

Moray Coastal Change Adaptation Plan

Hopeman to Covesea Coast

Final Report

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Contract

This report describes work commissioned by Will Burnish, on behalf of Moray Council, by a letter dated 9 August 2022. Moray Council’s representative for the contract was Will Burnish. William Mortimer, Katie Corbett, and Doug Pender of JBA Consulting carried out this work.

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Purpose

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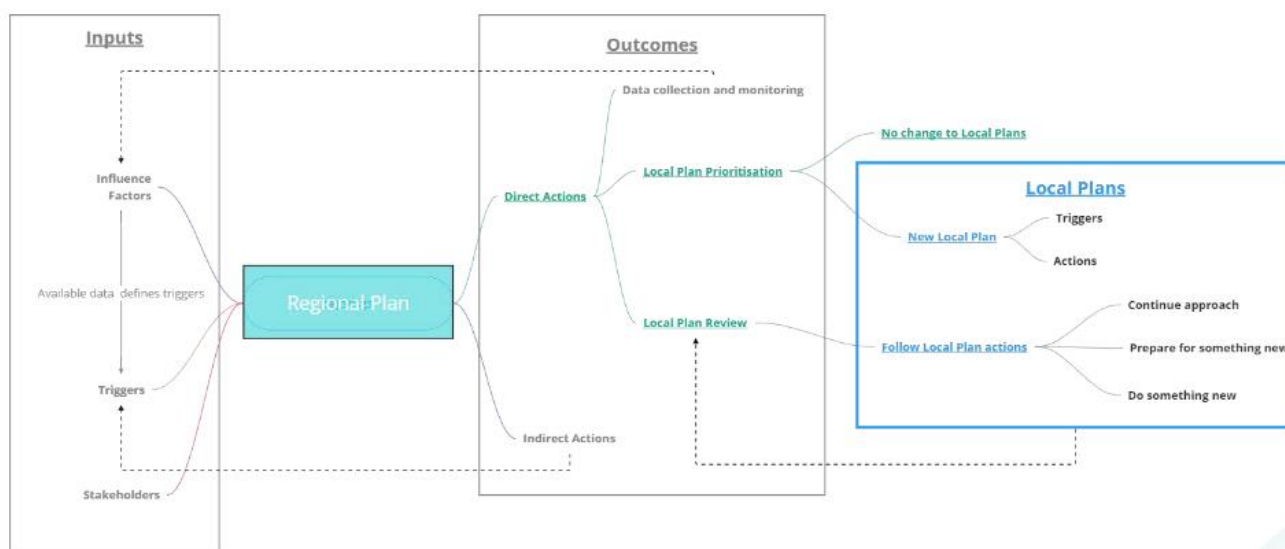
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Executive summary

The report documents the Coastal Change Adaptation Plan (CCAP) for the Hopeman to Covesea Coast Community Area (CA) in Moray. It forms one of the eleven Local Plans, for the Moray Council region.

It aligns with the wider Regional Plan¹ and forms the highest level of detail of the overall Coastal Change Adaptation Planning process adopted by Moray Council.



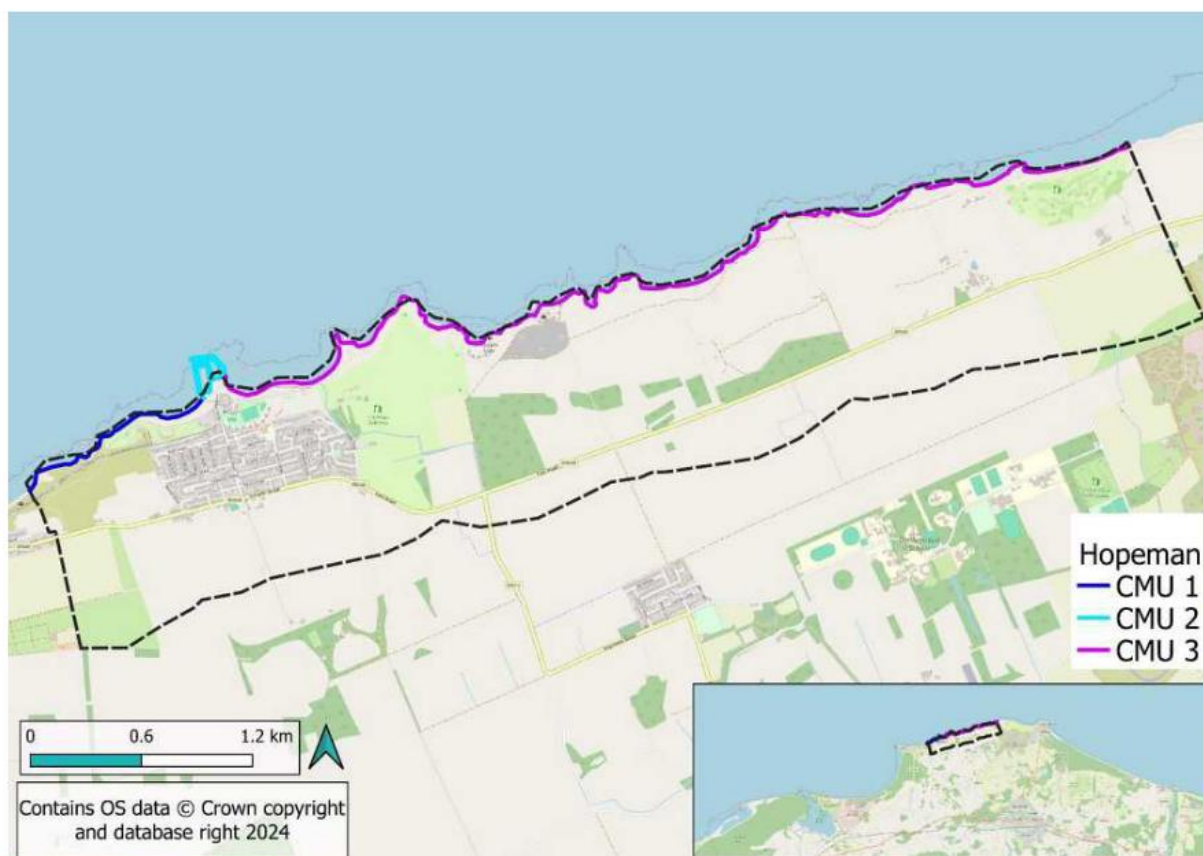
The CCAP provides an overview of the coastal flood and erosion risks to the Hopeman to Covesea Coast CA, which are used to underpin development of possible Adaptation Pathways for this community. These are presented, along with a framework to support proactive coastal risk management, enable implementation of climate change adaptation actions, and link with climate resilient development planning along Moray’s coast.

The Plan has been developed using available datasets from Moray Council, SEPA, and the Dynamic Coast Project. It aims to directly support statutory and non-statutory Moray Council policies, plans, and strategies and aligns with key coastal climate change adaptation guidance and resources within and beyond Moray Council.

This Plan documents the Phase 0 starting point of adaptation, meaning that no definitive preferred Adaptation Pathway or associated Action Plans have been developed. Rather this Plan sets out a framework and process for Moray Council to implement to effectively plan and support sustainable adaptation.

To develop Adaptation Pathways, the coast of the CA was classified into Coastal Management Units (CMUs) defined by 1) classification of coastal landform type, and 2) risk associated with coastal flooding and erosion. A total of three CMUs were identified, and associated Adaptation Pathways were developed for each.

¹ Moray Coastal Change Adaptation Plan: Regional Plan – IRR-JBAU-XX-XX-RP-MO-0001-S4-P03-Regional_Plan



The framework is to be delivered through the defined Implementation Plan by defining Triggers and setting associated Actions against these. A single Implementation Plan is applied to the entire CA, where the outcome of the process determines what direction will be followed within the Adaptation Pathway. The Implementation Plan has three key stages:

- 1) Monitoring and Triggers
- 2) Actions
- 3) Outcomes

Trigger points are identified and set following a risk-based approach and will be identified through repeat monitoring of available data that informs coastal flood and erosion risk.

Realisation of Triggers signal a need for review or change of the Adaptation Pathway. Actions bridge the gap between Triggers and Outcomes and define what processes need to be implemented before an appropriate Outcome is identified. Adaptation interventions are potential measures that can be applied. There are four possible categories:

- 1) No intervention
- 2) Enhance natural features
- 3) Protect
- 4) Create Space

A set of Phase 0 Actions have been identified, that require immediate attention because of Triggers being met in this iteration of the Hopeman to Covesea Coast CCAP. Furthermore, this initial stage of the adaptation planning process has identified several knowledge gaps and opportunities for activities to be undertaken upfront to support coastal change adaptation at the Hopeman to Covesea Coast.

The current iteration of the CCAP is at Phase 0. Triggers met in Phase 0 and associated Actions for each CMU are summarised in the table below. These will be delivered during the first cycle.

Full details of the Phase 0 Actions are included in Appendix C and documented in Section 4.4.

CMU	Trigger	Action
1	No current Triggers	No current Actions
2	No current Triggers	No current Actions
3	Erosion Trigger Exceeded	Increase monitoring and plan for assessment

As well as Triggers and Actions that correspond directly to the Adaptation Pathway and specified CMUs, Proactive Actions that support the whole of the Hopeman to Covesea Coast are summarised below:

- 1) Develop modelling framework to support future assessments.
- 2) Establish coordinated and consistent beach monitoring plan for Natural CMUs.
- 3) Adaptation and resilience workshop with local community and stakeholders.
- 4) Identify landownership and safeguarding space.

Again, these will be delivered during this first cycle.

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Abbreviations

CCAP	Coastal Change Adaptation plan
CA	Community Area
CMU	Coastal Management Unit
DC	Dynamic Coast
mAOD	meters Above Ordinance Datum
MHWS	Mean High Water Spring
NFRA	National Flood Risk Assessment
NRP	Non-residential Property
RCP	Representative Concentration Pathways
RP	Residential Property
SEPA	Scottish Environment Protection Agency
SLR	Sea Level Rise

Glossary

Accretion*	The build-up of sediment resulting in the seaward movement of the coast/ Mean High Water Springs.
Actions*	A plan or policy option that promotes an adaptive approach to coastal change that makes use of long term or resilient solutions such as preserving natural features.
Action Plan*	The proposed strategy or course of action to be taken depending on trigger point reached.
Adaptation*	The adjustment in economic, social, or natural systems in response to actual or expected climate change, to limit harmful consequences and exploit beneficial opportunities.
Adaptation Pathways*	A flexible way of managing future uncertainty by planning for multiple scenarios without rigid timelines responding to the nature of future changes as they unfold.
Asset*	An item, such as a building, that is deemed to have an economic, social, or cultural value (or combination of).
Decision point*	A management action based on a trigger being reached.
Erosion*	The removal of sediment resulting in the landward movement of the coast (Mean High Water Springs)
Hard coast*	Coast that is comprised mainly of materials resistant to erosion such as hard rock types or artificial structures.
Implementation Plan	The framework developed in this first iteration, or Phase 0 of the Adaptation Pathway to support Moray Council in the development of Action Plans for each CMU.
Implementation Plan Actions	Actions that Moray Council will deliver in response to a Trigger being met and will determine the Outcome of the phase of the Adaptation pathway.
Outcomes	Outcomes of the Implementation Plan determine the current path of the Adaptation Pathway.
Soft coast*	A coast composed of unconsolidated sediments, which is not inherently resilient to erosion, but relies on the balance of natural processes to maintain its shape in response to storms and everyday processes.
Triggers*	Either a physical process or an enabler/inhibitor that when reached or a threshold crossed.

*Term definitions from Scottish Government Coastal Change Adaptation Plan Guidance²

² Scottish Government (2023) Coastal Change Adaptation Plan Guidance – Interim
https://www.dynamiccoast.com/files/ccapg_2023feb.pdf

1 Introduction

1.1 Coastal Change Adaptation Planning in Moray

Our climate is changing and throughout history, our coast has responded to changes in sea level, storms, and other climate parameters. This means that the current position of Moray's coast is not fixed but is dynamic and will continue to evolve as our climate changes.

We can no longer use traditional, engineered, coastal risk management approaches in isolation to protect society against these risks. Instead, we must, as a society, become more resilient and adapt to our changing coast through combined coastal risk management with climate resilient development planning on land near the coast. To enable this, we must be proactive in making combined coastal risk and land management decisions which provide long-term space for the coast to naturally respond to coastal climate change risks.

Developing and implementing an Adaptive Framework now to address how society responds to the current and future risks can help to reduce costs and negative impacts such as assets eroding into the sea or suffering repeat, frequency flooding. More positively, a proactive approach to adaptation and climate resilient development planning now can generate wider benefits and opportunities for coastal communities and the ecosystems which sustain and support them.

The Coastal Change Adaptation Plans (CCAPs) provide a key first step in this process; they are a practical mechanism to enable proactive engagement with and involvement of communities to co-develop a shared vision for long-term societal resilience to coastal climate change risk and impacts.

To support this adaptation journey in Moray the coast has been subdivided into Community Areas (CAs) (Figure 1-1). Hopeman to Covesea Coast is one of eleven CAs recognised in the Regional Coastal Change Adaptation Plan (CCAP).

The geology of the Hopeman to Covesea Coast is made up of the New Red Sandstone Supergroup, comprising inter-bedded sandstone, mudstone and evaporites. This rock type is moderately weather resistant and has resulted in a predominantly rocky coastline with high cliffs, interspersed with pocket beaches. The Dynamic Coast project estimates as much as 70m of shoreline retreat could be realised by 2100 at the beaches within CMU 1 to the west of Hopeman and CMU 3 to the east of Hopeman. Furthermore, the community of Hopeman is shown to be at risk of coastal flooding, which will increase in the future.

This provides the justification for a more detailed, local, CCAP which is contained in this document.

The entire Coastal Change Adaptation Plan for Moray is contained within a series of documents, the following should be consulted alongside this CCAP to provide context on the overall process.

- IRR-JBAU-XX-XX-RP-MO-0001-S4-P03-Regional_Plan
 - Provides the region wide plan and process to deliver coastal adaptation across Moray.
- IRR-JBAU-XX-XX-RP-MO-0007-S4-P03-Coastal_Change_Adaptation
 - Provides information on the concept of coastal change adaptation and how this has been applied to the Moray Coastal Change Adaption Plan.

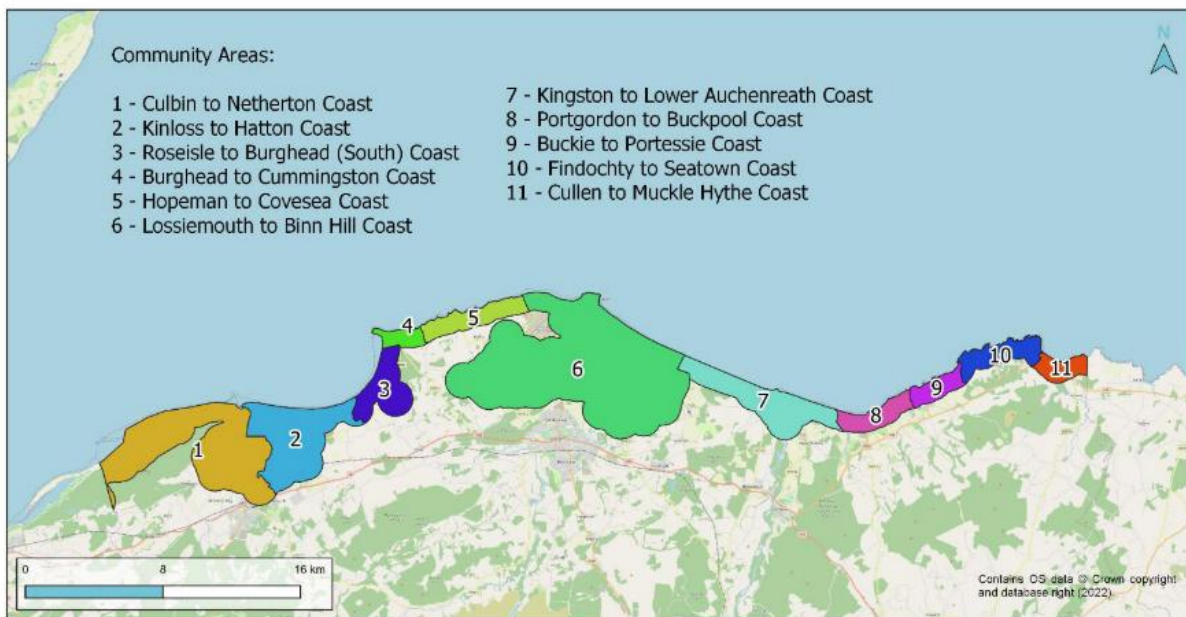


Figure 1-1: Extent and location of CAs within Moray

1.2 What is a Local CCAP?

A Local CCAP follows the same principle as the Regional CCAP but is assessed and developed at a finer level of detail for a specified CA. A local CCAP is developed where a CA has been identified as a high priority, based on risk, development, management, and socio-economic Influence Factors (see Regional Plan for more details). It divides the coast of the CA into individual Coastal Management Units (CMUs) and presents Adaptation Pathways for each. See section 2.2 for more details on CMUs and CMU classification.

1.3 What are adaptation pathways?

Adaptation Pathways are flexible tools that can be used by local authorities, politicians, local businesses, and residents to make current and future decisions across all involved sectors to accommodate coastal change and associated uncertainty.

As well as the traditional management, they should identify opportunities to work with natural processes, enhance the environment and include necessary supportive steps to **create space** (e.g. accommodate erosion through land safeguarding) in preparation for inevitable future sea level rise and associated increases in erosion and flooding.

1.4 What do adaptation pathways do?

Adaptation Pathways aim to identify climate resilient risk management and development pathways for each or CMU; the phases in the pathways, provide flexibility for decisions at various points on the pathway to be modified dynamically through time.

Triggers are used in Adaptation Pathways to signal when the current management approach should be reviewed, and possibly changed, in response to updated information or change of circumstance i.e., risk has increased.

1.5 What is the focus of the Local CCAP?

Adapting to coastal and climate change requires two parallel streams:

1. Land-based initiatives to **prevent** new future risk.
2. Management initiatives to **reduce** current and future risk.

The Local CCAP presented here **focuses only on the management initiatives** but, only by considering these in parallel with those that are land-based will result in a sustainable adaptation journey for Moray. This should identify both the need and practical steps required to safeguard land to support where areas of retreat may be considered in the future.

1.6 Where are we on the adaptation journey?

The aim of this first CCAP is to consolidate our understanding of the physical risks and how these interact with communities and their assets to identify the present day and future hazards of our changing coast for the Hopeman to Covesea Coast. It then identifies and promotes a process that, when implemented by Moray Council, will support community adaptation to coastal change.

The adaptation journey is a multiphase, multiyear process and aims to transition communities into a more sustainable and resilient future. We are currently at **Phase 0**, meaning that no definitive preferred Adaptation Pathway and associated Action Plan have been developed.

1.7 What is the Phase 0 Adaptation Framework?

The overall aim of the framework set out in this Local CCAPs is to:

Guide Moray Council towards development of detailed Adaptation Pathways and associated Action Plans for the Hopeman to Covesea Coast CA.

To achieve this goal the following objectives have been set for Phase 0:

- Identify and characterise local CMUs within the CA suitable for development of future Adaptation Pathways.
- Present coastal flood and erosion risk for each CMU.
- Develop an Implementation Plan to be used by Moray Council to support adaptive decision making, future action planning and evaluation of adaptation options.
- Identify CA and CMU specific Triggers that will influence adaptation decision making.
- Identify and set Proactive Actions that will support delivery of the CCAP in each CMU.
- Inform and support the Local Development Plan⁵ and Local Planning Policy. These should be implemented in parallel to avoid future risk by making space for change.

1.8 How has this framework been developed?

The approach to coastal change adaptation in Moray is presented in the Regional Plan which distils the Scottish Government guidance³ into **four key pillars of adaptation** (Figure 1-2). Development and implementation of the CCAP Implementation Plan should align with these principles.

³ Scottish Government (2023) Coastal Change Adaptation Plan Guidance – Interim
https://www.dynamiccoast.com/files/ccapg_2023feb.pdf

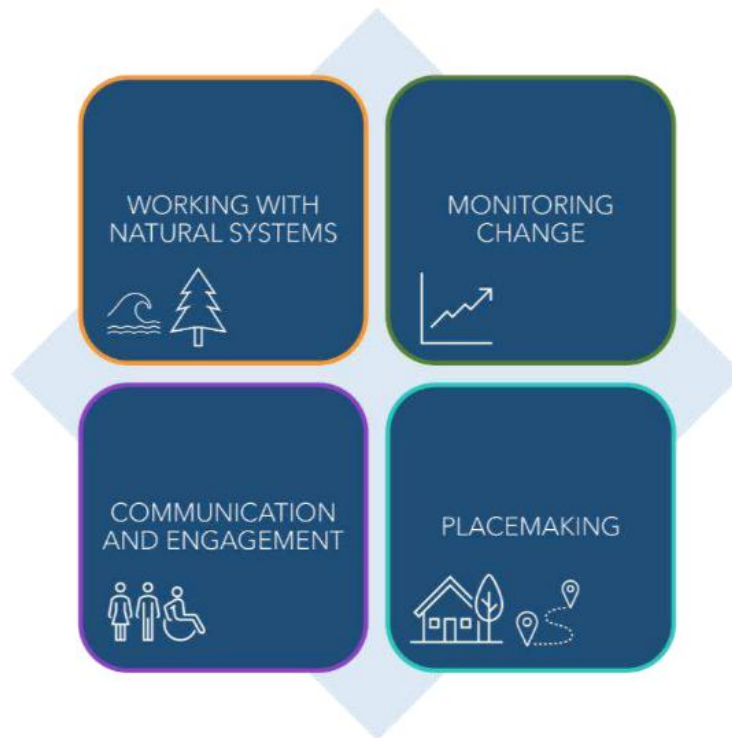


Figure 1-2: Four pillars of coastal adaptation for Moray

1.9 How does the Local CCAP link to the Regional CCAP?

The Regional CCAP links to the Local CCAP in the following ways:

1. Defines the **prioritisation** of Local CCAP with risk, development, management, and socio-economic Influence Factors (see Regional Plan for more details).
2. Sets wide **Proactive Actions** that, when implemented, should be used to support Local CCAP Action Plans.
3. Provides the links between the **land-based** components of the Adaptation Planning process. This includes links with the LDP, and delivery of necessary regional actions required to effectively support and plan for adaptation at a local level e.g. land safeguarding.

2 Plan Overview

2.1 Plan Area and Characteristics

The Hopeman to Covesea Coast CA covers an area of ca. 6.8 km² and is located between the Burghead to Cummington Coast CA and Lossiemouth to Binn Hill Coast CA (Figure 1-1). The CA includes a range of coastal environments and land use areas. The CA also sits within SEPA Potentially Vulnerable Area (PVA) due to the flood risk identified in the Flood Risk Management Plan⁴ (Figure 2-1).

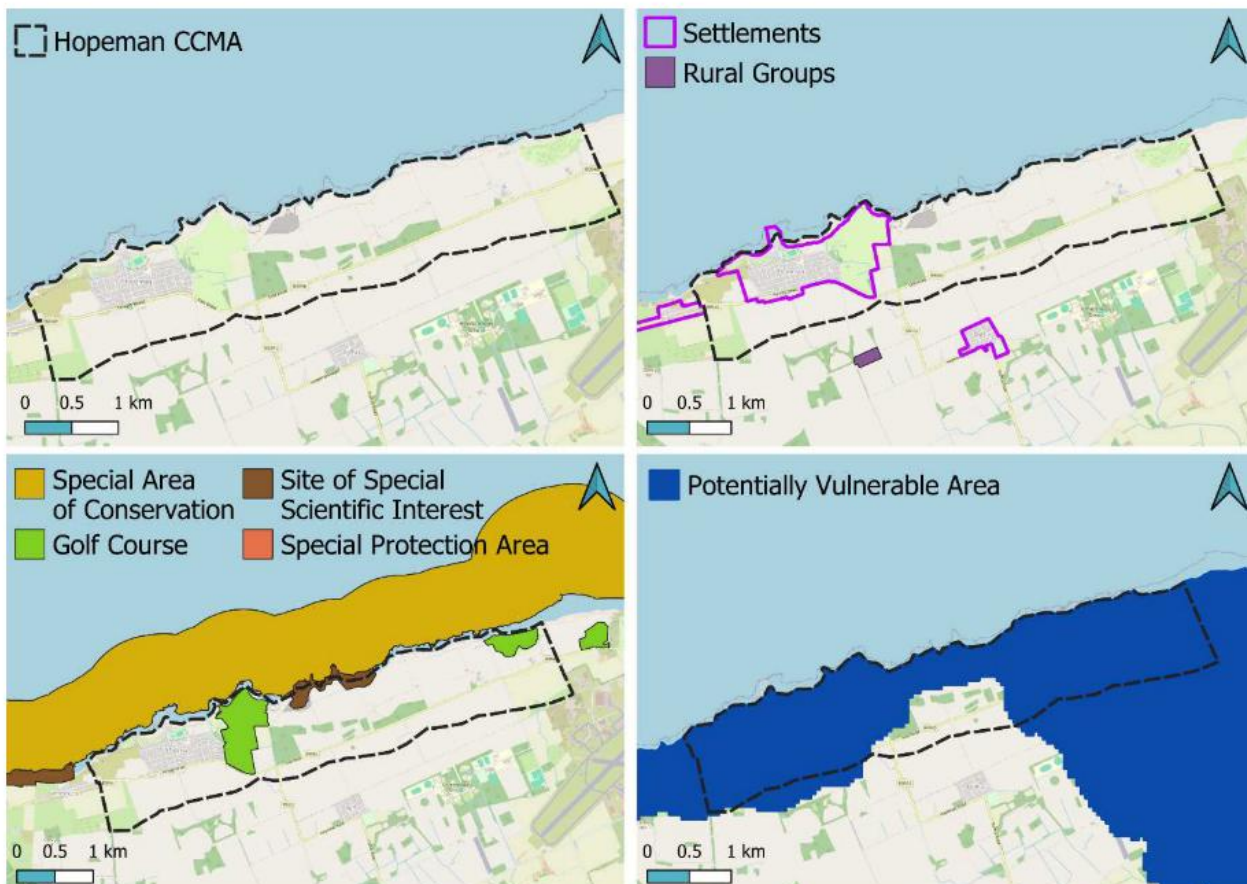


Figure 2-1: Hopeman to Covesea Coast CA, showing settlements, greenspace and environment and special consideration areas.

Settlements:

The Hopeman to Covesea Coast CA includes the settlement of Hopeman, which has a population of approximately 1,724 with 701 households⁵. The Moray Council Local Development Plan⁶ has identified designation areas for specific land use in these settlements.

Greenspace and Environment:

The entire coastline of the CA is a NatureScot designated Special Area of Conservation (SAC) and the coastal waters are a designated Special Protection Area (SPA). There is a 1 km long stretch of coastline east of Hopeman town which is a Site of Special Scientific Interest (SSSI).

4 Moray Council. 2016. Findhorn, Nairn and Speyside Local Flood Risk Management Plan. Section 2.4.4.

<http://www.moray.gov.uk/downloads/file105636.pdf>

5 Moray Council. 2020. Moray Local Development Plan. Volume 2: Settlement Statements.

http://www.moray.gov.uk/moray_standard/page_133431.html

6 Moray Council. 2020. Moray Local Development Plan. Volume 3: Rural Groupings.

There are two golf courses in the CA: Hopeman Golf Course east of Hopeman, and Covesea Links Golf Course on the coast to the east of the CA.

Special consideration areas:

The CA contains part of the Burghead to Lossiemouth (Potentially Vulnerable Area 05/01) as identified in the Nairn and Speyside Local Flood Risk Management Plan (LPD05)⁷. The PVA covers approximately 14 km² is characterised by a long coastline and has several watercourses draining north into the Moray Firth and.

Habitats:

There are three key habitats along the coastal extent identified by Nature Scot (Figure 2-2). These include coastal unvegetated mobile shingle, unvegetated sands and dunes.

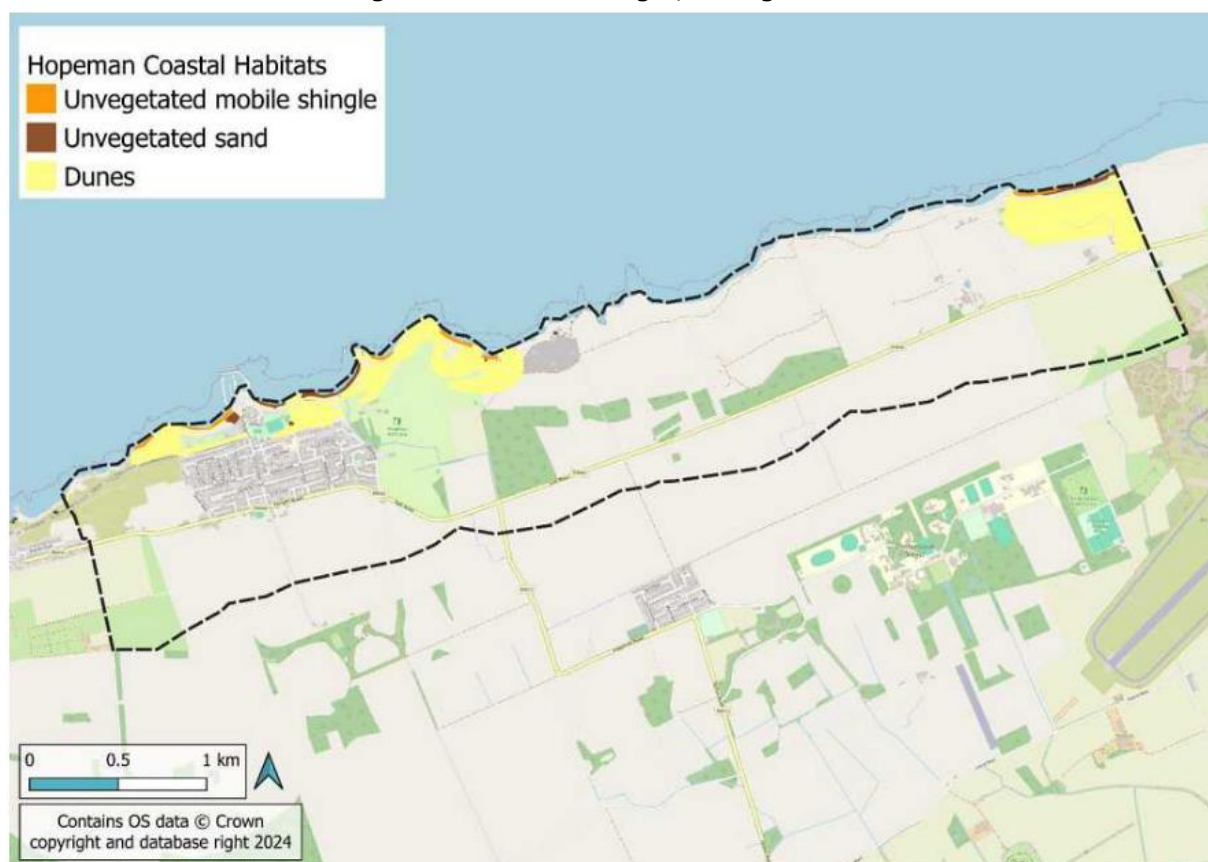


Figure 2-2: Coastal habitats at Hopeman to Covesea Coast as identified by NatureScot.

2.2 Coastal Management Units

To facilitate the development of this Local CCAP, the coast of the Hopeman to Covesea CA is classified into Coastal Management Units (CMUs) defined by:

1. Classification of coast type.
 - a. Natural – beaches, cliffs, dunes, saltmarshes, etc.
 - b. Built Structures – formal engineered structures.

⁷ Moray Council. 2016. Findhorn, Nairn and Speyside Local Flood Risk Management Plan. <http://www.moray.gov.uk/downloads/file105636.pdf>

- c. Hybrid – combination of a and b.
- 2. Risk associated with coastal flooding and erosion.
 - a. Risk and Hazard.
Assets present in CMU, which are at risk of flooding/erosion Hazard.
 - b. Risk and unknown Hazard.
Assets present in CMU, no data on flood/erosion risk available.
 - c. No Risk and Hazard.
No assets present in CMU, but there is still a flooding/erosion hazard.
 - d. No risk and no Hazard.
No assets present in CMU, no flooding/erosion Hazard.

Assets referred to in the risk classification include residential properties, key roads, and infrastructure. Following this, the Hopeman to Covesea Coast CA coast has been subdivided into three CMUs (Figure 2-3). The CMUs are described below including a summary of the coastal change and flood risk. Full details of each CMU are provided in Appendix A.

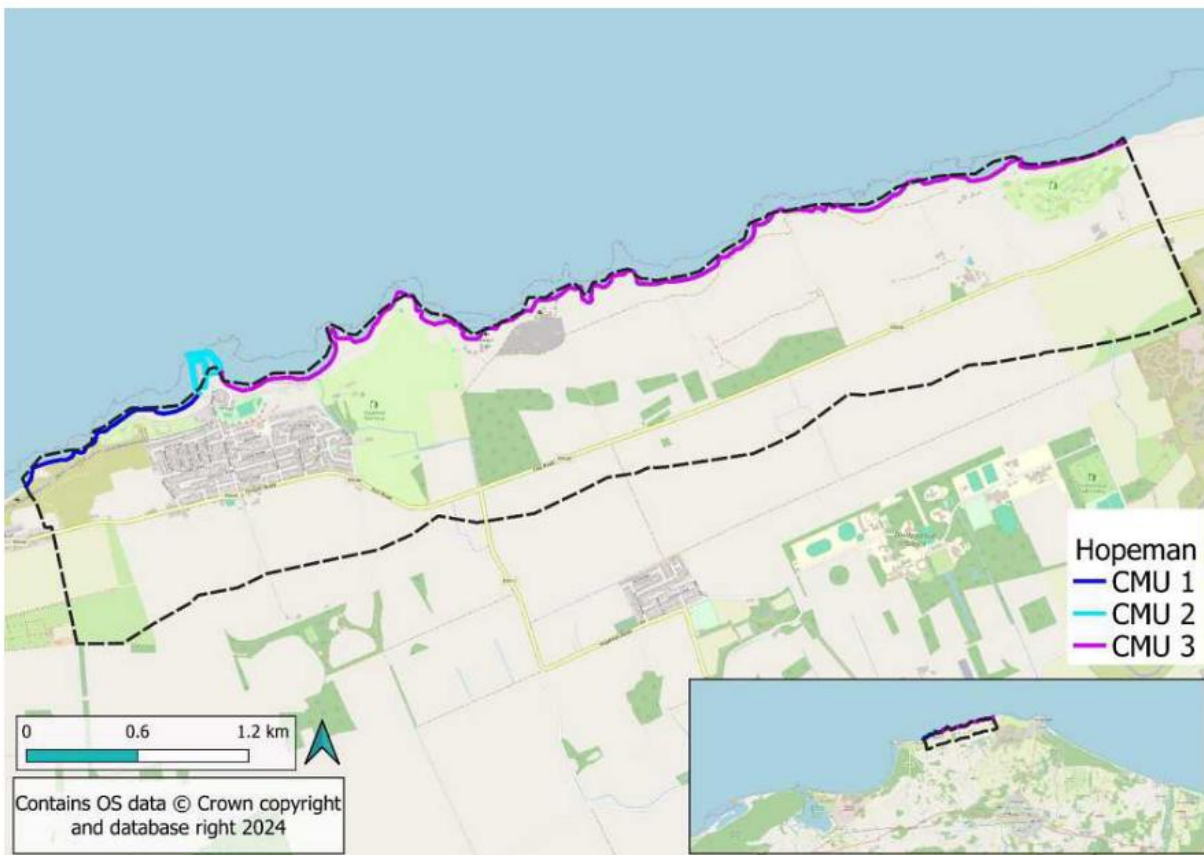


Figure 2-3: Hopeman to Covesea Coast CMU divided coastal extents.

2.2.1 CMU 1: West of Hopeman – Natural

This CMU is a natural coastline, approximately 1.1 km in length, along which there are a series of rocky cliffs and intertidal rock platforms. The CMU extends from Colach Bay, a rocky bay north of Cummingston in the west, through to West Beach, a large sandy beach to the west of Hopeman Harbour and immediately north of West Beach Caravan Park. The Moray Coastal Trail runs the entire length of this unit near the cliff top. The B9040 minor road linking Cummingston to Hopeman runs parallel to the coast on the cliff top, although this is set-back approximately 400 m.

The Dynamic Coast erosion projections show the coastline is susceptible to erosion, specifically parts of Colach Bay and West Beach. The coastline here has an estimated historic rate of retreat of 0.2 m/yr. This rate is projected to increase up to 0.7 m/yr by 2050 and 1.1 m/yr by 2100 leading to an estimated maximum potential distance of retreat of just over 16 m by 2050 and up to 66 m by 2100.

SEPA flood maps show that there is a very small risk of flooding from 1-in-200-year and 1-in-200-year plus climate change events near to Colach Bay, however there is no flood hazard to assets according to NFRA data.

2.2.2 CMU 2: Hopeman Harbour – Built Structures

This CMU is defended by built structures. The unit comprises the complete extent of Hopeman Harbour, a historic landmark built between 1838-1890 to support the local sandstone industry. The Harbour walls are a combination of masonry and concrete structures and are configured into two large basins. The harbour offers over fifty berthing spaces to local leisure boats as well as a safe area for water sports. This unit is small compared to the other two, stretching approximately 500 m around the perimeter.

There is an unknown hazard from coastal erosion in this unit as there is no data available from the Dynamic Coast projections due to the presence of the harbour structures.

SEPA flood maps show that there is a risk of flooding from 1-in-200-year and 1-in-200-year plus climate change events.

2.2.3 CMU 3: East of Hopeman - Natural

This CMU is an expansive stretch of natural coast, approximately 6.1 km in length. It is dominated by rocky platforms backed by high vegetated and rocky cliffs. Dispersed along the unit there are a series of sandy pocket beaches, which include East Beach, Clashach Cove, Primrose Bay and Covesea Beach. Within the unit there are two golf courses: Hopeman Cove Golf Course, situated on the coast immediately east of Hopeman, and Covesea Links Course, situated directly landward of Covesea Beach.

The Dynamic Coast erosion projections show widespread susceptibility to erosion and coastal retreat within this unit, specifically at the sandy beaches.

Dynamic Coast data shows that historically the shoreline has retreated at maximum rate of 0.7 m/yr. Maximum future erosion rates are expected to increase to 0.8 m/yr by 2050 and to 1.2 m/yr by 2100. This would result in a maximum of 73 m of land loss caused by shoreline retreat by 2100.

Hopeman Beach Huts and public parking off Harbour Street are impacted by the erosion projections. According to the Dynamic Coast dataset, the assets within the projected erosion vicinity in 2100 under the High Emission Scenario would comprise two non-residential properties and up to nine residential properties.

2.3 CMU categorisation for local adaptation plan

Review of the characteristics and risk associated with each CMU led to the classifications summarised in Table 2-1. These were used to develop initial Adaptation Pathways, Triggers, and an associated Implementation Plan.

Table 2-1: Hopeman to Covesea Coast CMU categorisation.

CMU	Coastal Type Classification	Risk Classification
1	Natural	Risk and Hazard
2	Built Structures	Risk and Hazard
3	Natural	Risk and Hazard

3 Adaptation Pathways

Development of Adaptation Pathways for each CMU are based on the classification presented in Table 2-1. This aims to provide a flexible approach to adaptation that works towards a defined and desirable end outcome for the CMU and CA.

Details of this outcome are however, not defined at this stage, and will ultimately be dependent on monitoring changes to the following factors at the coast and on land adjacent to the coast:

- **Natural systems**
 - Habitat.
 - Greenspace.
- **Climate**
 - Climate change guidance.
 - SEPA flood maps or risk assessments.
 - Coastal flood occurrence.
 - Coastal erosion risk.
- **Risk exposure**
 - Change in defence condition.
 - Update to SEPA flood warning system.
 - Erosion risk buffer exceeded.
 - Flood risk threshold exceeded.
- **Socio-economics**
 - Changes of asset ownership.
 - Changes of land ownership.
 - Community pressures.
 - Tourism.

Adaptation Pathways for each CMU are presented in the following sections.

3.1 CMU 1 and 3 Adaptation Pathways

CMU 1 and 3 are classified as natural coasts and have been assigned an adaptation pathway for natural coastlines with risk from erosion, flooding, or both (Figure 3-1):

- **CMU 1 = Natural with risk and hazard**
- **CMU 3 = Natural with risk and hazard**

Phase 0 of the adaptation pathway (1st column) is the current action undertaken by Moray Council in respect of these CMUs. Here this is **No Intervention**. This means that there will be no coastal and/or erosion risk management interventions during this phase.

For the adaptation pathway to move to Phase 1 (2nd column of potential actions) a pre-defined Trigger must be realised. Then, depending on the outcome of any Implementation Plan Actions, this may or may not result in a change to the management approach adopted for the CMU.

Consultation of the CCAP Implementation Plan (Section 4.1) will guide the process and ultimately the pathway to adaptation.

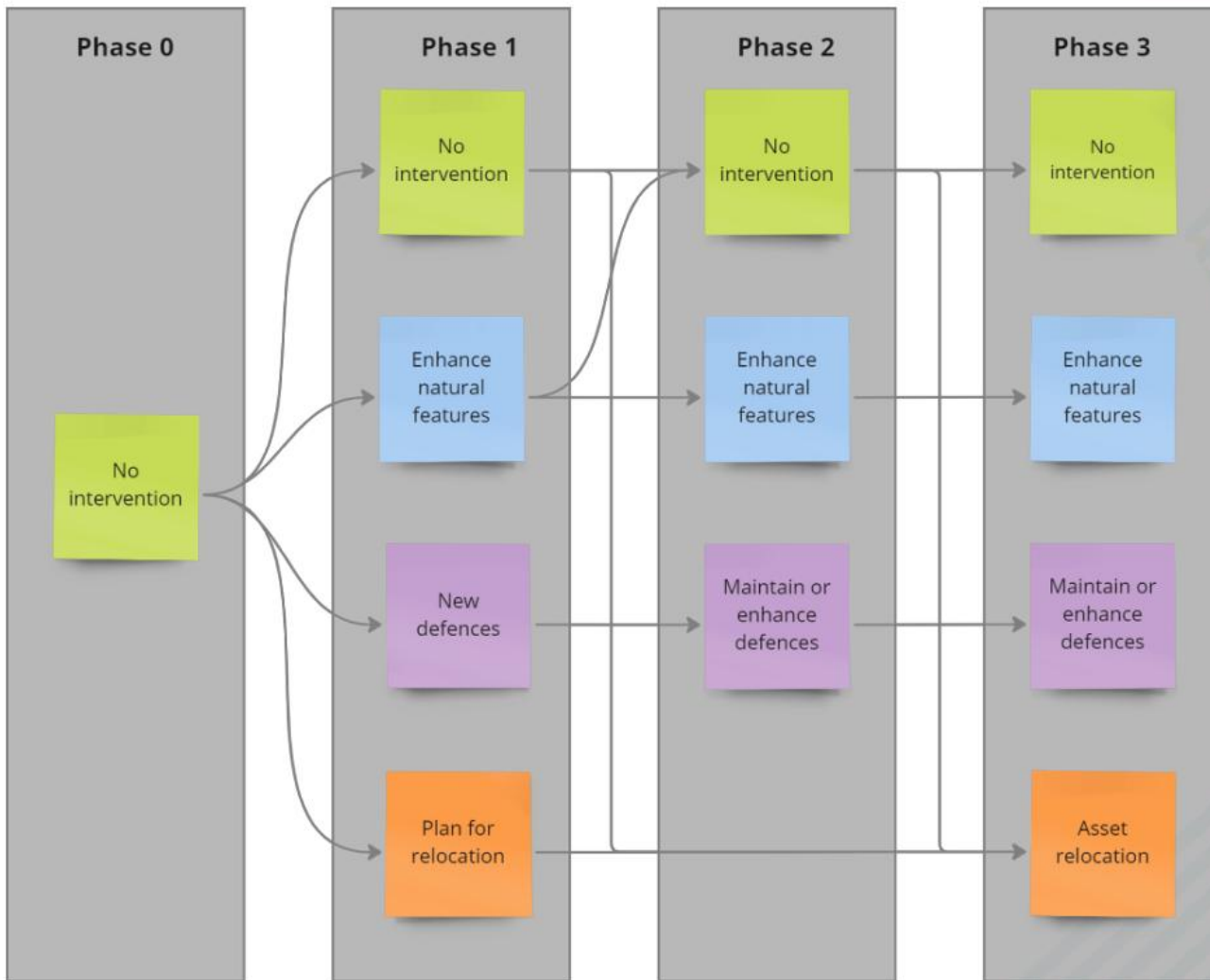


Figure 3-1: Adaptation Pathway for CMUs 1-3 (natural coast). Grey lines represent possible future pathways.

3.2 CMU 2 Adaptation Pathway

CMU 2 comprises the seawalls of Hopeman Harbour, and therefore has been assigned an adaptive pathway for built structures. Within CMU 2 there is risk of coastal flooding (Figure 3-2).

- **CMU 2 = Built Structures with risk and hazard**

Phase 0 of the adaptation pathway (1st column) is the current actions undertaken by Moray Council in respect to these CMUs. In CMU 2 this is **Maintain Defences** as Moray Council are responsible for maintaining the Harbour structures. This means that there may be coastal flooding and/or erosion risk management interventions and maintenance of existing structures during this phase.

For the adaptation pathway to move to Phase 1 (2nd column containing potential actions) a pre-defined trigger must be realised. Then, depending on the outcome of any Implementation Plan Actions, this may or may not result in a change to the management approach adopted for the CMU.

Consultation of the CCAP Implementation Plan (Section 4.1) will guide the process and ultimately the pathway to adaptation.

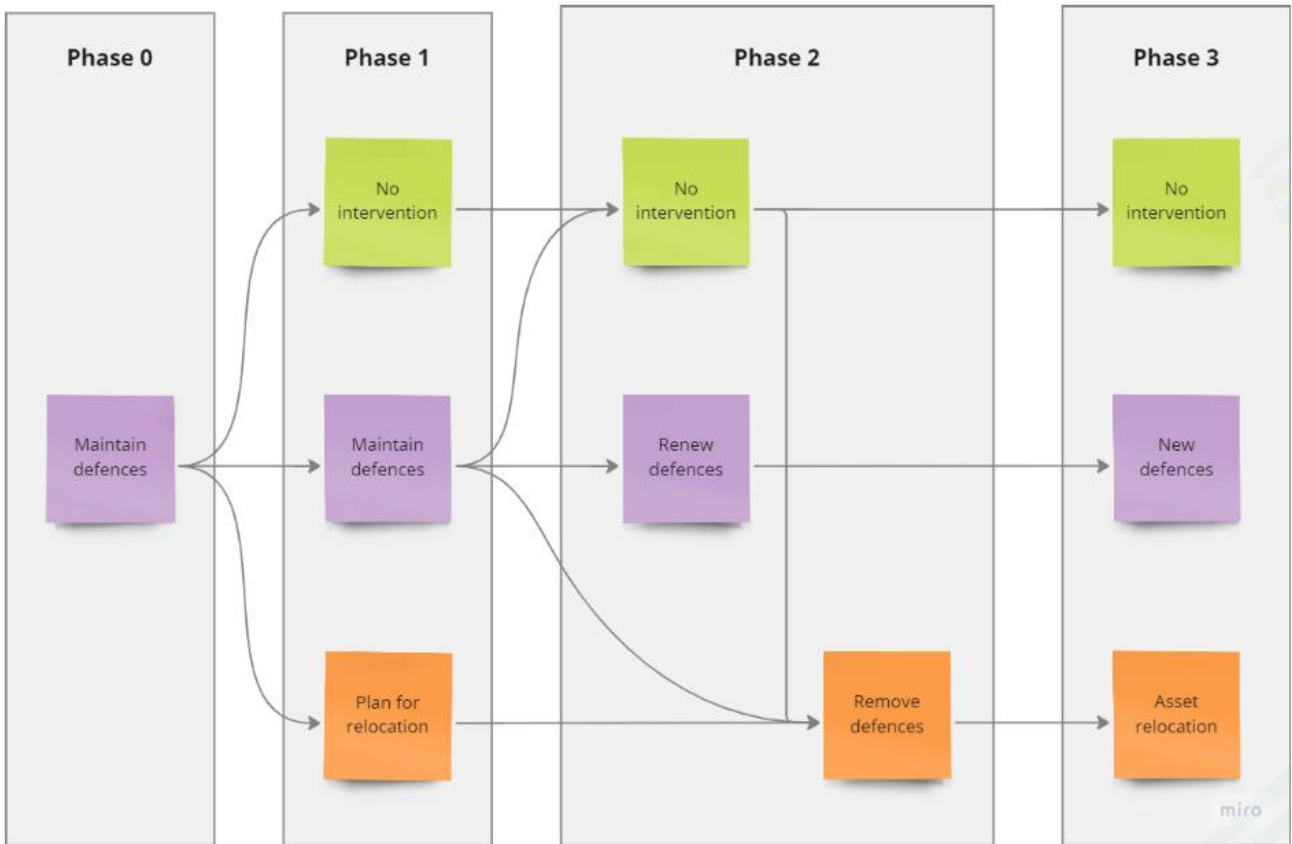


Figure 3-2: Adaptation Pathway for CMU 2 (built structures). Grey lines represent possible future pathways.

4 Adaptation Process

4.1 Implementation Plan

To support the delivery of the Adaptation Framework, a single Implementation Plan is applied to the entire Hopeman to Covesea Coast CA with generic triggers and actions set that are relevant across the CA. Specific triggers and actions are then assigned to each CMU based on the Risk Assessment. Outcomes of the Implementation Plan link to the Adaptation Pathway specific to each CMU.

Delivery of the Implementation Plan has three stages (Figure 4-1):

- 1) Monitoring and Triggers (Section 4.2)
- 2) Actions (Section 0)
- 3) Outcomes (Section 4.6)

The outcome of the Implementation Plan determines what path will be followed within the Adaptation Pathway when moving to a new phase.

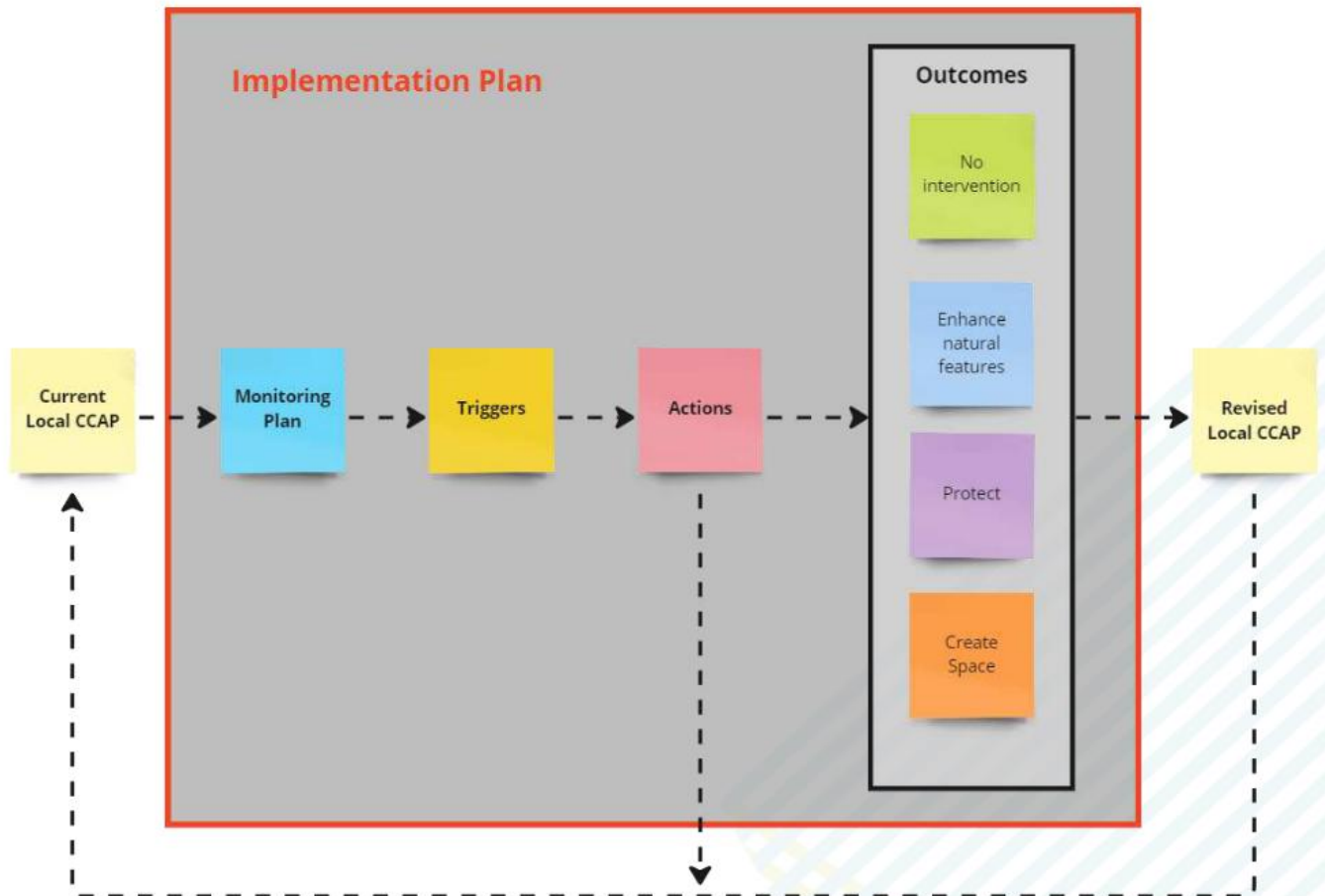


Figure 4-1: High-level Implementation Plan.

4.2 Monitoring and Triggers

4.2.1 Monitoring

Triggers are realised through monitoring of available data that informs risk of flooding and erosion. Triggers signal the requirement to deliver the Implementation Plan, which may lead to a review of the Risk Assessment and potential change to the Adaptation Pathway.

Triggers are categorised as:

- Natural systems triggers.
- Climate triggers.
- Risk exposure triggers.
- Socio-economic triggers.

These are subsequently grouped into categories with each requiring a plan for monitoring within the CA:

- Third party data and information.
- Moray Council data and information.
- Moray Council monitoring.
- External pressure.

4.2.2 Trigger Classification

Classification of the triggers falls into two parts.

1. Generic triggers applicable to the entire CA.
2. Bespoke triggers applicable to individual CMUs.

Climate, natural system, and socio-economic triggers are generic for the whole CA (Table 4-3), but risk exposure triggers related to physical flooding, erosion and overtopping thresholds are specific to each CMU. For the Hopeman to Covesea Coast CA these are summarised in Table 4-3.

Effective review of these requires development of a monitoring plan of risk for each CMU as follows:

- CMU 1: Monitoring of Erosion Hazard
- CMU 2: Monitoring of Flood Hazard
- CMU 3: Monitoring of Flood and Erosion Hazard

4.2.3 CMU-specific flooding trigger

Based on SEPA's NFRA data, where there is risk of flooding, the elevation of assets at risk are compared to sea levels taken from the SEPA tide gauge at Buckie. Assets considered at risk from flooding include:

- Residential properties.
- Key roads.
- Harbour infrastructure

Where flood risk is present in a CMU, the lowest elevation of a residential property (minus 300mm freeboard) or key road is used to determine a frequency of exceedance using the tide gauge levels (Table 4-1).

At Hopeman to Covesea Coast, current SEPA maps indicate negligible flood risk to residential properties and key roads. Therefore, no flooding triggers have been set.

4.2.4 CMU-specific erosion trigger

Where there is risk of erosion, the distance from the asset at risk to the coast is used to define the Trigger. For properties, roads and other features, the coast is defined by the landward extent of the natural feature e.g. beach, barrier, spit, or cliff. Assets considered at risk from erosion include:

- Residential properties.
- Key roads.
- Other features, such as carparks and golf courses.

To note, if two assets are in the same location (e.g. a road and property) only the most seaward asset is used to define the Trigger for that CMU.

A two-level approach is defined using buffers around the asset at risk. The associated action is, again, dependent on the consequence and asset at risk.

Erosion buffer distances (metres) for each level are defined as follows:

- **Residential properties**
 1. Maximum of historic erosion rate multiplied by 20 or 20m.
 - Increase monitoring and plan for assessment.
 2. Maximum of historic erosion rate multiplied by 10 or 10m.
 - Undertake assessment and plan for intervention.
- **Roads and other features**
 1. Maximum of historic erosion rate multiplied by 5 or 5m.
 - Increase monitoring and plan for assessment.
 2. Maximum of historic erosion rate multiplied by 2 or 2m.
 - Undertake assessment and plan for intervention.

Level 1 erosion trigger has been met for the property in CMU 3 (Table 4-1). Location of all assets used for erosion triggers are shown in Figure 4-2 and Table 4-2.

Table 4-1: CMU-specific erosion triggers for Hopeman to Covesea Coast properties, roads, and features. Cells shaded red indicate that the erosion trigger has been met.

CMU	Maximum historical change rate (m/year)	Present-day distance of Property to coast (m)		Erosion trigger level 1: Coast X m from property	Erosion trigger level 2: Coast X m from property
3	0.7	Residential property	17	20	10
CMU	Maximum historical change rate (m/year)	Present-day distance of feature to coast (m)		Erosion trigger level 1: Coast X m from feature	Erosion trigger level 2: Coast X m from feature
1	0.2	Non-residential property	55	5	2
3	0.7	Non-residential property	25	5	2

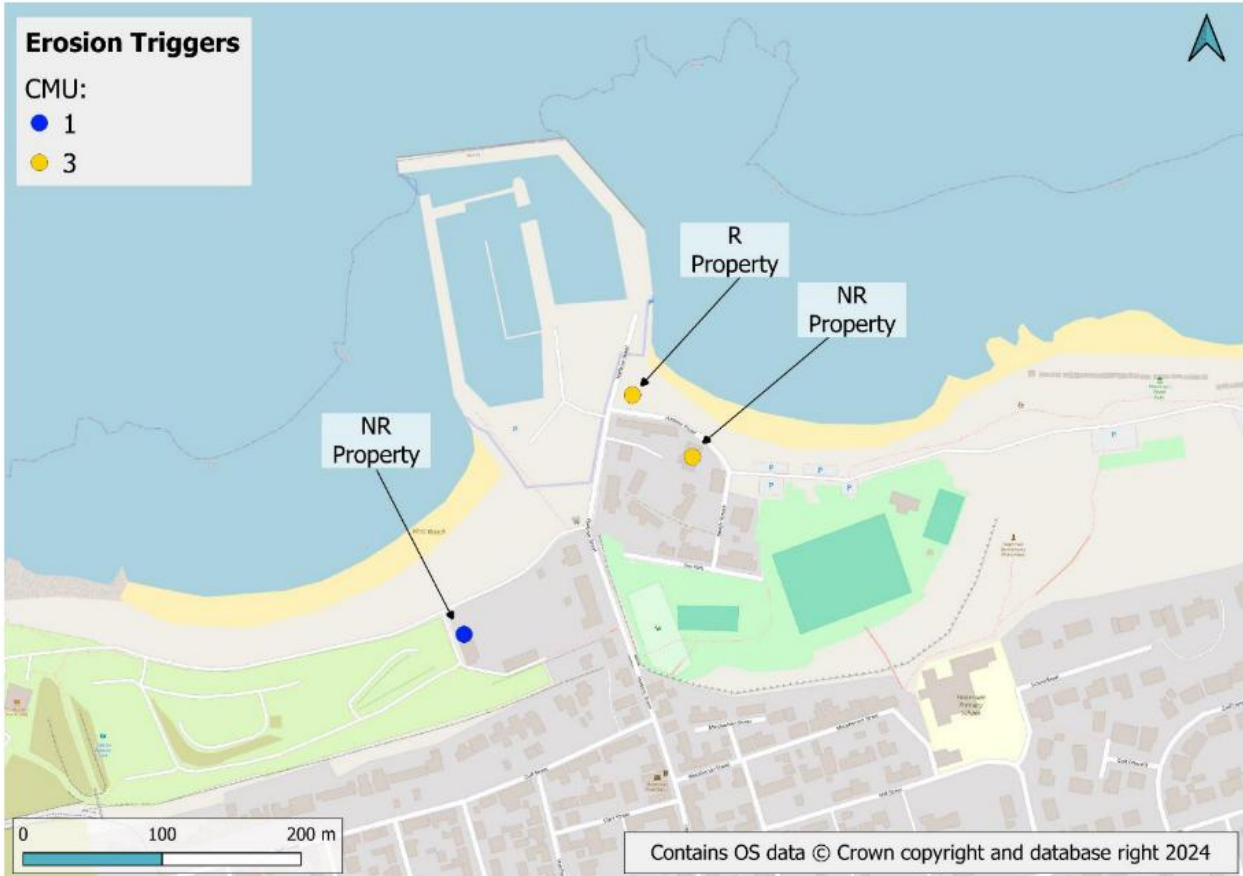


Figure 4-2: Hopeman to Covesea Coast erosion trigger locations.

Table 4-2: Hopeman to Covesea Coast erosion triggers

CMU	Asset	Trigger Met	Erosion Trigger
1	Non-residential property	No	

3	Residential property	Yes – Level 1	
3	Non-residential property	No	

4.2.5 CMU-specific condition triggers

Where a coastal defence is present in a CMU, a CMU-specific trigger will be applied to the condition of the coastal defence. Currently, coastal defences are present in:

- CMU 2

As with the other CMU-specific triggers, a two-level condition trigger approach and associated action is defined using the grades of coastal defence condition according to the EA and Defra condition assessments⁸:

- **Condition trigger level 1:**
 1. Defence condition Grade 4
 - Increase monitoring and plan for assessment.
- **Condition trigger level 2:**

⁸ Environment Agency (2013) Practical guidance on determining asset deterioration and the use of condition grade deterioration curves: Revision 1.

1. Defence condition Grade 5:

- Undertake assessment and plan for intervention.

These CMU-specific condition triggers assume coastal defences are currently Grade 3 but this should be reviewed upon completion of the Regional Proactive Actions for defence condition (Section 4.7).

4.2.6 New information trigger

New information on hazards, vulnerability, built structure and infrastructure assets etc will become available regularly as the CCAP is implemented. The new information trigger acknowledges this and accounts for changes to properties, roads, key features, or assets available from Dynamic Coast or the NFRA.

This new information may be provided by a Council/ stakeholder member or local resident of the CA and would trigger a review of the relevant part of the CCAP.

- **New Information trigger:**

1. New information received of asset at risk:

- Understand risk and, if relevant, set adaptation triggers and actions.
- Incorporate into monitoring plan.

4.2.7 Moray Coastal Trail

Impact of flooding and erosion on the Moray Coastal Trail⁹ (MCT) is yet to be quantified but it will likely become badly affected by coastal change and flooding in both the short and long-term.

As part of delivery of the Regional Plan a more detailed assessment will be undertaken to understand the impacts of climate change on the MCT (Regional Proactive Action). This will provide opportunities for investigation options to enhance and retain the amenity.

4.3 Actions

Actions, like Triggers, are also applied to the entire CA, or to specific CMUs where the risk of flooding and/or erosion is identified. Actions will be specific to CMUs where, for example, a coastal defence is present; a natural protective feature is present; the risk of flooding/erosion is localised; assets are at risk of flooding/erosion.

Actions applicable to the Hopeman to Covesea Coast CA have been identified in Table 4-3. These are based on the Phase 0 Triggers only and it is possible that more will be required as a reactive response to change. Delivery of the Regional Plan¹⁰ Proactive Actions are also required to support. The types of actions are summarised below:

Review risk assessment:

Involves a review of available data and associated risk assessment. Increased monitoring, planning, and implementing an assessment, and planning for intervention because of the erosion and flooding triggers are included in the review risk assessment action.

Community engagement:

- **Places:** Involves local groups, such as Councillors and community groups.
- **Practice:** Involves third party stakeholders, such as SEPA, Scot Gov, Nature Scot etc.
- **Asset:** Includes private defences and harbours and utilities specific to each built structure or hybrid CMU.

⁹ <https://www.morayways.org.uk/routes/the-moray-coast-trail/>

¹⁰ IRR-JBAU-XX-XX-RP-MO-0001-S4-P03-Regional_Plan

Post flood data collection:

Involve community engagement, surveys, photographs etc.

New risk assessment:

Following a review of the current risk assessment and/or community engagement, a new risk assessment may be required. Should a new assessment be deemed necessary this should follow appropriate guidance¹¹ and include all necessary components to develop a preferred Adaptation Pathway and associated Action Plan for delivery. E.g. risk, economics, social, environment, engineering, land use planning etc.

Actions bridge the gap between Triggers and Outcomes and define what processes need to be implemented before the most appropriate Outcome is recognised and delivered for each CMU. Actions linked to specific triggers and relevant to the Hopeman to Covesea Coast CMU are included in Table 4-3. These highlight what may be delivered during the Phase 0 cycle and are dependent on the associated Trigger being realised.

Table 4-3: Triggers, trigger categories and associated actions for each Hopeman to Covesea Coast CMU.

Category	Trigger	Action	CMU
Natural Systems	Changes to habitat	Community engagement (places)	CMU 1 CMU 3
	Changes to greenspace	Community engagement (places)	CMU 1 CMU 3
Climate	Update to climate guidance	Review risk assessment Community engagement (practice)	All
	Update to SEPA flood maps	Review risk assessment Community engagement (practice)	All
	Coastal flood occurrence	Review risk assessment Community engagement (places, asset) Post flood survey	All
Risk exposure	Defence condition	Community engagement (asset)	CMU 2
	Update to SEPA flood warning	Review risk assessment Community engagement (places, practice)	All
	Erosion buffer exceeded	Review risk assessment Community engagement (places)	CMU 1 CMU 3
	Flood risk threshold exceeded	Review risk assessment Community engagement (places)	All

¹¹ Scottish Government. 2016. Flood protection appraisals: guidance for SEPA and responsible authorities <https://www.gov.scot/publications/guidance-support-sepa-responsible-authorities/pages/2/>

	Update to Dynamic Coast	Review risk assessment Community engagement (practice)	All
Socio-economic	Changes of asset use	Community engagement (asset)	All
	Changes of asset owner	Community engagement (asset)	All
	Community pressure	Review risk assessment Community engagement (places)	All

4.4 Phase 0 Actions

Phase 0 Actions require immediate attention and have been identified by triggers realised through the development process of this initial CCAP for Hopeman to Covesea Coast. There is one trigger identified and outlined below:

- CMU 3:
 - Trigger 1: Erosion risk threshold exceeded (level 1)
 - **Action 1:** Increase monitoring and plan for assessment.

An overall summary of all CMUs, Triggers, buffers, and Phase 0 Actions is provided as a standalone record in Appendix C for clarity.

4.5 Supporting Steps and Proactive Actions

The nature of adaptation means that future decisions and directions are unknown and will be affected by external changes not necessarily under Moray Council’s influence. It is critical that proactive supporting steps and Proactive Actions are undertaken to enable effective decision making in the future.

Proactive Actions are defined as those whereby there should only be benefit. Undertaking these can therefore only have a positive impact on supporting adaptation or increasing resilience.

At this stage in the adaptation planning process four such actions have been identified. These have been developed focusing on the key pillars identified previously and through review and understanding of key knowledge gaps. They therefore aim to close these knowledge gaps at this stage and support alignment with wider aspects of the adaptation plan for the region.

A summary of these actions is provided in Table 4-4, with further details on each included in Appendix B. These are designed to complement the wider Proactive Actions identified in the Regional CCAP.

Table 4-4: Local Proactive Actions.

Action	Details	Pillars
1	Develop modelling framework to support future assessments	Working with Natural Processes
2	Establish coordinated and consistent beach monitoring plan for Natural CMUs	Monitoring Change
3	Adaptation and resilience workshop with local community and stakeholders	Community and Engagement
4	Identify landownership and safeguarding space. This should link with Regional Proactive Action 6 to identify and define local opportunities.	Placemaking

4.6 Outcomes

Outcomes are the potential intervention measures that will be implemented after a trigger is realised and the associated actions, defined in the Implementation Plan, have been undertaken. There are four possible outcome categories:

- 1) No intervention.
- 2) Enhance natural features.
- 3) Protect.
- 4) Create Space.

These Categories however are general, and nuances and variations may result upon completion of any more detailed study.

As the Implementation Plan is applied at CMU level, the ultimate outcome is dependent on the CMU and the associated Adaptation Pathway. Table 4-5 summarises the general and specific CMU outcomes for the Hopeman to Covesea Coast CA.

Table 4-5: Hopeman to Covesea Coast CA possible outcomes.

Category	Outcome	Hopeman to Covesea Coast CMU
No intervention	No intervention	CMU 1 CMU 3
Enhance natural features	Enhance natural features	CMU 1 CMU 3
Protect	Maintain defences	CMU 2
	Sustain* defences	CMU 2
	Improve** defences	CMU 2
Create space	Set back defences	All
	Relocate assets	All
*standard of performance is sustained into the future in response to climate change **standard of performance is improved beyond the current and then maintained in response to climate change		

The complete Implementation Plan for the Hopeman to Covesea Coast is shown in (Figure 4-3); structured using the three stages: 1) Monitoring and Triggers, 2) Actions, and 3) Outcomes.

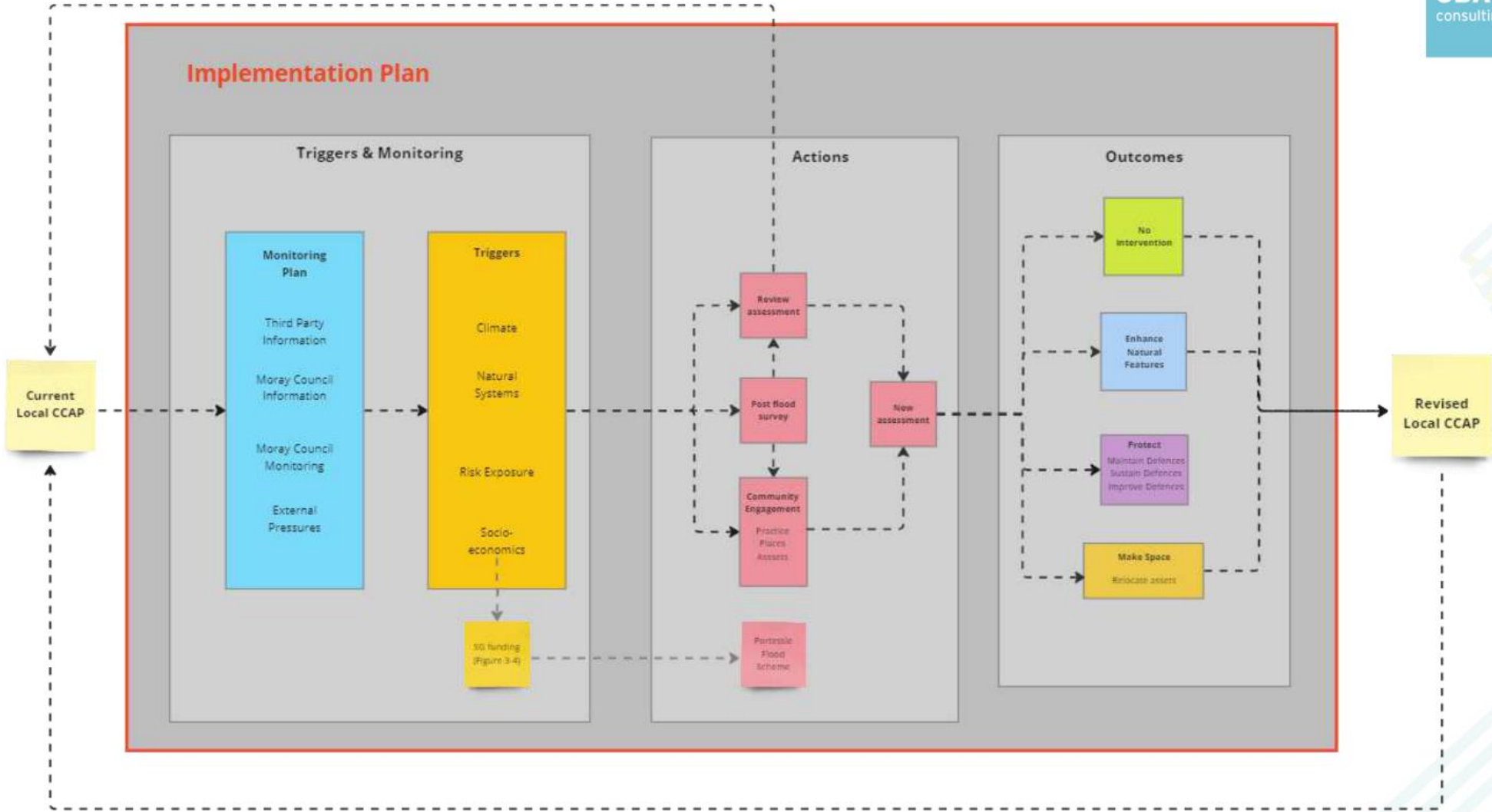


Figure 4-3: Complete Implementation Plan for the Hopeman to Covesea Coast CA.

4.7 Example application

Figure 4-4 provides a schematic describing an example application of the Implementation Plan and how it fits in with the wider Adaptation Framework for the Hopeman to Covesea Coast. The red box highlights the processes described in this iteration of the CCAP.

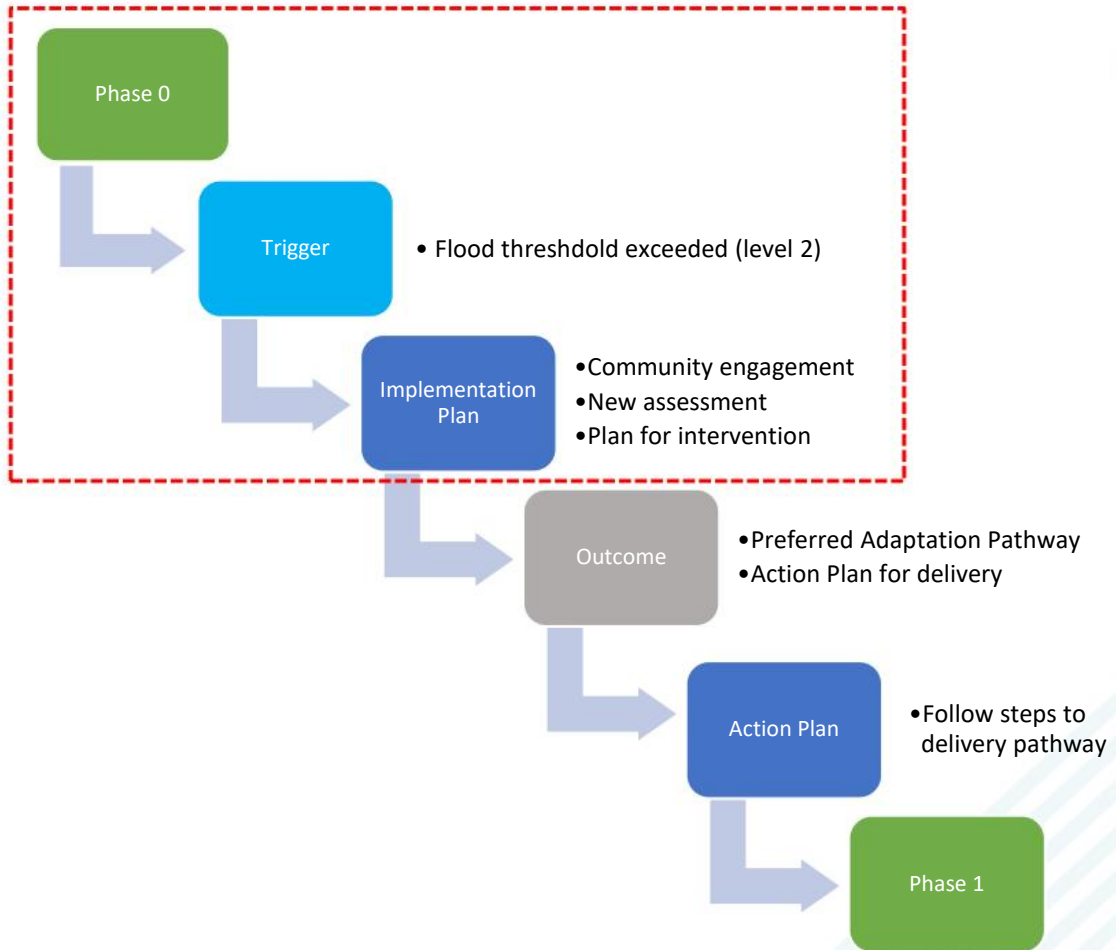


Figure 4-4: Example application of Phase 0 to Phase 1 of the adaptation process and how the Implementation Plan works with Adaptation Pathways and Action Plans.

5 Summary and Next Steps

5.1 Approach

This document presents the local CCAP for the Hopeman to Covesea Coast. It is the first iteration and will be subject to ongoing review and update to effectively guide the adaptation process. The approach for developing the Plan makes use of available, national information, on coastal flood and erosion risk, and combines these with relevant local datasets.

Adaptation in Moray has been steered by relevant published documentation and the Scottish Governments interim guidance on CCAPs. These have been used to develop a CCAP. This has been simplified into four key pillars of adaptation:

- 1) **Working with Natural Processes**
- 2) **Monitoring Change**
- 3) **Community and Engagement**
- 4) **Climate Resilient Placemaking**

This local Plan builds on the Regional Plan by focusing on these pillars to develop an Adaptation Framework that can effectively support Hopeman to Covesea Coast preparing for the impact that climate change will have on the coast. This will be delivered by following the Implementation Plan, presented here, that outlines Triggers and associated actions to develop detailed Adaptation Pathways and an action Plan for the Hopeman to Covesea Coast CA. This will happen when the process moves into Phase 1.

5.2 Coastal Management Units and Risks

The Hopeman to Covesea Coast CA was subdivided into three CMUs. For each of these a refined assessment was undertaken to determine coastal type and associated current and future flood and erosion risk. These are summarised as:

- CMU1 – Natural with Risk and Hazard
- CMU2 – Built Structures with Risk and Hazard
- CMU3 – Natural with Risk and Hazard

These were then taken forward to develop Adaptation Pathways and an Implementation Plan with Triggers and Actions associated with each CMU.

5.3 Adaptation Pathways

To enable effective implementation of this CCAP across the Hopeman to Covesea Coast CA, each CMU has been assigned a generic Adaptation Pathway. This is specific to the CMU classification.

The adaptation journey is a multiphase, multiyear process and aims to transition communities into a more sustainable and resilient future. We are currently at **Phase 0**, meaning that no definitive preferred Adaptation Pathway and associated Action Plan have been developed. To move to Phase 1 of the Adaptation Pathway, a trigger must be realised that results in New Assessment and a preferred pathway and associated Action Plan must be identified:

1. **Phase 0:**
 - Development of the Implementation Plan
 - Delivery of Phase 0 Actions (Appendix C)
 - Delivery of Phase 0 Proactive Actions (Appendix B)
2. **Phase 1:**
 - Implementation Plan outcomes:
 - Preferred Adaptation Pathway
 - Action Plan for delivery
 - Delivery of Phase 1 No Regrets Actions
3. **Phase 2+:**
 - Implementation Plan outcomes:
 - Preferred Adaptation Pathway (Continue or revise Phase 1)
 - Action Plan for delivery (Continue or revise Phase 1)
 - Delivery of Phase 2 No Regrets Actions

While ultimately the Adaptation Pathways have a desired outcome, what that looks like and how it will be reached cannot be defined at this stage. Effective monitoring against the set triggers will enable the CCAP to evolve through Phases and support Moray Council decision making to aim to achieve this end-outcome.

A detailed summary of Phase 0 Actions is included in Appendix C.

5.4 Implementation Plan

The Implementation Plan was developed by defining Triggers and setting Actions against these. Delivery of the Plan will result in end outcomes that will ultimately influence the direction of the Adaptation Pathways in the Hopeman to Covesea Coast CA.

At this stage the pathways do not result in definitive end points. Triggers, while tangible, provide markers whereby Moray Council will undertake actions, guided by the Action Plan. The Outcomes of these, however, are unknown and the direction of the pathway in the future therefore cannot be defined.

Triggers focus on the updates to the data and documentation that has underpinned the development of the plan, and bespoke flooding or erosion thresholds being exceeded, through monitoring of physical processes.

As well as Actions that rely on Triggers being realised. This initial stage of the adaptation planning process has identified several knowledge gaps and opportunities for activities to be undertaken upfront. These are defined as Proactive Actions, whereby undertaking these will only benefit and support Moray's adaptation to coastal change.

In total, four Proactive Actions have been set.

5.5 Next Steps

Adapting to coastal change will be a continual journey and it is therefore important that the process is ongoing. Here, the following key steps require implementing by Moray Council to support this journey and follow CCAP:

- Implement internal governance processes to review and monitor Triggers.
- Deliver local Phase 0 Actions.
- Deliver local Proactive Actions.

Appendices

A CMU Risk Assessment

A.1 Data and overview

Coastal parameters and associated datasets summarising wave, tide, and sea level conditions for the Hopeman to Covesea Coast are summarised in Table A-1.

Table A-1: Coastal dataset summary for the Hopeman to Covesea Coast CA.

Coastal Data		Details	Data source
Hindcast wave height	0.62 m	50th percentile	CMEMS
	0.96 m	75th percentile	
	2.69 m	99th percentile	
Tide levels	HAT	2.5 mOD	TotalTide
	MHWS	2.0 mOD	
	MHWN	1.1 mOD	
	MSL	0.1 mOD	
	MLWN	-0.5 mOD	
	MLWS	-1.5 mOD	
	LAT	-2.1 mOD	
Extreme Sea Levels	2.07 mOD	MHWS	CFB (3054)
	2.81 mOD	2-year	
	3.09 mOD	50-year	
	3.15 mOD	100-year	
	3.22 mOD	200-year	
	3.37 mOD	1000-year	
Sea level rise projections	0.14 m	2050 70th percentile	UKCP18
	0.19 m	2050 95th percentile	
	0.58 m	2100 70th percentile	
	0.82 m	2100 95th percentile	

An overview of coastal flood and erosion hazards is provided for the Hopeman to Covesea Coast CA (Table A-1). This has been produced using SEPA flood mapping for 1 in 200-year and 1 in 200-year plus climate change flood events as well as Dynamic Coast erosion projections for 2020 to 2100. The data has been analysed for each CMU individually and has been used to identify receptors at risk.

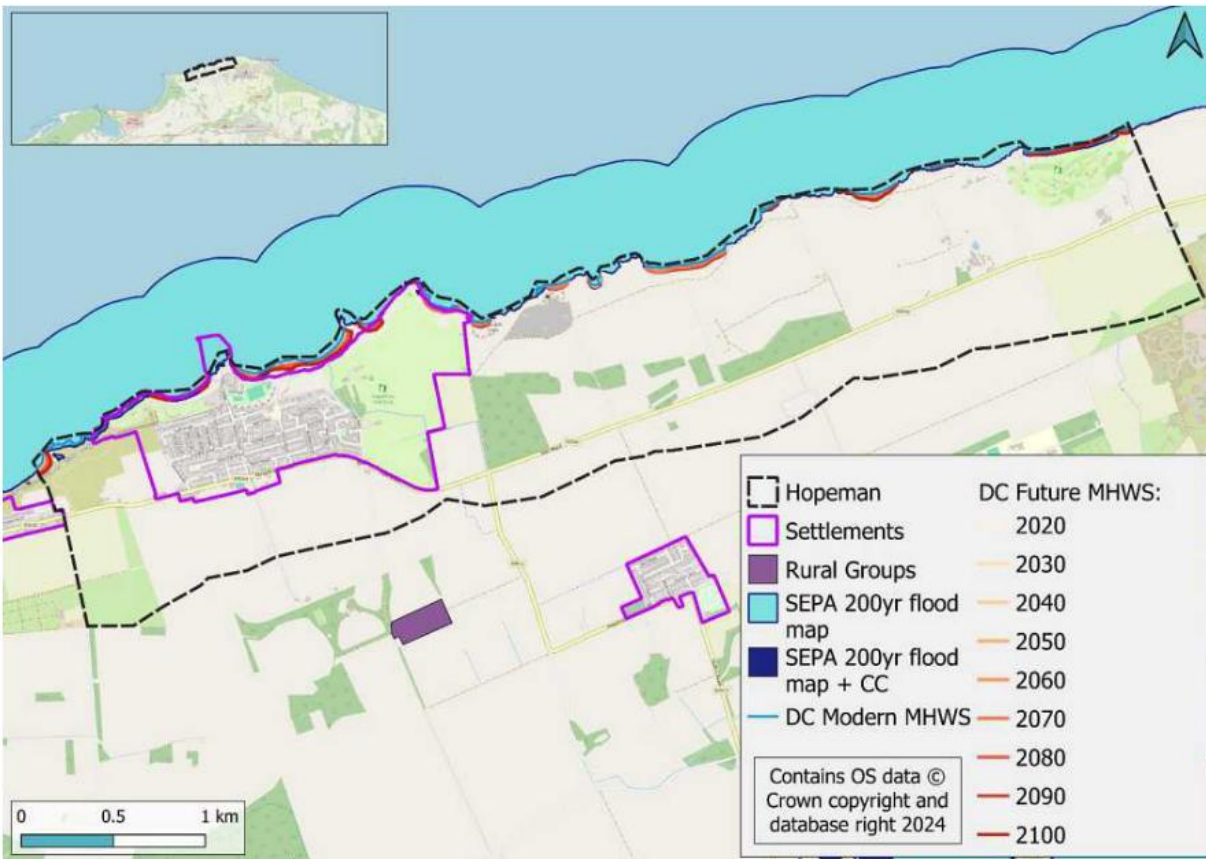


Figure A-1: Hopeman to Covesea Coast CA coastal flood and erosion hazard overview.

A.2 CMU 1:

This CMU is a natural coastline, approximately 1.1 km in length, along which there is a series of rocky cliffs and intertidal rock platforms. The CMU extends from Colach Bay, a rocky bay north of Cummingston in the west, through to West Beach, a large sandy beach to the west of Hopeman Harbour and immediately north of Station Caravan Park in the east. The Moray Coastal Trail runs the entire length of this unit near the cliff tops. The B9040 minor road linking Cummingston to Hopeman runs parallel to the coast, although this is set-back approximately 400 m from the coast and elevated above upon the cliff top.

SEPA flood maps show that there is negligible flood risk from 1-in-200-year and 1-in-200-year plus climate change events.

Dynamic Coast data shows that historically the shoreline has retreated at maximum rate of 0.2 m/yr. Maximum future erosion rates are expected to increase to 0.7 m/yr by 2050 and to 1.1 m/yr by 2100. This would result in a maximum of 65m of land loss caused by shoreline retreat by 2100. Table A-2 summarises Dynamic Coast data for CMU 1. Assets within Dynamic Coast's projected erosion area or those in the vicinity of it in 2100 under the High Emission Scenario are summarised below:

- Two NRPs (non-residential properties)

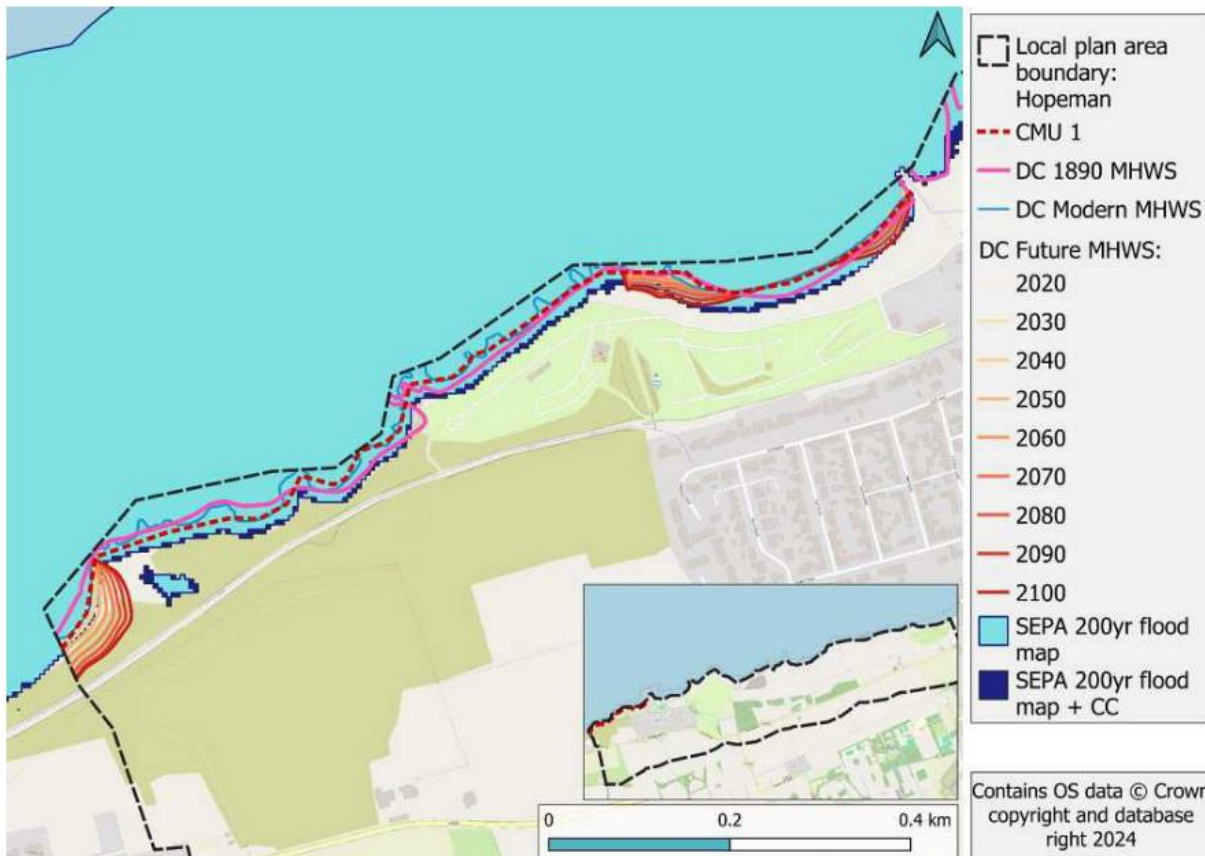


Figure A-2: CMU 1 coastal hazards map showing SEPA flood extents and Dynamic Coast (DC) past and future erosion. Inset shows unit without coastal hazards.

Table A-2: CMU 1 Dynamic Coast erosion summary.

Dynamic Coast calculation	Results	
Historical rate	0.2 m / yr	Maximum
	0.1 m / yr	Median
2050 rate	0.7 m / yr	Maximum
	0.2 m / yr	Median
2050 distance	15.8 m	Maximum
	2.0 m	Median
2100 rate	1.1 m / yr	Maximum
	0.4 m / yr	Median
2100 distance	65.2 m	Maximum
	23.3 m	Median

A.3 CMU 2:

This CMU is defended by built structures. The unit comprises the complete extent of Hopeman Harbour, a historic landmark, built between 1838-1890 to support the local sandstone industry. The Harbour walls are a combination of masonry and concrete walls and are configured into two large basins offering over fifty berthing spaces to local leisure boats as well as a sheltered area for water sports. The CMU is relatively small compared to the other two units, stretching approximately 500 m around the perimeter.

SEPA flood maps show that the area around the harbour is at threat from coastal flooding for a 1-in-200-year coastal flood event in the present day, and increasingly so with sea level rise projections. Assets on land at risk from a 1 in 200-year flood event, according to NFRA data, are summarised below:

- Two NRPs (non-residential properties)

Assets at risk from a 1 in 200-year plus climate change flood event include assets at risk from a 1 in 200-year flooding event (shown above) plus assets summarised below:

- Two NRPs (non-residential properties)

Dynamic Coast considers CMU 2 to be defended and therefore has no projection of erosion. This however is dependent on the performance, condition, and existence of the structures.

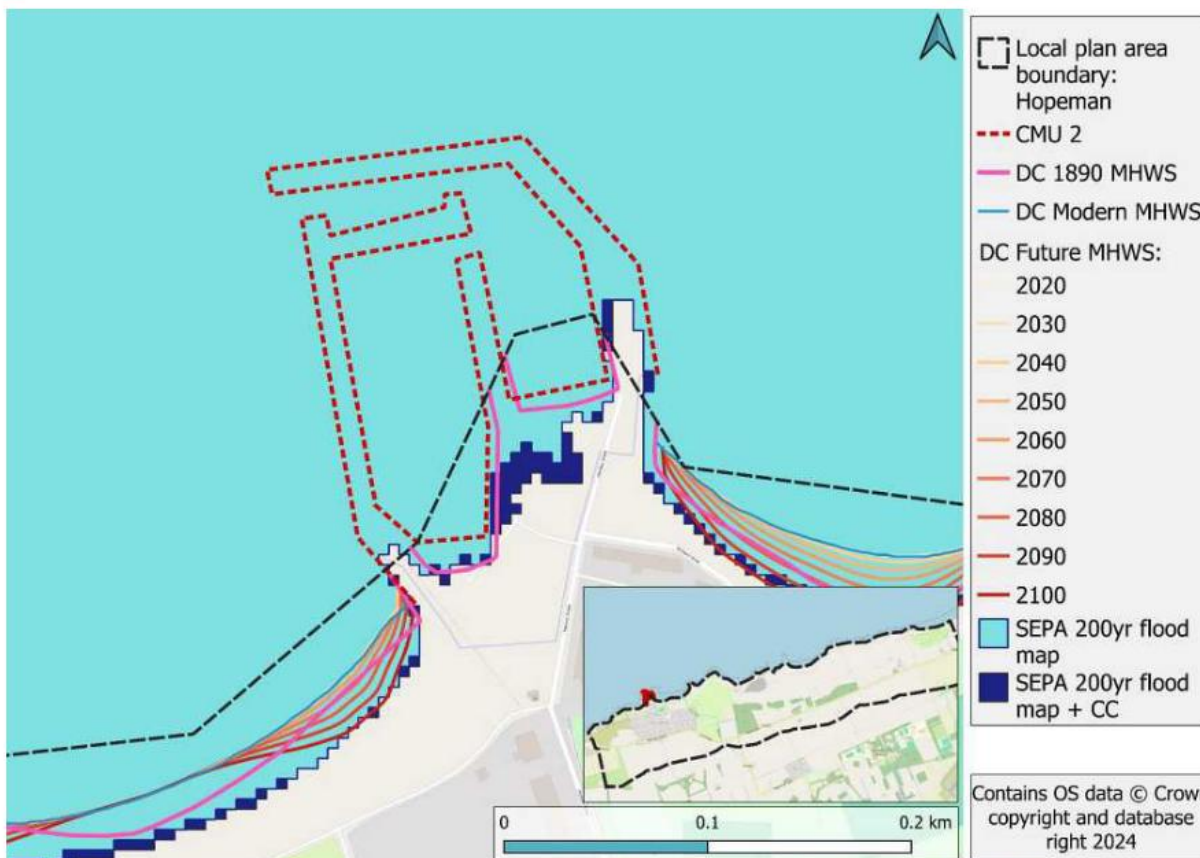


Figure A-3: CMU 2 coastal hazards map showing SEPA flood extents and Dynamic Coast (DC) past and future erosion. Inset shows unit without coastal hazards.

A.4 CMU 3:

This CMU is an expansive stretch of natural coast, approximately 6.1 km in length. It is dominated by rocky platforms backed by high vegetated and rocky cliffs. Dispersed along the unit there are also a series of sandy pocket beaches, which include East Beach, Clashach Cove, Primrose Bay and Covesea Beach. Within the unit there are two golf courses: Hopeman Cove Golf Course, situated on the coast east of Hopeman, and Covesea Links Course, situated directly landward of Covesea Beach.

SEPA flood maps show that there is currently no flood risk from 1-in-200-year and 1-in-200-year plus climate change events.

Dynamic Coast data shows that historically the shoreline has retreated at maximum rate of 0.7 m/yr. Maximum future erosion rates are expected to increase to 0.8 m/yr by 2050 and to 1.2 m/yr by 2100. This would result in a maximum of 73 m of land loss caused by shoreline retreat by 2100. Table A-3 summarises Dynamic Coast data for CMU 1. Hopeman Beach Huts and public parking off Harbour Street are impacted by the erosion projections. According to the Dynamic Coast dataset, the assets within Dynamic Coast’s projected erosion area or those in the vicinity of it in 2100 under the High Emission Scenario are summarised below:

- Two NRPs (non-residential properties)
- Nine RPs (residential properties).

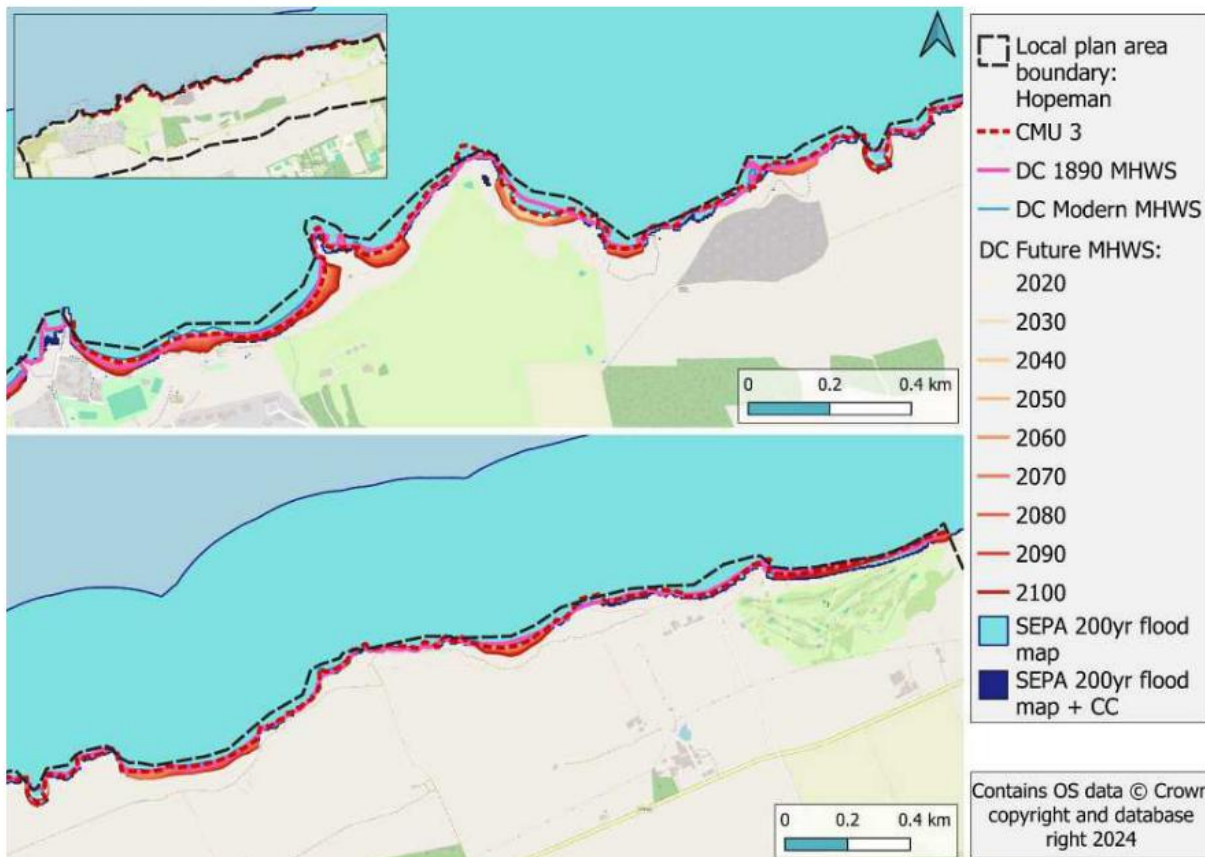


Figure A-4: CMU 3 coastal hazards map showing SEPA flood extents and Dynamic Coast (DC) past and future erosion. Inset shows unit without coastal hazards.

Table A-3: CMU 3 Dynamic Coast erosion summary.

Dynamic Coast calculation	Results	
Historical rate	0.7 m / yr	Maximum
	0.1 m / yr	Median
2050 rate	0.8 m / yr	Maximum
	0.2 m / yr	Median
2050 distance	22.4 m	Maximum
	4.1 m	Median
2100 rate	1.2 m / yr	Maximum
	0.5 m / yr	Median
2100 distance	73.0 m	Maximum
	25.9 m	Median

B Proactive Actions

Action 1 - Develop modelling framework to support future assessments.

Implementation of effective future risk assessments will require investment in numerical (or similar) modelling tools that can effectively and efficiently quantify flood and erosion risk. A modelling framework should be developed that includes:

- Statistical extremes
- Wave transformation
- Morphodynamics and erosion
- Flood inundation extent

Action 2 –Establish coordinated and consistent beach monitoring plan for Natural CMUs

The requirements for monitoring the beach systems in the CA should be reviewed in the context of a wider Regional monitoring plan. Information should be collected through monitoring that is specific to support future risk assessments and compared to CMU specific erosion triggers. It should focus across the entire CA but increase in frequency and detail for CMU 1 and 3 where predicted risk associated with erosion and coastal change is greatest.

Action 3 – Adaptation and resilience workshop with local community and stakeholders

Adaptation to coastal change is not solely about physical interventions in coastal communities. Community and individual responsibility to increase resilience and adapt to coastal hazards is of paramount importance.

The outcomes of this initial phase of the CCAP should be presented to the community and stakeholders alongside consideration for wider support and education around climate awareness and flood resilience.



Action 4 – Identify landownership and safeguarding space. This should link with Regional Proactive Action to identify and define local opportunities.

To work with natural processes and make space for coastal change it is inevitable that existing land will be lost. To adapt effectively it is therefore important that land and asset ownership within the CA is fully understood to enable safeguarding of areas. This should feed into revisions of the wider Moray Council Local Development Plan.



C Trigger and Action Database

Table C- 1: Phase 0 Tigger and Action database for Hopeman to Covesea Coast.

Community Area (CA)	CMU	Coast Type	Trigger Type	Asset Affected	Asset Description	Trigger Level	Trigger Exceeded?	Trigger Buffer Flooding (Freq/10 yr)	Distance to coastline (m)	Trigger buffer erosion (m)	Action	Owner	Delivery Partners	Timescale	Cost
Hopeman to Covesea Coast	1	Natural	Erosion	Property	Non-residential Property	1	N		55	50	None	NA	NA	NA	NA
						2	N			53	None	NA	NA	NA	NA
	2	Built Structures	Flooding	Other	Hopeman Harbour	1	N				None	NA	NA	NA	NA
						2	N				None	NA	NA	NA	NA
			Defence condition			1	N				None	NA	NA	NA	NA
						2	N				None	NA	NA	NA	NA
	3	Natural	Erosion	Property	Residential Property	1	Y		17	-3	Increase monitoring and plan for assessment.	Moray Council	None	Short	Low
					2	N		17	7	None	NA	NA	NA	NA	
				Property	Non-residential Property	1	N		25	20	None	NA	NA	NA	NA
					2	N		23		None	NA	NA	NA	NA	

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