

Potential Flood Relief Scheme

Option 1

c450m long wall on left bank.
Height (above existing ground):
Average: 1.4m
Range: 0.5m to just over 3m

Area that would otherwise be inundated by flood water following a flood event that in probability would occur on average once every 100 years.

Replacement Bridge

Area to which flood waters will be confined by defence walls in a flood event that in probability would occur on average once every 100 years.

c1km long wall on right bank.
Height (above existing ground):
Average: 1.5m
Range: 0.5m to just over 3m

— Flood Defences
■ Undefended
■ Defended

Flood Water Level

Flood Wall

Normal Water Level

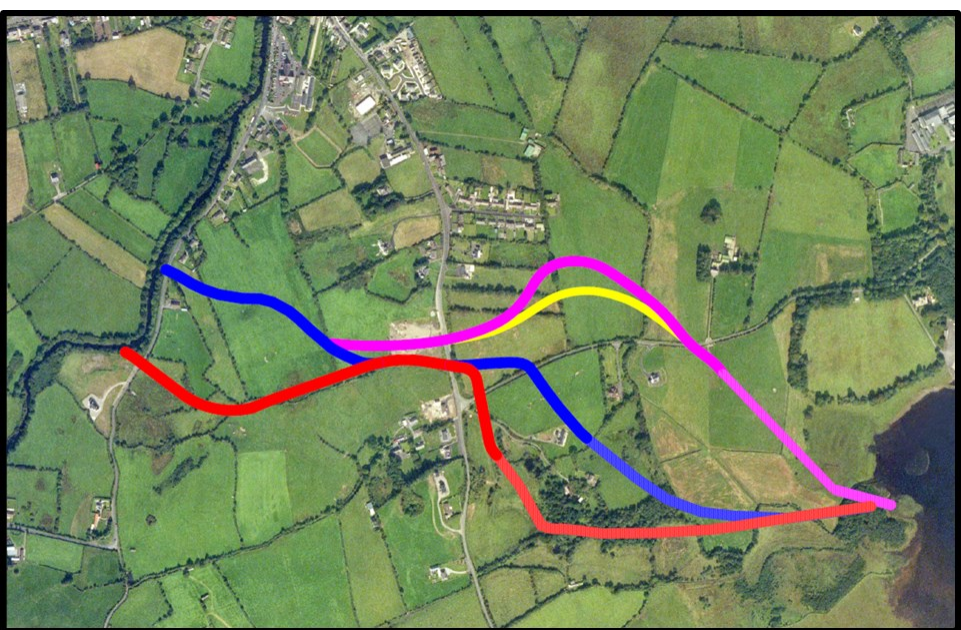
Typical section through flood wall

Potential Flood Relief Scheme

Option 2

Option 2 Diversion Channel

- Purpose is to divert flow away from Crossmolina directly to Lough Conn during high flows
- c2km long channel
- Excavation depths exceeding 10m
- Excavation volumes > 300,000 m³
- New Channel would be larger than existing river channel
- 2 new bridges and road diversions
- Similar in scale to excavation for a major road project



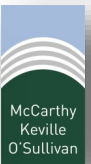
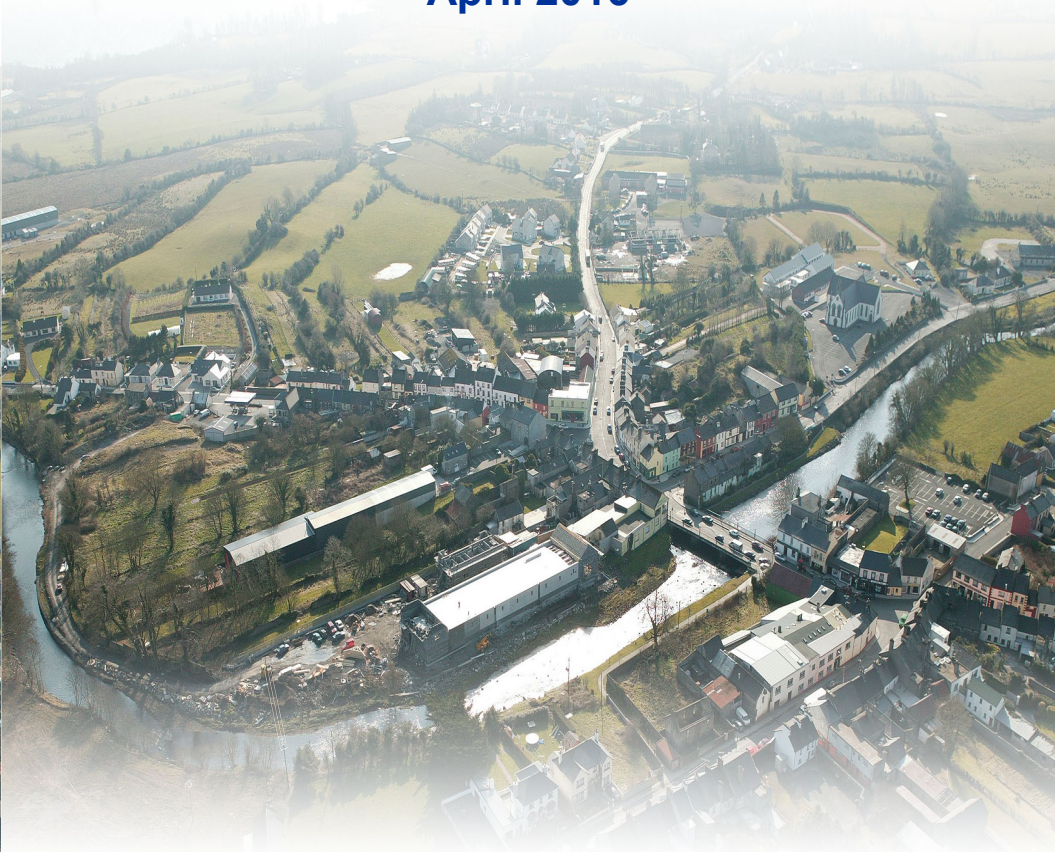
Public Information Event

Information Brochure

River Deel (Crossmolina)

Flood Relief Scheme

April 2016



PURPOSE OF THE PROJECT

The purpose of the River Deel (Crossmolina) Flood Relief Scheme is to identify the most appropriate flood relief scheme to alleviate flooding in Crossmolina town. The Office of Public Works (OPW) has appointed consultants to carry out both an Engineering Study and an Environmental Study in order to determine an appropriate scheme on the basis of technical, social and environmental criteria.

RESULTS OF CONSTRAINTS STUDY

The purpose of a Constraints Study is to identify the key environmental issues in a Study Area which might be impacted by possible flood alleviation measures and/ or which may impose constraints on the viability and/ or design of these measures. The design constraints include the requirement to maintain traffic and pedestrian links across the Jack Garrett Bridge, in addition to local amenity and angling areas. Ecological constraints include the importance of the River Deel as a Salmon fishery, the protection of the designated Special Area of Conservation (SAC) habitats and species along with Special Protection Area (SPA) species and the population of protected Freshwater Pearl Mussel which are of high ecological importance. Other constraints include the protection of water quality and archaeological sites in the area.

OPTIONS CONSIDERED

A wide range of flood relief options were considered under technical, environmental, economic and social criteria, including structural and non-structural measures. Structural measures include increased conveyance, flood defence, storage, flow diversion and relocation of properties. Conveyance can be increased by widening or deepening the river or replacing the bridge with a wider, higher structure. Modelling showed that neither dredging, channel widening or bridge replacement offer a stand-alone solution to the 100 year flood event. Upstream storage was not considered viable based on the large land area that would be required for storage and the porous nature of the land which would be difficult to waterproof. Four options were brought forward for more detailed multi-criteria assessment. These included the provision of flood defence walls/embankments, Dredging (in combination with flood defences), Bridge Replacement (in combination with flood defences) and the construction of a diversion channel. Following analysis the provision of flood defences only was considered to be the preferred option. However, in detailed design of the project, it transpired that the flood defences could not be constructed without the replacement of the Jack Garrett Bridge and therefore the preferred option was no longer viable. Similarly the dredge option would also require bridge replacement and is not considered to be the preferred option. The two viable options currently under consideration as the preferred solution are the Bridge replacement with flood defences and the provision of an overflow channel.

CURRENT POSITION

The Office of Public Works (OPW) and its consultants, in conjunction with Mayo County Council, are currently reviewing the options for the Crossmolina Flood Relief Scheme. Having received the existing Jack Garrett Bridge design drawings from Mayo County Council, the OPW Engineering Consultants advice is that the existing Jack Garrett bridge in Crossmolina, while perfectly adequate for its current use, will not be suitable for incorporation into the currently proposed works. This information came to light following consultations with Transport Initiative Ireland, and indicated that a previously unknown concrete services duct within the bridge created an inherent weakness in the bridge in relation to its suitability for incorporation into the flood defence works.

Should these works go ahead, then the bridge will have to be replaced (the initial proposal being replacement of one side at a time, i.e. one lane of traffic would be kept open) and with this in mind, Ryan Hanley consultants were instructed to review the flood defence options.

Taking into account the recently established need for bridge replacement, the two most promising options comprise the following -

- (1) flood defence walls, embankments, pumping stations, and attendant storm drainage provisions along with a replacement bridge.
- (2) a diversion channel upstream of the town which would divert flood flows to an outflow point at Lough Conn.

It should be noted that the possibility of a combination of flood defence walls, new bridge, and dredging was also initially looked at as an option, and is again being reviewed, however it should be borne in mind that dredging is not likely to emerge as the preferred option due to the significant environmental issues associated with a dredge of the River Deel.

In order to identify the preferred scheme from this review it will be necessary to undertake some preliminary site investigations which will also involve the engagement of a Hydrogeologist by the Engineering Consultants. Elements of the hydrogeological investigations have already begun, but other elements can only be undertaken during low-flow conditions in the river, and as such will be weather dependent.

The findings of the preliminary investigations will be used to inform the identification of a preferred flood relief scheme for Crossmolina.

The Environmental Impact Statement (EIS) and Natura Impact Statement (NIS) will then be progressed to Exhibition. The EIS will assess the effect of the scheme on aspects of life in Crossmolina, from the natural environment to its possible impact on the quality of life for the residents of the town.

These documents, along with maps/drawings and photomontages will be used in the formal Scheme Exhibition (duration of one month), which it is hoped to hold in late 2016, presuming the weather allows the relevant investigations be completed, and should the diversion channel emerge as the preferred option. If the existing flood defences and bridge replacement proposal remain the preferred option, it may be possible to hold the Exhibition at an earlier date, as a substantial amount of work on the EIS and NIS has already been completed.

Following the exhibition period, a further minimum period of 4 weeks will be allowed for the receipt of comments and observations from interested parties, which will be given due consideration by the OPW, with the scheme being amended if appropriate. Following this, the detailed design of the Scheme will be undertaken which will allow the relevant documentation to be prepared to apply for formal Confirmation of the scheme under the Arterial Drainage Acts by the Minister for Public Expenditure and Reform.

As part of the Confirmation process, the Minister will be required, as a result of EU environmental regulations, to have an independent assessment of the Environmental Impact Statement carried out.

The OPW remains fully committed to the Scheme and has provided for its costs in its multi annual budget profiles for 2016-2018.

WHAT HAPPENS NEXT?

All comments received in response to this Public Consultation will be considered by the OPW and will be taken into account in the finalisation of a preferred Flood Relief Scheme, which will then be assessed in terms of Environmental Impacts. An Environmental Impact Statement (EIS) will be prepared. The Environmental Study and Engineering Study for the River Deel (Crossmolina) Flood Relief Scheme will be delivered in the Stages as outlined below. The current stages are shown in blue text.

| Environmental Study | | Engineering Study |
|---------------------|--|--|
| Stage I | Constraints Study (<i>this stage</i>) | Stage I (a) Engineering Design |
| | Screening for Appropriate Assessment | Stage I (b) EIS & Screening for AA |
| Stage II | Environmental Assessment of Viable Options | (see Environmental Study) |
| | Appropriate Assessment | Stage I (c) Valuation Survey |
| Stage III | Environmental Impact Statement | Stage II Public Exhibition |
| Stage IV | Public Exhibition | Stage III Detailed Design & Confirmation |

YOUR OPPORTUNITY TO TAKE PART

The OPW wishes to consider all viewpoints in relation to the development of a proposed flood relief scheme for the River Deel in the Crossmolina area. This is your opportunity to take part at the early stages of the planning of the River Deel (Crossmolina) Flood Relief Scheme. The time spent by you in communicating your views to the OPW is appreciated.

The general public and all interested parties are invited to give their opinions at this intermediate stage of development of the scheme. Please let your views be known by either completing the enclosed questionnaire or writing to the address below, giving your comments. Please return your information by **Friday 29th April 2016**.

Your opinion is appreciated and will be given full consideration. The responses received will be analysed and included in the assessment of the preferred scheme. A further opportunity to review the findings of the EIS will be provided to the public as part of the Public Exhibition Stage of the project.

FURTHER INFORMATION

All queries, questionnaires and comments in relation to this project can be addressed to:

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