

Cork County Council



Ballintubber Flood Relief Scheme

Part 8 Planning Application Report



Table of Contents

SECTION 1:	INTRODUCTION	1
1.1	Purpose.....	1
1.2	Part 8 Documents	1
1.3	Background Information.....	1
1.4	Overview of Information.....	1
1.5	Public Consultation Meeting	2
1.6	Plans and Particulars	2
1.7	Site Notices	2
1.8	Submission Process	2
SECTION 2:	DESIGN APPROACH	3
2.1	Objectives of Proposed Development	3
2.2	Design Guidance and Standards.....	3
SECTION 3:	DESCRIPTION OF PROPOSED PROJECT.....	4
3.1	Descriptions of Surface Water	4
3.2	Description of the Works.....	5
SECTION 4:	ENVIRONMENTAL SUMMARY	6
4.1	Ecological Impact Assessment.....	6
4.2	Appropriate Assessment Screening	6
4.3	Outline Construction and Environmental Management Plan.....	6
4.4	Archaeological and Built Heritage Assessment.....	6
4.5	EIA Screening Report	6

SECTION 1: Introduction

1.1 Purpose

The objective of this report is to describe the project the 'Ballintubber Flood Relief Scheme'. The aim of the proposed infrastructure works is to facilitate and alleviate flooding in Ballintubber via the construction of a 1.1km gravity stormwater pipe to existing West Ballintubrid Stream. In accordance with the Planning and Development Regulations, 2001 (as amended), this report details the proposed development together with the accompanying drawings which together describe the nature and extent of the proposed development.

1.2 Part 8 Documents

The following is a list of documents contained in the Part 8 planning application for the Ballintubber Flood Relief Scheme':

- Part 8 Planning Application Report (this document);
- Ecological Impact Assessment;
- Outline Construction Environmental Management Plan (CEMP);
- Flood Risk Assessment;
- Environmental Impact Assessment Screening Report;
- Report on Screening for Appropriate Assessment;
- Archaeological, Architectural and Built Heritage Impact Assessment;
- Part 8 Drawings.

1.3 Background Information

Ballintubber is located approximately 3km southeast of Carrigtwohill, Co. Cork. Over the years the area has experienced flooding events that have endangered properties and made public roads impassable. The most recent significant flooding event of winter 2015/2016 has far surpassed any other flood event in the past 50 years or more

The problems in Ballintubber are as a result of prolonged heavy rainfall. The ground becomes saturated and results in elevated groundwater levels and reduced capacity to absorb further precipitation. The community lies in a natural depression in an area identified as a karst limestone aquifer and as such, the groundwater table is extremely susceptible to rainfall volumes. The flooding event of winter 2015/2016 cannot be considered as an isolated incident, and localised flooding is becoming a more regular event which requires the implementation of a sustainable solution.

The Cork County Council – Brief for the Engagement of Consulting Engineers June 2018 document also prescribed that proposed works were to include the following:

'Lay 940m of 450mm diameter pipe from the northern boundary of the nursery (Irish Plant Propagation Ltd.) to the outfall to existing stream approximately 940m south'.

1.4 Overview of Information

1.4.1 Flooding Extent Assessment

A report was prepared by J.B. Barry and Partners in September 2017 to assess pumping rates, property impacts and seek solutions to the dramatic flooding events which occurred in December 2015 and January 2016. Two natural basins denoted Zone A and Zone B were identified with a combined containment volume of 14,540m³ (also identified in Figure 3 – 6 of this report). Based on measured pumping rates and calculated vacuum tanker volumes, the total volume removed from the site was calculated as 88,156m³ and 177,840m³ for Zone A and Zone B respectively and therefore in excess of 14,540m³. It was concluded that both Zone A and Zone B would be fully inundated with surface water if no pumping mitigation measures were implemented. The combined affected area measures circa 8.83 hectares and would affect up to 7 no. private residents.

1.4.2 Desktop Study

A desktop study was undertaken in December 2018 by J.B. Barry and Partners and report prepared. The report analysed the catchment, historic flood events, rainfall data, land use, soils, geology, hydrogeology and provided an estimation of flood flows.

1.5 Public Consultation Meeting

A Public Consultation Meeting was held on the 30th October 2018 from 7pm to 9pm in Carrigtwohill Community Council, Main Street, Carrigtwohill, Co. Cork

This provided the community with an opportunity to view the outlined plans and raise queries with the project team for the Ballintubber Flood Relief Scheme.

1.6 Plans and Particulars

Plans and particulars of the proposed development are now available for inspection and/or purchase at a fee not exceeding the reasonable cost of making a copy for a period 5 weeks from 9th April 2021 during public opening hours at the offices listed below Monday – Friday 9.00am to 4.00pm.

- Planning Department Floor 1, County Hall, Carrigrohane Road, Cork.
- Cork County Council Offices, Cobh Municipal District Offices, Carrig House, Cobh, Co. Cork.
- Cork County Council Offices, Middleton Area Office, Pearse Memorial Chambers, Youghal Road, Middleton, Co. Cork.

Plans and particulars are also available for inspection and to print from Cork County Council's website at the below address:

- <https://www.corkcoco.ie/en/planning/part-8-development-consultation>

1.7 Site Notices

Site notices have been erected at various locations across the project area.

Refer to Drawings 18104-JBB-00-DR-00101 for site locations and the location of site notices.

1.8 Submission Process

A submission or observation in relation to the proposed development, dealing with the proper planning and sustainable development of the area in which the development would be situated, may be made:

- By using the online submission form on www.yourcouncil.ie or,
- In writing, to the Senior Engineer, Coastal and Flood Projects, Cork County Council, County Hall, Carrigrohane Road, Cork, T12 R2NC before 4.00pm on 28th May 2021.

SECTION 2: Design Approach

2.1 Objectives of Proposed Development

The objective of this report is to describe the project the 'Ballintubber Flood Relief Scheme'. The aim of the proposed infrastructure works is to facilitate and alleviate flooding in Ballintubber via the construction of a 1.1km gravity stormwater pipe to existing West Ballintubrid Stream. In accordance with the Planning and Development Regulations, 2001 (as amended), this report details the proposed development together with the accompanying drawings which together describe the nature and extent of the proposed development.

2.2 Design Guidance and Standards

The infrastructure works are designed in accordance with the following guidance and standards:

- Design Manual for Urban Roads and Streets (Department of Transport Tourism and Sport, 2013)
- National Cycle Manual (National Transport Authority (NTA), 2011)
- The SuDS Manual (CIRIA C753) (CIRIA, 2015)
- The Greater Dublin Strategic Design Strategy
- DN-GEO-0344 – The Geometric Layout of Signal Controlled Junctions and Signalised Roundabouts (Transport Infrastructure Ireland (TII), 2005)
- IW-CDS-5030-01 - Wastewater Infrastructure Standard Details, Connections and Developer Services (Irish Water, 2017)
- IW-CDS-5030-02 - Design Risk Assessment for Wastewater Infrastructure Standard Details, Connections and Developer Services (Irish Water, 2016)
- IW-CDS-5030-03 - Code of Practice for Wastewater Infrastructure, Connections and Developer Services (Irish Water, 2017)
- IW-CDS-5030-04 - Design Risk Assessment associated with Code of Practice for Wastewater Infrastructure, Connections and Developer Services (Irish Water, 2018)
- IW-TEC-800-02 - Technical Standard, Wastewater Pumping Stations and Rising Mains (Irish Water, 2017)

SECTION 3: Description of Proposed Project

3.1 Descriptions of Surface Water

The proposed drainage will consist of trapped gullies which will collect surface water run-off from the Irish Plant Propagation Limited site and surrounding areas. The gullies will connect to a network of pipes and fall by gravity and catch-pit manholes which will remove sediment and debris from the run-off

The pipe network can attenuate the surface water since it will have a pipe diameter of 450mm for over 550m. The overall proposed surface water drainage layout is shown in drawings 18104-JBB-00-XX-DR-Z-00017 and 18104-JBB-00-XX-DR-Z-00018.

Storm water is collected in Zone A via a series of gully pots and gravitated initially 80m via a 225mm diameter pipe before increasing to a 300mm pipe for 430m to Zone B. 25m of the pipe will be constructed through road, 265m through compacted gravel with the remaining 220m constructed through fields.

A further series of gully pots are located in Zone B to collect surface water within the zone. The combined storm water gravitates 550m via a 450mm diameter pipe and discharged to the head of the West Ballintubrid Stream. 456m of this section will be constructed through fields with the remaining 94m constructed through road.

Stormwater is then conveyed through the stream channel to the existing outfall at the foreshore.

A proposed 22 no. manholes will be required to be constructed over the length of the route to facilitate changes in directions. A headwall will be constructed at the outfall to the West Ballintubrid Stream.

The proposed route is shown in yellow in Figure 1 below.



Figure 1 Proposed Route

Below provides a breakdown the length, type and diameter of pipe.

Table 1

Chainage	Gravity/Pumped	Diameter	Manholes per Section
0m – 80m	Gravity	225mm	2
80m – 512m	Gravity	300mm	11
512m – 1,083m	Gravity	450mm	9

3.2 Description of the Works

The potential flood alleviation measures identified to be applied as part of the proposed works include:

- Install and or erect all Health and Safety controls identified in Project Risk Assessment & Safety Plan, including the following; signage, fencing, access/egress route, secure access ladders, barriers etc.;
- Plant used on site is restricted to plant approved in advance by Cork County Council engineering staff and will vary depending on requirements;
- The following plant and materials will likely be available but may not be required on site; 14tonnes and 25tonne excavator, tracked dumper, hydraulic rock breakers, mini-digger, 5t and 7.5t mini-digger, dumpers, 3", 4" and 6" pumps, compressors, and shuttering systems.
- Materials which may be required during the construction process include; imported granular fill, concrete, gully pots, manholes and concrete pipes;
- A temporary compound will be established adjacent to the works area to accommodate work huts, welfare facilities and materials storage;
- Any excavated material will be transported to a designated tip with tractor and dump trailer/ dumpers;
- Water will be pumped from excavations as required. Pumped silted water from excavations to be put through a de-silting or series of de-silting chambers prior to releasing into the river. The discharged water will meet the requirements of the Surface Water Regulations 2009 as amended;
- Rock breakers will be utilised in areas identified in ground investigations or elsewhere to reach the required pipe excavation depths,
- Diversion of any stormwater, sewerage, water pipes and services as required; and
- No instream works are proposed as part of the construction methodology. All works will take place from the hard surface upgradient of the spring outfall

SECTION 4: Environmental Summary

4.1 Ecological Impact Assessment

An Ecological Impact Assessment (EclA) for the Ballintubber Flood Relief Scheme has been undertaken and is included as part of the Part 8 planning application. This aim of the assessment was to identify, quantify and evaluate potential effects of the proposed infrastructure works on habitats species and ecosystems in the surrounding environment. Impacts to ecological receptors are considered and mitigation measures are proposed to offset or reduce the identified impacts.

Refer to the Ecological Impact Assessment (EclA) Report for the Ballintubber Flood Relief Scheme for further details.

4.2 Appropriate Assessment Screening

A screening for Appropriate Assessment (AA) report has been prepared to assist the competent authority, in this case Cork County Council, to carry out a Screening for Appropriate Assessment for the Ballintubber Flood Relief Scheme.

Refer to the Report to Inform Screening for Appropriate Assessment for the Ballintubber Flood Relief Scheme for further details.

4.3 Outline Construction and Environmental Management Plan

An outline Construction and Environmental Management Plan (CEMP) has been prepared for the Ballintubber Flood Relief Scheme. The principle objective of the outline CEMP is to provide recommended measures to avoid, minimise and control adverse environmental impacts associated with the construction of the proposed infrastructure works. The outline CEMP details measures relating to preparation of the site, traffic management, waste management, emergency response, noise and vibration, ecology, invasive species, pollution prevention, archaeology and dust.

Refer to the Outline Construction Environmental Management Plan for the Ballintubber Flood Relief Scheme for further details.

4.4 Archaeological and Built Heritage Assessment

An archaeological and architectural impact assessment was carried out by Tobar Archaeological Services of the lands in the vicinity of the proposed infrastructure project.

Refer to the Archaeological and Built Heritage Assessment of the Ballintubber Flood Relief Scheme for further details.

4.5 EIA Screening Report

A Screening for Environmental Impact Assessment (EIA) report has been prepared to assist the competent authority, in this case Cork County council, to carry out a Environmental Impact Screening Report for the Ballintubber Flood Relief Scheme.

Refer to the Environmental Impact Assessment Screening Report for the Ballintubber Flood Relief Scheme for further details.