



**CORK COUNTY COUNCIL**  
Comhairle Chontae Chorcaí

# **Environmental Impact Statement**

## **Skibbereen Wastewater Treatment Plant**

**Volume No. 1:**

**NON-TECHNICAL SUMMARY**



*September 2004*

**RPS** **mcOS**



# DOCUMENT CONTROL SHEET

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**Cork County Council**

**ENVIRONMENTAL IMPACT STATEMENT**

**for the**

**SKIBBEREEN SEWERAGE SCHEME  
WASTEWATER TREATMENT PLANT**

**SEPTEMBER 2004**

**VOLUME I NON-TECHNICAL SUMMARY**

**VOLUME II MAIN REPORT**

**VOLUME III TECHNICAL APPENDICES**



**VOLUME I**

**NON-TECHNICAL SUMMARY**

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# 1 INTRODUCTION

## 1.1 BACKGROUND

Skibbereen Town is located in west County Cork. It has a current population of approximately 2,000 persons however this population increases in the summer time due to the local tourism industry. The town is built along the banks of the Ilen River.

Currently there is no wastewater treatment system in the town and raw wastewater discharges directly the Ilen River or its tributary the Caol Stream. An engineering report on the requirements for a proposed sewerage scheme for the town has recommended that wastewater from the town should be collected and pumped to a header manhole and discharged by gravity to a treatment plant sited at Coronea adjacent to the graveyard. The inlet works and outfall at the treatment plant should be designed for a future population equivalent (PE) of 9,400 persons. All other elements of the works should be designed for 4,700 PE with the provision for expansion of the treatment plant at a later stage.

Figure 1.1 shows a map of Skibbereen and illustrates the location of the proposed wastewater treatment plant at Coronea.

RPS-MCOS Ltd. has prepared this Environmental Impact Statement for the proposed wastewater treatment plant on behalf of Cork County Council. This statement assesses potential environmental impacts in accordance with the guidelines published by the Environmental Protection Agency (EPA).

## 1.2 THE NEED FOR AN EIS

The requirement for an EIS was determined by examining the most recent legislation pertaining to Environmental Impact Statements in Ireland. Council Directives 85/337/EEC and 97/11/EC (amending the former) require under article 4(1) that Environmental Impact Assessment reports must be made for certain development projects. This Directive is implemented in Ireland through S.I. 349 of 1989 and is amended by S.I. 93 of 1999 entitled European Communities (Environmental Impact Assessment) (Amendment) Regulations, 1999. Such projects are listed in Part II of the First Schedule of S.I. No. 93 of 1999 and include "waste water treatment plants with a capacity greater than 10,000 population equivalent as defined in Article 2(6) of Directive 91/271/EEC not included in Part 1 of this schedule". The proposed scheme in Skibbereen is slightly below the threshold at 9,400PE. Although the proposed wastewater treatment plant capacity could be considered to be sub-threshold development, following consultation with Cork County Council Planning Department it was considered prudent to prepare an EIS for this development.

This EIS concerns the proposed wastewater treatment plant for Skibbereen, which is one element of the overall sewerage collection and treatment strategy proposed for the town. The other elements of the sewerage scheme, involving sewers, pumping stations, overflow structures and other works will be the subject of separate statutory processes, as appropriate, prior to their development.



### 1.3 STRUCTURE OF THE REPORT

The EIS comprises three main parts:

**Volume 1:** **Non-Technical Summary** of the information contained in the EIS.

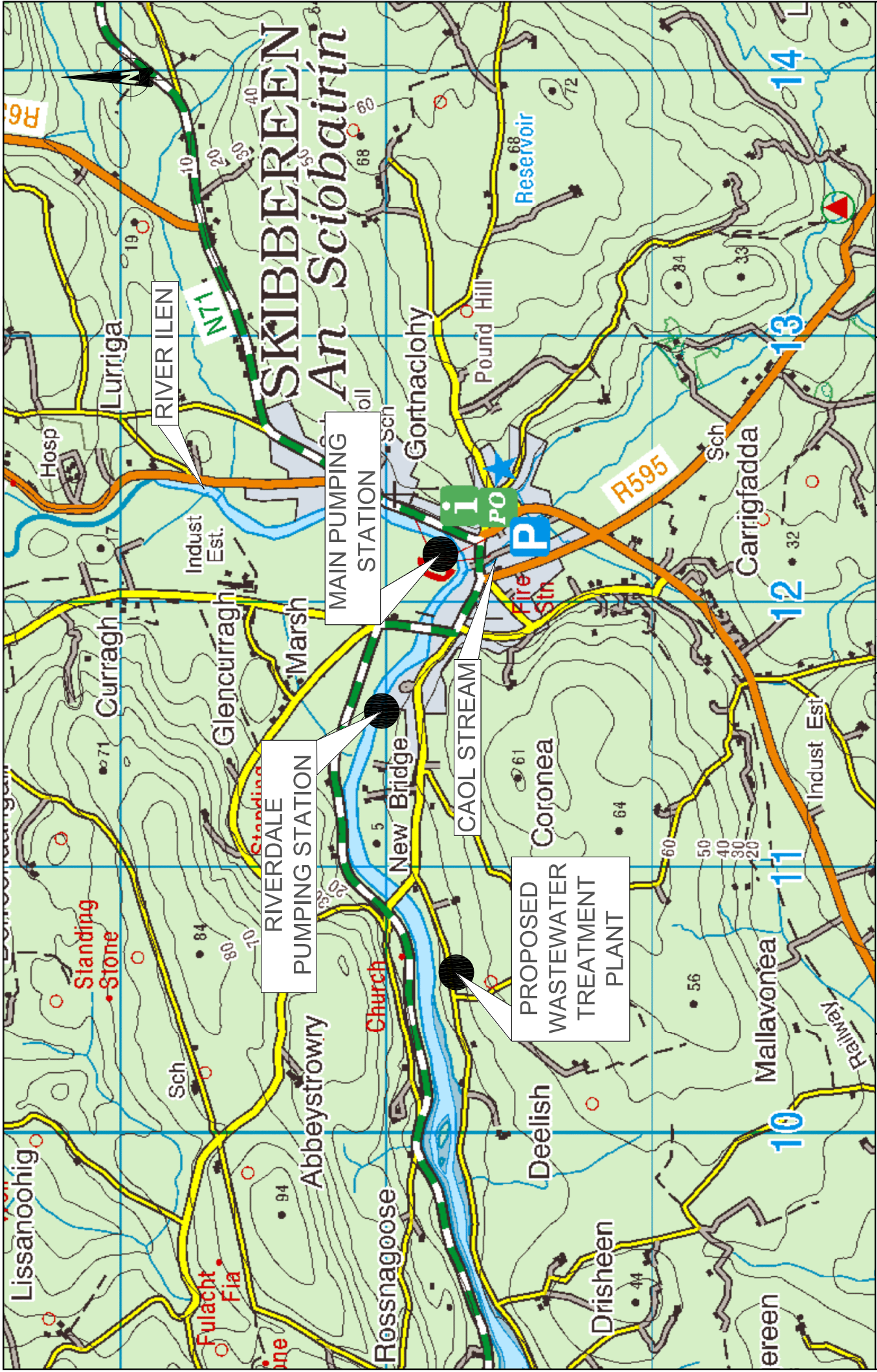
**Volume 2:** **Main Report** which:

- Gives general information about the project;
- Discusses project background information and peripheral issues;
- Outlines the need for the scheme;
- Describes the characteristics of the proposed wastewater treatment plant;
- Describes the current receiving environment and examines the likely significant impacts of the proposed plant on that environment;
- Proposes measures to mitigate adverse impacts and identifies any residual impacts after mitigation;
- Addresses potential impacts relating to the construction of the plant.

**Volume 3:** **Technical Appendices** which contains additional data to substantiate various sections of the Main Report.

Each of the volume of this EIS is available for inspection during normal working hours at the offices of Cork County Council, Skibbereen.

Any persons wishing to make a submission or observation regarding the Skibbereen Wastewater Treatment Plant should write to An Bord Pleanála, 64 Marlborough St., Dublin 1 within the period specified in the notice published in the press, advising that this EIS has been prepared.



|   |   |  |  |  |                                       |   |
|---|---|--|--|--|---------------------------------------|---|
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|   |   | <p><b>Rev:</b></p> <p><b>FIG. 1.1</b></p> <p><b>F01</b></p>  |  |  |                                       |   |
|   |   | <p><b>Rev:</b></p>   |  |  |                                       |   |
|   |   | <p><b>Rev:</b></p>   |  |  |                                       |   |

## 2 PROJECT DESCRIPTION

### 2.1 EXISTING SCHEME

The existing sewerage system in the town consists of, masonry culverts carrying foul flows and storm water run off from the streets and roofs, and masonry culverts carrying subsurface ground water as well as soil flows and piped sewers. These flows discharge to either the Ilen River or Caol Stream in a multiplicity of outfalls.

There is no treatment of these wastewater flows prior to discharge to the watercourse. Additionally, both of these watercourses are subject to the influence of the tide with the result that there is a continuous problem of contamination from the discharge of municipal wastewater.

### 2.2 PROPOSED SCHEME

In order to address the problems caused by the absence of an appropriate wastewater collection and treatment system and also address current EU requirements, it is proposed to collect the town's wastewater through a piped network incorporating new and existing sewers. The wastewater will then be pumped to a new wastewater treatment plant where it will be treated prior to discharge to the Ilen River. The following is a brief description of the proposed scheme.

#### 2.2.1 Collection System

The majority of the wastewater from the town will be collected through a new piped system and delivered to the main pumping station located in the Marsh, upstream of Kennedy Bridge. A second pumping station will be located on the southern bank of the river east of Riverdale. Both of these pumping stations will pump the raw wastewater to a high point on the high ground to the south-west of Riverdale Estate from where it will gravitate to the proposed treatment works. Furthermore, 3No smaller pumping stations will also be constructed on the Mill Road, Marsh Road and Glencurragh Road to assist the delivery of wastewater to the main pumping station in the Marsh.

#### 2.2.2 Wastewater Treatment Plant

Following an assessment of various alternative sites the preferred location for the proposed wastewater treatment plant is in the townland of Coronea.

The treatment plant will be constructed as a staged development. It is proposed that the main elements be designed to cater for a population equivalent of 4,700 in Stage 1. In the future the capacity of the treatment plant would be extended to 9,400 population equivalent in Stage 2. The following illustrates the flows and biological loadings into the treatment plant:

|                            | <b>Stage 1</b>            | <b>Stage 2</b>            |
|----------------------------|---------------------------|---------------------------|
| Population Equivalent      | 4,700                     | 9,400                     |
| BOD Load                   | 282 kgs                   | 564 kgs                   |
| Dry Weather Flow           | 1,081 m <sup>3</sup> /day | 2,162 m <sup>3</sup> /day |
| Maximum flow through plant | 3,243 m <sup>3</sup> /day | 6,486 m <sup>3</sup> /day |

The proposed treatment plant will comprise of a treatment facility capable of treating the sewage to the requirements set out in Table 1 of EC Directive 91/271/EEC regarding the Disposal of Urban Wastewater. This Directive is implemented in Ireland by SI 491 of 1994 as amended by SI 254 of 2001. In summary, the standards set for the disposal work are as follows:-

|                  |          |
|------------------|----------|
| BOD              | 25 mg/l  |
| COD              | 125 mg/l |
| Suspended Solids | 35 mg/l  |

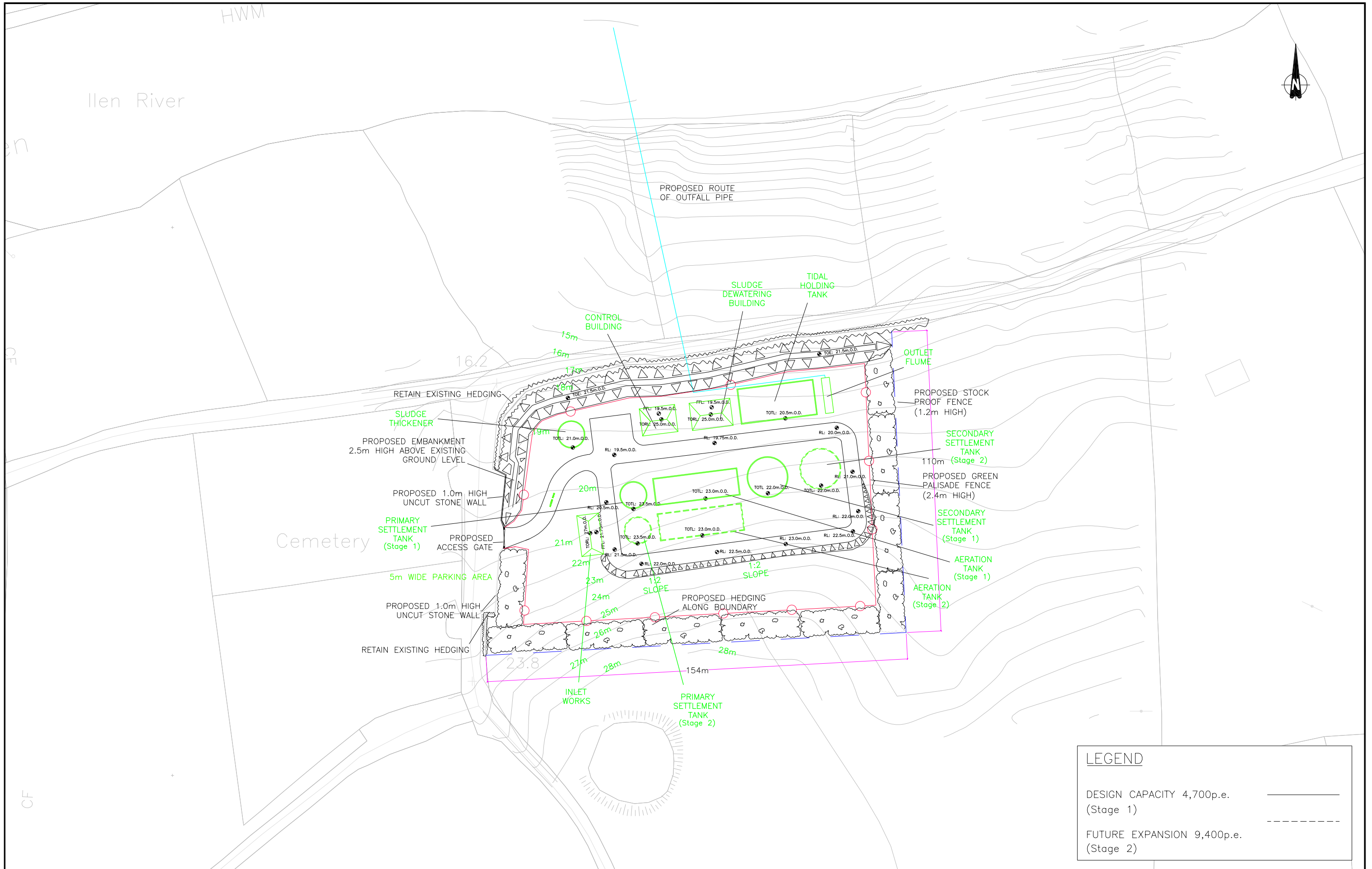
It is envisaged that the treatment plant will be procured and constructed as a Design, Build and Operate (DBO) Contract. For this reason the wastewater treatment plant will not be designed in detail until the DBO Contractor has been appointed. Therefore, within this EIS the treatment plant design is indicative and will be outlined sufficiently to encompass the likely treatment processes that will be ultimately put in place. Furthermore, specific processes will not be prescribed but environmental parameters will be set down with which the treatment plant operations must comply when complete.

This EIS is based on an indicative design that can meet the effluent discharge criteria as defined in the relevant EU Directives and National Regulations. This indicative design, shown in Figure 2.1, comprises the following treatment elements:-

- Covered inlet works comprising;
  - 6mm fine screen with screenings, removal, washing and compaction
  - Grit trap with grit removal, washing and compaction
  - Measurement flume
  - Air extraction from the covered spaces and its treatment in biological filters to remove foul odours
- Primary Settlement comprising;
  - 2No. 8m diameter radial flow primary settlement tanks
  - Tanks to be covered and the air extracted and treated in biological filters for odour removal.
- Aeration Basin based on a conventional activated sludge process using a plug-flow system. Aeration achieved using fine bubble diffused air system;
- Secondary Settlement / Clarification;
- Sludge Thickening, Dewatering & Removal. Sludge thickened in a covered tank and the air extracted and odour removed;
- Tidal Holding and Effluent Discharge.

The arrangement of tanks and buildings, shown in Figure 2.1, is typical of the works required. Indicative levels for the proposed structures and buildings are also shown to facilitate the visual impact assessment of the treatment plant. This figure shows the treatment plant following completion of Stages 1 and 2. Structures required for Stage 2 but not required for Stage 1 are indicated as dotted lines.

Note that the size and location of the proposed structures may vary. However, it is envisaged that the final design will be comparable with those indicated. All reasonable measures will be taken to minimise the visual impact of the required structures on the predominantly rural landscape. These measures may include the choosing of appropriate cladding for structures and limiting the maximum heights to that reasonable practicable.



| LEGEND                                  |       |
|---|-------|
| DESIGN CAPACITY 4,700p.e.<br>(Stage 1)  | _____ |
| FUTURE EXPANSION 9,400p.e.<br>(Stage 2) | ----- |

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| No. | Date   | Amendment / Issue | App. |
|-----|--------|-------------------|------|
| F01 | MAR'04 | REPORT            | A    |

Project: **SKIBBEREEN SEWERAGE SCHEME WASTEWATER TREATMENT PLANT**

Title: **INDICATIVE SITE LAYOUT PLAN**

|                |                          |
|----------------|--------------------------|
| Drawn by: AOC  | Job No: MCW0153          |
| Checked by: BB | File No: MCW0153SK0014   |
| Approved by:   | Drg. No: <b>FIG. 2.1</b> |
| Scale: NTS     | Rev: F01                 |
| Date: MAR '04  |                          |

### 3 POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES

#### 3.1 GENERAL

The construction and operation of the proposed wastewater treatment plant will have potential impacts on various aspects of the environment.

The impacts on the following elements of the environment are discussed comprehensively in Volume II, the Main Report of this EIS and are summarised in Table 4.1:

- Human Beings;
- Air and Odour;
- Climate;
- Visual and Landscape;
- Noise and Vibration;
- Flora and Fauna;
- Aquatic Environment;
- Geology, Hydrogeology and Soils;
- Material Assets;
- Archaeology.

Where necessary ameliorative measures are recommended to reduce significant negative impacts. The impact of both the construction and operational phases of the project are assessed.

The more potentially significant impacts of the proposed treatment plant are summarised below.

#### 3.2 HUMAN BEINGS

The scheme will have a number of positive impacts on the social and economic environment of Skibbereen and its environs through:-

- Catering for new and existing residential developments;
- Catering for new and existing employment zones in the catchment areas;
- Catering for future leisure development in the area;
- Providing additional employment opportunities to the area during both the construction and operational phase of the development;
- Protecting and improving public health and freshwater aquatic environment through achieving a consistently compliant final effluent quality.

The scheme may also have a number of negative impacts on the social and economic environment of Skibbereen arising from:

- **Odour:** Offensive odours and their potential significant impact on the surrounding environment are considered in Section 3.3 below. Odour limits and mitigation measures are proposed to

minimise the impact of the wastewater treatment plant on local residents. Mitigation measures such as adequate filtered ventilation and covered tanks are proposed;

- **Traffic:** The impact of construction traffic on local residents is dealt with in Section 3.8 below. The proposed development will not lead to a significant increase in traffic during operation and any increases in traffic will be confined to the construction phase of the project. The removal of dewatered sludge off-site will be undertaken using enclosed tankers. Enforcing a speed limit on the access road will minimise the impact on local residents;
- **Visual Intrusion/Obstruction:** The potential visual impacts are associated with possible impaired or unsightly views and are discussed in Section 3.4. Mitigation measures include the suitable planting of indigenous hedgerow species. Consideration will be given to minimising the impact when designing the proposed structures;
- **Health & Safety:** Permanent security fencing will be constructed around the treatment plant to protect members of the public. Secure site fencing will also be constructed during the construction stage for protection of the public. All phases of the development will be managed in accordance with the requirements of the Safety and Health legislation. The removal of the untreated discharges from within the town will reduce the risks to public hygiene;
- **Construction:** The potential impacts from construction are temporary and relate to traffic, noise, dust and vibration. These are dealt with in more detail in Section 3.8. The Contractor will be required to implement mitigation measures to reduce the impact of the construction on local residents and businesses in Skibbreen Town.

Coronea Burial Ground is located adjacent to the western boundary and entrance to the treatment plant. Both the construction and operation phases of the treatment plant have the potential to negatively impact on visitors and funeral ceremonies at the cemetery. The area where the cemetery is located comprises a mixture of agricultural land and rural housing with relatively low levels of traffic. Traffic disruption and noise impacts have been identified as the most significant potential impacts from the proposed development on the Coronea Burial Ground. It is proposed to provide some additional off road car parking at the entrance to the treatment plant for the adjacent graveyard. This is likely to result in a positive impact. The following mitigation measures are recommended to reduce adverse negative impacts associated with development:-

- Both construction and operations activities on the treatment plant site are to be mindful of the sensitivities associated with activities at the cemetery;
- Parking of construction or operational traffic outside the perimeter of the treatment plant site shall not take place at any time;
- No heavy vehicle movements should take place while ceremonies are ongoing at the cemetery;
- Construction and operations activities that may entail elevated noise levels should not take place for the duration of any ceremonies at the cemetery.

### 3.3 AIR AND ODOUR

Wastewater odours arise either through the discharge of odour substances of industrial origin to the sewer system or from anaerobic decomposition of biodegradable matter in the wastewater. In wastewater treatment plants, the principal potential sources of odours are:-

- Septic wastewater containing hydrogen sulphide on arrival at the plant. This will not occur if the sewer system is adequately designed and vented;

- Industrial waste discharging to the collection system, which, in the case of Skibbereen, is minimal;
- Unwashed grit and screening removals;
- Scum on settling tanks;
- Sludge thickening tanks if infrequently desludged;
- Infrequent desludging of settling tanks;
- Scum on walls of storm holding tanks.

In general, odour control in a wastewater treatment plant is accomplished by proper design and operation of the various processes to ensure that the wastewater is maintained in a fresh condition throughout the treatment system. However, where the need for odour control is required, enclosed buildings and tanks, aeration, the addition of chemicals and air scrubbing are some of the methods that may be employed.

Based on current international standards, a 98% non-exceedance hourly concentration of 4 ou/m<sup>3</sup> at the nearest sensitive receptors is recommended as an appropriate odour standard in order to minimise any negative impact. Surrounding the treatment plant with trees and shrubs will cut down on aerosol transmission and so further protect the surrounding environment.

The detailed design of the treatment plant has yet to be finalised, however, when available the compliance of this design with this odour standard will be demonstrated by carrying out an air dispersion modelling assessment prior to final approval of the proposed design.

Provided that the proposed wastewater treatment plant is designed and operated using best available technologies, it should not have a significant impact on the environment with respect to odour emissions.

### 3.4 VISUAL AND LANDSCAPE

The wastewater treatment plant site is located on a north-facing slope that faces the N71, the River Ilen, and the Abbeystrowry Cemetery to the north of the Ilen river but will have little visual impact on the surrounding landscape if it is adequately and appropriately screened.

Therefore it is proposed to create a dense screen of semi-mature planting on all four sides of the plant. This will consist of plants indigenous to the area, namely hawthorn, ash and sycamore. It is also proposed to plant groups of *Ilex aquifolium* and *Pinus contorta* in the centre of the planting to give additional winter screening.

Based on the indicative design, virtually all of the works in the proposed plant will be at or below ground level and will, therefore, not significantly intrude on the skyline. A series of photomontages have been prepared and are included in Volume 3 of this EIS showing pre and post construction views of the proposed indicative design. Figure 3.1 shows a post construction view of treatment plant from the Abbeystrowry Cemetery across the river to the north of the treatment plant. The control building and inlet works building in the plant will be single storey. They will be residential or agricultural in scale and character and visually unobtrusive. The sludge dewatering building is agricultural in scale and is the largest building on the site. The cladding and colouring of this building will be appropriate to the area so as to minimise visual impacts.

Various other mitigation measures are recommended in this EIS including:



- Additional shrub and small tree planting should be carried out inside the proposed plant to break up any straight or geometrical lines which might be eye catching. Surplus excavated material should be mounded around the perimeter of the site to form irregular banks that will give additional screening;
- The entrance to the proposed plant should be located between the two entrances to the cemetery to minimise the view into the plant from the two central pathways through the cemetery;
- The materials proposed for the control house and the dewatering house should not be obtrusive. The buildings should be clustered informally rather than linear to resemble a traditional agricultural complex;
- Care should be taken to avoid any reflective surfaces throughout the plant. Lighting should be low level down lighters with columns finished in matt black;
- The design considered in this EIS is indicative only and the final design should comply with the Cork Rural Design guide.



**Figure 3.1: Post-construction view from Abbeystown Cemetery north of the proposed treatment plant site**

### 3.5 NOISE AND VIBRATION

Noise surveys were carried out at the site of the wastewater treatment plant during day and night time. Additional surveys were carried out in wastewater treatment plants similar to that proposed for Skibbereen.

The development of a treatment plant at the Coronea site should not exceed the noise criteria of 35 dB(A) night time and 45 dB(A) day time at any nearby residence. Furthermore, there should not be any significant pure tones or impulsive elements in the noise spectrum.

Where necessary the above or other appropriate noise reduction measures should be employed to ensure that noise emissions from the treatment plant are within the above limits. Noise reduction measures that may be incorporated into the detailed design of the treatment plant include:-

- The selection of low noise equipment;
- The use of silencers and attenuators;
- The use of local screenings, barriers and enclosures;
- The selection of plant location within the site;
- The use of buildings or earth banks for screening.

### 3.6 AQUATIC ENVIRONMENT

The Ilen River is considered to be an important fishery and a local resource. The river discharges into Roaringwater Bay, a candidate Special Area of Conservation. Areas within Roaringwater Bay are designated for shellfish production. Therefore, the impact of the proposed discharge of treated wastewater on the receiving waters was assessed in detail as part of this EIS.

Based on the results of water quality sampling by the EPA, the existing water quality in the Ilen River is generally good. Upstream of the town of Skibbereen the quality rating for the river water, determined using the Biological Quality Rating, is Q4, i.e. satisfactory condition with fair water quality. However, based on available records the Q-rating of the river has dropped since 1971. The results of water quality sampling presented in Volume II of this EIS also indicate, that within and downstream of the town, the river water quality is of a lower standard to that recorded upstream of the town. The existing situation, where untreated wastewater from the town is discharged directly to the river, is likely to be contributing to this relative deterioration in water quality.

At the location of the proposed treatment plant and outfall, the Ilen River is tidal. It is proposed to discharge treated wastewater to the river via an outfall located approximately 330m downstream of New Bridge, located approximately 1.5km downstream of the town. Discharge to the river would be controlled so that it would only occur over a limited 4 hour duration of the ebbing tide commencing 0.5 hours after high water.

To assess the assimilation and dispersion characteristics of the Ilen River, an extensive survey was carried out. Data acquired during this survey were then used as the basis for a mathematical modelling assessment of the impact of the proposed discharges on the receiving waters.

The impact on water quality parameters, BOD, faecal coliform and nutrients (Nitrogen and Phosphorous), for various river flow and tidal conditions were assessed as part of this EIS. Relevant National and EU standards were used as the benchmarks for the assessment of impacts from the proposed discharge. Both Stage 1 and Stage 2 discharges were assessed.

The results of the modelling show that the predicted faecal coliform and BOD concentrations from the proposed wastewater discharge will not exceed acceptable limits contained within the benchmark National and EU standards used as part of this assessment.

The nearest licensed shellfish area to the proposed outfall is located more than 8km downstream in the River Ilen. The dispersion model results predict acceptable faecal coliform concentrations from the proposed discharge in the water column of shellfish areas.

Assessment of the impact on background nutrient levels from the discharge of treated wastewater from the proposed indicative treatment plant design shows that there is a risk that EPA criteria for enrichment of the river may be exceeded under certain conservative conditions. Therefore, in order to minimise this risk, additional nutrient reduction facilities are to be included within the detailed design of the treatment plant. The selected DBO Contractor will determine the final design of the required processes, however, processes may include extended aeration, the use of anoxic zones, recycling of flows etc.

Long term monitoring of the Ilen River and the final effluent from the treatment plant will be undertaken to determine compliance or otherwise with the quality objectives set for the scheme.

In summary, the proposed sewerage scheme will have a positive impact on the overall quality of the water in the River Ilen. At present, there is no treatment of wastewater discharged to the river. The negative impact of this is seen from the decrease in water quality within the town. Following completion of the project, treated wastewater will be discharged to the River Ilen and the discharge regime from the plant, using a tidal holding tank, will maximise the dispersion and hence minimise any potential negative impacts on background water quality.

### 3.7 ARCHAEOLOGY

Skibbreen or the 'little boat harbour' is a thriving market town, regarded as the capital of the area known as 'The Carberies'. Standing on the River Ilen, at a point where the river widens into a creek, it was founded after Algerian pirates sacked the neighbouring port of Baltimore in 1631. The growth of Skibbreen therefore, seemed to stem from an influx of inhabitants who moved up river to safer homesteads.

The proposed treatment plant and outfall pipe are located in Coronea townland, within the Barony of West Carbery, on the western side of Skibbreen town. The Great Southern Railway is to the east where it cuts through the western side of Skibbreen town, while the Ilen River forms the northern boundary of the town. Abbeystowry church and cemetery (RMP<sup>1</sup> CO141-084/01 and 02) are to the north-east of the proposed development site, separated from it by the River Ilen.

The proposed site of the treatment plant is in the north-western corner of a greenfield site with a public roadway at the northern and western boundaries. The adjacent southern and eastern areas are under pasture. A ringfort (RMP CO141-122) is visible to the south, Figure 3.2, and an old stone and earth field boundary runs north-south to the east of the proposed development and ringfort. A cemetery, the Coronea Burial Ground, is located directly west of the proposed development site but is separated from it by a roadway. The outfall pipe will extend from the treatment works facility in a northern direction, crossing the public roadway and a greenfield site that steeply slopes down to the River Ilen, from south to north.

The impact of the proposed wastewater treatment facility and outfall pipe on the archaeological landscape of the area was assessed using all of the available documentary and cartographic sources. There are nine recorded monuments surrounding the proposed development area. The treatment plant site is incorporated into the *zone of constraint* around one of these known sites. It is also possible that previously unrecorded monuments may be uncovered during topsoil stripping and the underwater survey associated with the outfall pipe.

In order to prevent any potential loss to the archaeological record a series of mitigation strategies are recommended.

- All topsoil removal should be monitored by a suitably qualified archaeologist to record any archaeological deposits and to recover any artefacts. The archaeologist will require a licence for this work as issued by the Department of the Environment, Heritage and Local Government;
- The monitoring archaeologist should be empowered to halt the development if buried archaeological features or finds are uncovered. Provision should be made to resolve any newly exposed archaeological sites;

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<sup>1</sup> Record of Monuments and Places

- Provision, including financial and time should made be at the outset of the project to facilitate any excavation or recording of archaeological material that may be uncovered during the developmental works.

Underwater investigations comprising a Dive Survey and Metal Detection Survey of the proposed outfall route were carried out under licence from the Department of the Environment Heritage & Local Government. As a result of this survey the following additional mitigation measure should be implemented as part of the development:

- Archaeological monitoring of the removal of all riverine overburden down to bedrock should be considered, particularly in light of the presence of faunal remains on the northern bank.

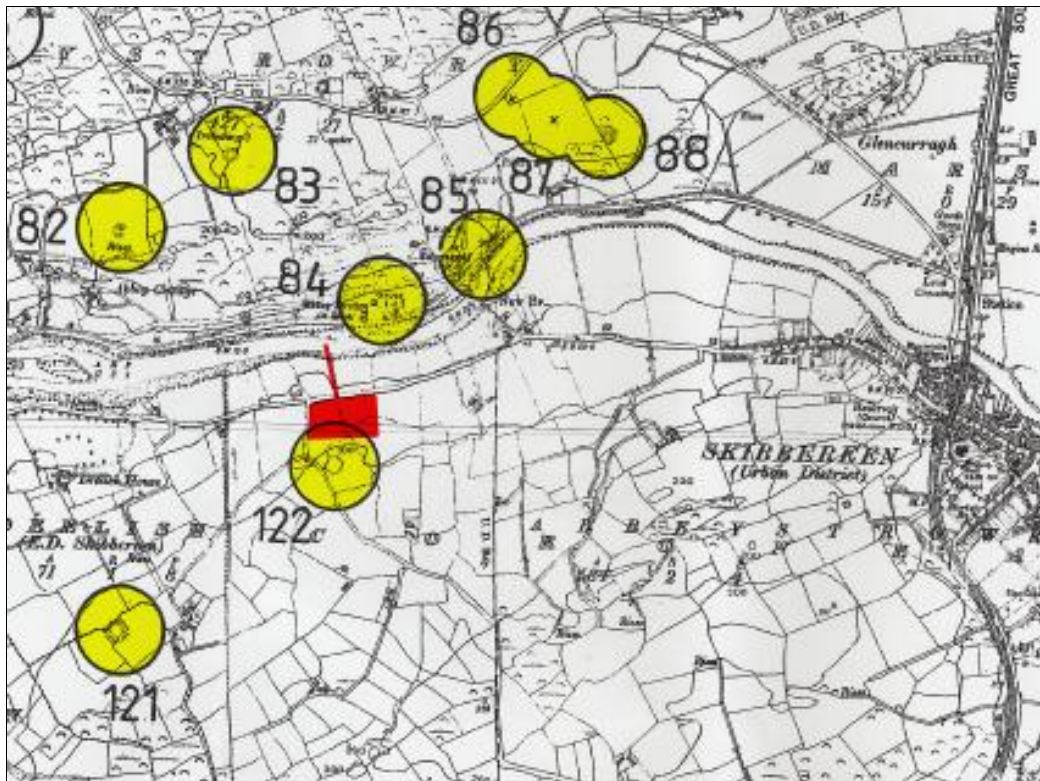


Figure 3.2: Extract from RMP CO141 showing proposed development area and known archaeological sites in the environs.

### 3.8 CONSTRUCTION

The proposed Skibbereen Wastewater Treatment Plant would be located approximately 0.7km from the N71 to the west of the town. The area surrounding the site is relatively rural in nature with the nearest residence being approximately 120m east of the site boundary. The Coronea cemetery is located to the west of the site.

It is anticipated that it will take some 18 months to construct the wastewater treatment plant at Skibbereen. This process will give rise to a temporary impact which will be largely unavoidable because of the scale and scope of the work to be undertaken. The main impacts of the construction process will be:-

- Construction traffic on adjacent roads;
- Additional noise from plant, machinery and vehicles;
- Dust emissions from the construction site during dry weather;
- The transportation of mud or soil from the site by vehicles leaving it;
- The visual impact of the construction site on the surrounding areas;
- The disruption due to the construction of the rising mains to the treatment plant and the outfall pipe from the treatment plant to the Ilen Estuary.

These environmental impacts resulting from the construction of the treatment plant will be confined to the period when construction is taking place. Every effort will be made to reduce and minimise the temporary impact of the construction phase. The following summarises the more significant potential impacts.

#### 3.8.1 Noise and Vibration

The impacts associated with noise and vibration arise from construction plant such as excavators, dump trucks, compaction equipment etc.

The construction contractor will be obliged to take specific noise abatement measures and comply with recommended standards. This will ensure noise impacts are kept to a minimum during the construction period. The Contractor will also be required to be mindful of the sensitivities of funeral ceremonies at the graveyard funeral.

Significant ground vibration from construction work is not expected to cause undue disturbance or structural damage. The Contractor will be expected to limit vibrations, measured as peak particle velocity to less than 3 mm/s for vibrations from mechanical plant activity.

#### 3.8.2 Working Hours

During construction normal working hours will be 08.00-20.00 hours Monday to Friday and 08:00 to 16:00 on Saturday. Works other than the pumping out of excavations, security and emergency works will not be undertaken outside of these working hours without the written permission of Cork County Council. This permission would only be granted in exceptional circumstances and, if granted, can be withdrawn at any time should the working regulations be breached.

### 3.8.3 Impact on Watercourses

Construction works have the potential to impact on the Ilen River and Estuary. Measures will be taken to ensure that effects, if any, on the Ilen River are avoided. For example no pump-outs will be discharged directly to the River. The Contractor will be required to implement all necessary precautionary measures to prevent the erosion of river banks, the silting up of the pollution of the Ilen River or other watercourses.

Waste products associated with the works will not be permitted to enter water bodies adjacent to the works and all necessary precautions will be made to prevent spillage of diesel fuel or other solvents used during the construction process.

### 3.8.4 Dust Emissions

Due to the nature and scope of the construction work to be undertaken on the site, dust from the construction work may be blown, by prevailing winds, across adjoining lands near the site. This will be of particular concern during periods of sustained dry weather. The Contractor will be required to keep dust emissions to a minimum as part of his site management plan.

### 3.8.5 Traffic Management

The access route to the proposed wastewater treatment site will be along the road to Deelish Pier and turning into the site opposite the graveyard. No traffic counts were taken on this road as it was felt that the impact of construction traffic would be minimal. However, it is anticipated that during construction works there will be an increase to the traffic along this road with construction vehicles accessing the site. It is anticipated that construction traffic will comprise:

- Transportation of construction equipment to and from the site;
- Construction staff vehicles;
- Heavy vehicles removing excavated materials from the site;
- Heavy vehicles supplying construction materials such as pipes, concrete, sand, mechanical and electrical equipment.

The increase in traffic movements due to cars and light commercial vehicles will not have a major impact on the traffic movements on the public roads. The traffic movements due to heavy commercial vehicles will have a slight impact on the traffic along the narrow road to Deelish Pier but this will not be severe, particularly if these movements do not take place while ceremonies are ongoing at the cemetery.

Parking at the site will be restricted to within the site boundaries and no parking will be permitted in the public parking spaced outside the Coronea Burial Ground.

Vehicles leaving the wastewater treatment plant site or working on the construction site perimeter may result in the deposition of mud or spoil on adjacent public roads. During the construction operation, it is intended to have a network of hardstanding aprons and roadways within the site to ensure clean working areas for the site vehicles. In addition, mud or soil deposited on the adjacent public roads would be cleaned on a daily basis.

## 4 CONCLUSION

This EIS has assessed the proposed development and its impact on the environment. Based on the preceding sections of this document the significant impacts of this development have been identified and are summarised in Table 4.1.

The overall scheme will help to improve the general economic conditions through the provision of wastewater infrastructure capable of supporting a significant increase in residential, commercial and recreational development in Skibbereen Town and its environs.

Using Best Available Technology (BAT) in the wastewater treatment plant there will be no significant adverse impacts on the water quality of the River Ilen.

The proposed development will have no significant visual and landscape impact on the area. Any effects that can be foreseen will be mitigated with effective screening and design.

The odour emission levels at the wastewater treatment will be controlled to negligible levels and should not present a significant impact with proper management of the plant.

The noise level from the wastewater treatment plant will be minimal and where necessary controlled to below generally acceptable levels.

Careful consideration should be given to reducing and accommodating the impacts of local concerns, where possible, during the construction phase.

**In general, by removing current untreated discharges to the water course and replacing these with a treated discharge downstream of the town, it is envisaged that the proposed wastewater treatment plant will have a net positive impact on the physical, biological and aesthetic environment of Skibbereen Town and its environs.**

**Table 4.1: Summary of Significant Environmental Impacts****KEY**

None



Slight



Moderate



Significant

| Section                       | Category          | Environmental Impact                      | Potential Impact (negative/positive) | Summary Mitigation <sup>1</sup>   | Residual Impact        |
|-------------------------------|-------------------|---|--------------------------------------|---|------------------------|
| Human Beings                  | Health and Safety | Boundary Security                         | Negative                             | Secure gates and fencing and mature planting to exclude members of the public   | None                   |
|                               | Amenity           | Loss of recreational area                 | Negative                             | Not applicable as the site is currently agricultural in usage   | None                   |
|                               | Traffic           | Public safety and disturbance             | Negative                             | Speed and parking restrictions, low volume, truck washing   | Slight                 |
| Air & Odour                   | Odour             | Nuisance                                  | Negative                             | Provision of Odour Control Facilities   | Slight/Not Significant |
| Climate                       | Greenhouse Gas    | Increase in greenhouse effect             | Negative                             | Plant design options will result in negligible effect   | Slight                 |
| Landscape                     | Visual            | Aesthetics                                | Negative                             | Appropriate walls, screening and planting<br>Sensitive design of structures   | Moderate               |
|                               |                   | Land take                                 | Negative                             | Not significant   | None                   |
| Noise & Vibration             | Nuisance          | Background noise levels                   | Negative                             | Specified criteria for noise emissions  | Slight                 |
| Aquatic Environment           | Water Quality     | Physiochemical and bacteriological Levels | Positive                             | Removal of untreated discharges and provision of a secondary treated effluent discharge using tidal balancing and nutrient reduction. | Significant Positive   |
| Geology, Hydrogeology & Soils | Site Development  | Earth Disturbance                         | Negative                             | Re-use of soils within the site landscaping   | None                   |
| Material Assets               | Landtake          | Change of land use                        | Negative                             | Acquisition of land   | None                   |



| Section           | Category        | Environmental Impact                       | Potential Impact (negative/positive) | Summary Mitigation <sup>1</sup>   | Residual Impact  |
|-------------------|-----------------|--|--------------------------------------|---|------------------|
| Cultural Heritage | Archaeology     | Disturbance of Archaeological Material     | Negative                             | Archaeological Monitoring during ground disturbance   | None or positive |
| Construction      | Human Beings    | Noise, Air, Traffic, & Working Hours       | Negative                             | Defined standards relating to noise levels working hours, control of dust and emissions, siting of equipment. Traffic management plan and monitoring of noise and vibration | Moderate         |
|                   | Flora & Fauna   | Removal of Habitats                        | Negative                             | Not significant   | None             |
|                   | Watercourses    | Siltation, erosion and pollution           | Negative                             | No direct discharge to the Ilan River   | Slight           |
|                   | Landscape       | Visual                                     | Negative                             | Visual Intrusion will fluctuate according to location and type of activity  | Slight           |
|                   | Material Assets | Land take                                  | Negative                             | None  | None             |
|                   | Road Conditions | Damage to existing roads and mud on roads. | Negative                             | Provision of appropriate daily maintenance systems  | Slight           |

Note:-

1. Additional Mitigation measures may be specified in the detailed sections of this EIS and this "Summary Mitigation" should not be considered to be a full description. Please refer to the relevant section in Volume II of this EIS for any additional mitigation measures.