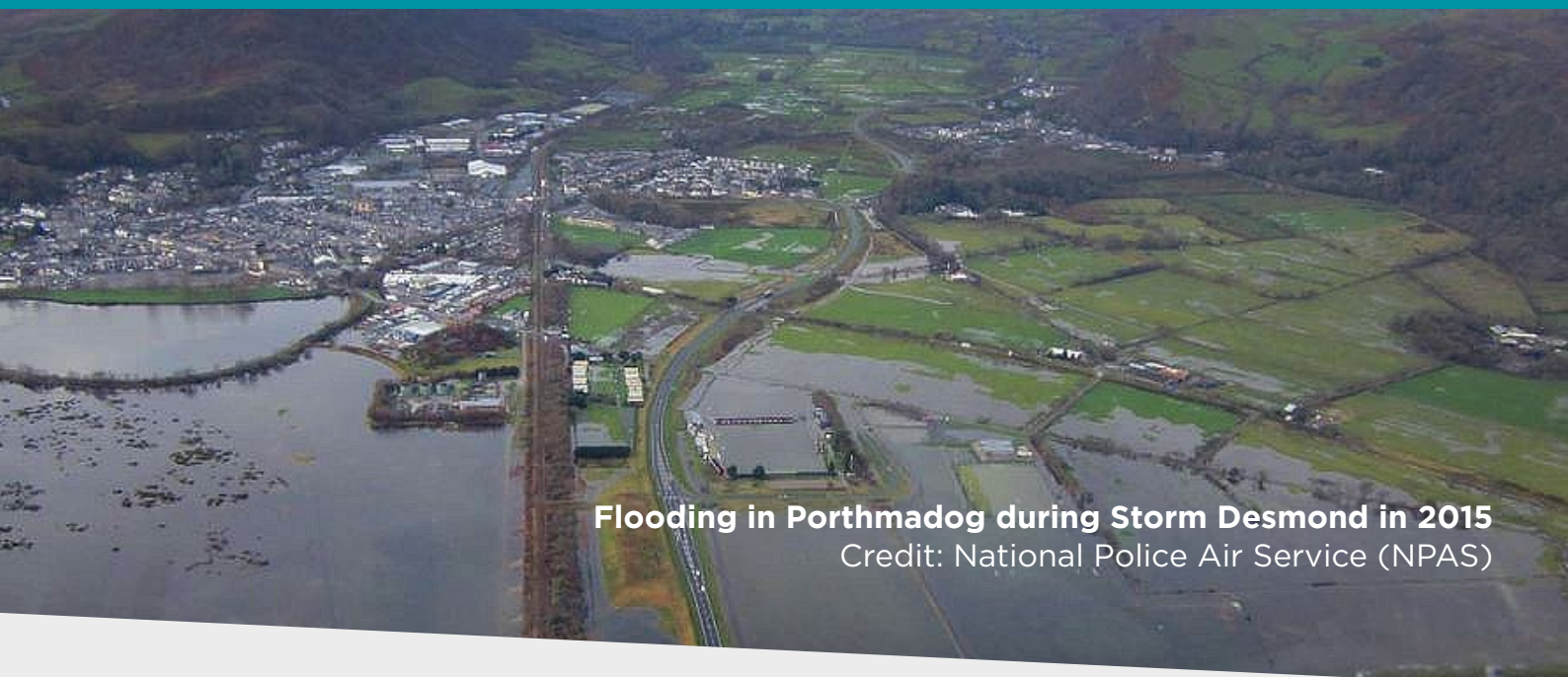


Porthmadog Flood Risk Management Project



Cyfoeth Naturiol Cymru
Natural Resources Wales

Issue 1 | January 2023



Flooding in Porthmadog during Storm Desmond in 2015

Credit: National Police Air Service (NPAS)

Project update

Natural Resources Wales is working to find long-term flood risk management solutions for Porthmadog and Tremadog. We will also be looking for wider environmental, social, and economic opportunities.

Throughout 2022, we have been updating our flood model to better understand the risk of flooding. Using the latest guidance, available river flow records and photographs taken during the winter of 2015, we are able to predict present and future flood risk considering the increased pressures from climate change.

The model shows a greater number of homes and businesses at risk from the Afon Glaslyn, Y Cyt and from the sea. This concerns us all, and that is why NRW is focused on finding sustainable solutions to manage the risk.

Prior to the model update, in 2021, we sent letters to households and businesses asking for your experiences of flooding. This has helped us to better understand your concerns and what really matters to you. Suggestions to date include upgrading the existing defences in the town and removing flood water more quickly from the area.

Our latest understanding of flood risk presents a challenge in sustaining present levels of flood protection. From the coast, we are predicting up to a one metre rise in sea levels within the next century. From rivers, we are expecting greater volumes of flood water and frequent extreme flooding. There is an indication that new flow routes will be created, potentially bypassing existing flood defences and connecting Y Cyt with the Afon Glaslyn.

Working with the community and with our partners, we will be assessing options to manage this threat and work towards identifying a preferred option in 2023.

Background

Most of Porthmadog sits on low lying land which is at risk of flooding from the Afon Glaslyn, Y Cyt and from the sea. The land was reclaimed from the sea in 1811 when the Cob was constructed across Traeth Mawr by William Maddocks.

The Cob has prevented the natural inward movement of tidal water from reaching Pont Aberglaslyn. This bridge is located eight kilometres (five miles) inland to the north, near Beddgelert.

Maintaining today's level of flood protection is a challenge with existing defences being put under increased pressure from more frequent weather events.

Our flood model shows there are up to 345 residential properties, and 105 commercial properties at risk from river flooding, with existing defences in place.

This increases to 825 residential properties and 220 commercial properties in the future when we account for sea level rise and climate change. These predictions do not account for flooding from other sources such as surface water, sewer drainage and groundwater, of which falls within the responsibilities of other organisations.



Existing Flood Defences

Key

- | | | |
|----------------------------|-----------------------|-----------------------|
| ● Afon Glaslyn Tidal Gates | — Coastal embankments | --- Other embankments |
| ■ Y Cyt Tidal Doors | — River embankment | — Watercourses |
| | — Quay structure | /// Built-up areas |

What we're doing

Exploring options to reduce flood risk

Using all evidence gathered to date and by working closely with the community, we will be assessing options to reduce the risk of flooding to homes and businesses from rivers and the sea. The criteria we will be using to assess these options will include value for money, sustainability and buildability.

In addition to conservation and drainage duties in the area, NRW also has a responsibility for reducing flood risk, giving priority to people and homes.

Using the latest flood model, we will assess what would happen naturally or if certain options were taken forward.

For example, raising defences, building new defences, working with nature and adapting structures to cope with the changing landscape.

We will also look at opportunities for recreation and wildlife, and what other Authorities could do to manage the risk of surface water flooding and groundwater flooding.

The local community and stakeholders will play a key part in the process. We will be holding public consultation events, providing local points of contact, and creating a way to share views and comments with NRW.

Flood Model Update

We have recently completed a flood model update for the Porthmadog, Tremadog and the Glaslyn area.

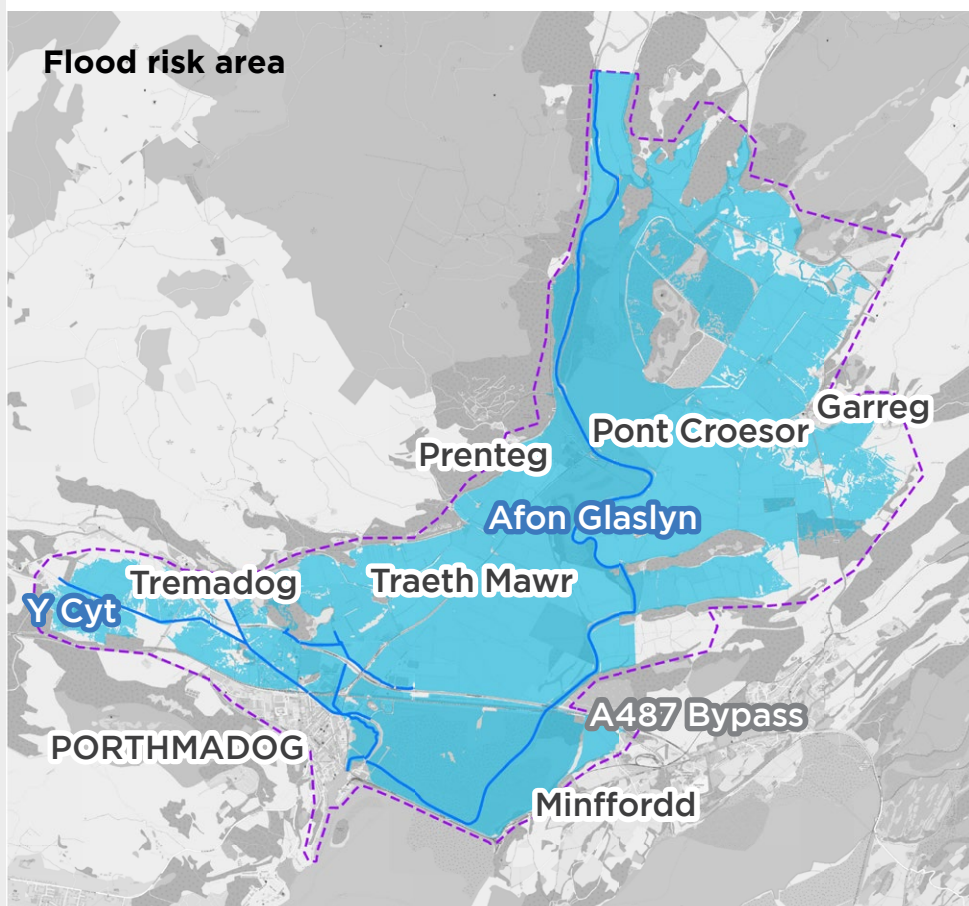
The model predicts more significant flooding to homes and businesses from rivers and the sea, even with existing defences in place.

Risk of flooding from rivers and the sea is defined in three categories, High, Medium and Low Risk.

The modelled output (right) is representative of low risk from rivers. Low risk means that each year, this area has between a 0.1% and 1% chance of flooding occurring.

Key

- Model boundary
- Modelled sections of main river
- Flood risk area (Low risk)



Next steps

Upcoming public consultation

We will soon be holding a series of public consultation events to discuss the flood model findings and what these mean for you. We also want to hear your views on possible flood risk management options and how these are to be assessed.

Please come and visit us at one of these events where members of the project team will be on hand to answer your questions. Once the consultation has launched, we will also be out in the community raising awareness and discussing options. If you see us, please come and talk to us.

Consultation

Event details

**Y Ganolfan Community Centre,
High Street, Porthmadog, LL49 9LU:**

- **Thursday 26 January 2023**
between 13:30hrs and 18:30hrs
- **Friday 27 January 2023**
between 09:30hrs and 14:00hrs

Our website will be updated throughout the project with news and responses to Frequently Asked Questions.

Further information about the public consultation and how to feedback online will be available on our website when the consultation launches on 17 January 2023.

Keeping in touch

How to get involved

We want to hear from you so we can further understand the impact of flooding on the community and to consider and develop options that best manage flood risk into the future.

We also want to explore wider environmental and social opportunities that can be developed as part of any preferred option for this project.

Even if you have done so previously, please get in touch if you'd like to find out more and to share your views and comments.



Andrew Basford (Welsh Learner)
Project Manager
03000 65 3846



Sharon Parry (Welsh Speaker)
Project Team Support Officer
03000 65 5264



**Porthmadog.floodrisk@
grasshopper-comms.co.uk**



**Natural Resources Wales,
Bangor Office, Maes y Ffynnon,
Gwynedd,
LL57 2DW**



Further information about the project is available at:
www.naturalresources.wales/porthmadogfloodrisk