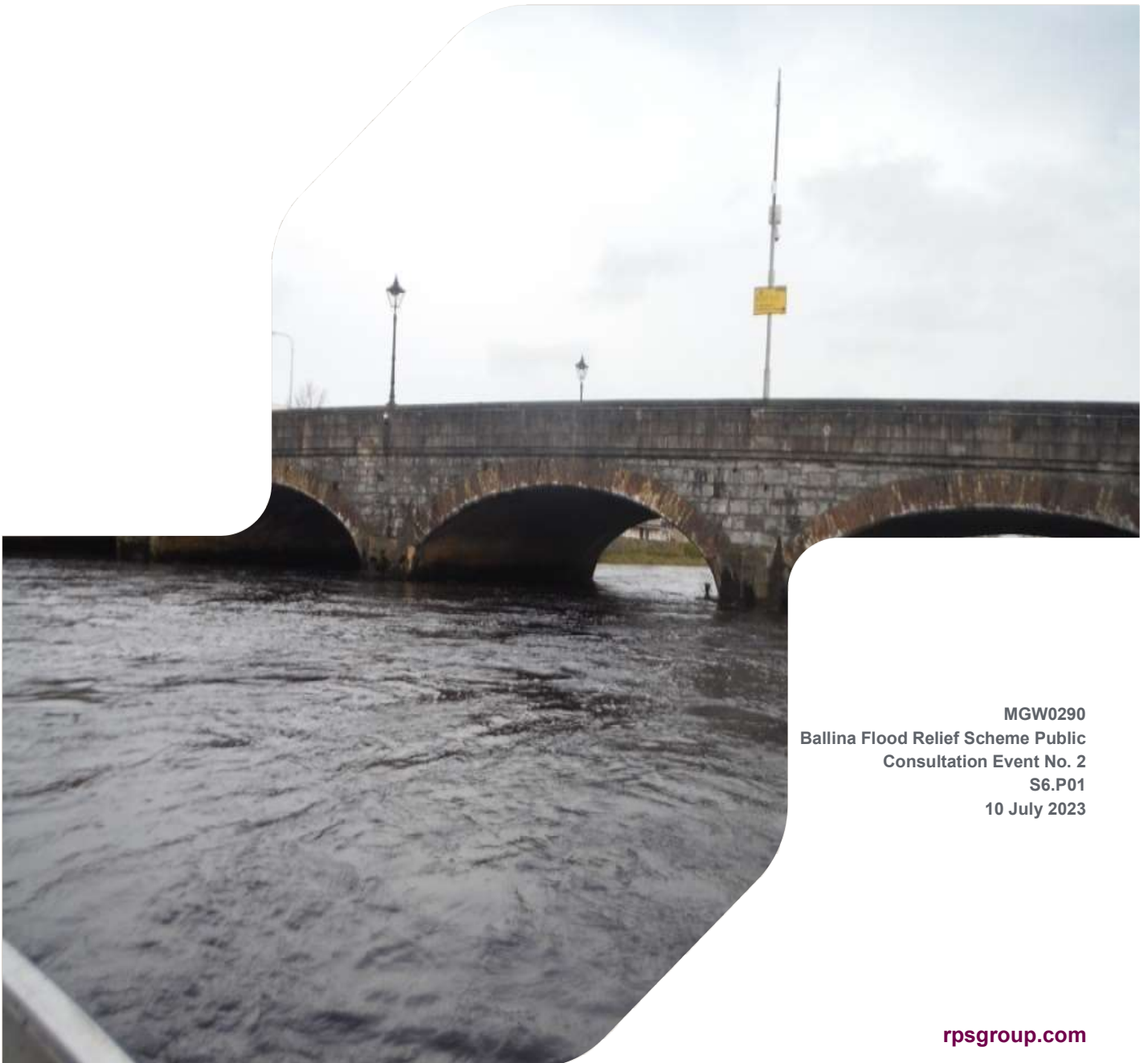


# BALLINA FLOOD RELIEF SCHEME PUBLIC CONSULTATION EVENT NO. 2



MGW0290  
Ballina Flood Relief Scheme Public  
Consultation Event No. 2  
S6.P01  
10 July 2023

**REPORT**

**Document status**

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**Approval for issue**

PJG	10 July 2023
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Prepared by:

**RPS**

Prepared for:

**Mayo County Council**

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## REPORT

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## REPORT

# 1 INTRODUCTION

Ballina has a long history of tidal flooding due to its location on the River Moy which flows through the town. This flood risk is well documented and has been subject to hydrological and hydraulic analysis, flood risk assessment and development of a preferred option through the Western CFRAM Study.

In March of 2020 RPS were appointed as the engineering and environmental consultants for the Ballina Flood Relief Scheme (FRS) to deliver the scheme through the statutory processes and complete detailed designs.

The objective of this project is the identification, design and submission (for planning consent) of a flood relief scheme, which is technically, socially, environmentally and economically acceptable, to alleviate the risk of flooding to the community of Ballina to a determined standard of protection, and to procure, manage and oversee the construction of that scheme.

At this time, the Project is in Stage 1 of 5 (as noted below) and Emerging Preferred Options have been identified for the Proposed Scheme.

- **Stage I:** Identification and Development of a Preferred Scheme
- **Stage II:** Planning process
- **Stage III:** Detailed Construction Design, Compilation of Work Packages and the Preparation of Tenders for Contracts
- **Stage IV:** Construction Supervision and Project Management Services
- **Stage V:** Handover of Works

As part of the development of a preferred scheme for the project a Public Consultation Event was held on the 30<sup>th</sup> March 2023 from 4pm-8pm in the Newman Institute, Cathedral Close, Ballina, Co. Mayo. The purpose of the consultation event was to:

- Present alternatives considered for the development of the Proposed Scheme.
- Present the Emerging Preferred Option including the location and extent of the proposed flood relief measures.
- Collate public comments and concerns relating to potential environmental issues associated with the Proposed Scheme.
- Inform the environmental studies to be undertaken as part of the Environmental Impact Assessment (EIA).

REPORT

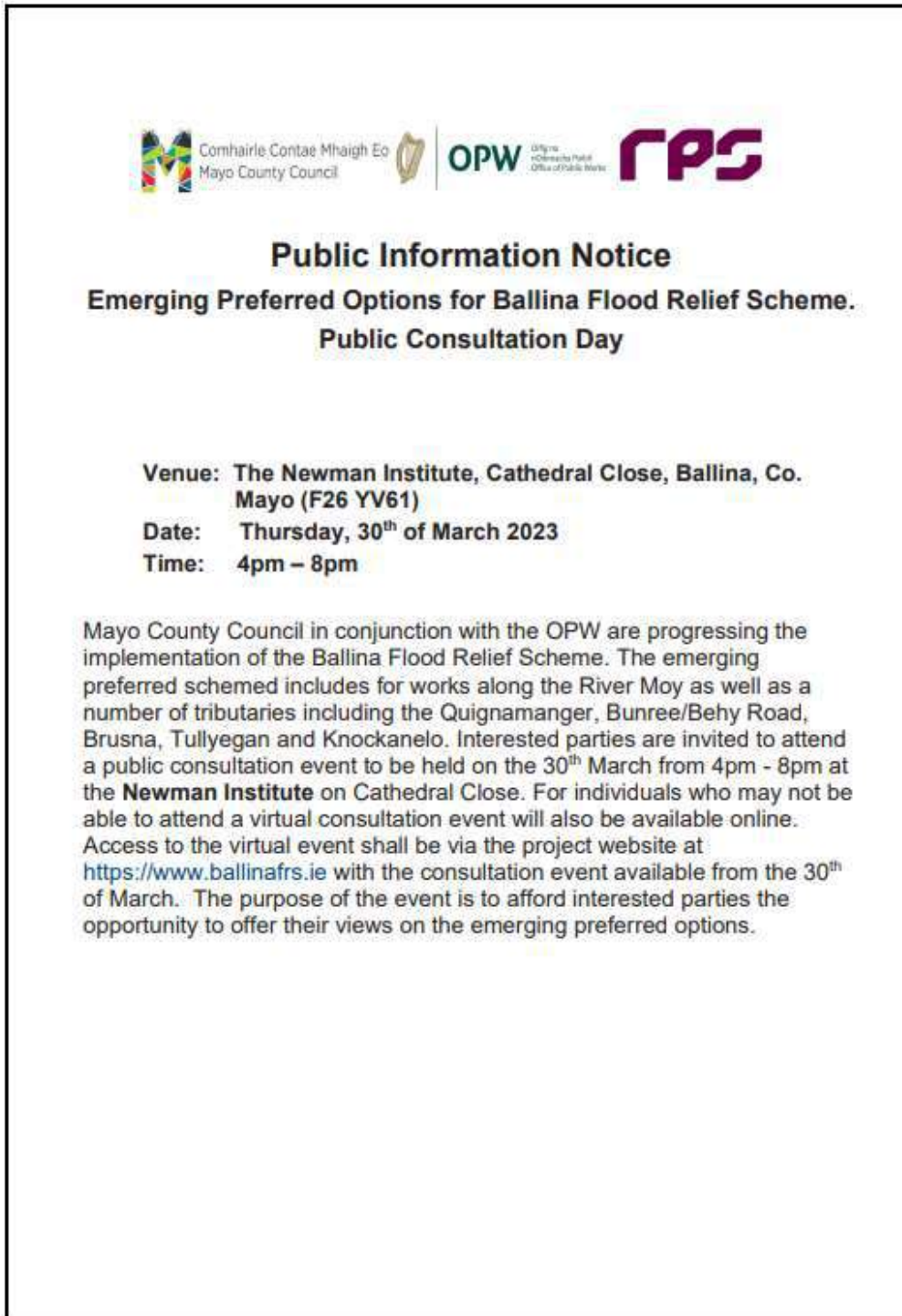
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## 2 CONSULTATIONS

### 2.1 Public Consultation Evening

The public information evening was held on the 30<sup>th</sup> of March 2023 from 4 pm to 8 pm in the Newman Institute, Cathedral Close, Ballina, Co. Mayo. This event was attended by RPS employees and staff from the OPW and Mayo County Council. This was the second of such events with the first one held on the 23<sup>rd</sup> September 2020 in the Kennedy Glasgow House, Quignamanger, Ballina, Co. Mayo, which served as an introduction to the development of a Flood Relief Scheme for Ballina.

The event was advertised in the Western People, the principal paper for the locality, in the edition published on 27<sup>th</sup> March 2023. A copy of the consultation notice has been included in **Figure 2-1** below. A household leaflet drop was also carried out to inform locals of the upcoming event.



**Figure 2-1 Public Information Notice 30<sup>th</sup> March 2023**

The format of the event was centred around the presentation of information boards (see **Figure 2-2** to **Figure 2-4**). These notice boards displayed overview maps showing the proposed works on the River Moy and each of the tributaries as indicated below:

- **River Moy**
  - Flood defences.
    - Image of existing and photomontage of proposed works on Clare Street.
    - Image of existing and photomontage of proposed works on Bachelor's Walk.

## REPORT

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- Image of existing and photomontage of proposed works on Emmet Street.
- Image of existing and photomontage of proposed works on Cathedral Road.
- **Quignamanger**
  - Diversion culvert upgrade, flood walls and culvert upgrade.
- **Bunree/Behy Road**
  - New culvert and culvert upgrade.
- **Brusna**
  - Flood walls and embankments.
- **Tullyegan**
  - Flood walls and/or embankments.
- **Knockanelo**
  - Diversion culvert inlet upgrade, culvert upgrade.

Attendees were requested to fill out an attendance log and were invited to fill out a comments sheet setting out their views and concerns regarding the Project.



**Figure 2-2 Public Consultation Notice Boards**

REPORT



Figure 2-3 Public Consultation Notice Boards



Figure 2-4 Public Consultation Notice Boards



## REPORT

## 2.2 Ballina Flood Relief Scheme Website

Details of the public consultation were also posted on the Ballina FRS Website ([www.ballinafrs.ie](http://www.ballinafrs.ie)) with the opportunity for members of the public to submit comments online and a virtual public consultation event was held for those unable to attend the event. The virtual room was accessible from the 30<sup>th</sup> March until 1<sup>st</sup> June 2023. Images of the Virtual Room can be seen in **Figure 2-5** to **Figure 2-8**.



**Figure 2-5 Virtual Consultation Room**



**Figure 2-6 Virtual Consultation Room**

## REPORT



Figure 2-7 Virtual Consultation Room



Figure 2-8 Virtual Consultation Room

The material displayed in the Virtual Room is provided in **Appendix A**. Also included in Appendix A, are the photomontages as presented at the Public Consultation Evening held on the 30<sup>th</sup> March 2023.

Note: Options 2 and 3 of the Knockanelo presented in the Virtual Room are Options 3 and 2, respectively as documented in the Options Development Report (RPS, December 2022).

## 2.3 Consultations with Statutory and Non-Statutory Bodies

An Options Selection Letter was issued to stakeholders on 21 December 2022, requesting comment on the Emerging Preferred Option by 27 January 2023. The EIA Scoping Report was also made available for stakeholder review on 27 February 2023 requesting comment to be submitted by 27 March 2023. Details of the consultees, their responses to date and a sample of the letters are provided in **Appendix B**.

## REPORT

### 3 ISSUES RAISED

A total of 39 people attended the Public Consultation Event and to date ten comment forms have been received via the website and/or provided at the consultation event. A summary of the comments received are categorised into those that are directly relevant to the scheme and those that are outside of the scheme remit. The Issues Raised Directly Relevant to the Scheme are summarised under subcategory headings.

#### Issues Raised Directly Relevant to the Scheme

##### Architecture / Landscape / Visual

- Consider reuse of the existing stone when rebuilding walls at Bachelor's Walk.
- Reuse of original stone as much as possible on Bachelor's Walk. Mix new stone with old where necessary.
- Suggestion that the level above existing wall height shall be "see through"/glazed. Also notes that there should be maintenance of the gullies.
- Comments call for the improvement of heritage and connections for pedestrians and cyclists in the town:
  - Improve heritage style features on the new flood walls.
  - Reopen the stream from Killala Road to River Moy.
  - Improve green space and reduce hardscape space where possible.
  - Improve pedestrian and cycle flows around rivers.
  - Connect Barrett Street car park to Ham Bridge.

##### Recreation and Fishing

- Recreational access to the river from Bachelor's Walk to preferably be preserved for water sports.
- Consider potential future installation of a pontoon for the rowing and kayaking clubs use at Ballina Quay when considering height of the defences at the quay.
- Boat club does not want to have to vacate for the duration of the works and notes that a lot of the trailers are not suitable to be moved offsite.
- Member of the Ballina Salmon Angling Club referred to a book from the Ballina library, which describes the best trees/plants that could be planted on the Brusna to attract certain flies, which could help lure trout and salmon species. He said that he would refer to this book on his feedback form.

##### Ecology

- Consideration to be given to environment and ecosystems – minimise impacts to Salmon, Seals and Otter.

##### Property

- Request for a call from team to discuss the culvert potential for flooding at a property on Abbey Street and the impact that the proposed works will have long term on flood risk.
- Query noting if there are any restrictions in place for residents on Emmet Street regarding planning applications? And is so what are they and when would they be lifted?
  - One of the plans uses McAndrew's Lane for a new culvert. Business property adjoins this lane for a large portion. What will be done to protect the building and to minimise impacts on trade? How will access to the car park be affected? Reservations are noted in relation to the best route to the River

## REPORT

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Moy. Also notes reservations in regard to the disruption of traffic flow through town at Humbert Street.

- Old Ballina Dairies Site: there was interest shown in the method of construction for the proposed floodwalls in the vicinity of the site and the flood relief culvert that runs through the two existing buildings on the site. It was noted that there is future potential for the development of the site. This is important with respect to the timing of the use of the site as a site compound.
- Bachelor's Walk residents had the following comments:
  - i. Some were concerned that the structural integrity of the wall could be compromised due to the frequent seepage through the quay walls with some saying the gaps in the masonry is getting wider.
  - ii. Some complained about not having enough help with the deployment of sandbags.
  - iii. Some queried the limitation of the existing combined pump and queried if there will be upgrades to the pumping station.

### Issues Raised Outside of Scheme Remit

- Concern about flooding on Cregg's Road directly outside homeowner's property. Homeowner notes that he has sent photographs into the council. A solution where the footpath is extended past the homeowner's property is requested.
- Attendee noted that they are unconvinced that any plan will progress and that they are angry that CFRAM mapping caused them to lose flood insurance.
- Protection in the interim to be implemented by defence force or Civil defence with large sand bags to be laid out and plastic sheeting set between the bags. Seeks better notification in relation to flood and weather warnings which may lead to flood events.

Overall, the event was positively received and there was very good engagement with the attendees. The venue worked well, with plenty of parking and the central location allowed for easy access too.

**REPORT**

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**3.1 Lessons Learned and Suggested Improvements**

As a result of the public consultation event there were a number of lessons learned including:

1. Perhaps it might have been better if there was an additional stand (or two), to facilitate a more spread out presentation format (less info per stand) – this would have reduced multiple groups congregating around the existing stands.
2. Some members of the public were querying the options at Ridgepool Road and Ballina Manor Hotel. There were no photomontages for this area. Future public consultation days should include all areas of proposed works.
3. Virtual fly-through would be helpful as it would provide the public with better perspective and spatial awareness when observing the proposed options.

# Appendix A

## Consultation Documentation

# BALLINA FRS

PROJECT UPDATE

EMERGING PREFERRED OPTION



Comhairle Contae Mhaigh Eo  
Mayo County Council



OPW  
Oifig na n-Obreacha Poiblí  
Office of Public Works

**rps** MAKING  
COMPLEX  
EASY  
A TETRA TECH COMPANY

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# PROPOSED FLOOD DEFENCES

MOY

QUIGNAMANGER

BUNREE/BEHY ROAD

BRUSNA

TULLYEGAN



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# PROPOSED FLOOD DEFENCES

## MOY

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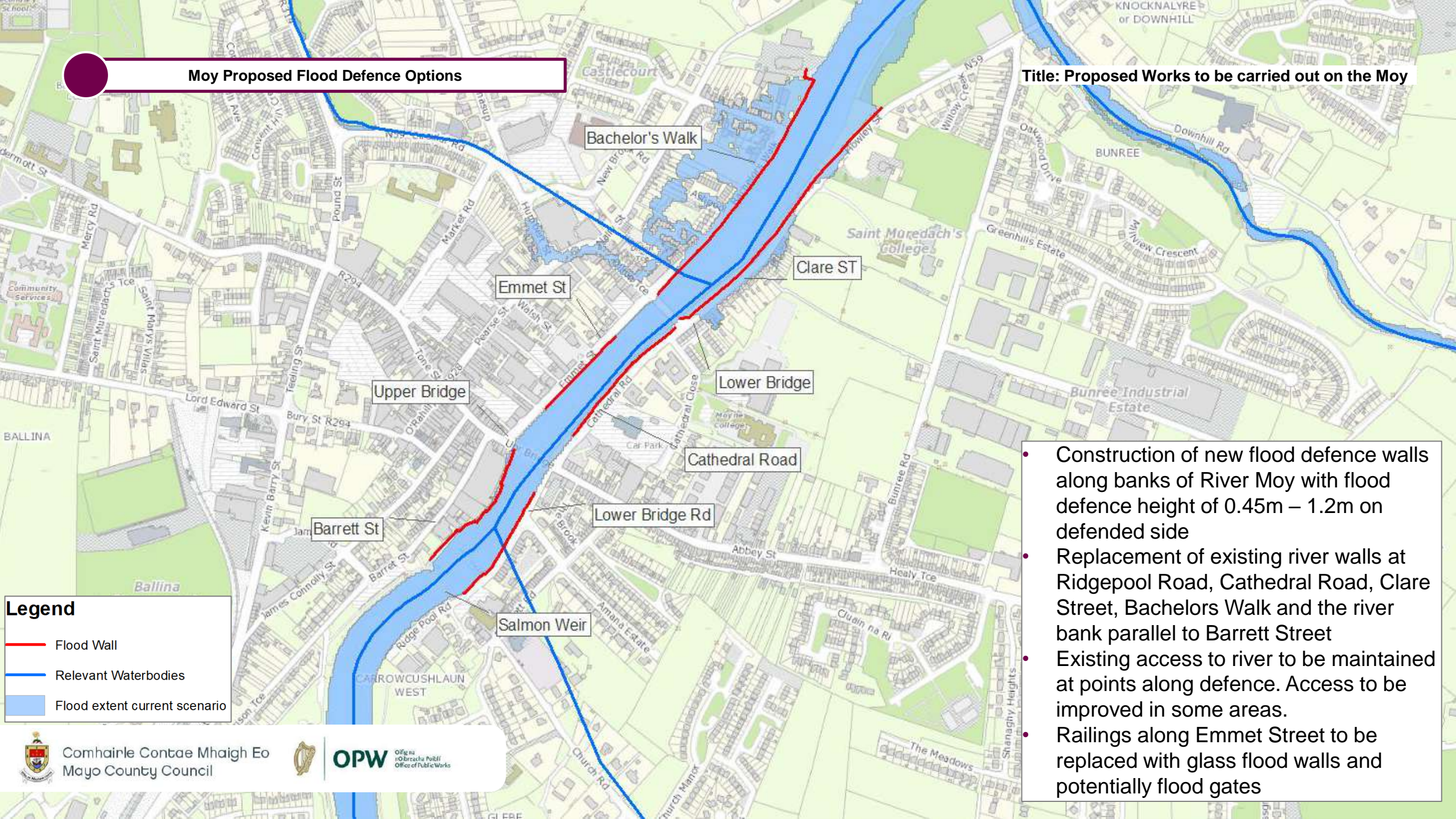
# Proposed Flood Defences

Moy

- Option 1
  - Flood Walls

## Moy Proposed Flood Defence Options

Title: Proposed Works to be carried out on the Moy



### Legend

- Flood Wall
- Relevant Waterbodies
- Flood extent current scenario




- Construction of new flood defence walls along banks of River Moy with flood defence height of 0.45m – 1.2m on defended side
- Replacement of existing river walls at Ridgepool Road, Cathedral Road, Clare Street, Bachelors Walk and the river bank parallel to Barrett Street
- Existing access to river to be maintained at points along defence. Access to be improved in some areas.
- Railings along Emmet Street to be replaced with glass flood walls and potentially flood gates

**Moy Proposed Flood Defence Options**

Title: Proposed Works to be carried out on the Moy

- Hard defences required at Ballina Quay – will need to accommodate current access points

**Legend**

-  Flood Wall
-  Relevant Waterbodies
-  Flood extent current scenario



MAP

Overview map of Ballina FRS Visualisations



1

View of Clare Street looking downstream - existing

Existing Access  
to be maintained.



Comhairle Contae Mhaigh Eo  
Mayo County Council



**OPW**

Oifig na n-Obreacha Poiblí  
Office of Public Works

1 View of Clare Street looking downstream



Proposed  
Flood Wall



Comhairle Contae Mhaigh Eo  
Mayo County Council



OPW  
Oifig na n-Obreacha Poiblí  
Office of Public Works

2

View of Bachelors Walk looking upstream to Lower Bridge - Existing

Existing Quay Wall



Comhairle Contae Mhaigh Eo  
Mayo County Council



OPW  
Oifig na n-Obreacha Poiblí  
Office of Public Works



2

View of Bachelors Walk looking upstream to Lower Bridge - Proposed

Proposed Flood Wall



Comhairle Contae Mhaigh Eo  
Mayo County Council



OPW  
Oifig na nOibreacha Poiblí  
Office of Public Works

3 View of Emmet Street looking from Cathedral Road - Existing

Existing Quay Wall

Existing Railing



Comhairle Contae Mhaigh Eo  
Mayo County Council



OPW  
Oifig na n-Obreacha Poiblí  
Office of Public Works

3

View of Emmet Street looking from Cathedral Road

Existing Quay Wall

Glass Flood Wall



Comhairle Contae Mhaigh Eo  
Mayo County Council



OPW  
Oifig na n-Obreacha Poiblí  
Office of Public Works

4 View of Cathedral Road looking upstream to Upper Bridge - Existing



4

View of Cathedral Road looking upstream to Upper Bridge - Proposed



Proposed Raised Plaza

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# PROPOSED FLOOD DEFENCES

# QUIGNAMANGER

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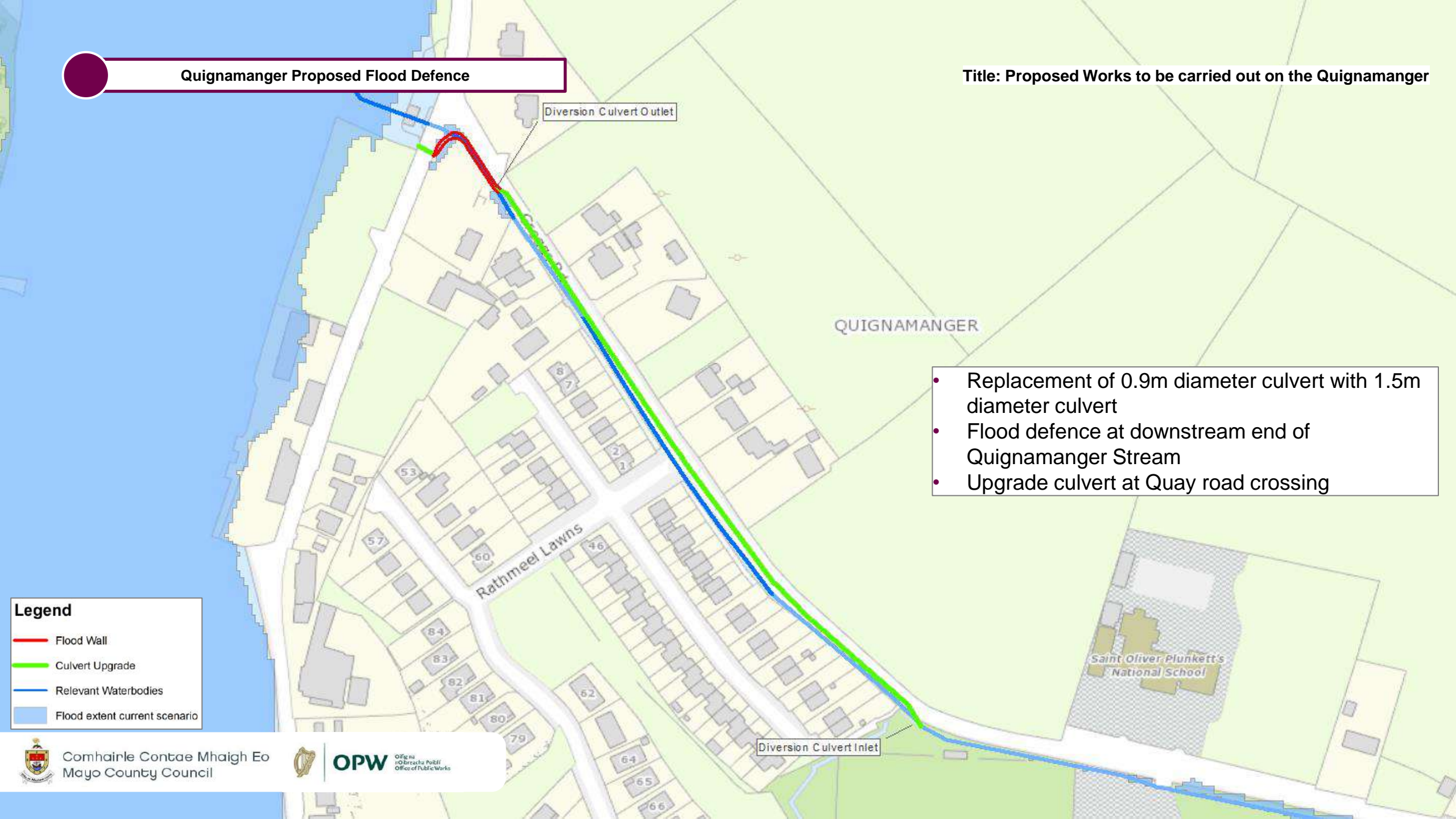
# Proposed Flood Defences

## Quignamanger

- Option 1
  - Diversion culvert upgrade
- Option 2 (Preferred)
  - Diversion culvert upgrade
  - Flood Walls
  - Culvert Upgrade

## Quignamanger Proposed Flood Defence

Title: Proposed Works to be carried out on the Quignamanger



Diversion Culvert Outlet

QUIGNAMANGER

Rathmeel Lawns

Saint Oliver Plunkett's  
National School

Diversion Culvert Inlet

- Replacement of 0.9m diameter culvert with 1.5m diameter culvert
- Flood defence at downstream end of Quignamanger Stream
- Upgrade culvert at Quay road crossing

**Legend**

- Flood Wall
- Culvert Upgrade
- Relevant Waterbodies
- Flood extent current scenario



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# PROPOSED FLOOD DEFENCES

## BUNREE/BEHY ROAD

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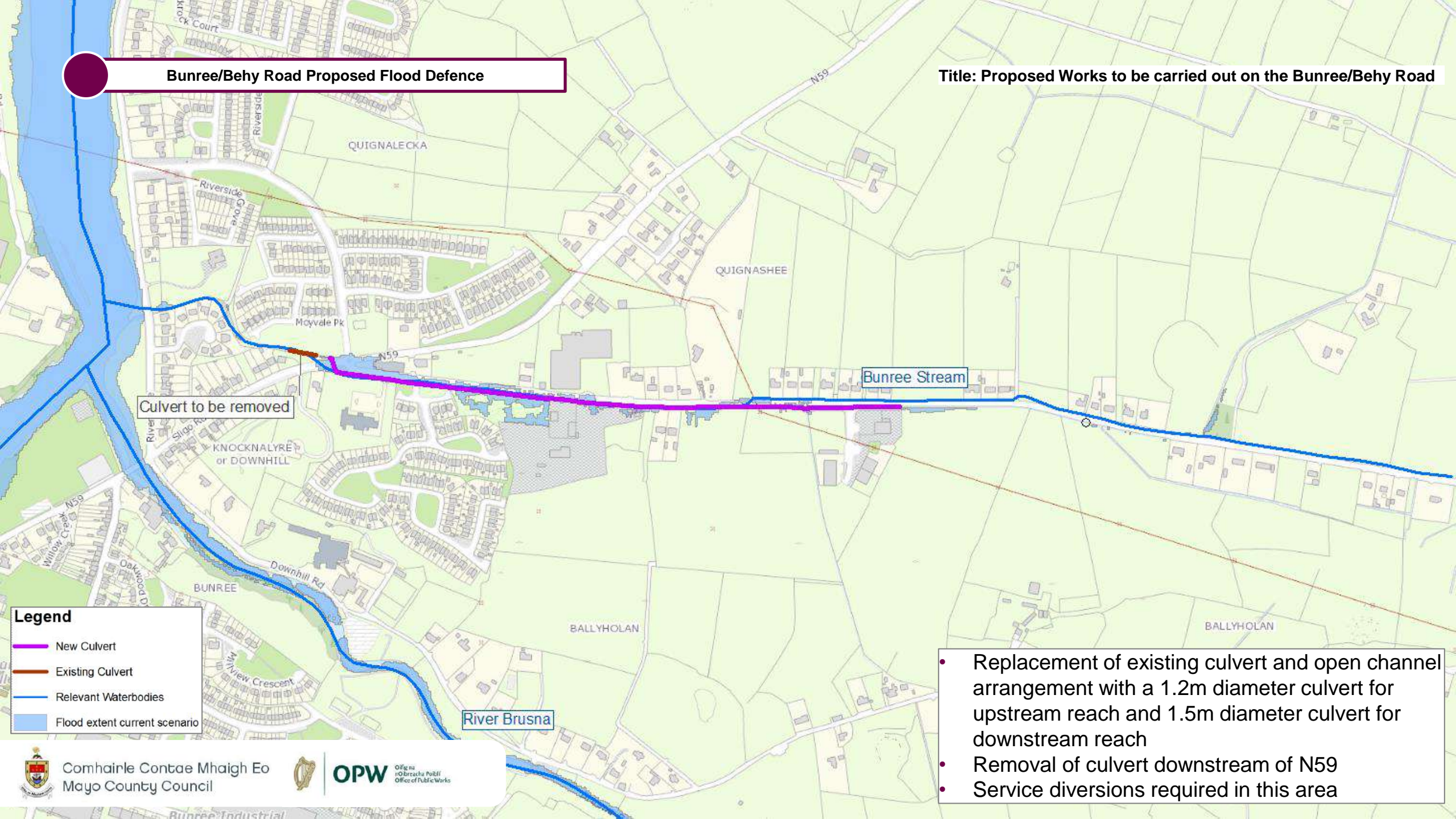
# Proposed Flood Defences

## Bunree/Behy Road

- Option 1
  - Culvert upgrades
  - Channel Upgrades
- Option 2
  - Diversion culvert
  - Culvert upgrade
- Option 3 (Preferred)
  - New culvert
  - Culvert upgrade

# Bunree/Behy Road Proposed Flood Defence

Title: Proposed Works to be carried out on the Bunree/Behy Road



Culvert to be removed

Bunree Stream

River Brusna

### Legend

- New Culvert
- Existing Culvert
- Relevant Waterbodies
- Flood extent current scenario

- Replacement of existing culvert and open channel arrangement with a 1.2m diameter culvert for upstream reach and 1.5m diameter culvert for downstream reach
- Removal of culvert downstream of N59
- Service diversions required in this area

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# PROPOSED FLOOD DEFENCES

## BRUSNA

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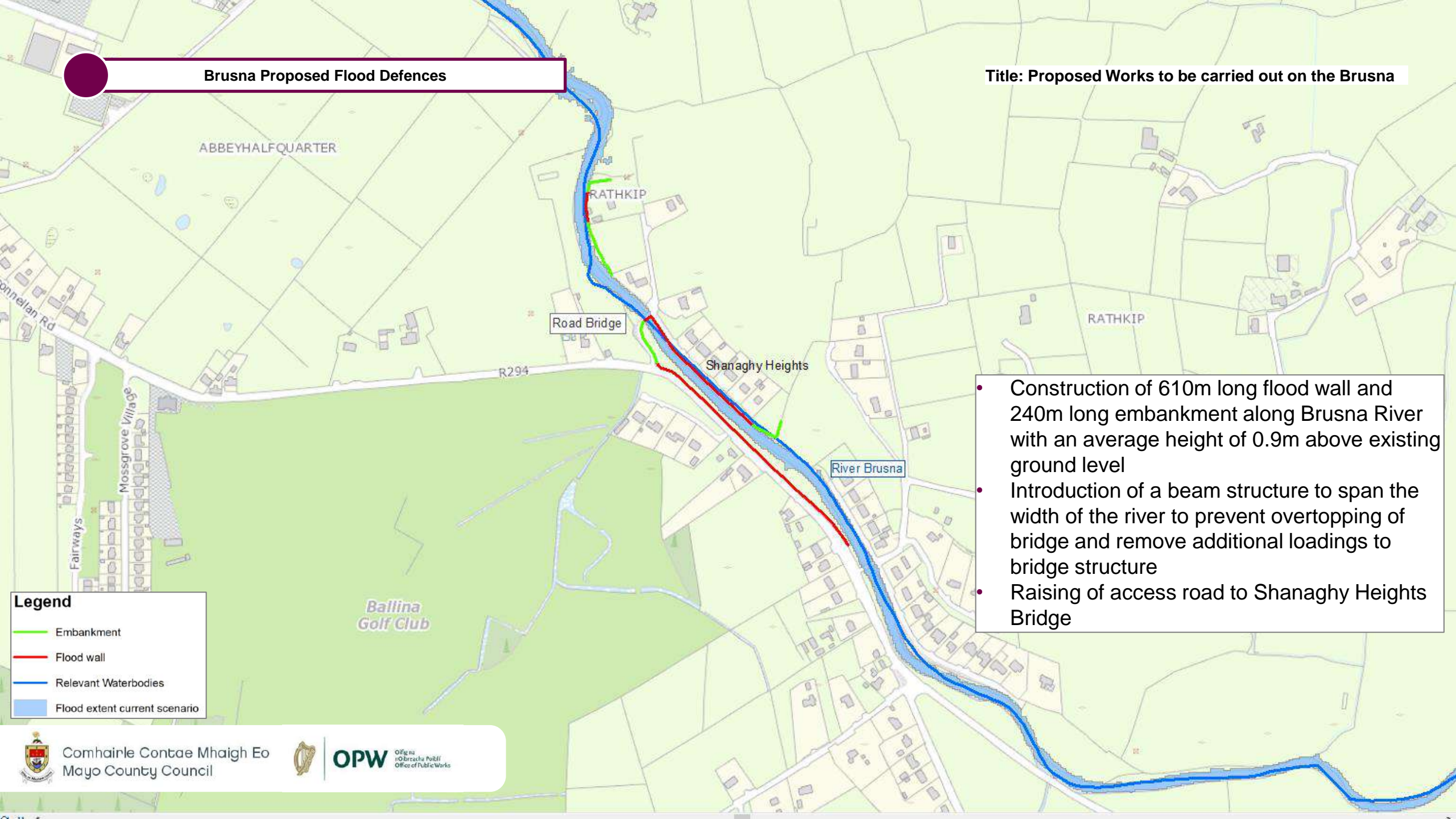
# Proposed Flood Defences

## Brusna

- Option 1
  - Flood Walls
  - Embankments

## Brusna Proposed Flood Defences

Title: Proposed Works to be carried out on the Brusna



- Construction of 610m long flood wall and 240m long embankment along Brusna River with an average height of 0.9m above existing ground level
- Introduction of a beam structure to span the width of the river to prevent overtopping of bridge and remove additional loadings to bridge structure
- Raising of access road to Shanaghy Heights Bridge

**Legend**

- Embankment
- Flood wall
- Relevant Waterbodies
- Flood extent current scenario

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# PROPOSED FLOOD DEFENCES

## TULLYEGAN

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# Proposed Flood Defences

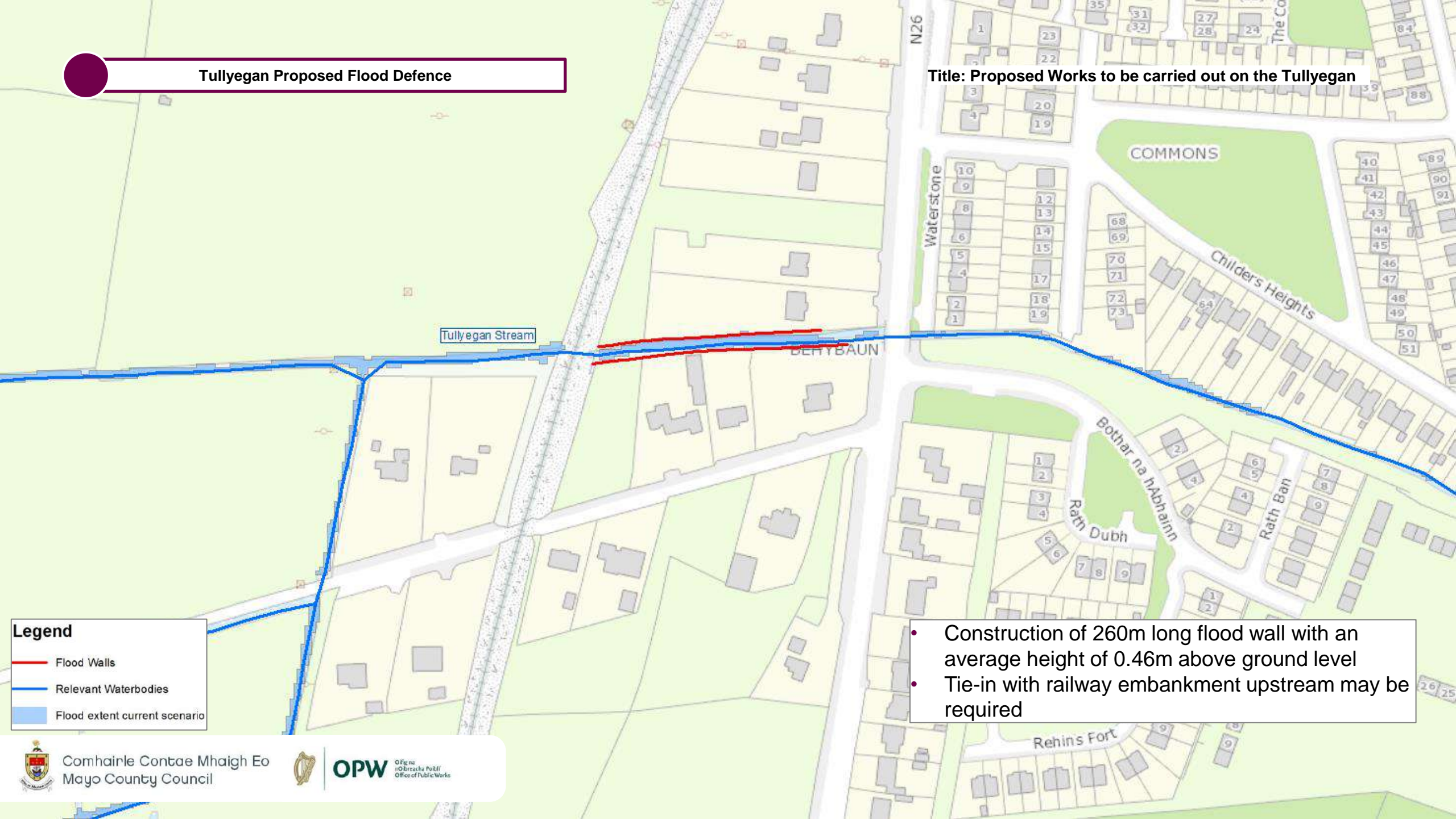
## Tullyegan

- Option 1
  - Flood Walls and/or
  - Embankments
- Option 2
  - Upstream flood storage



## Tullyegan Proposed Flood Defence

Title: Proposed Works to be carried out on the Tullyegan



Tullyegan Stream

BETHBAUN

Waterstone

COMMONS

Childers Heights

Bothar na hAbhainn

Rath Dubh

Rath Ban

Rehins Fort

### Legend

- Flood Walls
- Relevant Waterbodies
- Flood extent current scenario

- Construction of 260m long flood wall with an average height of 0.46m above ground level
- Tie-in with railway embankment upstream may be required



Comhairle Contae Mhaigh Eo  
Mayo County Council



OPW  
Oifig na nObreacha Poiblí  
Office of Public Works

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# PROPOSED FLOOD DEFENCES

## KNOCKANELO

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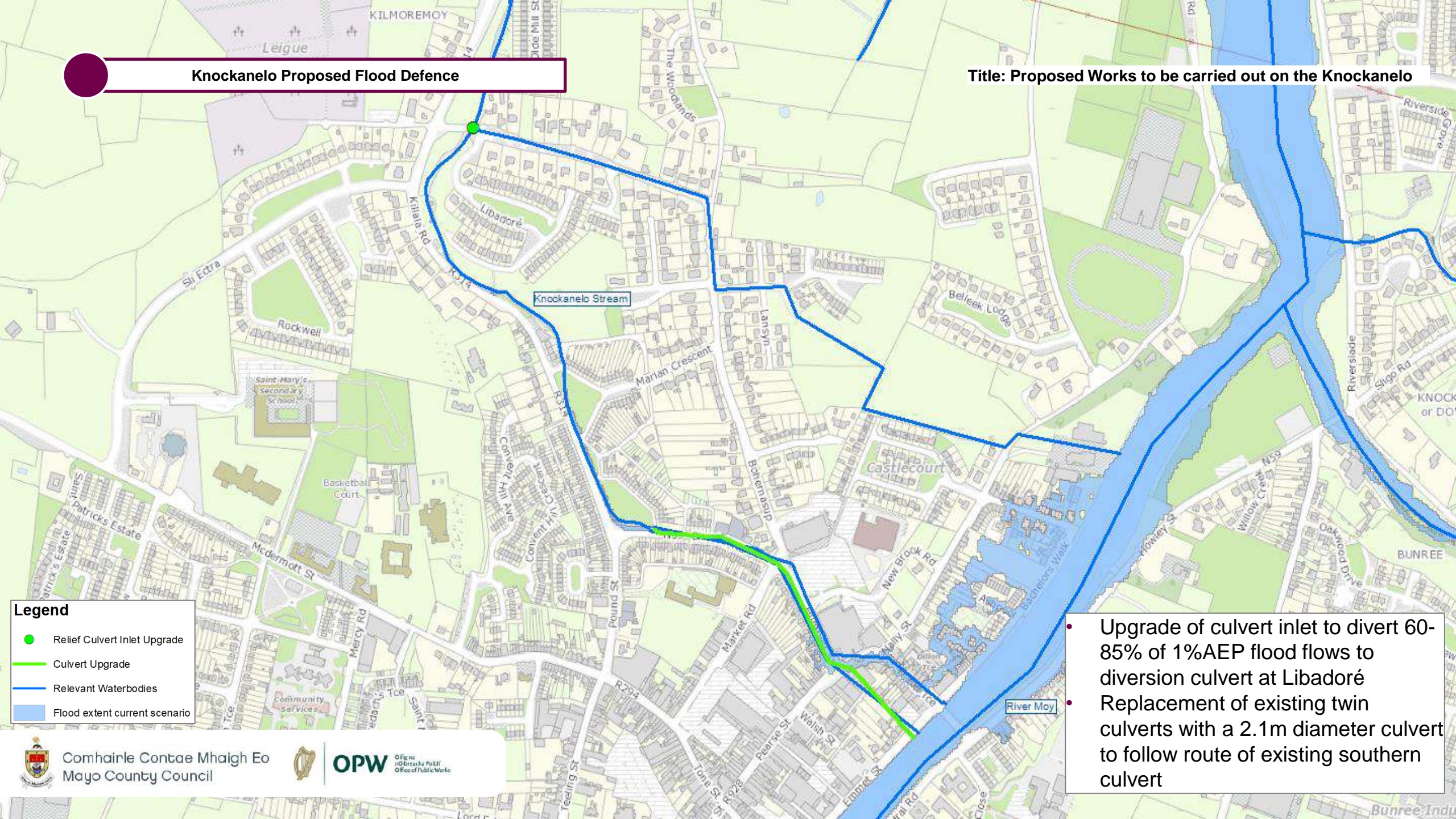
# Proposed Flood Defences

## Knockanelo

- Option 1
  - Diversion Culvert Inlet Upgrade
  - Culvert Upgrades
- Option 2
  - Diversion Culvert Inlet Upgrade
- Option 3
  - Diversion Culvert Inlet Upgrade
  - Upstream flood storage (online)
- Option 4
  - Diversion Culvert Inlet Upgrade
  - Upstream flood storage (offline)
- Option 5 (Preferred)
  - Diversion Culvert Inlet Upgrade
  - Culvert Upgrade

# Knockanelo Proposed Flood Defence

Title: Proposed Works to be carried out on the Knockanelo



- Legend**
- Relief Culvert Inlet Upgrade
  - Culvert Upgrade
  - Relevant Waterbodies
  - Flood extent current scenario

- Upgrade of culvert inlet to divert 60-85% of 1%AEP flood flows to diversion culvert at Libadoré
- Replacement of existing twin culverts with a 2.1m diameter culvert to follow route of existing southern culvert



REPORT

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# Appendix B

## Consultations with Statutory and Non-Statutory Bodies

REPORT



**Our ref: MGW0290-RPS-OS-XX-R-EN-0200**

Lynn 2, IDA Business &  
Technology Park, Mervue  
Galway, H91 H9CK  
T +353 91 400 200

Date: 21 December 2022

[Name and Address]

To Whom it may Concern,

RPS have been appointed by Mayo County Council to provide environmental and engineering design services for the Ballina Flood Relief Scheme (FRS).

Ballina has a history of flooding due to high-water levels in the River Moy. The purpose of this proposed scheme is to alleviate the risk of flooding to the community to an acceptable standard of protection.

We are currently at Stage I of the pre-planning and design process which includes option assessment of the flood relief defences that will be required on the River Moy and its tributaries. As part of this process a number of options have been identified and assessed for six risk areas within the Ballina FRS. The flood relief defence options and the emerging preferred option for the proposed scheme are outlined in this letter for your review.

If you would like to make comment on the options and emerging preferred option proposed for this scheme please forward your correspondence to the undersigned no later than the 27<sup>th</sup> of January 2023. It is our intention to consult with you again as the project progresses.

Project information and updates will be published on the project website which can be found at the following address - <https://www.foodinfo.ie/frs/en/ballina/home/>.

Please contact the undersigned directly at [tatiana.kelley@rpsgroup.com](mailto:tatiana.kelley@rpsgroup.com) if you have any queries in relation to the proposed scheme.

Yours sincerely,  
for RPS Group Limited

**Tatiana Kelley**  
Senior Project Engineer  
[tatiana.kelley@rpsgroup.com](mailto:tatiana.kelley@rpsgroup.com)  
+35391400244

**Attached: Details regarding considered options and the Ballina FRS emerging preferred option.**

Dublin | Cork | Galway | Sligo  
[rpsgroup.com](http://rpsgroup.com)

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The Registered office of each of the above companies is West Park  
Manor Campus, Dun Loughlin, Co. Dublin, D18 8K77



Apx Figure 1 Sample Consultation Letter 1

**REPORT**

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[Name and Address]

27 February 2023

To Whom it may Concern,

RPS have been appointed by Mayo County Council to provide environmental and engineering design services for the Ballina Flood Relief Scheme (FRS).

Ballina has a history of flooding due to high-water levels in the River Moy. The purpose of this proposed scheme is to alleviate the risk of flooding to the community to an acceptable standard of protection.

We are currently at Stage I of the pre-planning and design process which includes a scoping assessment to outline the content and extent of information to be contained in the Environmental Impact Assessment Report (EIAR) for the Proposed Scheme.

Please be advised that an EIAR scoping report has been compiled and is available for review and comment.

If you would like a copy of the EIAR scoping report this can be downloaded from the project website - <https://www.floodinfo.ie/frs/en/ballina/home/>. Alternatively you can contact the undersigned and we would be happy to forward it to you.

If you would like to make comment on the EIAR scoping report, please forward your correspondence to the undersigned no later than the 27<sup>th</sup> of March 2023. It is our intention to consult with you again as the project progresses.

Please contact [tatiana.kelley@rpsgroup.com](mailto:tatiana.kelley@rpsgroup.com) if you have any queries in relation to the proposed scheme.

Yours sincerely,  
for RPS Group Limited

**Tatiana Kelley**

Senior Project Engineer  
[tatiana.kelley@rpsgroup.com](mailto:tatiana.kelley@rpsgroup.com)  
+35391400244

**Apx Figure 2 Sample Consultation Letter 2**



## REPORT

## Apx Table 1 Consultation Responses

Stakeholder	Date Received	Summary of Response Received
<b>Most relevant Government Departments</b>		
Department of Agriculture, Food, and the Marine		No response at this time
Department of Communications, Climate Action and the Environment		No response at this time
Department of Public Expenditure and Reform		No response at this time
Department of the Housing, Local Government and Heritage	03-Mar-23	The normal target turnaround for pre-planning and other general consultations is six weeks from date of receipt. If you have not heard from DAU and wish to receive an update, please email <a href="mailto:manager.dau@npws.gov.ie">manager.dau@npws.gov.ie</a> .
Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media		No response at this time
Department of Transport		No response at this time
<b>Primary Stakeholders</b>		
Ballina MD		No response at this time
Climate Office, Mayo Co.Co.		No response at this time
Inland Fisheries Ireland (IFI)	25-Jan-23	<p>The proposed flood relief plan spans the main River Moy, The River Moy Estuary and five separate tributaries of the River Moy: Quignamanger Stream, Bunree Stream, Brusna River, Tullyegan Stream, and the Knockaneio [sic] Stream. The River Moy is a nationally important salmon and trout fishery attracting anglers from throughout Ireland and abroad. The significance of the River Moy as a fishery is confirmed by Ballina's official designation as the Salmon capital of Ireland. The River Moy and its Estuary is a migratory route for salmon, sea trout, eel and lamprey into the wider River Moy system. The River Moy Estuary supports a number of fish species including flounder, place, sea trout, eel, pollock and whiting and supports a number of charter boats for sea angling. The proposed works must not negatively impact on this fishery.</p> <p>The proposed works are also located along the River Moy Special Area of Conservation which is designated for the protection of Atlantic salmon, white-clawed crayfish and lamprey species and the Killala Bay/ Moy Estuary Special Area of Conservation which is designated for the protection of sea lamprey.</p> <p>These catchments are under environmental pressure with both the River Moy Estuary, the River Moy and the Knockanelo Stream being allocated moderate ecological status in the River Basin Management Plan. This status must be improved to good to comply with the Water Framework Directive.</p> <p>Having reviewed the information provided IFI have the following comments to make:</p>

## REPORT

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1. IFI requests that nature-based solution to flooding be prioritised such as rewetting of land and re-establishing connection between the river and its floodplain. Green infrastructure features should be used to attenuate surface water drainage such as the inclusion of swales, permeable paving/car park surfacing and green roofs, as required. These measures will filter surface waters, reduce stormwater runoff rates and improve flood alleviation. Riparian habitat enhancement should be considered where possible. Including the planting of native trees to provide dappled shade can provide shelter from predators, help maintain lower water temperatures during hot weather and improve biodiversity. IFI guidance for planning for watercourses in the urban environment can be viewed at <https://www.fisheriesireland.ie/sites/default/files/migrated/docman/IFIUrbanWatercoursesPlanningGuide.pdf>
2. IFI request that the Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas, Water Sensitive Urban Design Best Practice Interim Guidance Document be incorporated into the Plan, where applicable. This document can be viewed at [https://lawaters.ie/app/uploads/2021/12/20211216\\_SUDS\\_Interim\\_Guidance.pdf](https://lawaters.ie/app/uploads/2021/12/20211216_SUDS_Interim_Guidance.pdf)
3. There must be no discharge of silted waters, cement products, hydrocarbons or otherwise polluted waters into any surface watercourse as a result of the proposed works. The IFI Guidelines on Protection of Fisheries During Construction in and Adjacent to Waters, 2016 must be complied with. This document can be viewed at <https://www.fisheriesireland.ie/sites/default/files/migrated/docman/2016/Guidelines%20Report%202016.pdf>
4. Biosecurity measures must be put in place. There must be no spread of invasive species as a result of the proposed works. A survey of the sites must be carried out to identify and invasive species present. Biosecurity measures must be put in place for any equipment plant or machinery used within a watercourse. IFI biosecurity protocol can be viewed at [https://www.fisheriesireland.ie/sites/default/files/202106/research\\_biosecurity\\_biosecurity\\_for\\_fieldsurveys\\_2010.pdf](https://www.fisheriesireland.ie/sites/default/files/202106/research_biosecurity_biosecurity_for_fieldsurveys_2010.pdf)
5. Fish passage for all species present including eel, which is a critically endangered species, must be protected or enhanced where already impeded due to poor culvert design.
6. River Moy - The proposed flood walls must not prevent access for anglers to the fishery. Pedestrian access to fishery along Bachelors walk and Clare St must be maintained. IFI intends to install a disabled access for angling at the downstream end of the proposed wall on Clare St. and this must be facilitated in the design. Pedestrian and vehicle/boat access to the River Moy must be maintained from Cathedral Road. IFI launch protection vessels from this location which is also utilised by the emergency services and recreational users. Pedestrian and disabled access must be maintained at the ridge pool upstream of the upper bridge, this access is critical to the functioning of the fishery. IFI request that the proposed wall does not exceed the existing rail height at this location. There is also potential to introduce angler access adjacent to the salmon weir on Ridge Pool Road as part of the proposed works. This would improve safety for anglers accessing the fishery. Three, currently unused, pedestrian access points to the fishery exist along Emmet Street. The proposed works must not prevent this access being redeveloped along this stretch in the future. The timing of the proposed works will have a significant impact on the operation of the fishery. While instream works in spawning and nursery areas is limited to between July and September inclusive, to protect spawning and juvenile salmonids this is not the case in the lower section of the River Moy. IFI request that work on this

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section of the River is limited to the end of September where coffer dam installation is required through to the first of the following April when the coffer dam must be removed to facilitate angling along this valuable stretch of river.

7. The Knockanelo Stream historically provided habitat for sea trout and brown trout, unfortunately due to the installation of poorly designed culverts this watercourse is now impassable to migratory fish. The upper catchment has also been negatively impacted by land drainage. This catchment has been allocated moderate ecological status in the River Basin Management Plan and this status must be improved to good to comply with the Water Framework Directive. The Knockanelo Stream has been identified as being at risk of not achieving this target due to significant hydromorphology pressures including the barrier to fish movement caused by the existing culvert design and trash grates. The proposed culvert upgrade provides an opportunity to restore fish passage in this watercourse. The culvert could be improved in a number of ways, reduce the gradient from the upstream end to the downstream to less than 3% with internal baffles used where this slope is exceeded. The internal gradient must not exceed 5%. Light levels can be increased by increasing the height of the culvert and introducing light boxes or opening up sections of the culverted watercourse where possible. Section 6.10 and 6.11 of the 2016 Guidelines on Protection of Fisheries During Construction in and Adjacent to Waters. Provides information on culvert design. IFI must be consulted on the detailed design of the proposed replacement culvert.
  8. The Quignamanger Stream provides habitat which maybe suitable for eel. The existing culvert under the Quay road is a barrier to fish movement and impedes water flows in flood conditions. The proposed culvert upgrade must include a replacement culvert which provide passage for any aquatic species present. A significant proportion of the flow within this channel appears to come from a surface water drainage connection approximately 40m upstream of the Quay road culvert. IFI request that all exiting open channel is retained and existing culverts which restrict flood flows and or fish passage are replaced with adequately designed culverts. All the existing open channel must be retained as open channel. The area immediately upstream of the Quay road culvert could be redesigned to facilitate flood flows. This could be done by reprofiling the surrounding area to include a swale or other nature-based solution to accommodate flood flows which will not be facilitated by the culvert upgrade.
  9. The Brusna River provides valuable salmon and trout spawning and nursery habitat. This catchment is under environmental pressure, salmon stocks have declined to below their conservations limit, that is the number of adult salmon returning to spawn required to support a sustainable fishery. As a result, this fishery is now closed to angling. This measure is in place to support the recovery of the fishery. The proposed embankment and flood wall is also within the River Moy Special Area of Conservation which is designated for the protection of Atlantic salmon, white-clawed crayfish and lamprey species. The placement of the proposed embankment and flood wall on the downstream bank should be moved back to allow for maximum connectivity between the river and the adjacent floodplain. All existing riparian trees and vegetation must be retained to protect biodiversity and mitigate high water temperatures.
  10. The physical structure of the Buree [sic] Stream has been significantly altered. IFI request that all exiting open channel is retained as open channel. The channel should be restructured to allow for conveyance or storage
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of flood flows. This could be done by reprofiling the surrounding area to include a swale, floodplain or other nature-based solution.

11. The following restriction for the timing of any instream work including cofferdam installation, must be adhered to, to minimise the impact on the River Moy fishery and fisheries habitat:
- River Moy - September to April; cofferdams may be put in place in later September to allow work to be carried out from 1<sup>st</sup> October to 1<sup>st</sup> April.
  - River Moy Estuary, Ballina Quay: May to September
  - Quignamanger - May to September
  - Bunree Stream - May to September
  - Brusna River – July to September, in the case of any instream works.
  - Tullyegan Stream – May to September
  - Knockanelo Stream – May to September

IFI look forward to continued consultation in relation to the proposed flood relief scheme and culver design.

Mayo County Council (Local Authority)		No response at this time
MCC Environment Department		No response at this time
MCC Heritage Department		No response at this time
MCC Planning Department		No response at this time
MCC Road Department		No response at this time
Office of Public Works Head Office		No response at this time
TII	15-Mar-23	Transport Infrastructure Ireland (TII) was previously consulted on the Ballina Flood Relief Scheme in July 2020 (TII Ref: TII20-110051) and December 2022 (TII Ref: TII22-121384). The comments made then in relation to the Ballina FRS remain TII's position. TII has no further comments to make at this stage of the consultation.

### Secondary Stakeholders

An Taisce	No response at this time
Ballina Angling Club	No response at this time
Ballina Chamber of Commerce	No response at this time
Ballina Dragon Boat Racing Club	No response at this time
Ballina Municipal District	No response at this time
Birdwatch Ireland	No response at this time
Bord Gais Energy	No response at this time
Bord na Mona	No response at this time
BT Ireland	No response at this time

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Bus Eireann		No response at this time
Climate Action Regional Office (CARO) Atlantic Seaboard North		No response at this time
Coillte		No response at this time
Eir		No response at this time
Enet		No response at this time
EPA Regional Inspectorate Castlebar		No response at this time
ESB		No response at this time
Fáilte Ireland	14-Mar-23	Scoping report refers to Fáilte Ireland's Guidelines on the Treatment of Tourism in an Environmental Impact Assessment (Fáilte Ireland, 2011), which has been updated. Please see attached an updated copy, which you may find informative for the preparation of the EIAR. It provides guidance for those conducting EIAs and compiling an Environmental Impact Assessment Reports (EIAR), or those assessing EIARs, where the project involves tourism or may have an impact upon tourism. These guidelines are non-statutory and act as supplementary advice to the EPA EIAR Guidelines outlined in section 2.
Gas Networks Ireland		No response at this time
Geological Survey of Ireland	24-Jan-23	<ul style="list-style-type: none"> <li>Records show that there is a CGS in the vicinity of the flood relief scheme, namely that of the River Moy, Co. Mayo (GR 128034, 312458), under IGH theme: IGH14 Fluvial and Lacustrine Geomorphology. A long, lowland river that exhibits excellent meandering and drains a catchment area of over 2000km<sup>2</sup> flowing into the Moy River estuary at Ballina. The site is significant as it demonstrates some of the best examples of U-shaped river channel meandering in the country.</li> <li>We would encourage the FRS to take account of this natural asset and its geological heritage value and that the proposed FRS should not impact on the integrity of the CGS which is significant as it demonstrates some of the best examples of U-shaped river channel meandering in the country. The geodiversity represented by this site underpins much of the biodiversity associated with the site. However, if the proposed flood relief scheme is altered, please contact Clare Glanville (Clare.Glanville@gsi.ie) for further information and possible mitigation measures if applicable.</li> <li>Accompanying the letter was an extensive list of GSI datasets relevant to EIA.</li> </ul>
Irish Creamery Milk Suppliers Association (ICMSA)		No response at this time
Irish Environmental Network		No response at this time
Irish Farmers Association (IFA) Galway and Mayo Office		No response at this time
Irish Rail		No response at this time
Irish Water	27-Mar-23	Irish Water doesn't have capacity to advise on individual projects. Provided general response for things to be considered in a scoping report. Provided a summary of potential interactions with IW assets and the elements of the project.
Landscape Alliance Ireland		No response at this time

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Local Authority Waters Programme		No response at this time
Marine Institute		No response at this time
Mayo Local Enterprise Office		No response at this time
Mayo Public Participation Network		No response at this time
Met Eireann		No response at this time
Moy Boat Club		No response at this time
National Museum of Ireland		No response at this time
National Parks & Wildlife Service	19-Apr -23	<p>Flood walls and embankments can impact the hydro-morphology of the river channel and lead to changes in characteristics such as flow regime, water depth, and substrate condition. The spawning habitat for Salmon, Sea lamprey, and Brook lamprey, correspond to areas where the flow regime, depth, and substrate conditions are suitable. Similarly, habitats suitable for both larval lamprey and salmon fry, while different, are both determined by the hydro-morphological conditions of the river. Salmon, Sea lamprey, and Brook lamprey are qualifying interests of the River Moy SAC. Consequently, the Department considers that any potential effects on these species, such as changes to their habitats, should be considered as part of the Environmental Impact Assessment (EIAR) and Appropriate Assessment (AA) processes.</p> <p>The Department considers that the EIAR and any report done to inform the AA process should consider what effect the proposed flood walls and embankments will have on the hydro-morphology of the river channels and whether such impacts will adversely affect the conservation objectives of Salmon, Sea lamprey, and Brook lamprey, with reference to the relevant attributes and targets for these species<sup>1</sup>. For Sea lamprey and Brook lamprey the Conservation Objectives for the attributes 'Extent and distribution of spawning habitat' and the 'Availability of juvenile habitat' are particularly relevant. Similarly, for Salmon the Conservation Objectives for the attributes 'Number and distribution of redds' and 'Salmon fry abundance' are particularly relevant where changes to flow regime, water depth, and substrate conditions may occur.</p> <p>The Department notes that both spawning and larval habitat for Sea Lamprey occur in sections of the River Moy in the wider area of Ballina town (NPWS, 2004<sup>2</sup>). The potential for the proposed flood walls, along the River Moy in Ballina, to effect these areas of Sea lamprey habitat should be considered. This may require the use of hydraulic models to illustrate the potential impacts of any proposed flood walls and embankments on the distribution of suitable substrate within the channels. Consideration should be given to how any potential increase in winter flow, and any consequent increase in energy, through the main channel, would affect the distribution of suitable lamprey spawning and larval habitat, which depends on the erosion and deposition of suitable substrate. Surveys to record suitable spawning habitat</p>

<sup>1</sup> NPWS (2016) Conservation Objectives: River Moy SAC 002298. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

<sup>2</sup> O'Connor William (2004) A survey of juvenile lamprey populations in the Moy catchment. Irish Wildlife manuals, No. 15. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland. 3Heritage, G., 1 and Entwistle, N. Impacts of River Engineering on River Channel Behaviour: Implications for Managing Downstream Flood Risk, AquaUoS, University of Salford, Salford

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		(and/or the occurrence of reeds), and suitable larval habitat (and/or the occurrence of larval lamprey) should be considered within any areas where substrate conditions may be effected.
		Petrifying springs with tufa formation (Cratoneurion) [7220] have been recorded in the wider study area. The Department would like to note that these features are being proposed as potential qualifying interests of the River Moy SAC. Consequently, the Department considers that appropriate surveys to determine the presence of this habitat within the zone of influence of the proposed development should be undertaken. The EIAR should consider the effects of any potential impacts on this habitat within the zone of influence.
Northern & Western Regional Assembly		No response at this time
Public Lighting		No response at this time
River Moy Trust		No response at this time
Road Safety Authority		No response at this time
Royal Irish Academy; Committee for Historical Studies		No response at this time
Siro		No response at this time
Sustainable Water Network Ireland (SWAN)		No response at this time
Teagasc		No response at this time
The Arts Council		No response at this time
The Heritage Council	20-Feb-23	<p>The Heritage Council supports the Ballina Flood Relief Scheme in principle. However, we have a number of concerns in relation to the proposed development, as set out below under the following headings:</p> <ol style="list-style-type: none"> <li>Heritage Council and partners' Ballina Collaborative Town Centre Health Check (CTCHC) Report 2020 and Town Centre First Policy (2022); <ul style="list-style-type: none"> <li>Ballina Collaborative Town Centre Health Check (CTCHC) Report 2020: The Heritage Council recommends that this important CTCHC research informs the proposed flood relief scheme, particularly in relation to the public realm adjacent to the River Moy in the historic core, and that any [hard] engineering proposals ensure the protection and enhancement of important historic vistas, which have existed for hundreds of years and combine to create the unique 'time depth' of this historic town.</li> <li>Town Centre First Policy (2022): In relation to the importance of Ballina's built heritage, the Heritage Council would recommend that a registered Conservation Architect is part of the overall project team for the proposed development.</li> </ul> </li> <li>Need to consider Government Climate Policy: Climate Action Plan 2023 and National Adaptation Framework 2018; <ul style="list-style-type: none"> <li>The Heritage Council submits that to be in compliance with the aims of the Climate Action Plan 2023, putting off any nature-based catchment management to a later date, is not appropriate. The identified catchment wide measures, including woodland creation, improved land management practices such as re-wetting drained areas, river restoration works, such as riverbank restoration, construction of instream structures should be considered as an integral part of the proposed scheme.</li> <li>The Climate Action Plan 2023 highlights the close link between climate change and biodiversity loss,</li> </ul> </li> </ol>

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- which is identified in the IPCC 6th Assessment Report<sup>3</sup> and rightly emphasises the need to safeguard biodiversity and ecosystems as a key part of all climate resilient development.
3. Need to consider Places for People: National Policy on Architecture, published by Department of Housing, May 2022;
    - The Heritage Council submits that the proposed flood relief scheme should embrace the recent ‘cultural shift’ towards quality design-led, people-focused urban areas. This can only be demonstrated through envisaging all uses (private and public) and valuing urban morphology, i.e., understanding the towns’ [sic] unique historic form and fabric AND materiality. As noted above, the project team needs to involve appropriate disciplines including urban design and conservation.
    - According to Mayo County Council, Ballina has one designated Architecture Conservation Area (ACA) Pearse Street, which includes the historic commercial core of the town centre and features several historic laneways that run down to Emmet Street and the River Moy, e.g., Moy Lane. The Heritage Council would strongly recommend that these important historic vistas and pedestrian routes, particularly where they include views across the Moy River to Cathedral Road and Ballina Cathedral beyond, are considered in any environmental impact assessment (EIA).
  4. Need for a Design Palette and a Public Urban Design Panel;
    - In addition, it is important that any proposed materials for the flood relief scheme are linked to an agreed quality design palette for the historic town centre. Such a design palette, along with a detailed scheme to deliver a vibrant public space in front of Ballina Cathedral linking to the Mary Robinson House, would involve significant input and direction from local and national heritage experts and from key stakeholders including civic and business leaders - to ensure that the unique character, [historic] materiality and distinctiveness is being valued, understood and enhanced.
    - The proposed flood relief scheme, which involves significant public monies and is of huge public interest to Ballina’s citizens and its diaspora, would also benefit from the establishment of a Public Urban Design Panel, as per other developed countries – see Vancouver’s Urban Design Panel which was set up in the early 1970s<sup>4</sup>.
    - Given the lack of these key design components, the Heritage Council submits that the proposal requires more consultation and engagement and detail to ensure that any proposal brought forward is for a high-quality addition to the historic built environment, i.e., the receiving environment in Ballina.
  5. The Draft National Biodiversity Action Plan and the Need for a Nature-based approach to large-scale flood relief schemes in Ireland; and
    - The Draft National Biodiversity Action Plan (currently out to public consultation) acknowledges the importance of conserving biodiversity in the wider countryside, and not limiting conservation actions to designated areas.
    - Outcome 2B of the plan includes conservation actions for the wider countryside, highlighting the importance of areas that may not be legally protected but, which do, nevertheless provide habitat and connectivity for protected species and are often in themselves areas of importance for biodiversity. These include actions on farming, forestry, flood risk and peatlands.
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<sup>3</sup> <https://www.ipcc.ch/assessment-report/ar6/>

<sup>4</sup> <https://vancouver.ca/your-government/urban-design-panel.aspx>



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- Action 2B14 of this Plan commits that “OPW will work with relevant authorities to ensure that Flood Risk Management planning and associated SEA, EIA and AA, minimises loss of biodiversity and ecosystem services through policies to promote more catchment wide and non-structural flood risk management measures”. The indicator for this action is “Inclusion of catchment-wide and non-structural measures within the options assessed by Flood Risk Management Plans”.
  - The constraints study for the Ballina Scheme notes: “The following requirements of the IFI should be considered in the design of the proposed scheme:
    - Strong emphasis given to natural flood management techniques; and
    - An assessment of the impact of the existing drainage schemes should be carried out to enhance natural flood management.”
  - The Heritage Council concurs with these recommendations and is concerned that the opportunity to deliver on Action 2B14 of the National Biodiversity Action Plan may not be fully grasped by this proposed scheme.
  - In addition to the missed opportunity for nature-based catchment management, the Heritage Council is concerned about any proposed culverting of streams that are currently open water, and the likely impacts of this on amenity as well as biodiversity. Specifically, more detail is sought in relation to the proposed design of the scheme and impacts on the Bunree and Quignamanger. This information may be contained in the catchment study which was unavailable to the Heritage Council at the time of drafting this submission/observation.
  - There is also considerable biodiversity importance in the tree, scrub and wetland vegetation growth along the river Moy and Brusna – identified in the Ballina Local Biodiversity Action Plan<sup>5</sup> as ‘reed and large sedge swamps, depositing/lowland rivers, dry meadows and grassy verges and wet grassland habitat types’. In addition to their value in themselves, these are important ecological corridors, an importance also emphasised in the plan.
  - The Heritage Council would recommend these habitats being treated with care in the proposed flood scheme, e.g., the scheme should ensure that valuable wildlife corridors are not removed and include a commitment that where trees must be removed as part of the works, that mature replacements are installed well in advance of commencement of works.
6. Heritage Council Conclusions.
- In conclusion, the Heritage Council submits that the proposed flood relief scheme needs to be based on sound design rigour and rationale, particularly the section of the scheme that is to be located within the historic town centre of Ballina. We request that full consideration be given to integrating nature-based catchment management to the delivery of the scheme, as required in the Draft National Biodiversity Action Plan and the Climate Change Sectoral Adaptation Plan for Flood Risk Management. The Heritage Council would welcome further input as the proposal develops.

The National Water Forum (An Forám Uisce)

No response at this time

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No response at this time

<sup>5</sup> <https://www.mayo.ie/en-ie/your-council/services/heritage-conservation/biodiversity-natural%20heritage/ballina-biodiversity-plan>

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Virgin Media	09-Mar-23	Virgin Media confirm that there are existing underground services adjacent to the above location. Virgin Media attached the design drawings outlining the approximate location of these services. Virgin Media note that these services contain live fibre, transmitting data traffic of a highly sensitive nature. Any work to be carried out in the vicinity of this ducting will necessitate that a Virgin Media Plant Protection Officer be present during the work.
Vodafone		No response at this time
Water Policy Advisory Committee		No response at this time
Waterways Ireland		No response at this time
<b>Collaborative Workshop Invitees</b>		
MCC - Planning		No response at this time
(St. Muredach's Cathedral)		No response at this time
Ballina Chamber of Commerce		No response at this time
Climate Action Regional Office		No response at this time
Grainne Uaile Sub Aqua Club		No response at this time
IFI		No response at this time
Irelands Greenest Town		No response at this time
Irish Water		No response at this time
Kilmoremoy Parish		No response at this time
Local Authority Waters Programme		No response at this time
MCC - Roads/NRDO		No response at this time
MCC - Tourism Section		No response at this time
Moy Estuary Sea Trout Angling & Boat Club		No response at this time
NPWS		No response at this time
River Moy Search & Rescue		No response at this time
River Moy Trust		No response at this time