

Relic Defences and Adaptation: Golspie

April '24 to March '25

£49,000

The Highland Council



The old Pier, Golspie. ©The Highland Council (2024)

Overview:

Through two case studies at Golspie and Nairn, our project aims to better understand:

What constitutes a relic defence.

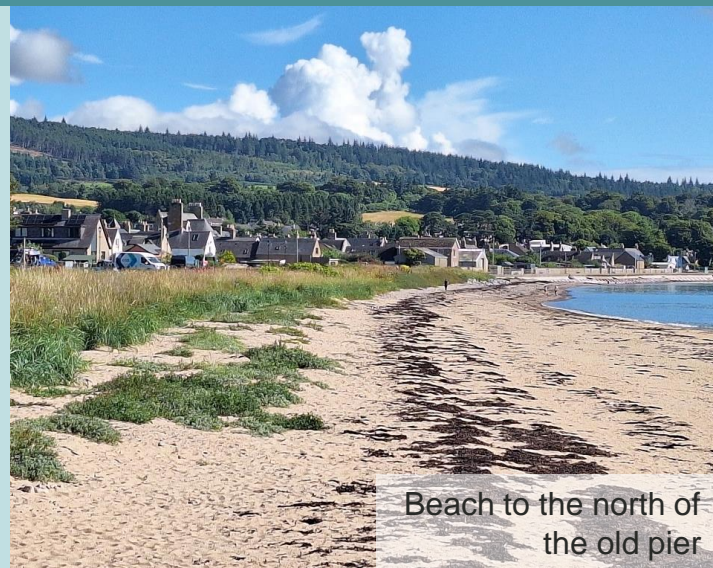
How a pathway approach can be used to manage risk over time.

How early community involvement can influence decision making and enable alternative solutions/funding opportunities.

How inclusion of CoastSnap can provide a monitoring opportunity.

What we are hoping to learn:

What constitutes a relic defence? How a pathway approach can provide short-term solutions, whilst longer term resilience measures are developed. How to manage community expectations, during development of potential options and understand alternative funding streams available to communities. The potential of CoastSnap to provide long-term monitoring in Golspie.



Beach to the north of the old pier

#adapt

#community



The Scottish Government
Riaghaltas na h-Alba



The Highland Council
Comhairle na Gàidhealtachd



Dynamic Coast
@DynamicCoasts

#1st April 2024

Relic Defences and Adaptation: Golspie

April '24 to March '25

£49,000

The Highland Council



Aerial image showing MHW and beach retention by old pier
© Getmapping Plc and Bluesky International Limited (2025)

Overview: We understand a relic defence is not always purpose built, such as the old pier at Golspie. Communities can often provide innovative solutions and funding opportunities. A pathway approach gives communities time to adjust to climate change impacts. A short-term solution is required to be progressed whilst developing longer-term adaptation actions.

What we are learning: Community input led to the exploration of free concrete mattresses, as a solution at the pier. A delegation from the community visited the manufacturer to explore the option & see how they had been used elsewhere. This was followed by a Structural Engineer review for suitability, it was concluded on their own they would not be a suitable option and may need classed as waste material, if incorporated into the groyne. Further work is required to define an option to be delivered short-term, whilst progressing longer-term adaptation actions.



Concrete mattress offered to community free to re-purpose for project © Subsea Protection Systems Ltd

Relic Defences and Adaptation: Golspie

April '24 to March '25

£49,000

Highland Council



Old pier adjacent to existing pier in Golspie
©Wallace Stone (2004)

Overview:

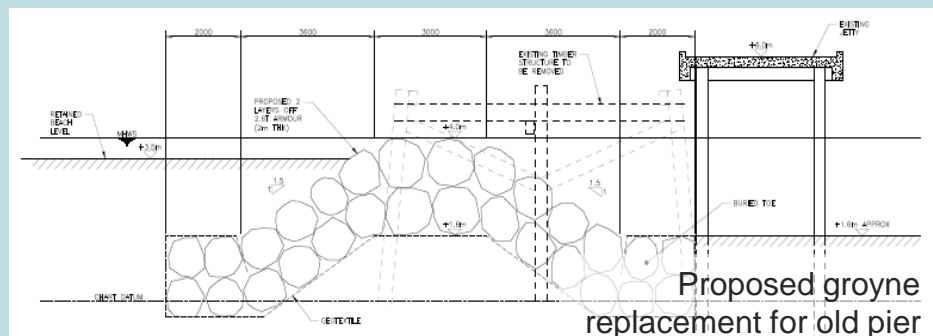
The old pier at Golspie appeared to be performing like a beach groyne, retaining beach material to the east side and so building up natural protection to the coast edge in front of properties in Golspie whilst providing shelter to the new pier and slipway to the west. This project aims to determine the coastal benefit derived from relic defences; what benefit is being derived in the defence's current state; and whether the defence should be retained, upgraded, removed or left to naturally depreciate.

We learnt:

We confirmed through review that the old pier has been operating as a groyne.

Recent storm damage has reduced the groyne qualities of the old pier resulting in reduction in beach retention.

The local community are invested in seeking options to reinstate the groyne function and have access to potential funding to construct a replacement.



#adapt

#community



The Scottish Government
Riaghaltas na h-Alba



The Highland Council
Comhairle na Gàidhealtachd



Dynamic Coast
DynamicCoast.com

#3 & Final. Mar 2025

Relic Defences and Adaptation: Nairn Beach

April '24 to March '25

£49,000

Highland Council



Gabion baskets forming toe of dune defences.
© The Highland Council

Overview:

Through two case studies at Golspie and Nairn, our project aims to better understand:

The beach and dune system at Nairn (which includes both natural and artificial defences) provides some flood protection to the lower lying areas of Nairn, such as Fishertown. With increased sea level rise, climate change induced erosion and flood risk, the deterioration of these natural features is increasing risk to the community. Understanding where to focus resources for maintenance and potential upgrade works is key to protecting coastal communities here.

What we are hoping to learn:

To understand the protection currently offered by the artificial structures present on Nairn's West beach.

It is also important to understand the relationship between the artificial structures and the impact on the natural features.

This project will help inform decisions about maintenance and upgrade of existing relic defences as well as the impact they may have in relation to potential natural restoration improvement projects.



Groyne retaining beach material on Nairn Central Beach
© The Highland Council

#adapt

#community