

# Leitrim County Council



## PART 8

### BRIEFING DOCUMENT

### ***PROPOSED KEADUE ROAD LEITRIM VILLAGE FLOOD DEFENCE WORKS.***

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## Introduction and Background to Project

Leitrim County Council in conjunction with the Office of Public Works (OPW) have a proposal to construct a temporary berm adjacent to the road to provide flooding protection for the Keadue Road and surrounding residents North of the R284.

## Background to the Development

Notable flooding took place in Leitrim Village and environs during events in October 1954, November 1968, February 1990, December/January 1999/2000, February 2002, January 2005, December 2006, November 2009 (See Fig 01 Below), December/January 2015 and February 2020. Historically, the worst flood event in the Upper River Shannon, including at Leitrim Village, occurred in November 2009.

An area at the Keadue Road is at high flood risk and is among the first urban areas along the Upper Shannon to experience flooding. The area at flood risk includes the Cluain Óir housing estate. This area is connected to the River Shannon via a local drain.



Fig. 01 - Photo Taken looking East toward Leitrim Village on the Keadue Road/R284 Nov 2009

## **Scheme Overview**

The location and details of the project accompany the Part 8 application drawings.

The Leitrim Village Flood Relief Scheme has not yet decided on the Standard Level of Protection (SoP) for the scheme, i.e. 1% Annual Exceedance Probability (AEP) or 1 in 100 year flood. Once this is decided upon and the options to protect property are agreed and designed, the project will be submitted to an Bord Pleanála for planning approval. Considering the timescale involved and the current delays experienced with applications to an Bord Pleanála, this local authority approached the OPW concerning advance funding to provide flood defences to protect the properties along the Keadue Road and the Cluain Óir housing estate. These properties flooded in 2009 and were under threat of flooding in 2015, 2106 and 2020. These flood defences are temporary and will be removed when the permanent defences are constructed as part of the Leitrim Village Flood Relief Scheme. It is reasonable to provide these defences now as these properties are subject to flooding regularly and will probably experience this treat again before the Leitrim Village Flood Relief Scheme is completed.

We propose to construct the berm to retain flood waters of the level similar to the 2009 flood. This will provide adequate comfort to the residents living adjacent to the R284 currently under flood risk. The works also involve the construction of a culvert in the existing stream and the installation of a Non-Return flap valve. This non return valve will prevent flood waters flowing back up the stream during flood events. Over pumping will be provided during these flood events to remove the natural water flow in the stream and pump this across the flood defence. This is similar to what we have completed in Carrick on Shannon which proved successful during the 2020 flood event.

The outfall will be constructed using a 2.0m x 1.0m Box Culvert. This local authority will require approval from the OPW in accordance with Section 50 of the Arterial Drainage Act 1945 to construct this culvert in the stream. This approval will be sought once this planning is approved.

## **OPW Minor Works Schemes**

While Local Authorities can and do undertake local flood relief projects within their own capital works programmes and using their own resources, the OPW continues to work with Local Authorities to support local flood relief projects. Funding of almost €41m has been approved by the OPW to Local Authorities since 2009 under the Minor Flood Mitigation Works and Coastal Protection Scheme. To the end of 2017, almost 500 local flood relief projects were completed across every county protecting almost 6,500 properties. Two thirds of these projects delivered flood relief schemes to areas outside of the CFRAM Programme. The purpose of the scheme is to provide funding to Local Authorities to undertake minor flood mitigation works or studies to address localised flooding and coastal protection problems within their areas. The scheme generally applies where a solution can be readily identified and achieved in a short time frame. Under the scheme, applications are considered for projects that are estimated to cost no more than €750,000 in each instance. Funding of up to 90% of the cost is available for approved projects. Applications are assessed by the OPW having regard to the specific economic, social, and environmental criteria of the Scheme, including a cost benefit ratio.

## **Landownership**

The flood defence berm is constructed in private property. Leitrim County Council has a signed licence agreement with the landowner to construct this berm and retain in place until the major flood relief scheme is completed. It is Leitrim County Council's responsibility to maintain the flood defences until this happens.

## **Planning Policy Context**

### **The Office of Public Works (OPW)**

The OPW is the lead State body responsible for the coordination and implementation of Government policy on the management of flood risk in Ireland. The OPW, in conjunction with Leitrim and other County Councils, undertook the National Catchment-based Flood Risk Assessment and Management (CFRAM) Programme, through which Flood Risk Management Plans (FRMPs) and flood maps were prepared. This was the largest ever flood risk study in Ireland to date, undertaking a detailed engineering assessment of 300 areas or communities believed to be at significant risk of future flooding. The CFRAM Programme included analysis of flood risk in Ballinamore, Carrick-on-Shannon, Drumshanbo, Leitrim, Manorhamilton and Mohill.

In 2018, the OPW published 29 Flood Risk Management Plans to address flood risk in Ireland. These plans include 118 additional Flood Relief Schemes, 4 of which are located in Co. Leitrim, namely Carrick-on-Shannon/Cortober, Leitrim Village, Mohill and Dromod. These schemes will be implemented under the ten-year €1 billion investment programme.

### ***Leitrim County Development Plan 2023-2029***

Leitrim County Council has adopted the Leitrim County Development Plan 2023-2029 hereafter referred to as the "Plan".

Leitrim County Council undertook a Strategic Flood Risk Assessment (SFRA) as part of the preparation of the Plan, consistent with "The Planning System and Flood Risk Management Guidelines for Planning Authorities" (2009). This has informed land use zoning decisions in the Plan.

In preparing this Plan, the Local Authority had full regard to the proposed development of flood relief schemes in Carrick-on-Shannon, Leitrim Village, Mohill and Dromod, to ensure that zoning or development proposals do not impede or prevent the progression of these measures.

This development subject of this application is consistent with the following policies within the Plan:

**FRM POL 2** To ensure that a flood risk assessment is carried out for any development proposal, in accordance with the Planning System and Flood Risk Management (DoEHLG/OPW 2009) and Circular PL2/2014. This assessment shall be appropriate to the scale and nature of risk to the potential development.

**FRM POL 3** To consult with the OPW in relation to proposed developments in the vicinity of drainage channels and rivers for which the OPW are responsible, and to retain a strip on either side of such channels where required, to facilitate maintenance access thereto. In addition, to promote the sustainable management and uses of water bodies and avoid culverting or realignment of these features.

**FRM POL 5** To protect the integrity of any formal flood risk management infrastructure, thereby ensuring that any new development does not negatively impact any existing defence infrastructure or compromise any proposed new defence infrastructure.

**FRM POL 6** To ensure that where flood risk management works take place that the natural, cultural and built heritage, rivers, streams and watercourses are protected and enhanced to the maximum extent possible.

**FRM POL 8** To consult, where necessary, with Inland Fisheries Ireland, the National Parks and Wildlife Service and other relevant agencies in the provision of flood alleviation measures in the county.

**FRM POL 11** To require proposals for development to comply with requirements of the Planning System and Flood Risk Assessment Guidelines including providing detailed design specifications as may be required to assess the impact of development.

a) Extensions of existing uses or minor development within flood risk areas shall not: obstruct important flow paths; introduce a number of people into flood risk areas; entail the storage of hazardous substances; have adverse impacts or impede access to a watercourse, floodplain or flood protection and management facilities; or increase the risk of flooding elsewhere.

b) Applications for development within Flood Zones A or B, and on lands subject to the mid-range future scenario floods extents, as published by the Office of Public Works, shall be subject to site specific flood risk assessment. Such assessments shall consider climate change impacts and adaptation measures and shall provide details of structural and non-structural flood risk management measures, to include, but not be limited to specifications of the following:

Flood-Resistant Construction

Developments in flood vulnerable zones shall specify the use of flood-resistant construction .....

Flood-Resilient Construction

Developments in flood vulnerable zones that are at risk of occasional inundation shall incorporate design and specification for flood resilient construction .....

**FRM POL 13** To require the submission of site-specific Flood Risk Assessments for developments undertaken within Flood Zones A & B and on lands subject to the mid-range future scenario floods extents, as published by the Office of Public Works. These Flood Risk Assessments shall consider climate change impacts and adaptation measures including details of structural and non-structural flood risk management measures, such as those relating to floor levels, internal layout, flood-resistant construction, flood-resilient construction, emergency response planning and access and egress during flood events.

**FRM POL 14** To require the undertaking of site-specific flood risk assessments for applications for development on land identified as benefitting land which may be prone to flooding.

This development subject of this application is consistent with the following objectives within the Plan:

**FRM OBJ 1** To implement and comply fully with the recommendations of the Strategic Flood Risk Assessment prepared as part of this Plan.

**FRM OBJ 2** To implement in conjunction with the Office of Public Works the recommendations contained in the Flood Risk Management Plans (FRMP's), including planned investment measures for managing and reducing flood risk, subject to obtaining the necessary planning consent and undertaking the required environmental assessments.

## **Flood Risk Assessment**

Leitrim County Council appointed Ryan Hanley consulting engineers to the Leitrim Village Flood Relief Scheme. We have appointed them to carry out the flood risk assessment of the proposals part of this application as they are best advised to do so and have all the relevant information for flooding in Leitrim Village.

The main findings of this assessment are:

- The reduction in flood levels will be achieved by Leitrim County Council through the construction of a temporary berm and deployment of pumps as described above.
- The reduction in flood level is intended to protect houses to the North of the bund, including those in Cluain Óir housing estate.
- The flood risk in the area is dominated by the River Shannon. During flood conditions, the Shannon enters a lake-like state, with very little difference in water levels over a stretch extending beyond Carrick on Shannon.
- The pump rate is very low in comparison to flood flows on the River Shannon. Similarly, the catchment of the Keadue Road drain is miniscule in comparison to that of the River Shannon upstream of Leitrim Village.
- Displacing a relatively small volume of water from the Keadue Road floodplain will result in an imperceptible change in water levels in the River Shannon at Leitrim Village and/or immediately downstream of the proposed bund.
- The proposed changes have been modelled by Ryan Hanley using the calibrated hydraulic model developed for Leitrim Village Flood Relief Scheme. The model results confirm that the change in water level in the flood plain immediately downstream of the berm would be less than 1mm.

## **Environmental Assessment**

### Appropriate Assessment

NATURA 2000 sites are protected habitats for flora and fauna of European importance. They comprise Special Areas of Conservation (SACs), designated under the Habitats Directive and Special Protection Areas (SPAs), designated under the Birds Directive.

An Appropriate Assessment Screening Report has been prepared by Ryan Hamley Consulting to assist the Planning Authority in their determination. The report concludes that a Natura Impact Statement / Appropriate Assessment is not required for this project.

### Environmental Impact Assessment

An Environmental Impact Assessment Screening Report was completed for proposed scheme by Ryan Hanley Environmental Consulting It concluded that a full Environmental Impact Assessment Report is not required for the project.