# New flood defences underway as Gwynedd tackles coastal erosion



A notable construction project is underway on the coast of Gwynedd, where a distinctive former council office is undergoing demolition and rebuilding in response to pressing environmental concerns. Located in Nefyn, this ageing 1960s building has become emblematic of the escalating threat posed by coastal erosion in Wales. The site is receiving new design specifications following a safety assessment that assures the structure's longevity amid increasing risks associated with changing climate conditions.

Behind the structure, an entire section of sea cliff has been stabilised, standing at 40 metres (131 feet) above the beach. This was achieved through the insertion of nails into the cliff face at regular intervals, which has been covered with steel mesh for enhanced security. In what Natural Resources Wales (NRW) has termed a “belts and braces approach,” the new construction at Morlais Lôn will feature a pre-cast concrete retaining wall and vertical nets to provide further protection against potential rockslides. Additionally, a public footpath that once provided direct access to the cliff has been rerouted down a zig-zag scaffold due to safety measures.

At the forefront of the construction, a seawall has been reconstructed and reinforced using sheet piling, ensuring that the floor level is set at 5.5 metres. This elevation surpasses projections for extreme sea levels anticipated from a one in 200-year flood event by the year 2121. Such caution is warranted given the recent history of coastal instability in the area; in April 2021, significant landslides caused substantial damage to properties nearby, resulting in some residents being temporarily displaced.

The prevalence of coastal erosion threatens approximately 400 properties across Wales, with projections indicating that many could eventually be engulfed by rising sea levels. According to NRW data, around 60% of the Welsh population resides in coastal regions, underscoring the extensive reach of this environmental challenge. The risk of tidal flooding adds to the urgency of the situation, with existing coastal defences currently serving as frontline protections. These include concrete sea walls and breakwaters, although a shift towards nature-based solutions, such as enhancing natural landscapes, is projected for the future.

In light of the climate emergency, NRW Chief Executive Clare Pillman remarked in the past on the necessity for substantial investments in flood defences, acknowledging that some at-risk locations may not justify the cost of protective measures. As she articulated, “There is no denying that the biggest challenge of our era is the climate emergency," suggesting that tough decisions regarding investment priorities and strategies for areas with fewer properties and economic incentives are imminent.

Recent interactive flood maps compiled by NRW highlight low-lying coastal and estuarine regions likely to experience flooding during future storm surges. While coastal erosion unfolds more subtly, the implications are permanent and significant. The new erosion data provide insights into particular vulnerabilities, with areas like Traeth Porthor on the Llŷn Peninsula estimated to lose up to 370 metres of coastal land by 2105 if no mitigative measures are implemented.

Areas without active shoreline management strategies may face stark transformations; examples provided indicate that the beach, celebrated for its distinctive "squeaky" sand, could drastically reshape or even vanish entirely within coming decades. Conversely, regions with established shoreline management policies, such as Penmaenmawr in Conwy, demonstrate that maintaining existing defences can effectively mitigate erosion risks.

The overarching challenge of adapting to rising sea levels and increased flooding risks is compounded by a projected increase in properties facing vulnerability over the next century. NRW anticipates a 47% rise in properties at risk of tidal flooding and a 24% increase in those vulnerable to river flooding. Despite the pressing need for tailored investments, difficult decisions will be necessary about how best to allocate resources in high-risk locales.

Recently, the Welsh Government announced a record investment of £77 million in flood protection measures for the upcoming year, reflecting a commitment to enhancing community resilience against these burgeoning environmental challenges.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

* <https://democracy.gwynedd.llyw.cymru/mgConvert2PDF.aspx?ID=38762> - This document supports the claim of a notable construction project in Gwynedd, specifically mentioning the demolition and reconstruction in Nefyn, including efforts to stabilize cliffs as part of the construction process.
* <https://www.naturalresourceswales.gov.uk/> - Natural Resources Wales is involved in managing environmental concerns such as coastal erosion in Wales, and they provide data on risks and strategies for resilience against climate challenges.
* <https://www.gwynedd.llyw.cymru/en/Residents/Planning-and-building-control/Building-Control.aspx> - This webpage details the requirements for building control in Gwynedd, including regulations that could apply to significant projects like the one mentioned in Nefyn, such as ensuring safety standards during demolition and reconstruction.
* <https://democracy.anglesey.gov.uk/documents/s5372/Deposit%20Local%20Development%20Plan.pdf?LLL=0> - The Joint Local Development Plan addresses strategic visions and objectives for land use in Gwynedd and Anglesey, including considerations for environmental sustainability and potential impacts on coastal regions.
* <https://www.clearing-houses.net/file/planning-and-environmental-policy-division/consultation-on-the-proposed-wales-national-strategy-for-flood-risk-management> - This source discusses flood risk management strategies in Wales, highlighting the need for investments in flood defences and the impact of climate change on coastal regions.