the Mill on Bridge Street at Chainage 452m;
- Connect to existing drainage/services at William Street and Main Street;
- Repair/upgrade works to be carried out to the Mill River Culvert from Chainage 0 to 80m;
- Road and footpath reinstatement works ;
- Removal and reconstruction of the sections of Wolfe Tone Square will be required to facilitate the tie in of the new Mill River culvert and backfilling of the old offline stone culvert;
- Construction of new services and utilities including foul water drainage. Surface water drainage, watermain infrastructure, electricity, and communications will be required at Wolfe Tone Square, New Street, and Bridge Street;
- Construction of 2 No. surface water pumping sumps in Wolfe Tone Square.

6.2 Construction phase

The construction of the proposed development will necessitate the excavation of the existing roads, footpaths and pavements, formation of suitable subbase and levels, relocation of existing utilities, reinstatement of pavement and footpath as required. Footpaths will be broken by mechanical hammer and roadway surfaces planed. The resultant materials will be loaded onto a dump truck by machine bucket for removal to an appropriately licensed waste facility.

The proposed development for which permission is being sought consists of the construction and operation of the following elements:

- The new culvert will be constructed using traditional open cut excavation methods whereby the ground is excavated from the existing road/surface level down to the proposed culvert formation level. Where space permits, the sides of the excavations will typically be battered and where the excavation is in proximity to existing buildings or other structures, a temporary shoring system such as trench boxes or sheet piles will be required.
- Where excavations are close to buildings or other structures, investigations will be carried out prior to commencing the main works to establish the nature and depth of foundations and, where necessary, temporary supports or underpinning will be provided.

- It is anticipated that the majority of excavation will be carried out using an excavator or similar with an attached toothed bucket. It is anticipated that some areas will require excavation assisted by rock ripping or localised use of rock breakers.
- A mass concrete levelling blinding will be placed where required on the existing soil/rock to ensure a uniform surface is provided to support the culvert.
- The majority of the new culvert will be manufactured off site and transported to the site in segments before being lifted into position by a crane and joined together.
- Localised sections of the culvert will be cast in-situ, typically at interfaces with existing culverts or at irregular or non-uniform geometries. Cast in-situ sections will typically be constructed using the following methods:
 - Steel reinforcement for the culvert base slab will be lifted onto the formation/blinding and fixed into position before pouring concrete.
 - Starter bars will be left out of the base slab to allow the reinforcement for the walls to be lapped on to provide continuity in the structure. Conventional formwork will be lifted into position using a crane before pouring concrete for the culvert walls. The culvert roof will also include conventional soffit formwork and may be poured at the same time as the walls.
 - Once the concrete has sufficiently cured the formwork will be stripped.
- Due to the limited space available for the construction works at many locations, it is anticipated that the construction will be carried out in a phased manner whereby the works will be divided into suitably sized segments. The basic sequence of works for each segment will likely include:
 - Initial excavations and temporary services diversions will be undertaken.
 - Excavation for the culvert will typically include the additional excavation required for the new/upgraded services and utilities which will be installed on each side of the new culvert.
 - The permanent services and utilities will be installed and the excavation/trenches will be backfilled.
 - The road/pavements will then be reinstated. It is envisaged that a temporary finish will initially be provided for each segment.
 - Once all sections of the culvert are installed, it may be necessary to undertake additional excavations each side of the new culvert to access the new services/utilities and make the final permanent connections for properties.
 - Alternatively, the culvert could be installed in its entirety with temporary services and, following completion of the culvert installation, the new services and utilities would be constructed each side of the culvert.
- The majority of the new culvert will be constructed along the line of the existing culvert and at such locations temporary over-pumping will be carried out. Over-pumping will involve the collection of water at the upstream end of each segment of works and pumping it back into the culvert at the downstream end of that segment. This will allow the stream flows to by-pass the works therefore construction will be carried out in the dry.
- Sections of the N71 road, New Street and Bridge Street will need to be closed at times to facilitate the works. Prior to commencing the works, a detailed traffic management system will be implemented to minimise disruption caused by the works. Traffic and pedestrian diversions will be put in place. Where

feasible, access to all properties will be maintained however there may be short timeframes when access cannot be safely maintained to particular properties.

- All material which is excavated during the construction works will be sorted and, where feasible, will be re-used in the new works. Where material is not suitable for use elsewhere in the works, it will be disposed of off-site.

A detailed Construction and Traffic Management Plan will be prepared by the Main Contractor carrying out the works and issued to CCC for agreement prior to any works starting on site.

6.3 Operational Phase

The proposed Bantry Mill Culvert Upgrade Project will constitute little by way in operational change and is considered to operate in effectively the same manner as it is currently.

6.4 Environmental Context of Project Site

The proposed project is located within the Electoral Division of 'Bantry Urban'. CSO data indicates that, in 2022, this ED had a total population of 3,358 persons resident.

Bantry is located in County Cork, 85km west of Cork City. The Bantry catchment is centred around the 2.2 km long Mill River, also known as the Bantry River, a steep channel upstream before it passes into a tidal culvert under Chapel Street in Bantry. The culvert passes under Bantry Town Centre and has an outfall into Bantry Harbour. There are multiple tributaries which join the Mill River: the Knocknaveagh, Sheskin East, Carrignagat, Alley River, and Scart. These are relatively steep and narrow, with many engineered sections including culverts, weirs, bridges, and aqueducts. The Alley River, also known as the Reenrou, has a shallower gradient, and is culverted in its lower reaches.

Bantry's culverts consists of a main culvert and two side culverts. The main culvert is 445m long and carries the Mill River under the centre of Bantry along New Street until it outfalls west of Wolfe Tone Square. There is a 103m long side culvert from the south which carries the Scart Stream into the main culvert at Bridge Street approximately 440m upstream of the outfall. The other side culvert connects from the north and carries the Alley River into the Mill River approximately 309m upstream of the outfall.

There are surface water capacity issues with the Mill River and existing surface water culverts which contribute to flooding in the area. Foul water in the Bantry area is conveyed via a combined sewer system to the Bantry Wastewater Treatment Plant (WWTP), which has a design capacity of 6,000 population equivalent (PE) and is situated on the northern side of Bantry Harbour. Sewage treatment discharge locations were gathered from EPA maps (2024). The primary discharge location for foul water is in Inner Bantry Bay, approx. 2.6 km west of the Mill River outflow into Bantry Harbour. A secondary outflow is at the junction of Glengarriff Road and Barrack Street, while emergency outflows are located on the Scart Rd south of the Harbour, at Reenrou East north of the Harbour, and in Bantry Harbour itself, near the WWTP.

The CORINE (2018) landcover data series (available on EPA's interactive map viewer) shows that landcover at the proposed development site is classified as 'Discontinuous Urban Fabric' (Code: 112). Lands nearby the proposed development site are classified as 'Pastures' (Code: 231) surrounding the town, whilst 'Sea and ocean' (Code: 523) occurs to the west¹.

According to the Geological Survey Ireland (GSI) online map viewer, the proposed development site is underlain by massive and flaser-bedded sandstone. Soils at the proposed development site are categorised as 'Made/Built Land'². The underlying GSI bedrock aquifer at most part of the site is categorized as a 'Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones'.

The groundwater vulnerability of the aquifer is recorded primarily as 'Low Vulnerability' for most of the length of the proposed works location. This increases from 'Low' to 'Moderate' to 'High' to 'Extreme' over a length of metres between New Street and Bridge Street, likely driven by decreasing depth to bedrock as 'Rock at or near

¹ CORINE (2018) landcover available at <https://gis.epa.ie/EPAMaps/>. [Accessed 15/02/2024].

² Geological Survey Ireland information available at <https://www.gsi.ie/en-ie/data-and-maps/Pages/default.aspx> [Accessed 08/08/2024].

Surface or Karst’ is recorded in large pockets throughout the area defined for ‘Extreme’ vulnerability. The GSI define groundwater vulnerability as “a term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease with which groundwater may be contaminated by human activities”.

The proposed development site is not located within a Special Area of Conservation (SAC) or Special Protection Area (SPA) collectively known as European Sites.

7. Annex III Criteria Assessment

7.1 Characteristics of Project

7.1.1 The Size of the Proposed Development

The works area of the proposed upgrade is limited to and contained within the terrestrial land over and within the culvert. The project falls below the thresholds which would trigger mandatory EIA as defined under Schedule 5 of the Planning and Development Regulations 2001, as amended.

7.1.2 Cumulative Effects

The proposed development is within Bantry town centre, which is subject to ongoing retail and commercial development. The area pertaining to the culvert location is zoned as ‘Town Centres/ Neighbourhood Centres’. A search of Cork County Council’s on-line planning enquiry system was consulted for granted or on-going planning applications, see table below.

Table 2: List of granted and/or on-going planning applications within the vicinity of the proposed culvert upgrade works

Application No	Applicant	Location	Proposed Development	Decision	Status	Decision Date/Due Date
24213	Eugene Daly	Vickery’s Inn Complex, New Street, Bantry, Co. Cork	Demolition and reconstruction of existing unstable laneway boundary wall, construction of building to be used as a mixed market/food emporium and all associated site works	*	Further Information	26/6/2024

The effect of the current proposal will be to improve the already present culvert structure and function. Any additional cumulative impacts would be temporary to short-term, occurring only during the construction phase.

The proposed Mill Culvert Upgrade Project will, in addition the Bantry Flood Relief Scheme, provide some additional capacity within the culvert during flood events whilst also replacing the deteriorating structure. These works, whilst separate from each other, require an holistic approach to ensure the objectives of both are aligned and achieved. As the Bantry Flood Relief Scheme is currently in Stage 1 of a 5-Stage project lifecycle and considering the flood relief scheme and this project are undertaken to ensure a synergistic result, it is unlikely that these efforts will be undertaken at the same time and that they will be undertaken which would result in

significant negative cumulative effects. Cumulation with other projects is therefore not considered to be significant.

7.1.3 Excavations

It is proposed to excavate ground in order to construct the new culvert which will occur from the existing road/surface level down to the proposed culvert formation level. Waste generated during the excavation works will be managed in accordance with a detailed Construction Waste Management Plan. The plan will be prepared by the main contractor carrying out the works and issued to Cork County Council for agreement prior to any works commencing on site.

7.1.4 The Use of Natural Resources, in Particular Land, Soil, Water and Biodiversity

The construction phase of the proposed development is anticipated to cover a period of between 12-18 months. During this period, there will be a combination of HGVs for the component deliveries and cars/vans for construction staff. HGV movements are expected to be most intense throughout the stage of construction, tailing off towards the final weeks. Car/van movements are expected to be constant throughout.

Due to the limited space available for the construction works at many locations, it is anticipated that the construction will be carried out in a phased manner, whereby the works will be divided into suitably sized segments. The basic sequence of works for each segment will likely include:

- Initial excavations and temporary services diversions will be undertaken,
- Excavation for the culvert will typically include the additional excavation required for the new/upgraded services and utilities which will be installed on each side of the new culvert,
- A mass concrete levelling blinding will be placed where required on the existing soil/rock to ensure a uniform surface is provided to support the culvert,
- The permanent services and utilities will be installed and the excavation/trenches will be backfilled,
- The road/pavements will then be reinstated. It is envisaged that a temporary finish will initially be provided for each segment,
- Once all sections of the culvert are installed, it may be necessary to undertake additional excavations each side of the new culvert to access the new services/utilities and make the final permanent connections for properties,
- Alternatively the culvert could be installed in its entirety with temporary services and, following completion of the culvert installation, the new services and utilities would be constructed each side of the culvert.

7.1.5 The Production of Waste

Contractors working on site during the works will be responsible for the collection, control and disposal of all waste generated by the works. Construction phase waste may consist of hardcore, stone, concrete, steel reinforcement, ducting, shuttering timber, food waste from the canteen and unused oil, diesel and building materials. This waste will be collected at the end of the construction phase and taken off site to be reused, recycled and disposed of in accordance with best practice procedures at an approved facility. Domestic wastewater from the on-site holding tank will be collected on a regular basis by approved contractors and disposed of in an authorised facility in accordance with best practice. Plastic waste will be taken for recycling by an approved contractor(s) and disposed or recycled at an approved facility.

All waste generated during construction, including surplus excavation material to be taken off-site, shall be only recovered, or disposed of at an authorised site which has a current Waste Licence or Waste Permit in accordance with the Waste Management Acts, 1996 to 2011. This shall not apply to the reuse of excavated material within the applicant's site boundary.

It is considered that the production of any waste associated with the construction of the development, as described above, would not cause unusual, significant or adverse effects of a type that would require an EIA.

7.1.6 Pollution and Nuisances

The proposed works may cause a temporary disturbance or nuisance to occupants of the immediate and surrounding environs of the town centre. Works will be very localised thus minimising any disturbance. Works locations will be over-pumped whereby water will be collected at the upstream end of each segment of works and pumped back into the culvert at the downstream end of that segment thus allowing the stream to by-pass the works. Consequently, works will be carried out in the dry.

7.1.7 The Risk of Major Accidents and/or Disasters

Given the temporary to short-term nature of the proposal and the small scale of the project, the risk of disasters (typically considered to be natural catastrophes e.g. very severe weather event) or accidents (e.g. fuel spill, traffic accident) is considered low. In the case of the occurrence of a severe weather event such as flooding, work will be curtailed.

7.1.8 The Risks to Human Health

There will be minor temporary nuisances associated with the project. The proposal will include noise from machinery on site (short duration, temporary). The project is a relatively small development, which will not involve significant risks to human health.

7.2 Location of Projects

7.2.1 The Existing and Approved Land-Use

The works will be carried out in an existing urban area with the upgrade works being subterranean and surface works to existing surfaces being temporary whilst upgrades undertaken. There will be no change in land-use. The area pertaining to the project's location is zoned as 'Town Centres/ Neighbourhood Centres'

7.2.2 The relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground

The proposed works are within the confines of the town centre and confined to particular streets and junctions and do not traverse any designated conservation areas. A Screening for Appropriate Assessment was undertaken, and this concluded there will be no significant impact on any European sites within the zone of potential influence.

The project does not involve use or destruction of natural resources, such that there would be a significant threat to their regenerative capacity.

7.2.3 The Absorption Capacity of the Natural Environment

7.2.3.1 Wetlands, riparian areas, river mouths

The works are in Bantry town centre, at the mouth of the Mealgh Stream, which drains to the Bantry marina and onwards to transitional and coastal waters. As the works are located in an urban setting, there are no wetland or riparian areas present in the vicinity of the works or along the works length.

Surface waters in the town enters the culvert system which ultimately discharges to the Bantry marina which is tidally influenced. The development will not create significant additional run off and will continue to function within the capacity of the natural environment.

7.2.3.2 Coastal Zones and the Marine Environment

The mouth of the culvert exits to Bantry marina, a low-energy area characterised by muddy and sandy shores which relatively low species richness. The marina is a natural inlet within Inner Bantry Bay and is bordered by man-made walls on all sides. The transitional WFD waterbody which the culvert drains to is extensive and spans the inner Bantry Bay waters from Ardnamanagh Point across the bay, incorporating the east coast of Whiddy Island, to Dulane Point.

As part of survey efforts undertaken on the 19th of June 2024, water samples were taken in the river and at the mouth of the culvert to determine the baseline physico-chemical parameters of the watercourse throughout the culvert length. The results of the water chemistry analysis and locations of sampling are detailed in Table 3.

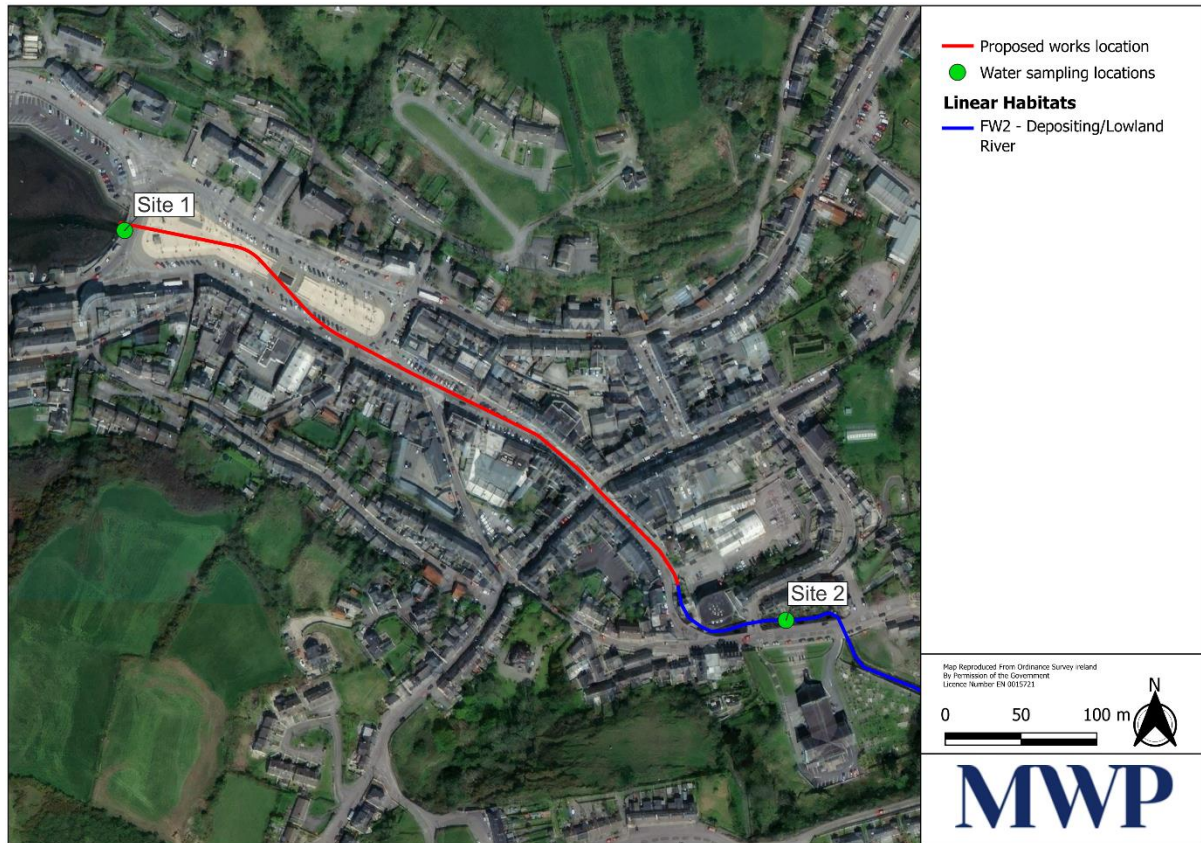


Figure 4: Water sampling locations in relation to proposed upgrade works at Bantry, Co. Cork

Table 3: Results of surface water physico-chemical analysis test

Physico-chemical parameters	Site 1 (Culvert exit)	Site 2 (Upstream, above culvert)
Total Ammonia (as N) mg/L	1.4	<0.05
Biological Oxygen Deman (BOD) mg/L	1.4	0.6
Total Hardness (as CaCO ₃ mg/L	~	60
Nitrate (as NO ₃) mg/L	2.2	2.9
Nitrite (as NO ₂) mg/L	<0.05	<0.05
Total Dissolved Solids mg/L	>8000	<100
Total Suspended Solids mg/L	~	<25
Dissolved Inorganic Nitrogen (DIN, as N) mg/L	1.9	0.66
OrthoPhosphate (as PO ₄) mg/L	<0.2	<0.2
Total Phosphorus as P mg/L	<0.5	<0.5
Total Organic Carbon mg/L	3.7	2.2

Physico-chemical parameters	Site 1 (Culvert exit)	Site 2 (Upstream, above culvert)
pH	7.79	8.12
Conductivity (25°C) μS/cm	>10000	241

* ~ : Insufficient sample for analysis (Total Hardness), unable to analyse due to matrix interference (TSS),

The results of the water analysis show relatively little variation between waters sampled upstream and downstream of the culvert. Ammonia (NH_3^+) increased between upstream and downstream locations (<0.05mg/l – 1.4mg/l), which may be linked to anaerobic conditions and increased bacteria within the culvert which explains higher levels of ammonia at culvert exit. These ammonia results also correspond with the Nitrate (NO_3^-) results which showed higher levels of nitrate at the upstream site than at the culvert’s end as aerobic conditions were present at Site 2 allowing ammonia to be nitrified to nitrate resulting in relatively higher nitrate than ammonia where aerobic conditions are present, i.e., upstream of the culvert. Ammonia cannot nitrify to oxidised nitrogen in anaerobic conditions within the culvert due to a lack of photosynthesising plant life due to no light present.

Nitrite (NO_2^-) is the initial sequentially oxidised form of ammonia before further nitrification to nitrate. This compound is considered particularly toxic to aquatic organisms in freshwaters. Levels of nitrite both upstream and at the culvert end measured <0.05mg/l.

Dissolved Inorganic Nitrogen (DIN) is effectively the summation of all forms of nitrogen, (i.e., ammonia + nitrite + nitrate). Levels of DIN were higher at the culvert end site (1.9mg/l) when compared to samples upstream (0.66mg/l), possibly driven by higher levels of ammonia downstream. Standard measures of DIN are not measured for river or transitional waterbodies which represent the source and sink of waters to and from the culvert. Coastal waterbodies are assessed for DIN and when referring to nutrient condition limits under Statutory Instrument (S.I.) 272/2009, these values (0.66mg/l and 1.9mg/l) represent Good status coastal waterbodies where Good status \leq 2.6mg/l where psu, or salinity, is 0 which can be assumed to be the case of the culvert waters. As the culvert drains to a larger transitional waterbody before entry to coastal waterbody, these values are likely to decrease significantly upon entry to due to a significant dilution factor.

The values for phosphate parameters Orthophosphate and Total Phosphorus both upstream and at culvert end were similar at <0.2mg/l and <0.5mg/l indicating negligible levels of phosphorus in the system.

Biological oxygen demand (BOD) is a measure of the amount of oxygen required to break down organic material in water over a set period of time (typically five days). BOD increased from the site upstream (0.6mg/l) to the culvert end (1.4mg/l) which indicates a high-quality river which deteriorates slightly, which would be expected as the culvert drains runoff from local infrastructure.

Total Hardness is a measure of calcium carbonate in water, the test for which failed on sample taken from the culvert exit as there was an insufficient sample for analysis. The site upstream returned a hardness value of 60 CaCO_3 mg/l which would be reflective of relatively soft water which may reflect the surrounding geology of the area, predominantly sandstone, a stone with low levels of calcium.

Total Suspended Solids (TSS) refer to larger waterborne particles within a water sample. The value recorded upstream was <60mg/l whilst a matrix interference on the sample taken at the culvert end resulted in the TSS being unable to analyse. Total Dissolved Solids (TDS) refer to primarily dissolved salt molecules. Values for TDS in the system showed much higher values at the culvert end (>8,000mg/l) when compared to that at the upstream site (<100). Similarly extreme difference in values were recorded with conductivity where conductivity at the

culvert end was recorded at >10,000µS/cm whilst the upstream site recorded a value of 241µS/cm. High values for TDS and conductivity are likely driven by the location of the culvert end where the exit meets seawater. Seawater is high in sodium chloride and other dissolved salts which would drive high TDS values whilst the ionic nature of seawater, again driven primarily by sodium chloride ions, relative to freshwater is culpable for the high value of conductivity in the samples taken at the culvert end. The values recorded for these parameters in these locations represent typical values in natural environments.

Total Organic Carbon (TOC) represents total amount of carbon in organic compounds in aquatic systems. This parameter increased between the site upriver (2.2mg/l) and the culvert end (3.7mg/l) and an increase would be expected given the culvert runs under an urban centre. These values would be expected of waters which drain urban centres such as Bantry.

The pH values recorded along the watercourse indicate the upstream site experiences more alkaline conditions (pH: 8.12) when compared to the more neutral pH of 7.79 recorded at the culvert end. More alkaline water upstream may be driven by surrounding geology such as mudstone however much of the surrounding area's soil type is primarily classified as "AminDW - Deep well drained mineral (Mainly acidic)". Anthropogenic activities upstream may be driving higher pH values at the upstream site when compared to culvert end. The most recent subcatchment assessment did not identify a significant pressure for the river waterbody "BANTRY_010" and it is considered to not be at risk with regard to the Water Framework Directive³.

7.2.3.3 Mountain and Forest Areas

The site is located within the town centre of Bantry. There are forestry and mountains in the greater region, but none will be affected by the project.

7.2.3.4 Nature Reserves and Parks

There are no nature reserves or parks in the area that will be affected by the project.

7.2.3.5 Areas classified or protected under legislation; Natura 2000 areas designated by Member States pursuant to Directive 92/43/EEC and Directive 2009/147/EC

A Screening for Appropriate Assessment has been prepared to determine whether the proposal is likely to have a significant effect on the conservation objectives of one European site, the Glengarriff Harbour and Woodland SAC (Site code: 000090). It concluded that there are no likely significant effects which could arise as a result of the upgrade works and the proposal could therefore be screened out for Stage 2 appropriate assessment.

7.2.3.6 Areas in which there has already been a failure to meet the environmental quality standards, laid down in Union legislation and relevant to the project, or in which it is considered that there is such a failure.

The results of the EPA water quality assessment under the WFD status indicate that water quality in the Bantry_010 was of Good status for the 2016-2021 WFD status period as well as the 2013-2018 status period. The WFD cycle 2 assessment for the Mealagh subcatchment (Code: Mealagh_SC_010) generated in January 2019 found that the Bantry_010 river was not at risk with regard to WFD and no significant pressures were identified

³https://catchments.ie/wp-content/files/subcatchmentassessments/21_20%20Mealagh_SC_010%20Subcatchment%20Assessment%20WFD%20Cycle%202.pdf (Accessed: 23/09/2024)

for the surface waterbody. Hydrologically linked transitional and coastal waterbodies, namely the Inner Bantry Bay and Outer Bantry Bay were also considered to not be at risk with regard to WFD.

The proposed upgrade works to Bantry culvert will not impact negatively on water quality in the immediate receiving watercourses and those hydrologically linked downstream including transitional and coastal waterbodies. Water will continue to drain into the existing drainage network and no additional pollutants or no additional discharges will enter the water as a result of the project.

7.2.3.7 Densely Populated Areas

Central Statistics Office (CSO) data reports that, in 2022, the electoral division of Bantry Urban had a total population of 3,358 persons. The works will be relatively small in scale and short-term in duration and are not anticipated to have a significant long-term effect on the surrounding population.

7.2.3.8 Landscapes and Sites of Historical, Cultural or Archaeological Significance

Examination of the National Monuments Service (NMS) online database of its sites and monuments records (SMR) indicates there are several listed buildings and features in the area. There is no overlap between any buildings or sites of historical significance and the proposed upgrade works.

Overall, the project aims to repair and improve the culvert thus benefitting the town population whilst retaining the cultural features and buildings of the town. Excavations are required along streets which have been previously excavated for initial culvert construction.

7.3 Types and Characteristics of Potential Impacts

7.3.1 Population and Human Health

The likely significant effects of the project on population and human health have been considered in the following table.

Table 4: Likely significant effects to population and human health

Characteristics of the Impact	Population and Human Health
Magnitude and spatial extent	Mainly limited to the site and locality affecting workers, residents and business owners. Visitors and those travelling through the town will be impacted to a lesser degree.
Nature	Temporary potential negative nuisance impacts to residents and business owners from noise arising from construction activities. Disruption to nearby residents, retail and commercial activities, road users and pedestrians during the proposed construction phase. Best construction practice in relation to noise and dust suppression will be implemented to keep impacts to a minimum. A Traffic Management Plan will also be put in place for the duration of the works.
Transboundary nature	Not applicable.
Intensity and complexity	A slight potential negative temporary impact on the immediate population is anticipated during the construction phase. When complete, the planned upgrade of key Bantry town centre locations will have a long-term positive impact on both the local population and visitors.
Probability	There is no likelihood of significant negative effects to population and human health as a result of the project.
Expected onset, duration, frequency and reversibility	Effects will be temporary.
Cumulation with other existing and/or approved projects	No likelihood for cumulative impacts to occur.
Possibility of effectively reducing the impact	A Construction and Environmental Management Plan will be put in place which will outline best practice measures to reduce impacts during the construction stage.

It is not considered that the proposal will result in a significant negative effect on population and human health, either alone, or in combination with other projects. Overall, the project will have a long-term positive effect on the town.

7.3.2 Biodiversity

The likely significant effects of the project on biodiversity have been considered in the following table.

Table 3: Likely significant effects to biodiversity

Characteristics of the Impact	Biodiversity
Magnitude and spatial extent	No change to the current scenario. Localised temporary impact during construction phase only resulting from traffic and noise.
Nature	Likely, temporary not significant negative impact to water quality due location of the works within the culvert with hydrological connectivity to transitional waterbody.
Transboundary nature	Not applicable.
Intensity and complexity	The site is comprised primarily of built ground within an urban centre with immediate environs comprising buildings and artificial surfaces and has no intrinsic ecological value. The project is not considered complex. There will be an imperceptible impact on biodiversity from the proposed works.
Probability	There is a no likelihood of significant effects on biodiversity as a result of the project.
Expected onset, duration, frequency and reversibility	Construction impacts will be temporary to short-term. Effects will be temporary to short-term.
Cumulation with other existing and/or approved projects	It is not considered that the proposal will result in a significant effect on the biodiversity, either alone, or in combination with other projects.
Possibility of effectively reducing the impact	A Construction and Environmental Management Plan will be put in place for the duration of the works.

It is not considered that the proposal will result in a significant effect on the biodiversity, either alone, or in combination with other projects.

7.3.3 Land & Soil

The likely significant effects of the project on land have been considered in the following table.

Table 5: Likely significant effects to land and soil

Characteristics of the Impact	Land and Soil
Magnitude and spatial extent	Localised to the footprint of the project.
Nature	Bantry is underlain by mudstone and sandstone. Soils generally comprise of made ground and works will be carried within area already excavated for culvert. Modifications will be to existing road surfaces, and their replacement with materials that are similar or the same. Existing road surfacing and concrete footpaths will be removed from the work site. Geological resources required are typical for this type of development. There will be a balance between waste material and soil generated and imported stone and fill for the new development. The likely impact on land is neutral.
Transboundary nature	Not applicable
Intensity and complexity	Changes on land and soils as a result of the project will result in effects which are imperceptible given that there is no land loss, excavations are into existing culvert, and road surfaces and footpaths will be replaced with similar or same materials.
Probability	There is a low probability of significant effects to land as a result of the project.
Expected onset, duration, frequency and reversibility	Construction will take place over a 12 - 18 month period with most disruption taking place in the first number of months e.g. earthworks, excavations, concrete deliveries. Impacts are not complex.
Cumulation with other existing and/or approved projects	No significant cumulative impacts on land are likely to occur as a result of in combination effects.
Possibility of effectively reducing the impact	A Construction and Environmental Management Plan will be put in place for the duration of the works. This plan will include measures for dealing with soils and other excavated materials.

There is no change in land use from the proposed development. Therefore, no significant effect on land and soils, either alone, or in combination with other projects, will occur.

7.3.4 Water

The likely significant effects of the project on the water environment have been considered in the following table.

Table 6: Likely significant effects to water

Characteristics of the Impact	Water
Magnitude and spatial extent	Localised to Bantry town centre within the existing culvert which has hydrological connection to the Mealagh river upstream and coastal waters downstream. No instream works will take place. All works will be undertaken in the dry.
Nature	There is no potential for water run-off from the site reaching receiving surface waterbodies when works in the dry are undertaken via overpumping. There will be no direct discharges to surface water during the construction phase of the project. Significant impacts are not envisaged due works done in the dry and works being undertaken to repair and upgrade already existing culvert. Water chemistry analysis undertaken upstream and at culvert end indicate water is typical of natural watercourses and indicative of good status water at both sites. The construction phase and operational phased of the project are not predicted to result in a significant negative effect on hydrology or surface water quality.
Transboundary nature	Not applicable.
Intensity and complexity	No runoff is expected to occur where works are done in the dry. Overpumping will ensure no silt and runoff will enter the drainage network below thus will not impact receiving watercourses.
Probability	There is a low probability of significant effects to water as a result of the project.
Expected onset, duration, frequency and reversibility	Construction will take place over a 12 - 18 month period with the majority of disturbances occurring at the onset of the project, e.g. earthworks, excavations, concrete deliveries, therefore impacts will be temporary-to-short term in nature. No instream works will take place and impacts are not anticipated to be complex.
Cumulation with other existing and/or approved projects	Significant cumulative impacts are unlikely to occur.
Possibility of effectively reducing the impact	A Construction and Environmental Management Plan will be implemented which will include best practice measures to protect water quality and reduce any impacts. With regards to use of fuels/oils, all fuels will be stored within secure and impermeable storage areas. Re-fuelling of plant and equipment will only take place within designated areas.

It is not considered that the Bantry Mill Culvert Upgrade Project will result in a significant effect on the water environment, either alone, or in combination with other projects.

7.3.5 Air Quality and Climate

The likely significant effects of the project on air quality and climate have been considered in the following table.

Table 7: Likely significant effects on air quality and climate

Characteristics of the Impact	Material Assets
Magnitude and spatial extent	Any impacts will be localised to the vicinity of the works during the construction phase of the project
Nature	The construction phase will give rise to dust and additional air emissions from construction vehicles, plant and machinery. However, this will be temporary and considering the scale of the project, will not be significant. No odour emissions are anticipated.
Transboundary nature	Greenhouse Gas (GHG) emissions have global effects, however, given the scale and nature of the development any GHG emissions will be very low and transboundary impacts are not anticipated
Intensity and complexity	Impacts on air quality will be insignificant, localised, and confined to the immediate vicinity of the works during the construction phase.
Probability	Significant impacts to air quality and climate are unlikely to occur.
Expected onset, duration, frequency and reversibility	Increased air emissions from construction will be temporary.
Cumulation with other existing and/or approved projects	Significant cumulative impacts with other emission sources e.g. other projects, agriculture and industry are unlikely to occur.
Possibility of effectively reducing the impact	Minor effects can be alleviated through standard good site practice for onsite machinery. This will be implemented through control measures outlined in the CEMP and in the Construction Traffic Management Plan.

It is not considered that the proposed upgrade works will result in a significant effect on the climate, either alone, or in combination with other projects.

7.3.6 Material Assets

The likely significant effects of the project on material assets (e.g. utilities and services such as electricity and water supply, capacity of roads to absorb traffic) have been considered in the following table. Stone will be required to be imported at the site.

Table 8: Likely significant effects to material assets

Characteristics of the Impact	Material Assets
Magnitude and spatial extent	The majority of impacts will occur in the immediate vicinity of the works. Localised impact on residential and commercial properties in the vicinity of the works.
Nature	There will be a slight negative impact due to traffic generated and traffic system interrupted and/or altered during construction. Neutral impact on utilities and services such as electricity supply, water resource, given there is sufficient resources available.
Transboundary nature	Not applicable. The impacts during the construction phase will be localised to the immediate area of works.
Intensity and complexity	Impacts to material assets, particularly traffic will be slight during the proposed works.
Probability	Slight localised impacts are likely to occur.
Expected onset, duration, frequency and reversibility	Effects will be intermittent, temporary to short-term in the immediate vicinity during the proposed works.
Cumulation with other existing and/or approved projects	Cumulative effects are expected to arise as a result of the upgrade works
Possibility of effectively reducing the impact	Minor effects can be alleviated through standard good site practice for onsite machinery. This will be implemented through measures outlined in the CEMP and Construction Traffic Management Plan.

It is not considered that the proposed upgrade works will result in a significant effect on material assets in the region, either alone, or in combination with other projects.

7.3.7 Cultural Heritage

The likely significant effects of the project on cultural heritage (e.g. national monuments, protected structures, proposed architectural conservation area) have been considered in the following table.

Table 9: Likely significant effects on the cultural heritage

Characteristics of the Impact	Cultural Heritage
Magnitude and spatial extent	Localised to the vicinity and immediate environs of the works
Nature	<p>There are recorded cultural heritage features within the town and adjacent areas. There is no potential for unrecorded subsurface archaeology as works are limited to excavations of the existing culvert, which was dug for initial installation, furthermore the area is urban in nature and has been subject to excavations.</p> <p>The construction phase may affect adjacent structures due to vibration and construction works however, this will be offset with mitigation and a careful monitoring scheme. There is also some economic impact on historic commercial units on the main street where footfall may be reduced due to works which will also be mitigated for.</p> <p>With mitigation, neutral impact on Cultural Heritage.</p>
Transboundary nature	Not applicable. Any potential impact would be localised to immediate area of works.
Intensity and complexity	Neutral, moderate and significant impacts prior to mitigation being implemented. Post-mitigation residual effects are considered to be neutral
Probability	Likely
Expected onset, duration, frequency and reversibility	Temporary to short-term impacts during the construction period of 12 - 18 months.
Cumulation with other existing and/or approved projects	Cumulative impacts are unlikely to occur
Possibility of effectively reducing the impact	No likelihood of impact once mitigation is implemented

It is not considered that the upgrade works will result in a significant effect on cultural heritage in the region, either alone, or in combination with other projects.

7.3.8 The Landscape

The likely significant effects of the project on the landscape have been considered in the following table.

Table 10: Likely significant effects on the landscape

Characteristics of the Impact	Landscape.
Magnitude and spatial extent	Localised to the immediate vicinity of the works
Nature	The works involve construction and upgrade of culvert which will result in the repaving of the streets within the town centre via the provision of surfacing works. These efforts will result in the reinstatement of Wolfe Tone Square architectural feature and other features around the works area. There may be some short-term negative impacts on the local streetscapes during construction. Post completion the impact on the landscape is expected to be positive.
Transboundary nature	There are no transboundary effects anticipated.
Intensity and complexity	Intensity considered low. Impacts are considered not complex.
Probability	Significant impacts unlikely to occur.
Expected onset, duration, frequency and reversibility	Impacts on the landscape/streetscape will be temporary during construction. Once complete the effects will be long term and positive.
Cumulation with other existing and/or approved projects	Following completion of the proposed works it is considered that there will be a cumulative positive impact on the town.
Possibility of effectively reducing the impact	The CEMP will outline best construction measures to ensure that the impacts on the landscape and streetscape are reduced during construction.

It is not considered that the culvert upgrade works will result in a significant adverse effect on the landscape in the region, either alone, or in combination with other projects.

7.3.8.1 The Interaction Between the Factors Referred to Above

The potential for interactions between one aspect of the environment and another can result in direct or indirect impacts, which may be positive or negative. Where relevant, interactions have been identified in this document. The main interactions between the following aspects/factors are:

- Effects on water quality can impact aquatic ecology and biodiversity
- Effects on land use can impact the soil and water environment

In the case of this project, the interactions are considered minor in nature and do not pose a significant threat. Site management and good construction practice will minimise and reduce potential impacts on site.

8. Conclusion

8.1 Conclusion of the EIA Screening

In accordance with Article 120(1B)(b)(i) of the Local Government Planning and Development Regulations 2001, as amended, it is concluded that there is no real likelihood of significant effects on the environment arising from the proposed development and that an EIA is not required in this instance.

8.2 Reasons for Conclusion

It is concluded that an Environmental Impact Assessment is not required based on the following reasons;

- Having considered the proposed upgrade works in the context of the mandatory requirement for Annex I and II projects, there is no requirement for EIA as the project is below the mandatory threshold for EIA.
- Having regard to the characteristics of the development, the proposal is of a relatively small-scale, involving excavation and upgrade of already present subterranean culvert, road reinstatement which are not complex in nature, within an urban centre site. Therefore, the development is not of a scale that would introduce significant or complex environmental effects.
- There is no potential for impacts on the qualifying interests for which European sites are designated. As such, there would be no significant direct or indirect impact on qualifying habitat or species associated with European sites;
- Having regard to the potential for effects on the environment, it is considered that due to the relatively modest scale of the proposed development and the development site location, the potential for minor effects can be alleviated through standard good site practice.
- Having considered the proposal in combination with existing and approved projects and activities, significant effects on the environment are not likely.
- Therefore, it is concluded that significant effects on the environment arising from the proposed development are not predicted.

8.3 Measures Available to Reduce Effects

Overall, this EIA Screening has predicted that impacts or effects resulting from the project will not be significant. Site management through the implementation of the CEMP and general good construction practice will minimise and reduce potential impacts on site.