Ballymakeera / Ballyvourney (Baile Mhic Ire / Baile Bhúirne)
Flood Relief Scheme

Introduction

The Lee CFRAM study highlighted Baile Mhic Ire as an area where a flood relief scheme was justifiable based on social, environmental and costs benefits analyses. A review of the Lee CFRAM study concluded that a standalone study focusing on the Baile Mhic Ire area was required.

Source of Flooding

The causes of flooding in the town are from the river itself, surface water flooding along the main street including backing up of surface water mains, overland flow and localized flooding from a number of minor tributaries entering the Sullane River through the town from the north.

Historically the flood areas include; upstream of Baile Bhuirne Bridge, through the middle of the town at the garage yard, upstream of Baile Mhic Ire Bridge and just west of the Post Office where surface water is backed up from the river.

Progress to Date

The Ballymakeera / Ballyvourney (Baile Mhic Ire / Baile Bhúirne) Engineering report completed in September 2013 included a range of flood relief options for the study area and justified a preferred flood relief scheme option. The option includes a combination of embankments, walls, channel straightening, bridge underpinning and localised dredging.

The stretch of the Sullane River within the study area has a history of Fresh Water Pearl Mussels (FWPM), due to this and the preferred options need for in channel works, a stage two FWPM survey was required – this survey was complete in June 2014.

The survey found FWPM along all the reaches, which the preferred option required in-channel works. On the environmental consultant's advice, for the preferred option to be environmentally viable, a solution to avoid damage to the FWPM was required to be illustrated. A proposed solution was to translocate the effected FWPM during the construction of the preferred scheme option then re-introduce them post the scheme works.

To attain an evaluation on such a solution, the National Parks and Wildlife Service (NPWS) as the responsible authority was contacted and a proposal prepared and forwarded to them for evaluation.

NPWS provided a positive response to the proposal and as a result, the OPW are in a position to proceed. The stage two public consultation day has taken place and an environmental impact statement will be prepared followed closely by the schemes exhibition.

Current Status of Scheme

The Ballymakeera / Ballyvourney (Baile Mhic Ire / Baile Bhúirne) scheme is currently at outline design stage. A ground investigation survey completed in 2017 will assist in determining the final option for the scheme.

A second public information day was held in the Abbey Hotel, Ballyvourney on March 22, 2018 to offer an opportunity for local representatives and stakeholders to raise issues and discuss their concerns. Further submissions from local representatives and stakeholders will be accepted up until the end of April 2018. All comments submitted will be considered when reviewing the final option for the Ballymakeera / Ballyvourney flood relief scheme.

Scheme proposal presented at the Abbey Hotel can be viewed below.

NOTES:

Figured dimensions only to be taken from this drawing, do not scale.

The project engineer to be informed immediately of any discrepancies noted.

AN CHEAPACH THOIR

KILLEEN
(ED Slievereagh)

NA CILLÍNÍ
(T AN SLIABH RIABHACH)

FLATS
MAGH REIDH

GLEBE
(ED GORTNATUBBRID)

SHANACLOON
AN tSEANCHLUAIN

Ballymakeery

Ballyvourney

Cascade Wood

St. Gobnet's Wood

Shanacloon Wood

Ballyvourney Bridge

Boháil Bridge

Sullane River

Church

Grave Yard

CR

UND

CE

FF

N22

Upgrade Embankment	Channel Widden
Cross Section 3000	New Channel Cut
River	Flood Defence Wall
River Grading	Existing Defence Upgrade
Embankment	Rock Armour
Road Raising	New Culverts
	Lay Surface Water Pipes

Rev	Date	Checked	Description

O.P.W. Engineering Services
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PROJECT
RIVER SULLANE (Baile Mhic Ire) DRAINAGE SCHEME

DRAWING
SCHEME PROPOSALS

Scales	NTS
Date	19/02/18
Drawn	ND
Checked	MH
Approved	PJ

Purpose Of Issue: **INFORMATION**

Drawing No. 2254/DR/001a

A1

Ballymakeera & Ballyvourney Flood Relief Scheme (River Sullane)

Flooding at Ballymakeera Bridge October 2011

Flooding at Ballyvourney Bridge October 2011

Flooding on Main Street September 2015

Study Objectives & Overview

The purpose of the project is to develop a Flood Relief Scheme to reduce the frequency and impact of flooding in Ballymakeera and Ballyvourney.

Stage 1 – Risk Assessment & Preferred Option Selection

Identify the preferred scheme through an assessment of a range of measures both structural and non-structural, to determine their technical, economical & environmental viability.

Status: Complete March 2018

Stage 2 – Environmental Assessment & Consent

The Preferred Scheme will be finalised pending the outcome of consultation, further refined into an outline design, assessed under the EIA and AA processes and advanced for consent.

Expected Completion: Autumn/Winter 2018

Stage 3 – Detailed Engineering Design & Tender

Expected Completion: 2019

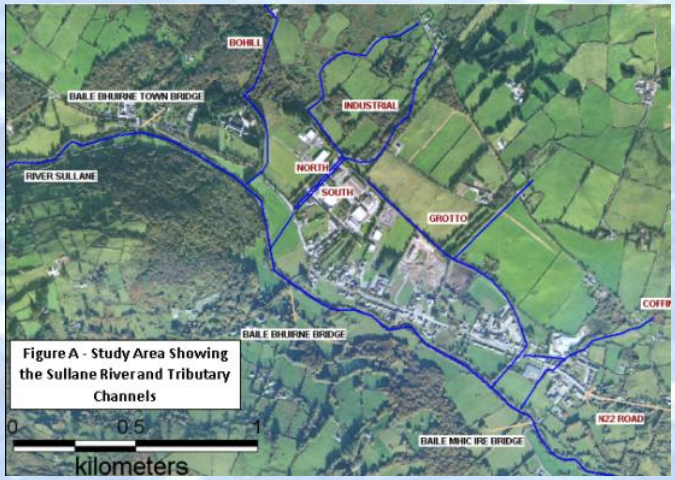
Stage 4 & 5 – Construction & Handover

Expected Completion during 2022

Contact the Project Team by email at SullaneFRS@rpsgroup.com

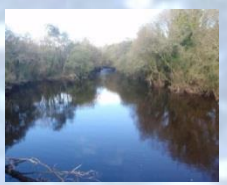
Ballymakeera & Ballyvourney Flood Relief Scheme (River Sullane)

Public Information Day No. 1 - Outcomes



Study Area






Key Outputs

- Approx. 50 people attended the Public Information Day, the majority of whom live or work in the Study Area.
- Questionnaire respondents were a mix of residential or commercial property owners or were involved in community facilities in the villages.
- A number of sources of flooding were referenced in the responses, particularly the Sullane River, but also tributaries of the Sullane and drains.
- Flood events from 1962 up to 2009 and 2011 were discussed.
- A number of respondents had installed flood protection barriers or had taken other measures to protect their properties from flooding.
- Dredging was identified as the most preferred method to prevent future flooding, followed by channel widening, and then walls / embankments. The relocation of properties was the least favoured potential response to flooding issues.

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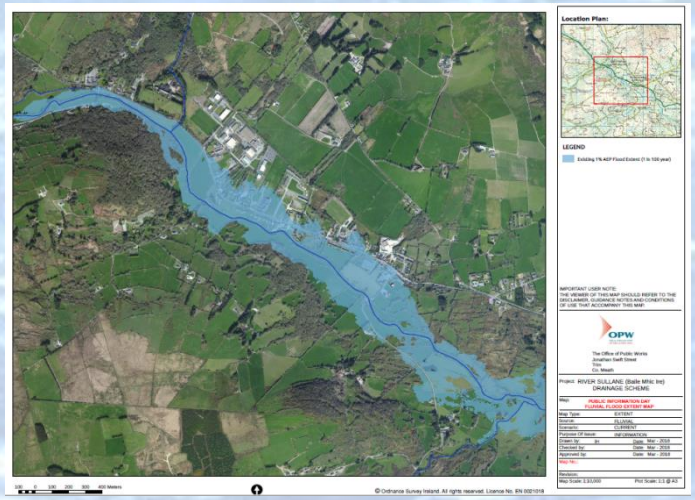
Ballymakeera & Ballyvourney Flood Relief Scheme (River Sullane)

❑ Progress since Public Information Day No.1

- Installation of Two Hydrometric Gauges Oct. 2011, at Ballymakeera Bridge and Ballyvourney Bridge, resulting in a change in Design Flow.
- Additional topographical survey, to aid in the tributary channels flood relief measure assessment.
- Site Investigations and Screening for Appropriate Assessment.
- Commencement of ecology surveys and translocation feasibility studies for Freshwater Pearl Mussel.
- Updated Flood Relief Study Engineering and Options Report.
- Updated Flood Relief Options works costs.
- Updated Cost Benefit Analysis and Multi Criteria Analysis.
- Updated Preferred Option.
- Tender for Interim Works Advertised.



Current 100-Year Flood Extent
(Draft Mapping for Main Channel of Sullane)

❑ Next Steps

- Refine and Finalise Preferred Option
- Environmental Impact Assessment / Appropriate Assessment
- Consent Process

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Ballymakeera & Ballyvourney Flood Relief Scheme (River Sullane)

An Environmental Constraints Study was undertaken to determine and document the key constraints that may inform the selection and design of the proposed Flood Relief Scheme.

Key Potential Environmental Constraints Identified included:

- ❑ Dust, noise and water quality impacts during the construction stage along with disruption to traffic and services;
- ❑ Loss of freshwater pearl mussel and associated habitat;
- ❑ Impact on Kerry Slug;
- ❑ Impact on salmonids and salmonid habitat / fisheries;
- ❑ Impact on St. Gobnait's Wood SAC;
- ❑ Impacts to bats, otter and kingfisher due to impacts on bankside vegetation and treelines;
- ❑ Impacts to bridges and other cultural heritage features;
- ❑ Impact on private amenity areas and boundary treatments; and
- ❑ Visual impacts from scenic routes and from sensitive receptors.

Key Recommendations for EIA Stage:

- ❑ Best Practice Construction methods to minimise dust, noise, pollution of waters and consultation with utility providers and local authority;
- ❑ Translocation and Assisted Breeding Programme for Freshwater Pearl Mussel;
- ❑ Kerry Slug Survey;
- ❑ Fisheries Assessment, Avoidance of in-stream works where possible; agreed Method Statements, Seasonal Restrictions;
- ❑ Appropriate Assessment Screening;
- ❑ Otter, Kingfisher and Bat Surveys;
- ❑ Invasive Species Surveys;
- ❑ Archaeological Assessment (including underwater); consultation with National Monuments Service and Cork County Council;
- ❑ Avoidance of Private Gardens / reinstatement where possible; and
- ❑ Keeping hard defences back from main routes.

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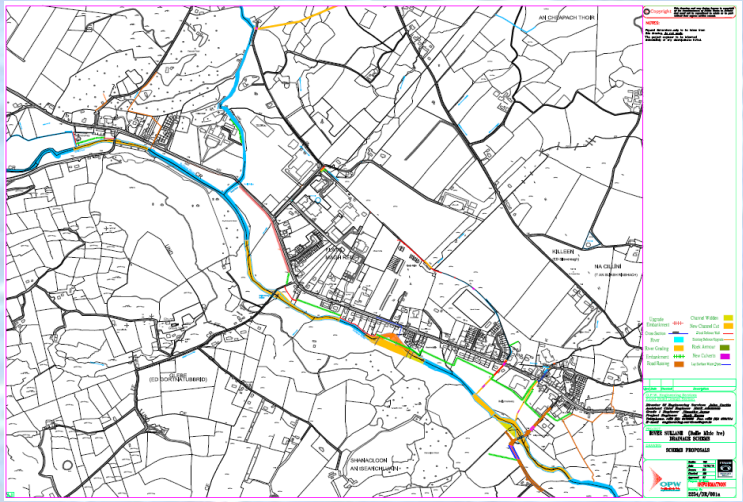
Ballymakeera & Ballyvourney Flood Relief Scheme (River Sullane)



A range of flood risk management measures were analysed against technical, economic, social and environmental criteria. The following is a summary of the combination of works that are emerging as being the **Preferred Option** to be recommended as part of the Ballymakeera & Ballyvourney Flood Relief Scheme:

1) River Sullane

Dredging and undrerpinning in the vicinity of Ballymakeera, Ballyvourney and Ballyvourney Town Bridges

Infilling of the 'Village Bend' and Creation of New Channel

Localised Channel Widening

Provision of Hard Defences in the form of New Embankments & Flood Walls and Upgrade of Existing Embankments

Tributaries

2) Bohill River

Localised Embankments

3) Industrial Channel

New Channel Cut and Culvert Installations

4) Grotto Channel

Localised Channel re-grading, New Culvert, Gravel Trap, Walls and Embankments

5) Coffin Channel

New Surface Water Pipes, New Channel Cut, Embankments and Localised Walls

6) Other Works

Road Raising and New Culverts at Balymakeera Bridge

7) Interim Works

Temporary Hard Defences, Localised Land Raising and Non-return Valves

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