



Porthmadog Flood Risk Management Project

Issue 2 | October 2023

Project Update

Natural Resources Wales is working to find long-term flood risk management solutions for the community of Porthmadog and Tremadog, alongside delivering wider environmental, social, and economic opportunities.

Throughout 2022 and 2023, we have been updating our flood model to better understand the risk of flooding in your area.

Using the latest guidance, available river flow records and photographs taken during the winter 2015 event, we can predict flood risk now, and in the future, including accounting for climate change.

The model shows a greater number of homes and businesses at risk from the Afon Glaslyn, the “Y Cyt” and from the sea.

Whilst we know this will be a matter of concern, please be reassured we are working hard to understand and find a sustainable solution to best manage this flood risk.

Porthmadog is at flood risk from both rivers and the sea as well as from rain and groundwater.

During high tides, the rivers are unable to flow out to sea and so a combination of extreme rainfall and high tides puts many residential and commercial properties at risk from flooding.

As our climate changes, we will face more frequent storms, heavy rainfall, and rising sea levels. This means that severe flooding events will become more frequent. This will put increased pressure on existing flood defences in the town and will impact how they will perform despite ongoing maintenance.

We have made good progress since the engagement events in January 2023. With your feedback, including responses from the letter drop in spring 2021, we have been able to understand the problem further and develop possible options to best manage the flood risk.

The current Flood Map (Flood Risk Assessment Wales Map) can be found on the Natural Resources Wales website [here](#).



The updated flood model outputs are currently in the checking and verifying stage. The new outputs are expected to be available online in late Spring 2024.

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 prevents the natural inward movement of tidal water from reaching Pont Aberglaslyn.

Pont Aberglaslyn is a bridge located eight kilometres (five miles) inland to the north near Beddgelert.

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

The projected flood risk from rivers in the model update is shown below. This indicates that up to 345 homes and 105 businesses are today at risk from a flood event which has a 1% chance of occurring in any given year.

Flood risk from rivers projected in the model update

Key

— Modelled section of main river

Chance of flooding every year:

- Flood risk extent with a 50% chance
- Flood risk extent with a 3.33% chance
- Flood risk extent with a 1% chance
- Study area boundary

The information shown (right) is to be used for the purpose of the Porthmadog Flood Risk Management Project Consultation only. These outputs are not final and remain under review.

These maps do not replace the flood risk information available on the Natural Resources for Wales Website.

Please read the following disclaimer for further details: [Natural Resources Wales/Disclaimer for our flood and coastal erosion risk mapping](#)



Sustainable Management of Natural Resources

This project will explore and adopt, where possible, principles of sustainable management of natural resources.

This will include natural flood management options, and the assessment of catchment wide environmental opportunities, aimed at maintaining and enhancing biodiversity and ecosystem resilience.

What we've been doing

During 2023, Natural Resources Wales has been reviewing the findings from it's flood model and using community feedback to start to develop a list of possible options to reduce flood risk to people and homes.

Over the last 6 months, we've also been:

- Carrying out new environmental surveys as part of evidence gathering
- Holding individual meetings with community and stakeholders
- Working with local partners to gather lived experiences and insights
- Continuing discussions and visiting local Porthmadog schools
- Pursued links with local Universities through our education team

Natural Environment

The study area forms a mix of coastal, wetland and woodland habitats that act as green corridors into the surrounding landscape.

The environmental importance of this area is reflected in the large number of protected habitats and species.

Many of these are of National and International importance and these too are being threatened by the effects of increasing flood risk and climate change.

What we're doing right now

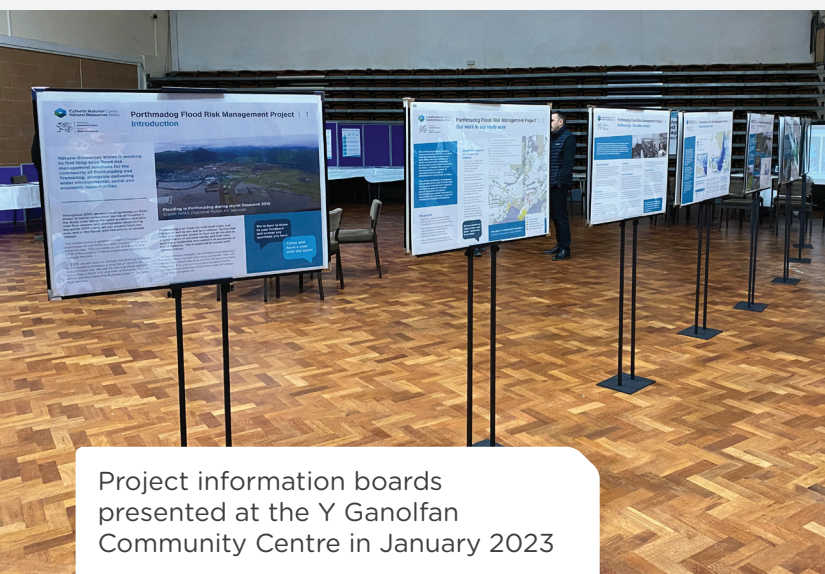
We are working through a long list of possible scheme options to reduce flood risk to people and homes in the Porthmadog and Tremadog area.

Using the evidence and feedback gathered to date, and working with stakeholders, we will appraise this long list of options to form a proposed draft short list.

We will be assessing each option against Criteria Success Factors (CSF's) which will include value for money, sustainability and technical viability.

We plan to share the assessment findings and the draft recommended short list of options, for public consultation in early 2024.

Our timescales have shifted however it is important that we do not rush these vital stages and we hope this update will keep you informed of our progress to date.



Project information boards presented at the Y Ganolfan Community Centre in January 2023

Project timeline and next steps

To Date Baseline

We have improved our understanding of the flood risk and developed a long list of options from stakeholders and public feedback.

Autumn 2023 Options Long List

We will assess the long list of options against Critical Success Factors to help us to identify a short list of draft options for public consultation.

Early 2024 Options Draft Short List

We plan to consult the public on the draft short list of options. After this, the final short list will be chosen alongside carrying out site investigations.

Summer 2024 Preferred Option

We will consult the public on the draft preferred option chosen from the short list. This will use information from ground investigations and will include outline design drawings.

We are planning consultation events from late January 2024 onwards when we want to hear from you on the assessment and the draft short list of options.

Confirmation of the dates and details will be sent out in the post, and by email, in late December 2023.

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

2025

Detailed design of the preferred option, subject to business case approval

2026

Statutory applications and permissions

2027

Construction of preferred option, subject to funding and approvals

Keeping in touch - How to get involved

We want to hear from you so that we can continue to understand the impact of flooding on your community.

This is so that we consider the best options for managing this risk and exploring wider environmental and social opportunities.

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 with us.

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Please visit our
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for further details:



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