Coastal Change Adaptation – funding call for case studies

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Welcome

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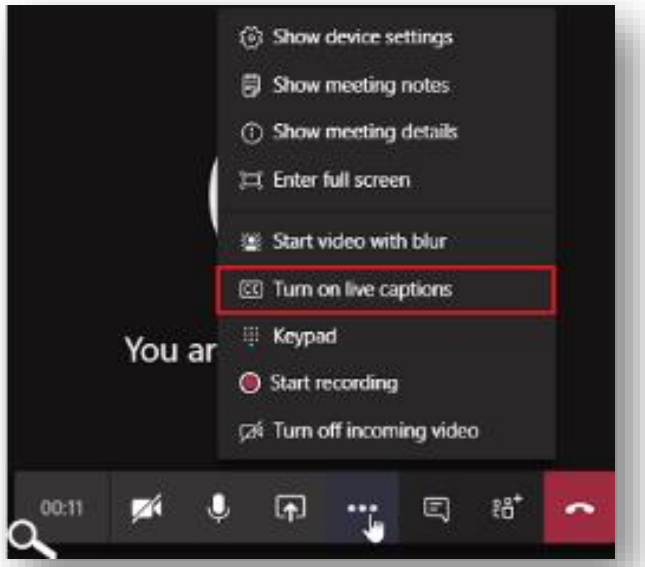

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Ground rules

- Please mute yourself if you are not speaking
- Introduce yourself and your organisation when you speak
- There will be time for Q&A after the presentations, if you have a question, please:
  - raise your hand or
  - type it in the chat
- Slides and the application form will be sent out to all delegates afterwards

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Agenda

Time		Speaker
13.00	Welcome and housekeeping	Cat Payne, Sniffer
13.05	Overview of the Coastal Change Adaptation Programme and capital fund	Tracy McKen, Scottish Government
13.15	The status of coastal change science in Scotland today, and how case studies can improve the evidence base	Dr Alistair Rennie and Professor Jim Hansom (Dynamic Coast)
13.30	Overview of the 2023 Coastal Change Adaptation Plan guidance	Kat Calisaya, SEPA
13.40	How to apply for the funding (incl M&R commitments from applicants)	Dr Alistair Rennie (Nature Scot) and Tracy McKen (Scottish Government)
13.50	Hear from previous applicants developing case studies in 2023-24	
13.50	• A716 Adaptation Approach	James McLeod, Dumfries & Galloway
14.00	• Coastal Change Adaptation in Orkney	James Green, Orkney Islands Council
14.05	• Nairn: Dune Resilience and Adaptation	Alan Fraser, The Highland Council
14.10	• Berwickshire Coastal Path	Duncan Morrison, Scottish Borders Council
14.15	• Sandhead rewilding	Brian Templeton, Dumfries and Galloway
14.20	Questions	Chair Cat Payne, Sniffer
15.55	Close	Tracy McKen, Scottish Government

Tracy McKen

Senior Policy Advisor

Water Environment and Resilience Team

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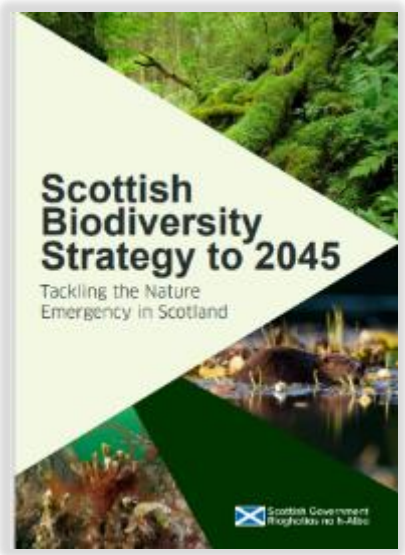
Coastal Adaptation and Wider Policies

- Scottish Climate Change Adaptation Program
- National Planning Framework 4
- Biodiversity Strategy
- Placemaking



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Coastal Change Adaptation Planning

- Dynamic Coast (DC2) identified the risks
- August 2021 – Funding for CCAP announced
- £11.7m over four financial years

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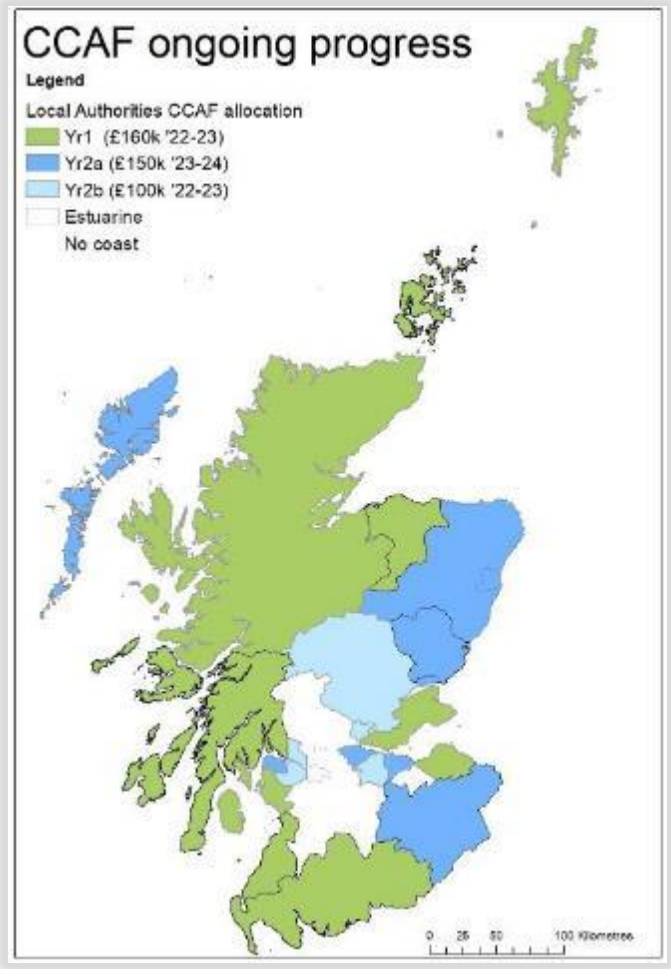
Coastal Change Adaptation Planning

Capital Funding Breakdown per year:

- 2022-23 - £1.6 million – direct to 10 LAs
- 2023-24 - £2.6 million
  - £1.85m direct to 14 LAs
  - £0.55m distributed to LAs for case studies
- 2024-25 - £2.7 million
  - £1.65m direct to 19 LAs
  - £1.05m available for case studies
- 2025-26 - £5.0 million
  - Distribution still to be agreed



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Dynamic Coast

Coastal change science & case studies

What is Dynamic Coast?

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The Scottish Government's Dynamic Coast project was funded by CREW, NatureScot and St Andrews Links Trust, with the research conducted by the University of Glasgow.

It is an award winning project, which is adapting Scotland's coastal zone, through partnership working.

Dynamic Coast aims to:

- Improve the evidence and awareness of coastal change in Scotland;
- Support decision-makers to ensure Scotland's coast and assets can flexibly adapt to our future climate.

It makes an important contribution to adapting to the climate risks identified by UK Committee on Climate Change, who recently said '*Progress delivering adaptation [in Scotland] has stalled.*'

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University of Glasgow

NatureScot
Scotland's Nature Agency
Buidheann Nàdair na h-Alba

CREW CENTRE OF EXPERTISE FOR WATERS

the home of golf

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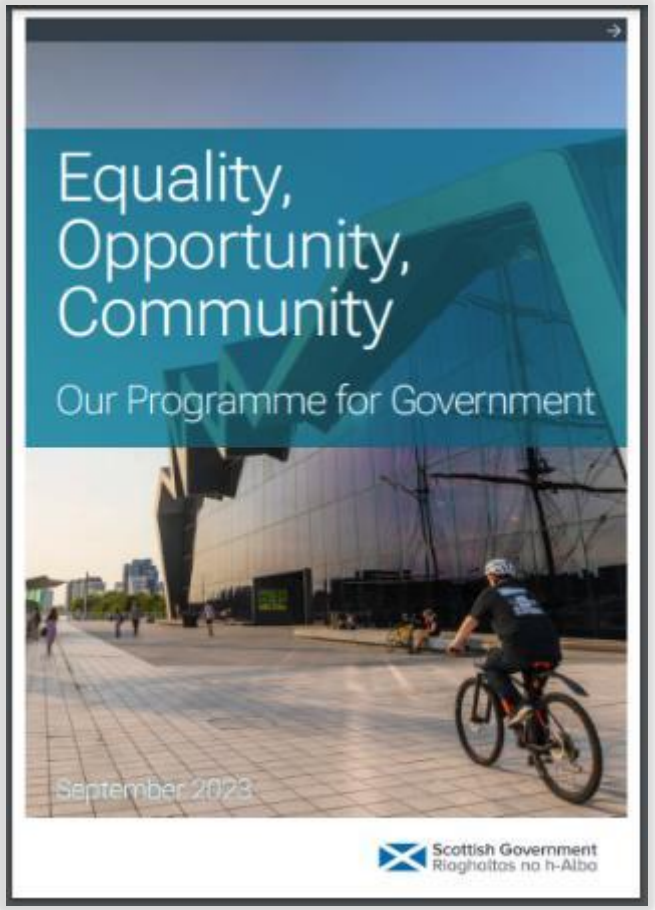
What is the science important?

- **Politically important,**
- Practically important,
- Tactically important.



PfG 2023

First Minister
Humza Yousaf MSP

"This is a Programme for Government focused on what really matters to the people of Scotland – reducing poverty, delivering growth, ***helping to tackle climate change****, and* ***providing high quality public services****."*

What is the science important?

- Politically important,
- **Practically important,**
- Tactically important.

Committee on Climate Change. Climate change risk assessment 3, Scotland. (2021)

*"The **risk of flooding** to people, communities and buildings remains among the **most severe risk for Scotland** and is the **costliest hazard to businesses**'*

***More action needed**:*

*The risk of climate change impacts, especially **more frequent flooding & coastal erosion**, causing damage to our infrastructure services, incl. energy, transport, water etc*

*The **viability of coastal communities is [at risk due to]** the **impact on coastal businesses** due **to sea level rise, coastal flooding and erosion**.*

What is the science important?

- Politically important,
- Practically important,
- **Tactically important.**

Committee on Climate Change: Is Scotland Climate Ready?
(2022)

- ***"Considerable work has been conducted*** *to …. understand … coastal risk in Scotland via* ***Dynamic Coast****, and [on] policy and* ***strategy development****, particularly* ***at the national level****."*
- *"Climate projections suggest greater sea level rise than had been projected previously."*
- *"the majority of Scotland's shoreline is not covered by Shoreline Management Plans, meaning most* ***local authorities do not yet have a plan to manage coastal erosion risk"****.*
- *"Local Authorities have responsibility for Planning, implementing LDP Guidance enacting NPF4, and wider duties to secure & report adaptation progress under Climate Change Act."*

What is the science important?

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- Politically important,
- Practically important,
- Tactically important,
- ***Never more important than NOW….***

Our climate is changing

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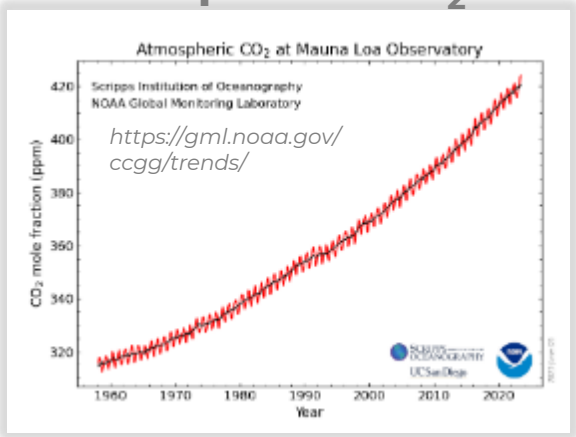
Anthropogenic climate change is:

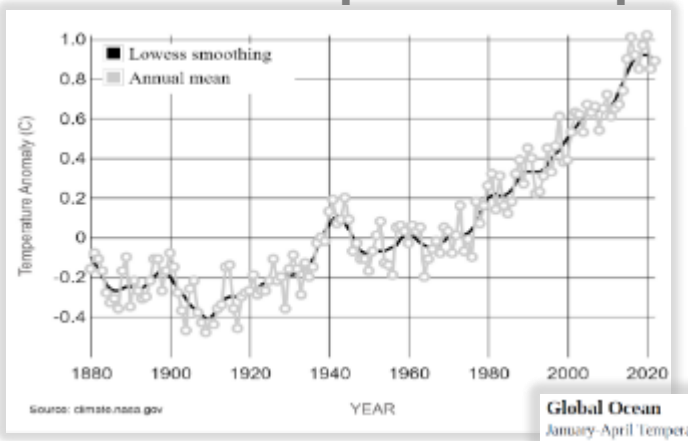
- increasing global atmospheric temperatures,
- Increasing global sea surface temperatures and
- Quickening relative **sea level rise**:

RSLR is now aligning with RCP 8.5 50-95%

Atmospheric CO_2

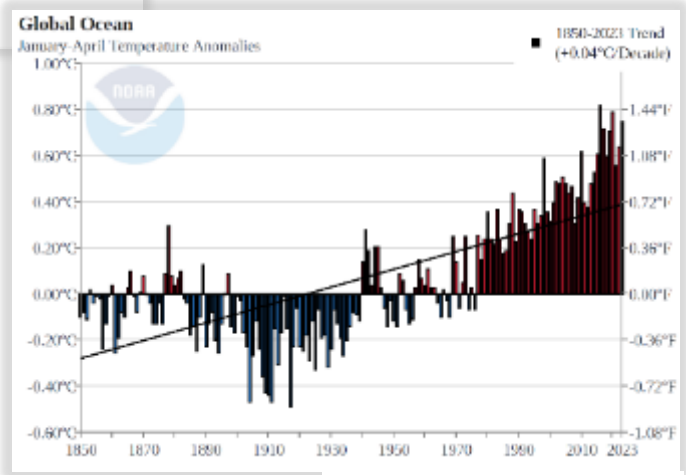


Global atmospheric temperature



https://climate.nasa.gov/vital-signs/global-temperature/

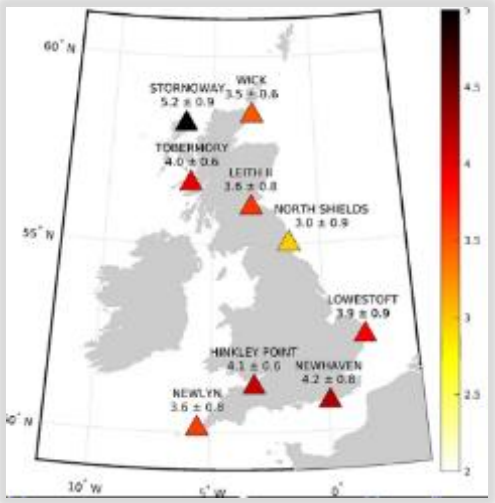
Global ocean temperature



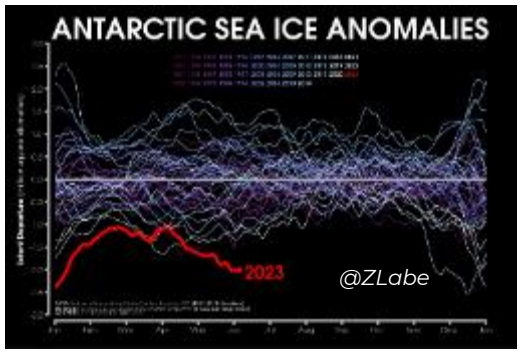
www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/global/time-series/globe/ocean/ytd/4/1850-2023

Relative sea level rise

3.6-5.2mm/yr in Scotland



MetOffice (2022) https://rmets.onlinelibrary.wiley.com/doi/10.1002/joc.7787



Our coasts are changing

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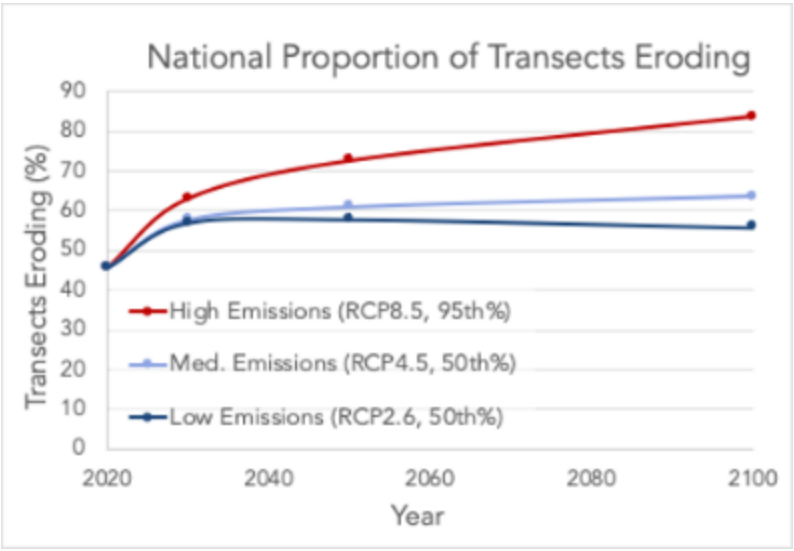
By analysing 6,000 km of new shoreline data, we have established that:

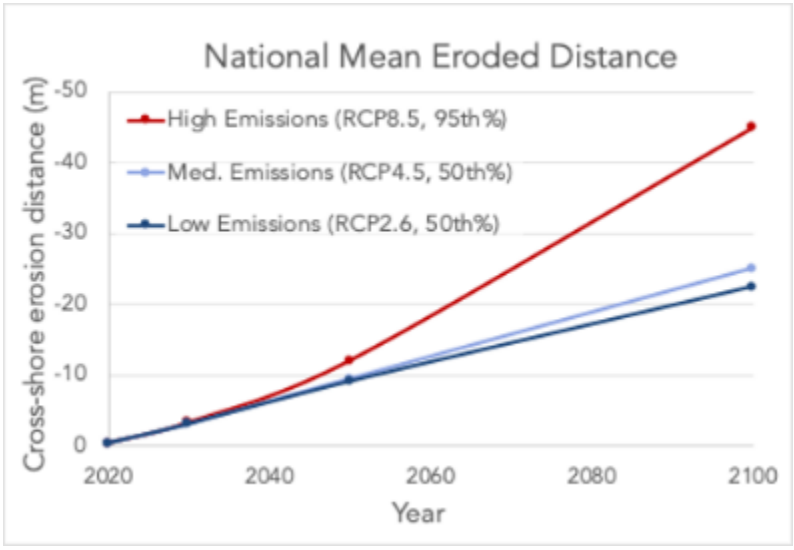
46% of Scotland's open erodible shores are retreating landwards.

Rate and extent of coastal **erosion increases under all emission scenarios**.

Under a HES coastal erosion is expected to affect **84% of our soft open coast**, with an average retreat of 45 m by 2100.

All results available at www.DynamicCoast.com





Our risks are changing

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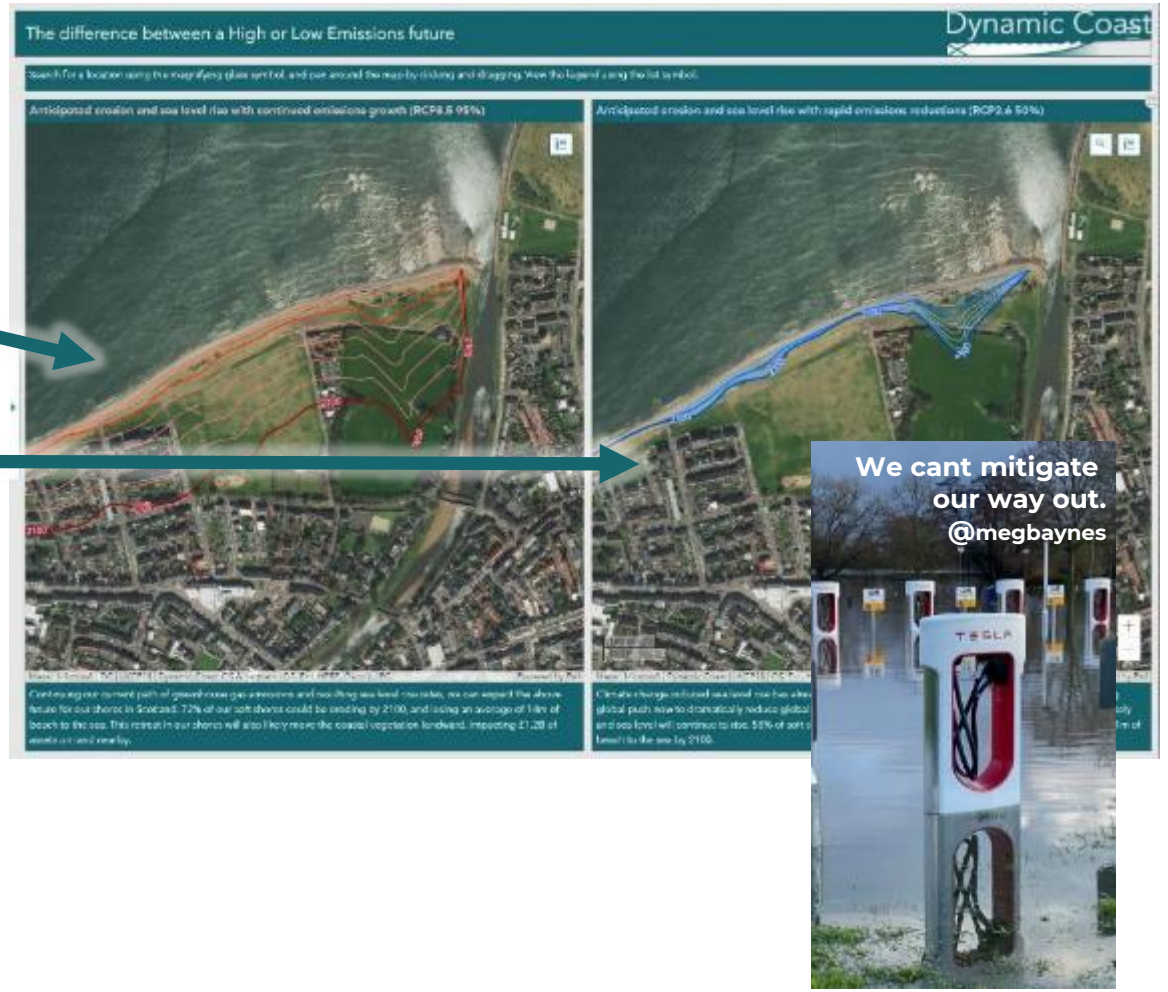
Scotland's **natural coastal defences protect £15bn of assets**, with £5bn of assets protected by artificial defences.

Under a **HES at least £1.2bn of assets are at risk** from erosion by 2050, unless we act.

Under a LES **at least** £814m of assets are at risk...

The avoided damage cost is **at least** £395m or 1/3.

Mitigation alone is insufficient, adaptation actions are essential, and investing in our science base is vital.



Our evidence base

Dynamic Coast provides the baseline evidence of past and anticipated change.

All results available at www.DynamicCoast.com

Our evidence base is growing

Dynamic Coast is being supplemented by:

- **Regional LiDAR surveys (OIC)**
- Regional prioritization (THC CCAP)
- Local resilience & EO (THC Nairn)
- Community recreational assets (Ab'shire)

Summaries available at www.DynamicCoast.com

Anticipated erosion in Orkney

Our evidence base is growing

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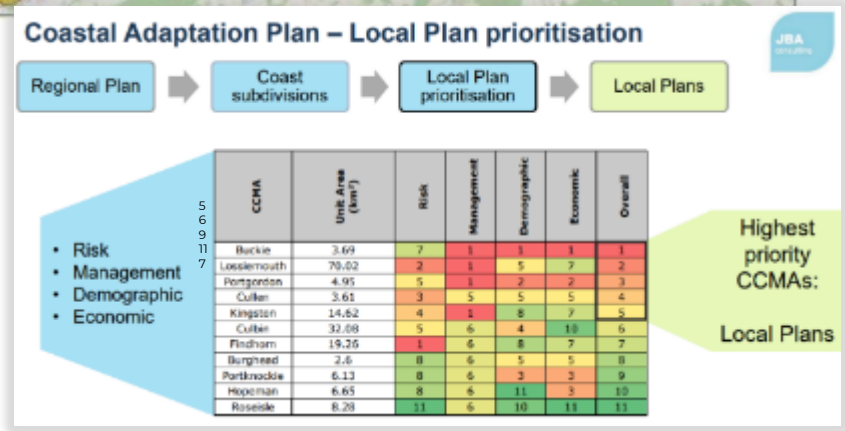
- Community recreational assets (Ab'shire)

moray council

JBA group

The Highland Council
Comhairle na Gàidhealtachd



Risk prioritisation supports smarter targeted approaches.
(©JBA, Moray Council)

Summaries available at www.DynamicCoast.com

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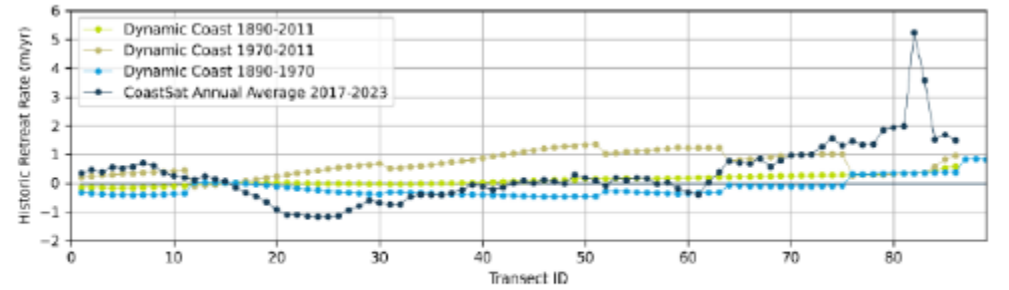
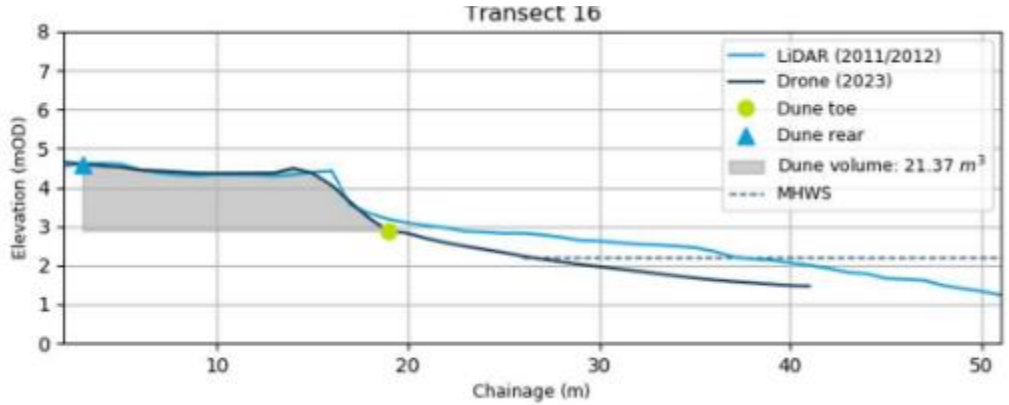


Figure 3-12: Historical rate comparisons between CoastSat results and Dynamic Coast at West Beach.



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Summaries available at www.DynamicCoast.com

So what might you propose?

We want to strengthen our decision-making processes, though better evidence some of which can be delivered by **YOU**.

So:

- What is hampering your work?
- Is it monitoring, uncertainty?
- Do you have a problem location?
- Communicating science & vulnerability?
- Are you/we *'winning hearts and minds'*?
- Can you improve on a neighbouring LA?
- Are your results/experiences upwardly transferrable to the national level?

Thanks for listening

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Science questions: **Alistair.Rennie@nature.scot**

Policy & funding questions: **Tracy.McKen@Gov.Scot**

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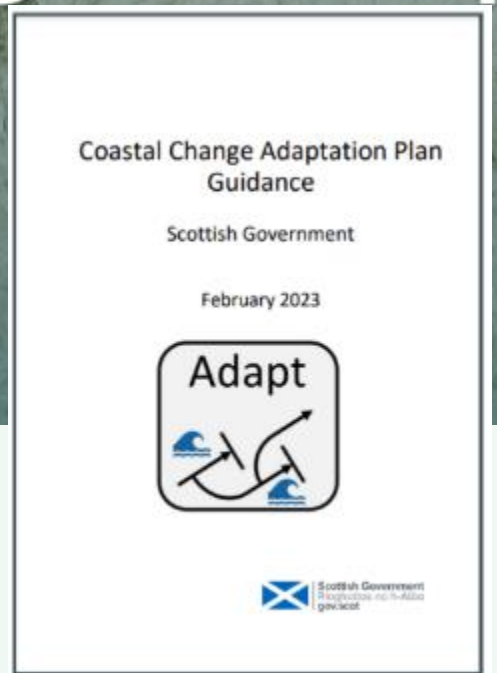
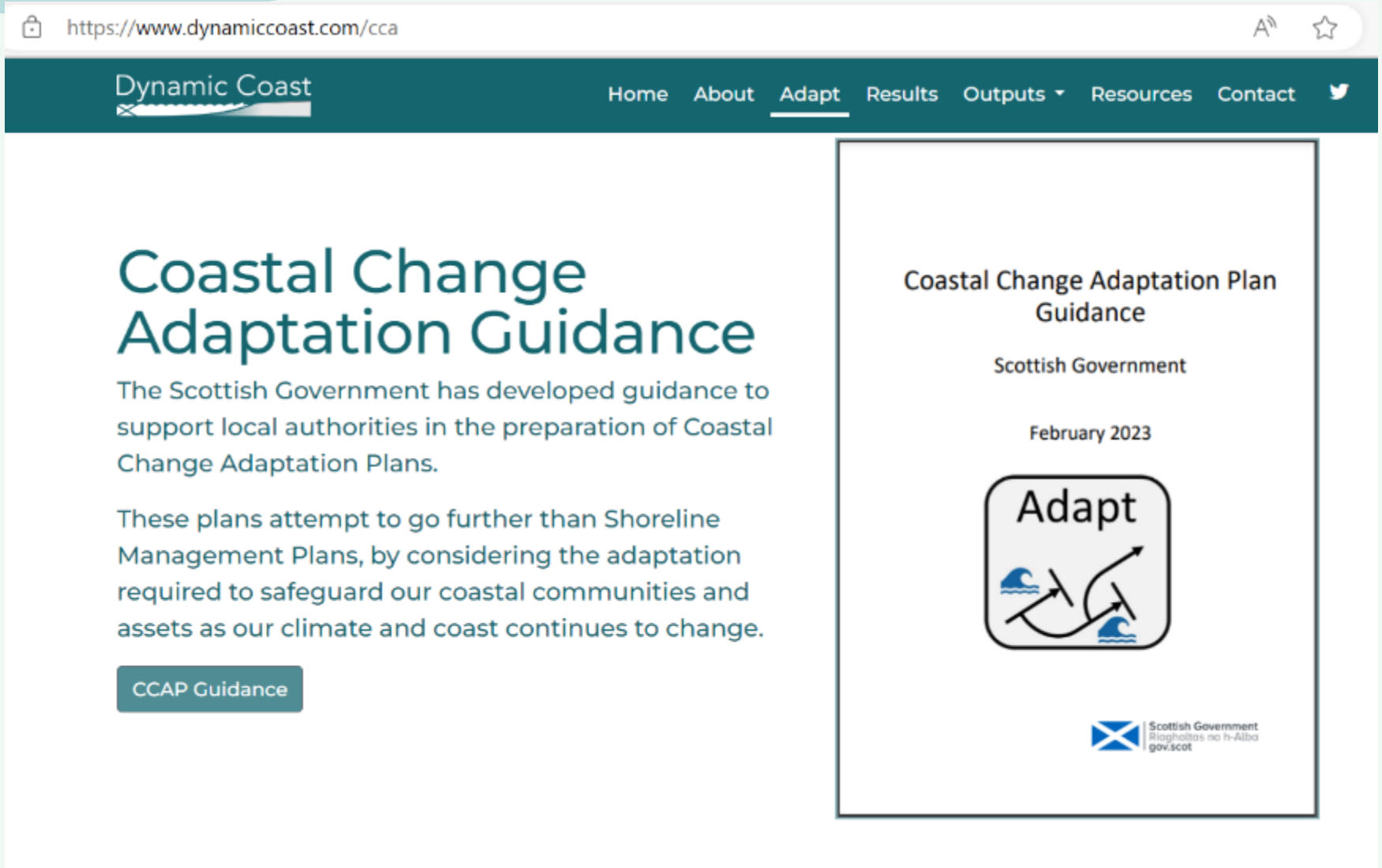
Coastal Change Adaptation



Where is the Guidance?

- Background,
- Stage 1: **Understanding the place**
- Stage 2: **Planning actions**
  - Triggers
  - Thresholds
- Stage 3: **Planning actions**
  - Cost
  - Timescales

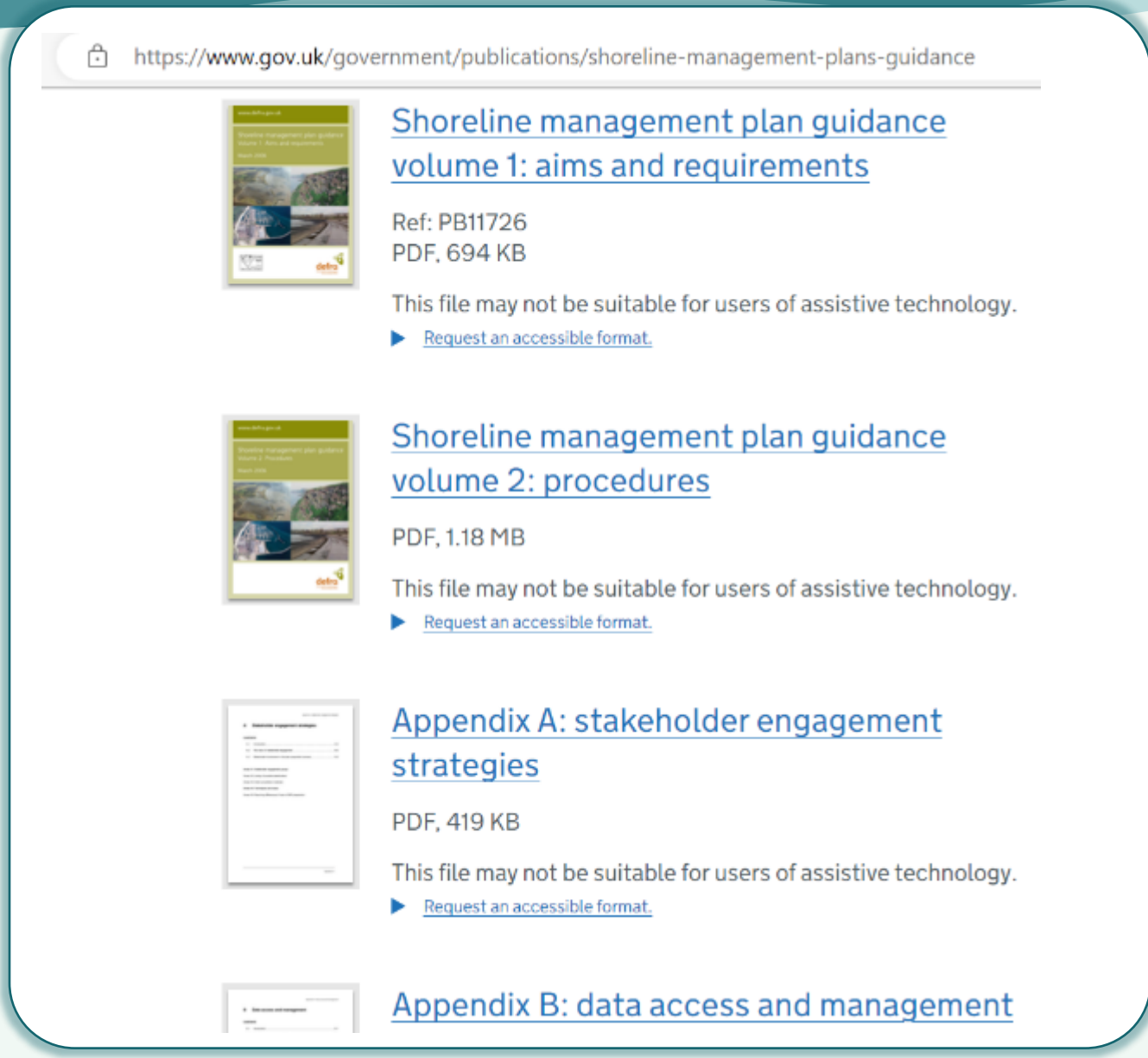


Stage 1: Understanding the place

- Agree on the place
  - Geographical area
  - Assets and stakeholders
- Assess long term flood and erosion risks (next 100 years)
- What are the other risks to that place, what else might change?
  - What actions are being taken now or have been taken in the past?

    → Current policy
  - What might change in future?
  - What is important for the future?

    → Future policy
  - **Involve and consult people**



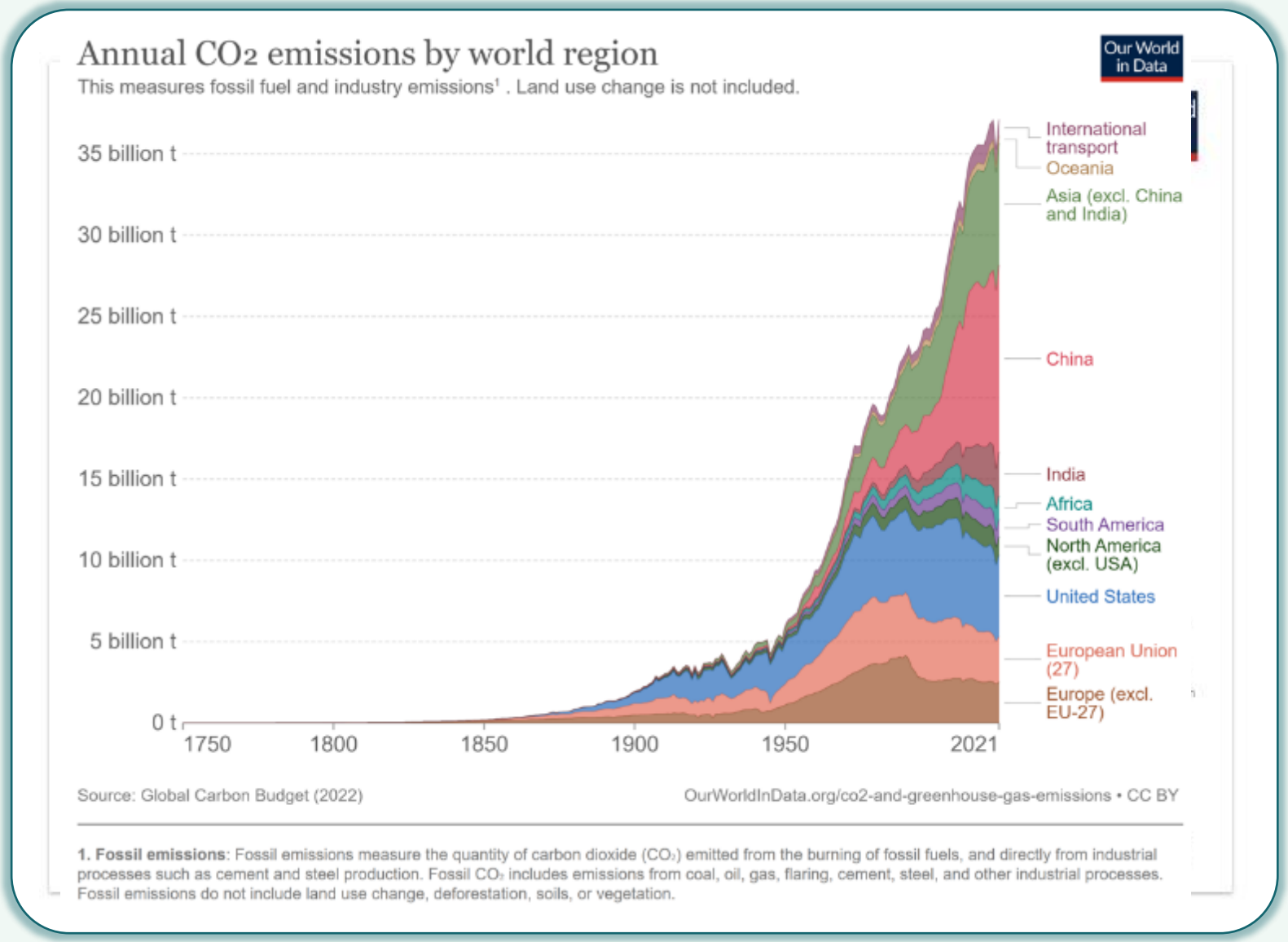
Stage 1: Key differences

- Identify Coastal Change Management Areas
- CCMAs must be adopted into Local Development Plans
- **AVOID** using language like:
  - **retreat**
  - **hold the line**

Managed Realignment (MR)	Set Back Defence	Removing or breaching the current line of defence with the intent to move back to new defences at the realigned location.
	Slow Erosion	The introduction of non-permanent/ short term measures to slow down but not stop erosion (e.g. with an aim to buy time for other response plans, including relocation, to be established).
	Remove Defences	Where defences are present and intent is to remove them and allow the shoreline to erode or flood and migrate landward
	Natural Features	Where the intent is to maintain the integrity of the natural feature (e.g. dunes / beach) approximately in its current position to provide defence intended to be solely achieved by nourishment.
	Advance the existing line	Where the intent is to move the line of the defences or shoreline forward artificially. Usually in support of infrastructure development (e.g. ports and harbour facilities) and not as a means of reclaiming land for other developments (e.g. housing) due to the residual risks of flooding, the locking in of maintenance of the defended line, collateral impacts on adjacent coastal areas and / or environmental interests.

Stage 1: Key differences

- Do not put timescales against policies
- Do not include a ‘medium term’ policy
- **How fast sea level will rise is uncertain**



Sea level is rising

- Change in baseline level of risk
- Last Glacial Maximum sea level was ~130m lower than today
- Sea level rise of 2m is almost inevitable
- Western Antarctica ice-sheet and Greenland are particularly vulnerable

Region	Cumulative Sea Level Rise 2017 – 2100 (m)
Argyll	0.86
West Highland	0.89
Western Isles	0.93
North Highland	0.89
Orkney	0.93
Shetland	1.02
NE Scotland	0.87
Tay	0.85
Forth	0.86
Clyde	0.85
Tweed	0.89
Solway	0.88

January 9, 2022 March 23, 2022

Image Source: http://www.humberriver.ca/globalice.html

Stage 2: How do we plan?

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Recommendations on how to address adaptation

- Coastal practitioners should engage with communities exposed to flooding and erosion, as well as scientists and science educators in order to develop climate literacy and the foundations for adaptation action. Involvement of a broad range of stakeholders who can bring together their knowledge, expertise and resources will help support climate change adaptation.
- Given the uncertainty in the timing of a 2 metres rise of sea-levels, priority should be given to identifying risks, vulnerabilities and adaptation challenges at high sea levels to reduce or avoid lock-ins (Figure 2).
- A climate service dedicated to coastal adaptation to sea-level rise will help to anticipate future risks and adaptation needs.
- Coastal adaptation practitioners can learn from success stories in other countries or regions, in order to identify management issues that require considering multiple meters of sea-level rise (Box 2) and how existing sea-level rise projections can be turned into action today.

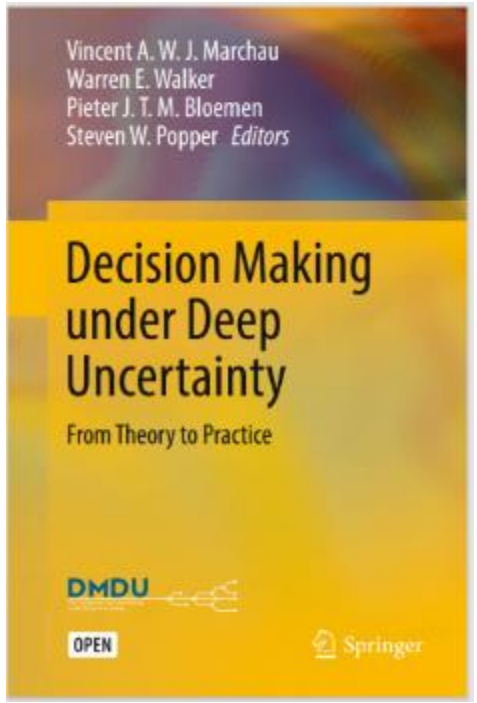
Figure 2: Engaging with adaptation to the range of sea-level rise possibilities: an ongoing process with priorities for today.

[Cloud UGA (univ-grenoble-alpes.fr)]

Stage 2: How do we plan?

- Dynamic Adaptive Policy Pathways (DAPP)
- Proactive and dynamic planning in response to how the future actually unfolds.
- Joins PEERS: Practitioner Exchange for Effective Response to Sea Level Rise (PEERS) Interest Form (google.com)
- Join Knowledge Hub Welcome - Knowledge Hub (khub.net)
- Read Chapter 4.2

  Decision Making under Deep Uncertainty: From Theory to Practice | SpringerLink



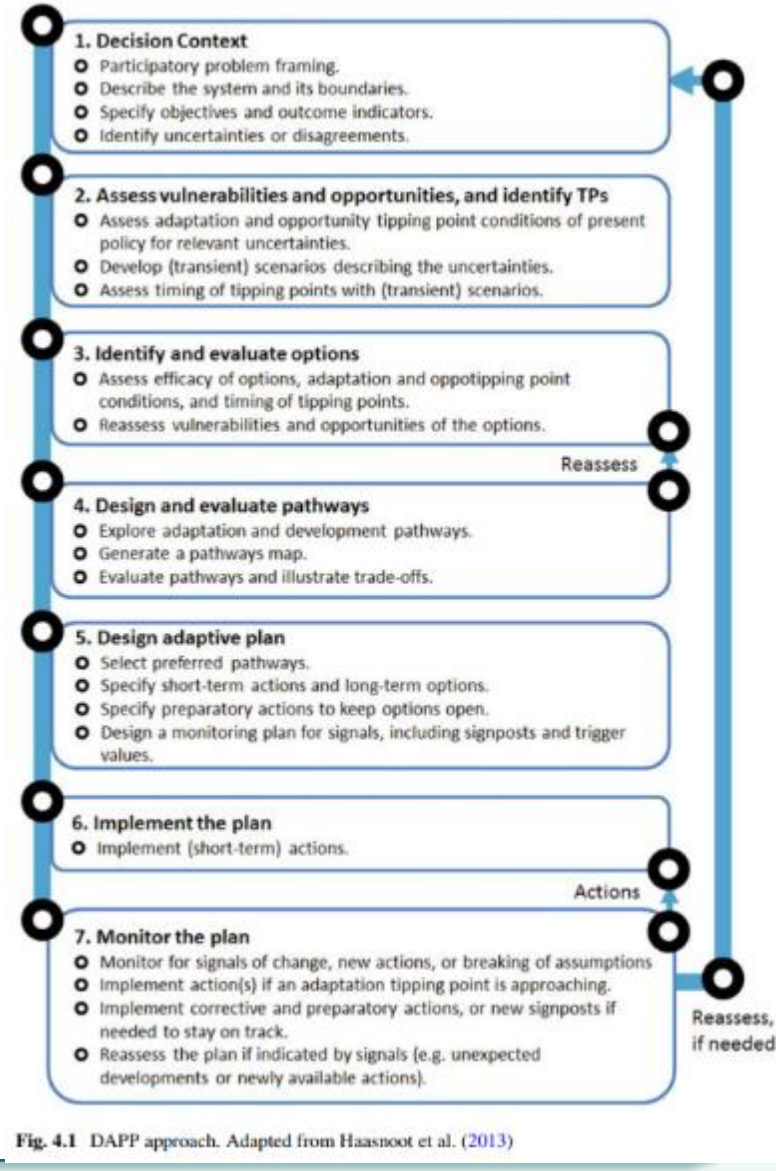


Fig. 4.1 DAPP approach. Adapted from Haasnoot et al. (2013)

Stage 2: Planning actions

- **Threshold:** a place you don't want to get to / unacceptable consequences
- **Trigger:** new action must be taken to avoid reaching that threshold
- Monitoring is key

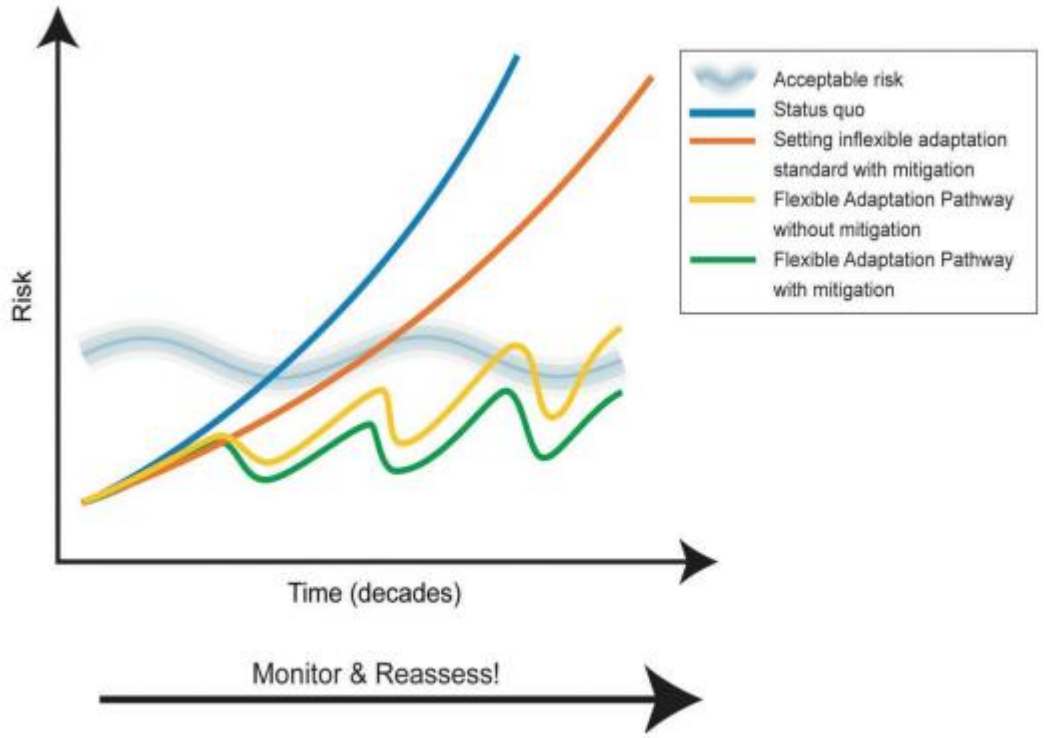
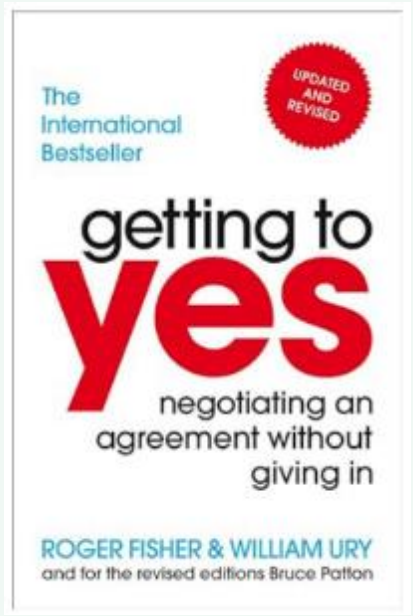


Figure 1 Changing risk in response to a Flexible Adaptation Pathway (adapted from Lowe *et al*, 2009)

Title of brief / note (climatexchange.org.uk)

Stage 2: Planning actions

- Physical triggers are easier to set / agree
- Social / economic triggers are harder
- Data availability is key



Enablers and inhibitors triggers	New information or studies	A new investigation identifies current land-use will not be sustainable
	Insufficient funding/lack of affordability	No funding available.
	Necessary defences / adaptations not viable.	Cost benefit analysis doesn't support intervention.
	Injection of Funding	Availability of (new) funding enabling adaptation or resilience activities.
	Relocation of infrastructure, property or people	Decision by council to cease repairs to existing defences.
	Changes in land-use	Business closes
	Changes in commercial / industrial operations	Business relocates to alternative site
	Social attitudes change	Community chose not to maintain activity
	Changes to government legislation / policy	New government funding stream becomes available

Stage 2: Planning actions

- Plan appropriate actions /investment
- Provides confidence to take actions now
- Provides confidence to wait /delay actions
- Enables you to change planned actions/ pathway according to how quickly trigger points / thresholds are reached.
- Helps generate consensus

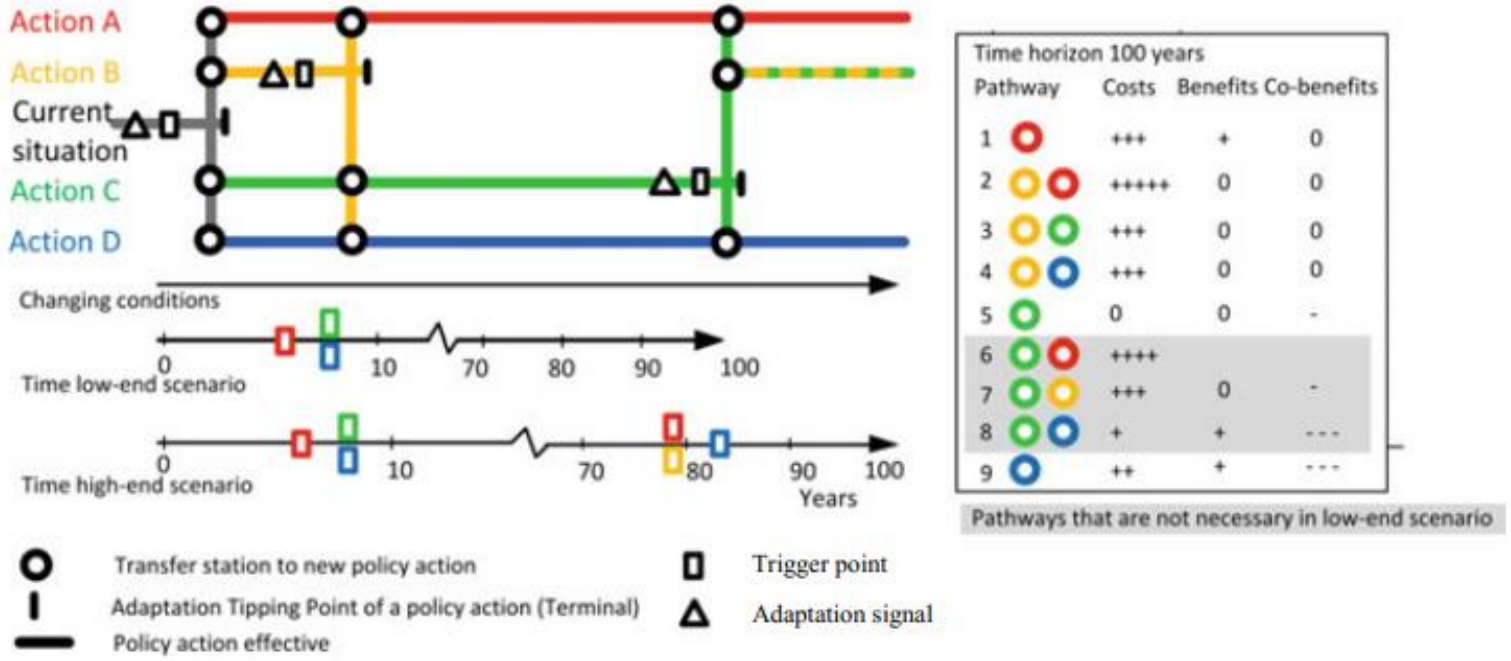


Fig. 4.3 A pathways map and a scorecard presenting the costs and benefits of the pathways presented in the map. Adapted from Haasnoot et al. (2018)

Stage 3: Add detail

- How much will actions cost
- What is the lead time of any action (build this into thresholds)
- Operational Practicalities

Stage 3 Action Plan Detail

Current Scheme, from now (Decision point 1)	**Current Action plan** Scheme / Property Level Protection (PLP) / Beach Management	Detailed **monitoring, resilience & adaption planning** → £x/yr (max) of dune feeding	Detailed **monitoring, resilience & adaption planning** → £x/yr (max) of Sea Wall repairs	Detailed **monitoring, resilience & adaption planning** Detailed plan to **relocate parts of Golf course.** → Repair dunes for Flood RM
Next Scheme after Decision Point 2	**Action Plan from Decision Point 2.** Scheme 2 / PLP / Beach Management	Detailed **monitoring, resilience & adaption planning** → £x/yr (max) of dune feeding → £x/yr (max) of sea wall repairs	Detailed **monitoring, resilience & adaption planning** → Detailed plan for phased **relocation of Splash**, play park, road, skate park etc.	Detailed **monitoring, resilience & adaption planning** Implement **phased relocation** of parts of Golf course. → **Feed beach** to slow/curtail erosion
Subsequent Scheme after Decision point x	**Action Plan from Decision Point n.** Scheme 3 / PLP / Beach Management	Detailed **monitoring, resilience & adaption planning** → Detailed works to **raise flood wall** & **feed beach** at sea wall	Detailed **monitoring, resilience & adaption planning** → Detailed works **re-patching semi-natural shore.**	Detailed **monitoring, resilience & adaption planning** → Implement **phased relocation** of parts of Golf course. → **Feed beach** to slow/curtail erosion

Thanks for listening

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Science questions: Alistair.Rennie@nature.scot

Policy & funding questions: Tracy.McKen@Gov.Scot

SEPA Evidence / coastal mapping: Steve.mcfarland@sepa.org.uk

This presentation: kat.calisaya@sepa.org.uk

Applying for Funding – part 1

- Return the completed form by **27 October** via email (hard copies not required) to **Tracy McKen** cc'ing Alistair.Rennie@nature.scot.
  - The form is based on the one from last year, taking in feedback received
  - We have kept as short as possible to gather the information we need to assess the case studies
  - Please keep sections 1 -14 within four pages.
  - You can also add maps, pictures and links to videos
  - Contact details are included on the introductory page

Applying for Funding – part 2

- Match funding is not required, but it is useful to work in partnership and note either in-kind or financial contributions from partners
- Funding is available for capital spend incurred for studies / research and delivering actions
- There is no minimum or maximum (up to the total fund limits) amount for individual projects, but we do encourage ambitious projects
- All projects will be assessed by the Coastal Change Adaptation Budget Group, which has members from local authorities, Dynamic Coast, SEPA and SG
- Possible Gaps in knowledge, case study projects are encouraged which consider:
  - Salt Marsh
  - Urban Shores
  - End of Life of Existing Structures

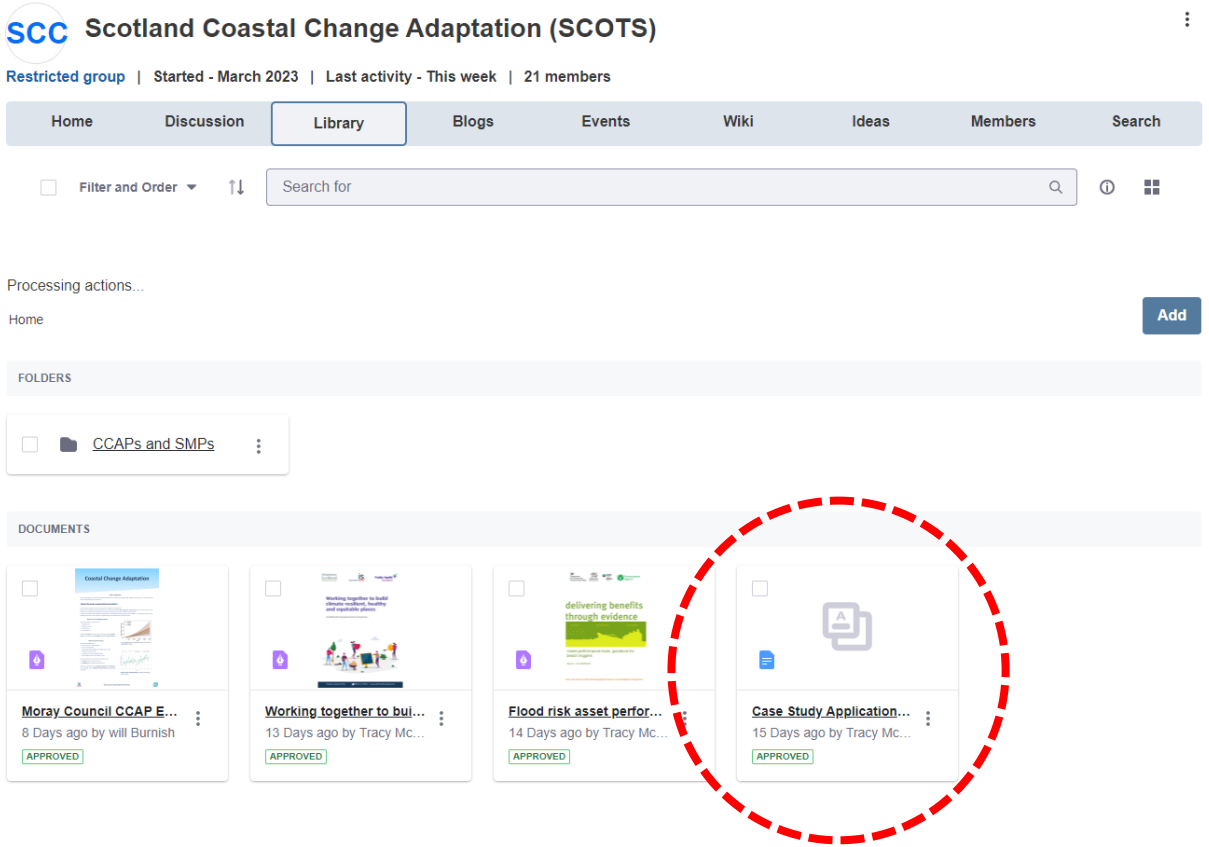
How to apply for a CCAF Case Study

Where to find it?

Dynamic Coast
DynamicCoast.com @DynamicCoasts

The application form is on the knowledge hub, and you will also be sent it following this meeting.

https://khub.net/group/scotland-coastal-change-adaptation-scots/group-library



Application form

Dynamic Coast
DynamicCoast.com @DynamicCoasts

COASTAL CHANGE ADAPTATION BUDGET – 2024-25
Case study proposal outline (August 2023)

CCAB Group seek capital fund applications from local authorities and their partnerships for case studies to help advance Coastal Change Adaptation in Scotland.

Instructions:

Please complete form and ensure **sections 1-14 do not exceed four pages**. Authorities can submit more than one proposal, please use separate form for each. For any questions or for technical help email Tracy.McKen@Gov.Scot. Return the completed form by **27 October** via email (hard copies not required) to Tracy McKen cc'ing Alistair.Rennie@nature.scot.

Background & helpful information:

The UK Climate Change Committee was critical of Scottish Government and local authorities stating that *'adaptation had stalled'*. The CCA Fund directly addresses these issues by funding adaptation planning and resilience actions that can be undertaken immediately. This heralds a new way of working, allowing authorities to identify and address their priority risks, in a way that suits their circumstances.

The CCA Fund supports iterative, adaptive and nature-based approaches.

Whilst there is £1.05m funding available in 2024-25, local authorities may have some flexibility in spend between years. Case studies must include adaptation and may include (but not limited to) restoration of natural coastal defences (e.g. sand dunes or salt marsh), purchase of fall-back land for coastal paths to be relocated into, development of adaptation options on urban shore and community consultation etc. Examples from 2023-24 are available here.

Whilst we welcome applications that initiate adaptation planning work, we particularly welcome applications that address more challenging aspects including: implementing difficult decisions, managed retreat of assets from at risk areas, securing carbon & biodiversity benefits, addressing substantive climate risks via transformative change etc. Proposals for ambitious projects which support actions in a CCAP (or pre-existing SMPs) are welcomed. Proposals from a group of adjacent local authorities working together are also welcomed, with one local authority the agreed lead.

Authorities are able to use match funding to leverage greater benefits, though this is not a prerequisite. You may want to consider the following funds: Existing council funds, Coastal Change Adaptation Revenue Funds, Water Environment Fund, Nature Recovery Fund (local authority allocation or applications), Coastal Communities Fund, Community funding and private finance etc.

All funded case studies will be required to provide brief progress report (templates are provided) which ensures that other authorities / partners can learn from your work. Authorities are required to monitor progress (incl. on the ground monitoring of physical interventions, and project monitoring, as necessary) and participate in Knowledge Exchange via Knowledge Hub (please join if you have not already).

A workshop is planned where you can meet members of the Dynamic Coast Team to discuss the application process. We may hold other virtual meetings to support the application process. Further details will be posted on the Knowledge Hub.

Case studies will be graded on a range of criteria and CCAB Group retain the right to fund the best combination of case studies to deliver the intended aims.

We encourage discussions with applicants to support those in the early stages of a project. Please get in touch (email addresses above).

1) Local authority name/address; main contact point for any follow-up clarifications: name, email and telephone number.	
{council name}	{applicant's name}
{email address}	{phone number}
2) Case study Grid Reference or hyperlink from Dynamic Coast webmap share-tool	
{insert a grid reference here or….}	https://arcg.is/1SX90L0
3) Short title for project (preferably less than 10 words)	
{insert text here}	
4) Location and brief description of coastal change area of concern including any previous erosion and flood risk management actions undertaken.	
{insert text here}	
5) If you have one, a brief description of relevant policies and actions in your Coastal Change Adaptation Plan / Shoreline Management Plan. Please provide a link to the latest plan. A Coastal Change Adaptation Plan is not essential for these case studies this year.	
{insert text here}	
6) Does your proposal incorporate aspects of Social Vulnerability? Methodology and interactive maps are available here (report & map)	
Yes / No	
7) Outline of activities/measures proposed.	
{insert text here}	
8) Predicted outcomes of these activities/measures on coastal erosion (and coastal erosion enhanced flooding) risk in the area now and allowing for future changes. NB. Coastal change is an essential criterion; hydraulic changes (alone) would not be eligible. If you are unsure, please email Alistair.Rennie@nature.scot. Include a brief explanation of the multiple benefits.	
{insert text here}	
9) Predicted multiple benefits of activities/measures: {delete Y or N to leave correct answer}	
Y / N : Transformative change (i.e. address high-end climate risks across multiple sectors of society)	
Y / N : supporting delivery of difficult decisions	Y / N : Delivering adaptation actions
Y / N : Addresses coastal flood risk	Y / N : Benefits carbon sequestration
Y / N : Biodiversity benefits	Y / N : Access & Leisure benefits
Other: {please insert text here}	
10) Timescale for implementation and readiness to proceed. Outline your internal approval process. NB. Projects that straddle financial years will not be precluded.	
{insert text here}	
11) What stage below best describes your project? {delete Y / N : to leave correct answer}	
Well-developed project, part funded, community support, licence / permissions in-place etc	Y / N :
Partially developed project,	Y / N :
Concept level only	Y / N :
Please expand / explain your choice above	
{insert text here}	
12) Estimated total costs of the project including contribution sought from this fund and confirmation of any other funding sources. Please also confirm your application is eligible for capital funding.	
Total: £ {insert number}	CCA Contribution: £{insert number} Capital spend: Y or N
13) Any other relevant information.	
{insert text here}	
14) If your proposal is successful, how and what will partners learn from your project?	
{insert text here}	
15) Head of Service or Director of Finance Signature. Applications can be submitted without approval, though this is required before funding is released.	

I agree to release the funding for use in the case study.	{insert signature here}
16) If you have any maps, pictures, links to videos that support your application, please insert them here. Please note this section is not included within your 4-page limit.	
{insert maps, pictures and or links to videos here}	

Form End.

Application form

Dynamic Coast
DynamicCoast.com @DynamicCoasts

We'll canter through the form now.

But please remember:

1. **Policy & funding questions: Tracy.McKen@Gov.Scot**
2. **Science questions: Alistair.Rennie@nature.scot**

We are all in this together … please liaise with colleagues from other authorities, including those who have Yr2 case studies.

Reporting

- Case Study Reporting
- We provide templates for reporting
- 3 updates over the case study project – start, in progress and final
- Examples are on the Dynamic Coast website: www.DynamicCoast.com/cca
- We can all use these to promote the work

Scottish Government
Riaghaltas na h-Alba
gov.scot

A chance to hear from previous applicants

Time	Project	Speaker
13.50	• A716 Adaptation Approach	James McLeod, Dumfries & Galloway Council
14.00	• Coastal Change Adaptation in Orkney	James Green, Orkney Islands Council
14.05	• Nairn: Dune Resilience and Adaptation	Alan Fraser, The Highland Council
14.10	• Berwickshire Coastal Path	Duncan Morrison, Scottish Borders Council
14.15	• Sandhead rewilding	Brian Templeton, Dumfries and Galloway Council

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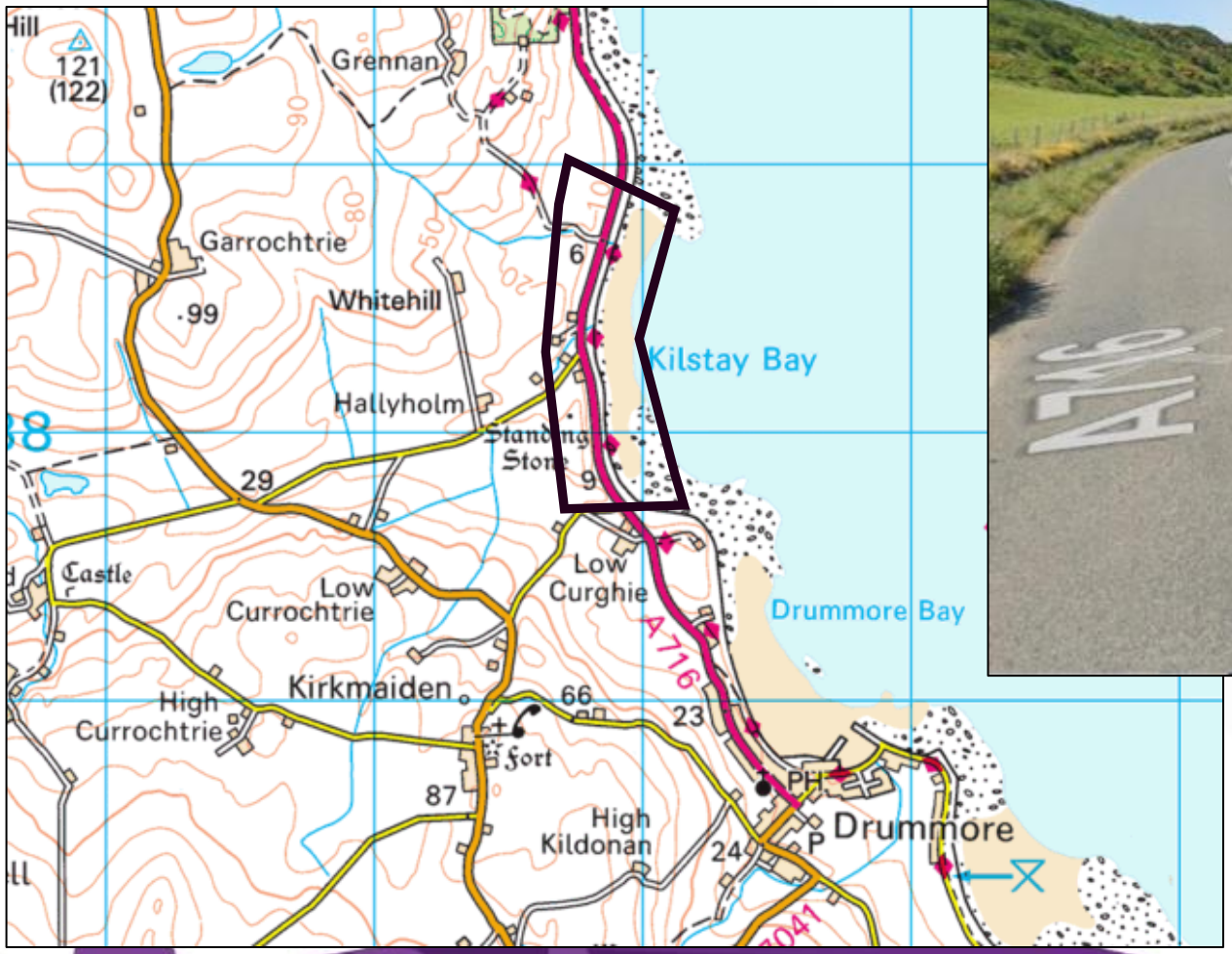
Dumfries & Galloway COUNCIL

A716 – Adaptation Approach

Location – Kilstay Bay

Location

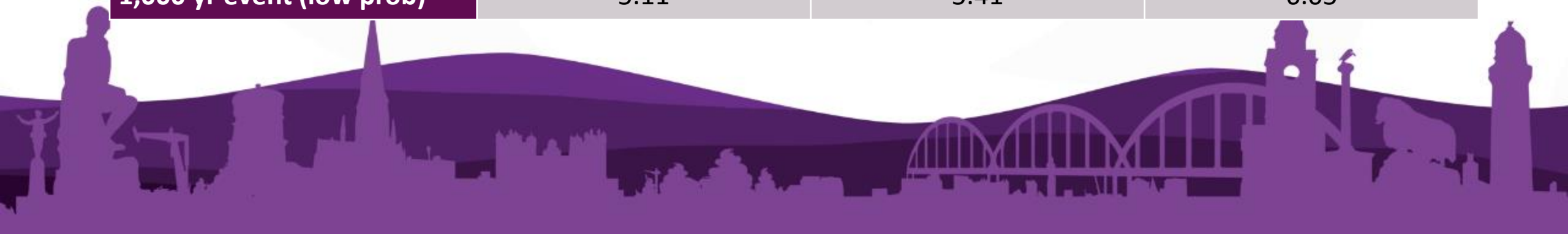

Grennan
121
(122)
Garrochtrie
Whitehill
99
Kilstay Bay
Hallyholm
Standing Stone
29
Castle
Low Currochtrie
Low Curghie
Drummore Bay
A716
Kirkmaiden
66
23
High Currochtrie
Fort
PH
87
High Kildonan
24
P
Drummore


A716
Google
Image capture: Jun 2023
© 2023 Google

Sea Level rises at Kilstay Bay

- Given rising sea level, the frequency of flooding and impact of wave thrown debris is expected to increase in the coming decades.

What Event	Current still water levels (mOD)	2050 still water levels (mOD) (UKCP18 RCP8.5 95%) +0.3m	2100 still water levels (mOD) (UKCP18 RCP8.5 95%) +0.94m
MHWS	2.77	3.07	3.71
HAT	3.32	3.62	4.26
1 yr event (annual)	4.07	4.37	5.01
10 yr event (high prob)	4.44	4.74	5.38
1,000 yr event (low prob)	5.11	5.41	6.05



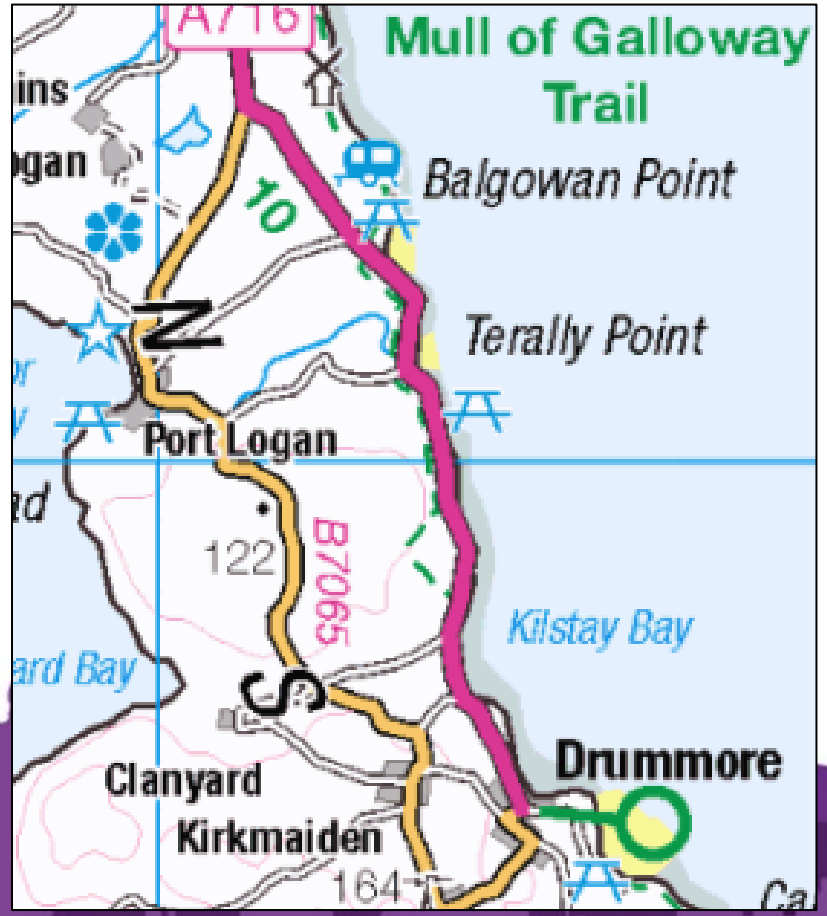
Proper engineering works

- Significant investment over the years >£1M

Current Storm impacts

A716 Road Closure gates

Main Route (A716) and Diversion Route (B7065)



Diversion Route (B7065) Improvements

- Funded from £160K allocation

Discussion points

- A716 has not been abandoned and properties still access this road.
- Still the main road from the South Rhins, but liable to more frequent closure due to storm events.
- But some investment into alternative route is being made.
- Study is funded to medium to long term options for South Rhins access.

Coastal Change Adaptation in Orkney

Case Study – Update

Orkney Islands Council

Coastal Change Adaptation Planning in Orkney

- Coastal Change Adaptation Plan (CCAP) – identified as a priority action in the Orkney Flood Risk Management Plan
- LiDAR survey of the Orkney coastline (during 2023) – data to model coastal change and identify vulnerabilities
- The CCAP will help us identify future impacts and agree acceptable sustainable solutions with communities
- CCAP will inform land use and marine planning policy and decision making, and will help to priorities coastal adaption projects and actions

Funding

- Year 1: Scottish Government Coastal Adaptation funding £160k – LiDAR
- Year 2: Case study finding £66k - Communications and Engagement Plan and activities
- Year 3: Scottish Government Coastal Adaptation funding – Coastal Change Adaptation Plan

Case Study:

Coastal Change Consultation and Engagement Plan and activities

Raise awareness and improve engagement on coastal change

Effectively communicate and collaborate internally within the Council and with local communities

Deliver engagement activities as part of the CCAP process

Examples - Workshops, social media, film, community site visits, activities with schools etc

Learn and transfer good practice

Build on and learn from existing best practice, report lessons learned and transfer knowledge

Orkney Islands Council

James Green

Team Manager - Marine Planning

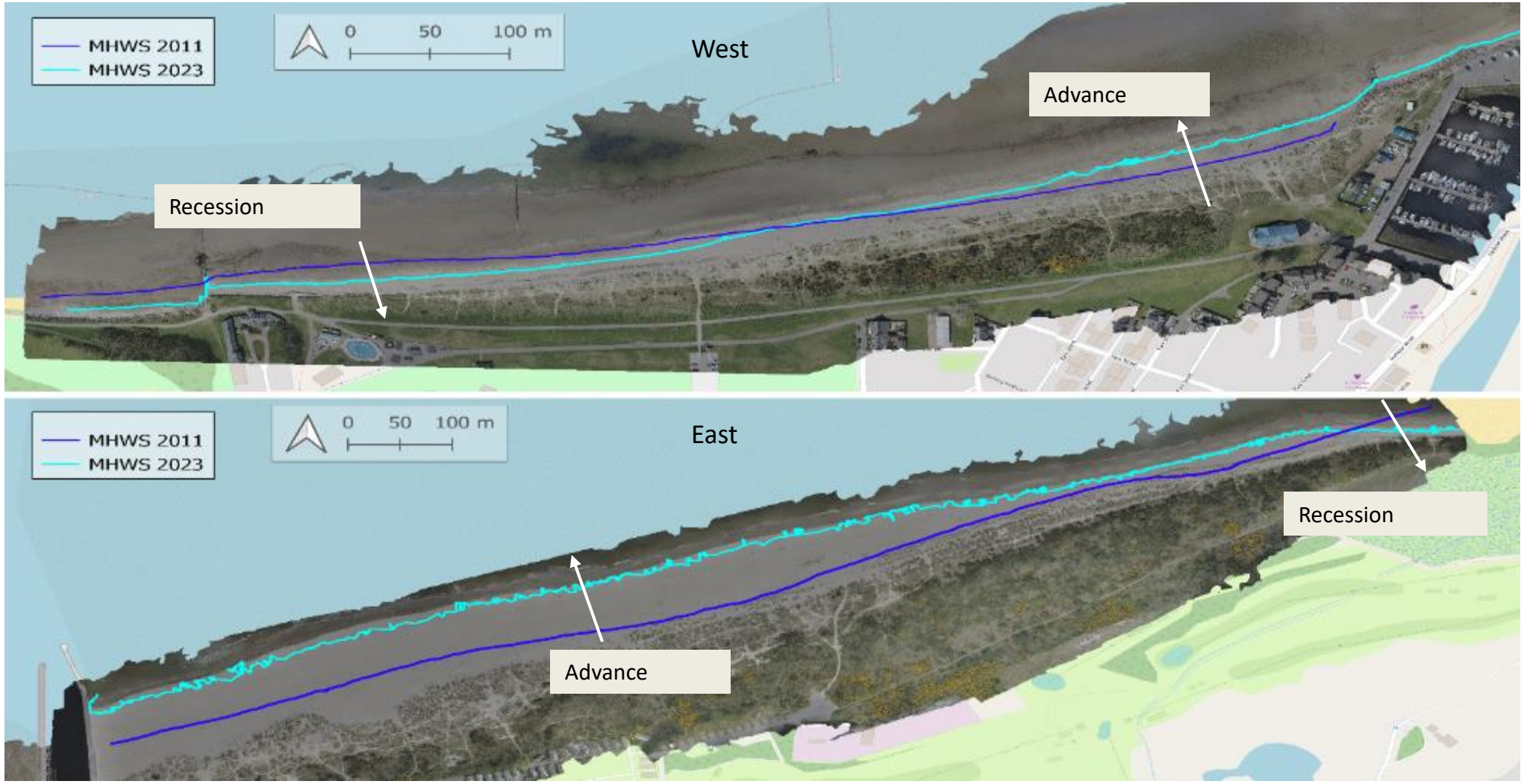
james..green@orkney.gov.uk

Nairn: Dune Resilience and Adaptation

The Fishertown dunes to the east (right) of the mouth at Nairn are narrow and erosional. ©DynamicCoast (2023)

What are the Coastal Erosion and Flood Risks?

What Have We Learnt So Far?



Current Project Next Stages

- Finalise coastal resilience assessment
- Develop pathway options
- Step up a coastal snap station
- Carry out stakeholder engagement with public on the proposed pathway and management of the dunes and beach

Application Process

- Not the most significant area of risk.
- Already had a project in this area.
- Consultant already on board.
- How would we have completed application without Consultant?

SCOTTISH BORDERS COUNCIL

Coastal Change Adaptation

Case Study-
Berwickshire Coastal Path

Sept 2023

Case Study Overview

- The case study aims to better understand how the Berwickshire coastal path can be adapted from its current position based on future climate change.

- Areas along the route are suffering from cliff erosion and surface slips affecting the safe use of the path.

- We are developing an understanding of the area to allow us to review the usage of the path, potential future options and consultation with landowners.

Berwickshire Coastal Path

- Approx 48km (30miles) long.
- One of Scotlands great trails.
- Links the Northumberland Coastal path at Berwick upon Tweed to the Southern Upland Way at Cockburnspath and the John Muir Way in East Lothian.
- Travels through small villages and towns, notably Eyemouth and St Abbs (New Asgard!!)
- Notable features in vicinity of the route are the East Coast mainline, St Abbs Head and Nature Reserve, Fast Castle, Siccar Point, Cove Village and Harbour
- Coastline is also a Special Protection Area and Site of Special Scientific Interest.


To Dunbar
NT 781716
Dunglass Dean
Path link via Dunglass to John Muir Way
Cove
Cove Harbour
NT 785715
Start/Finish
Cockburnspath
A1
Pease Bay
St Helen's Church
NT 804706
Siccar Point
(Hutton's Unconformity)
1 mile
2 kilometres
Pease Dean
Pease Bridge
Old Cambus Quarry
Old Cambus East Mains
Redheugh
Southern Upland Way
To Abbey St Bathans
A 1107
NT 855705
Fast Castle
Dowlaw
Dowlaw Dean
Dowlaw Quarry
No overnight Parking
Dowlaw Moss
NT 879697
'Tun Law Forts'
Highest cliffs on Berwickshire coast
Old Post Road
Moss Road
Admiralty Distance Poles
Lumsdaine
NT 907690
NTS National Nature Reserve
Westerside Dean
Coldingham Common
Lumsdaine Moor
Westerside
Pettico Wick
St Abbs Head
Admiralty Distance Poles
Coldingham Loch
Mire Loch

Scottish Borders COUNCIL

What we hope to learn

- **We are hoping to understand how the path is used, what landowners may feel about adaptation and the paths movement. How the identified approach could be used for other coastal assets.**

- **To understand how coastal assets could be managed in an adaptive way.**

- **Information needed, lessons learnt on consultation**

How are we going to achieve this

- **Look at the future erosion lines from Dynamic Coast and identify key areas that could be at risk of erosion and develop a timeline for future erosion.**

- **Identify and consult with path users, local communities & groups, landowners, businesses, Council Departments, other stakeholders.**

- **Ascertain what the future use of the path and location may look like in the face of erosion and other climate change pressures.**

Predicted outcomes

- **Establish best practice for adapting a coastal path, associated consultation processes and adaptation plans.**
- **Using above identify potential additional funding sources to aid adaptation.**
- **Improve connectivity between local communities.**
- **Landscape and visual benefits to local residents and tourists**
- **Promote wellbeing and mental health improvements for local residents and tourists**
- **Tourism benefits increases to the local economy greater visitor numbers.**
- **Better health and safety measures associated with the coastal path, reduced risk of landslips and path closures.**

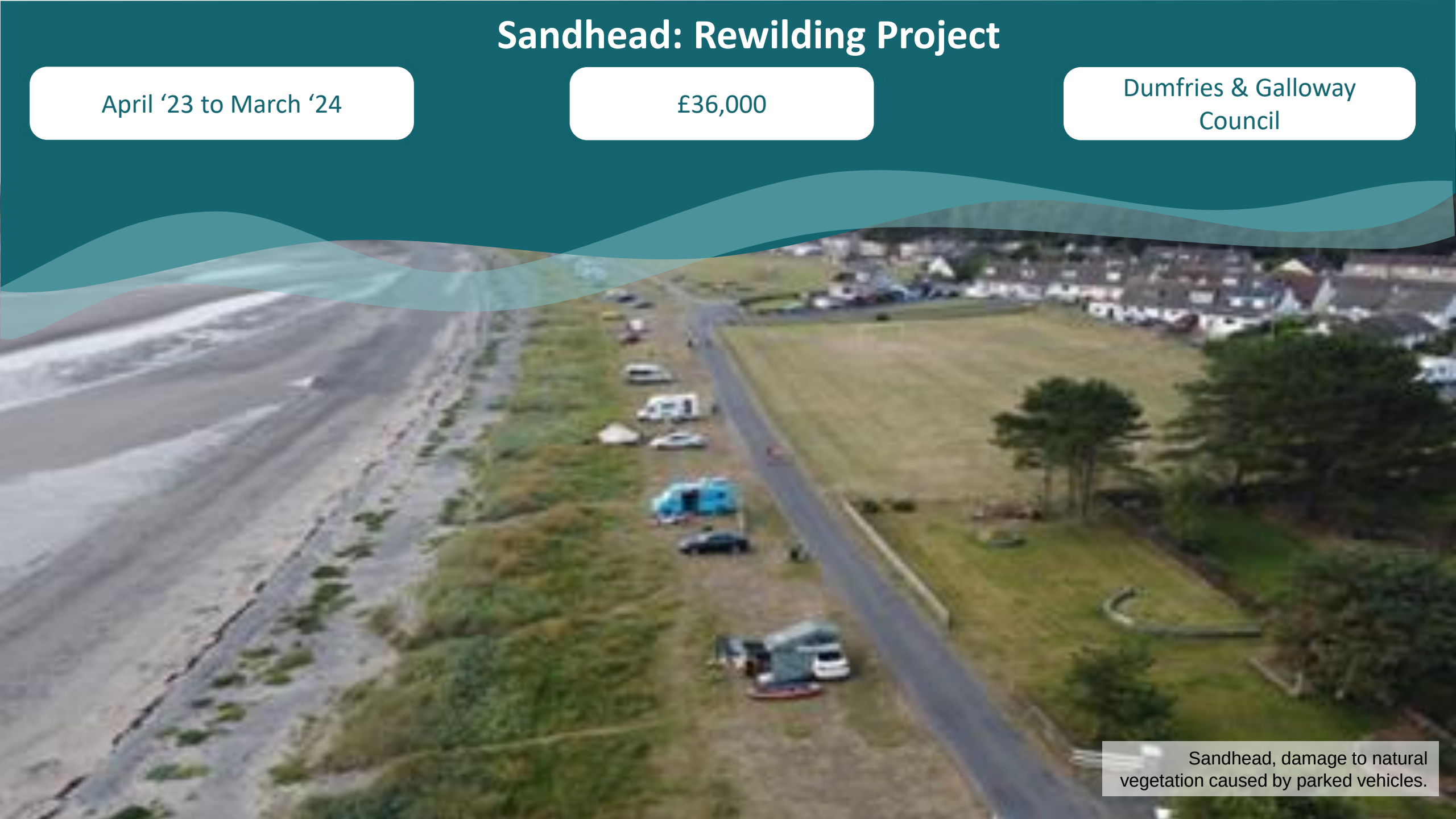
Scottish Borders COUNCIL

Sandhead: Rewilding Project

April ‘23 to March ‘24

£36,000

Dumfries & Galloway Council



Sandhead, damage to natural vegetation caused by parked vehicles.

Sandhead Rewilding Project

- Community Led Project
- Area designated for rewilding
- Area to be fenced off with Chestnut Pale fencing
- 815m in length with 6 access points
- Slip way maintained

Project Benefits

- Prevent vehicle parking and impacts on fragile vegetation
- Reduction of coastal erosion and flooding, whilst supporting wildlife
- Allowing visitors to enjoy the beach

What we are hoping to learn

Through use of monitoring, it is hoped to demonstrate the effectiveness of nature-based solutions to

- slow down coastal erosion,
- re-establish natural vegetation / dunes
- and improve the area for native wildlife species to thrive

Questions?

- Please raise your hand
- Or type your question in the chat
- Let us know your name and organisation
- The Q&A session is not being recorded

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Thanks for your time

- You'll be sent the slides and application form after the webinar. The form is also on Knowledge hub: https://khub.net/group/scotland-coastal-change-adaptation-scots

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