

1.2% of Scotland's built environment - its homes, businesses, factories and public services, are within 50m of our coastline. Dynamic Coast has shown that the combined threats of coastal flooding & erosion have increased in recent decades & are expected to worsen with climate change. Planning & action is needed now to reduce impacts on Scotland's homes, businesses and organisations. Dynamic Coast provides coastal change information & advice to the Scottish Government & local authorities, allowing us to adapt now & increase resilience.

Who will this impact?

- 24,500 residential buildings and 9,000 commercial buildings lie within 50m of Scotland's current mean high water spring¹. This equates to ~£1.59 billion of Scotland's total GDP per year (with an average household GDP of ~£65,000)².
- 28% of the built environment within 50m of the shore lies behind erodible soft coast (beaches, dunes and saltmarsh). 43% lies behind rocky resilient coasts, and only 29% behind artificial defences¹.
- The costs, risks and impacts to Scotland's housing and business infrastructure are set to increase with climate change.
- Flooding and erosion at the coast will disproportionately impact the least prepared and those least able to recover.

How can Dynamic Coast help you?

- Dynamic Coast provides detailed interactive [maps](#) of how our coastline has changed over the last 100 years, and how this has and will affect coastal buildings as the rates of erosion increase toward 2050.
- Nationally we identify **647 residential properties** and **221 non-residential properties** may be affected by coastal erosion by 2050 under a high emissions scenario and a 'do nothing' coastal management approach. Even if artificial defences are maintained 40% of these remain at risk.
- Highland is the Local Authority with the highest number of buildings at risk of erosion by 2050 (109), followed by Argyll & Bute (100).
- Findings from Dynamic Coast have helped identify the impact of coastal erosion on our homes and companies, providing guidance on at-risk areas
- The Dynamic Coast webmaps allow early action to address the risks identified, allowing sites to enhance resilience whilst there is still time.

What can you do to improve future resilience?

- ✓ Understand how your coast has changed & may change in the future – [view the erosion maps here](#) and SEPA's [flood maps here](#).
- ✓ Planners to update sustainable coastal management planning to ensure new building developments are future proof, areas of anticipated erosion are safeguarded for accommodation space and flexible resilience. and adaption plans are developed for existing at risk areas.
- ✓ Early adaptation has the potential to greatly reduce future costs.

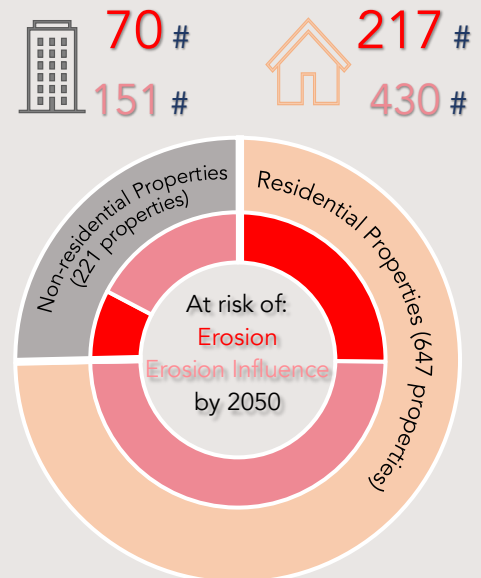
A window of opportunity

- The science is clear, we have a window of opportunity to plan, adapt and improve the protection and resilience of our coastal infrastructure before erosion and flooding worsens.
- Better planning and more informed decision making now will save time and money and reduce risk in the future.
- Leading Local Authorities are using [DynamicCoast.com](#) to plan ahead and Build with Nature to increase their resilience.

Find out more at:

[DynamicCoast.com](#), [transport.gov.scot](#), [SEPA.org.uk](#)

At risk of erosion by 2050:



What does this show?

'Erosion' figures (red) reflect assets that lie seaward of anticipated 2050 high water mark. 'Erosion Influence' figures (pink) reflect assets within the next 10m inland that may also be affected by erosion, storm damage and disruption.

What impact on assets?

Erosion and flooding can cause structural instability, loss of buildings and saline intrusions into water networks and agricultural businesses. **Existing artificial defences** are increasingly threatened by rising sea level, increased storm & flood frequency & wave reflection. **Existing natural defences** (beaches, dunes & saltmarsh) will move, narrow & retreat landward. Loss or damage to property also affects residents physical & mental health through stress and cost. Space inland needs to be found to allow the coast to move and buildings relocated to less risky sites.

Good practice:

ScotGov's **Climate Ready Scotland** plan applies an outcomes-based approach, ensuring built coastal environments and communities are inclusive, resilient and safe in response to climate change.³

¹ Dynamic Coast (2021) National Risk Assessment & Fitton, J.M. (2015) A national coastal erosion risk assessment for Scotland. PhD thesis, Uni of Glasgow

² ScotGov (2019) GDP Quarterly National Accounts, 2019 Quarter 2. <https://www2.gov.scot/Resource/0054/00548728.pdf>

³ ScotGov (2019) Climate Ready Scotland. www.gov.scot/publications/climate-ready-scotland-second-scottish-climate-change-adaptation-programme-2019-2024/