COASTWISE

HAPPISBURGH COASTAL EROSION TRANSITION PLAN

Coastwise Coastal Transition Plan Lot 1

NORTH NORFOLK DISTRICT COUNCIL

Department for Environment Food & Rural Affairs

Environment Agency

This plan, Happisburgh Coastal Erosion Transition Plan, was commissioned by Coastwise in 2025 and put together by Jacobs U.K Limited as a first iteration of a community coastal transition plan for the community of Happisburgh.

This document is a starting point, which over time can be developed and adapted.

The plan was co-created through Happisburgh Research and Liaison Group, Happisburgh Parish Council, Coastwise (North Norfolk District Council) and other relevant parties working together.

The hope is this plan will be adopted and taken forward by the local community in Happisburgh.

This project is funded by Defra as part of the £200 million Flood and Coastal Innovation Programmes which is managed by the Environment Agency. The programmes will drive innovation in flood and coastal resilience and adaptation to a changing climate.

Department for Environment Food & Rural Affairs

Environment Agency

Coastal transition accelerator programme

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Happisburgh Coastal Erosion Transition Plan

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North Norfolk District Council
Coastwise

Coastwise Coastal Transition Plan Lot 1

Happisburgh Coastal Erosion Transition Plan

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Happisburgh Coastal Erosion Transition Plan Summary

This Coastal Erosion Transition Plan sets out how Happisburgh will proactively plan for, and adapt to, continuing coastal change to build resilience and enable the community to move beyond a reactive "business as usual" approach to the risk of coastal erosion.

Happisburgh's vision is to remain a resilient coastal community that embraces climate adaptation through innovation, collaboration, and practical solutions. It prioritises residents in decision-making, aiming to create a safe, sustainable environment that celebrates heritage, supports local businesses, and fosters community cohesion. The vision includes preserving cultural landmarks where feasible, repurposing land for education and enterprise, and promoting biodiversity to enhance wellbeing. This evolving vision seeks to balance adaptation with legacy, ensuring Happisburgh thrives as a vibrant, welcoming place for future generations.

This will be achieved through a range of short, medium and long-term actions that are tied to the Community Vision developed through local input and collaboration. This sets out what the community values about where they live and their hopes for the future. All the actions are set out in detail in the Plan, with the ongoing and short-term actions summarised as follows:

What does this mean for me?	Ongoing Actions	Short-Term (0–2 yrs) Actions
I am a homeowner	NNDC will continue to explore options for homeowners in immediate erosion risk zones.	
I am a business owner	NNDC will continue to engage with directly-impacted businesses.	
I am a utility company	NNDC will continue to pursue engagement with utilities companies that was started during the development of this plan.	A responsible party will be appointed for reporting utilities assets at risk to utilities companies.
I am a Happisburgh resident	The Coastwise project in conjunction with Mind is offering mental health support. A scan and 3D model of St Mary's Church is being produced so that a record of the building is held into the future. NNDC will continue engagement with the Diocese of Norwich to explore future options for the church and graveyard.	The community will look to document heritage assets through community recordings. These could be recording of memories, images, video, or scans. Owners of these assets may choose to explore options for maintenance and deconstruction plans.
I am a landowner	NNDC will engage with landowners regarding the management of agricultural land in relation to surface water drainage and Groundwater.	Land by the coast that is not suitable for housing and commercial or agricultural use will be looked at to decide whether it could be repurposed.
I am a Happisburgh visitor	The beach access ramp will be maintained. A new car park is currently being built which will also include a new toilet block, electric vehicle charging points, and catering hardstanding. NNDC will continue to engage with Norfolk Highways and Norfolk County Council regarding the changes to highways, the coast path, and drainage.	NNDC will review beach access options and look at options for repurposing the current toilet block once the new one has been built.

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1. Introduction

The Purpose of This Plan

This Coastal Erosion Transition Plan sets out how the village of Happisburgh, Norfolk, could respond to coastal change.

Context

Location, character and landmarks

Happisburgh is a historic village on the east coast of England, with a population of approximately 1,900 residents (Figure 1-1). It is located along Norfolk's eastern coastline, and positioned approximately 16km from North Walsham, 22km from Cromer, and 32 km from Norwich. The village is known for its coastal character and heritage.

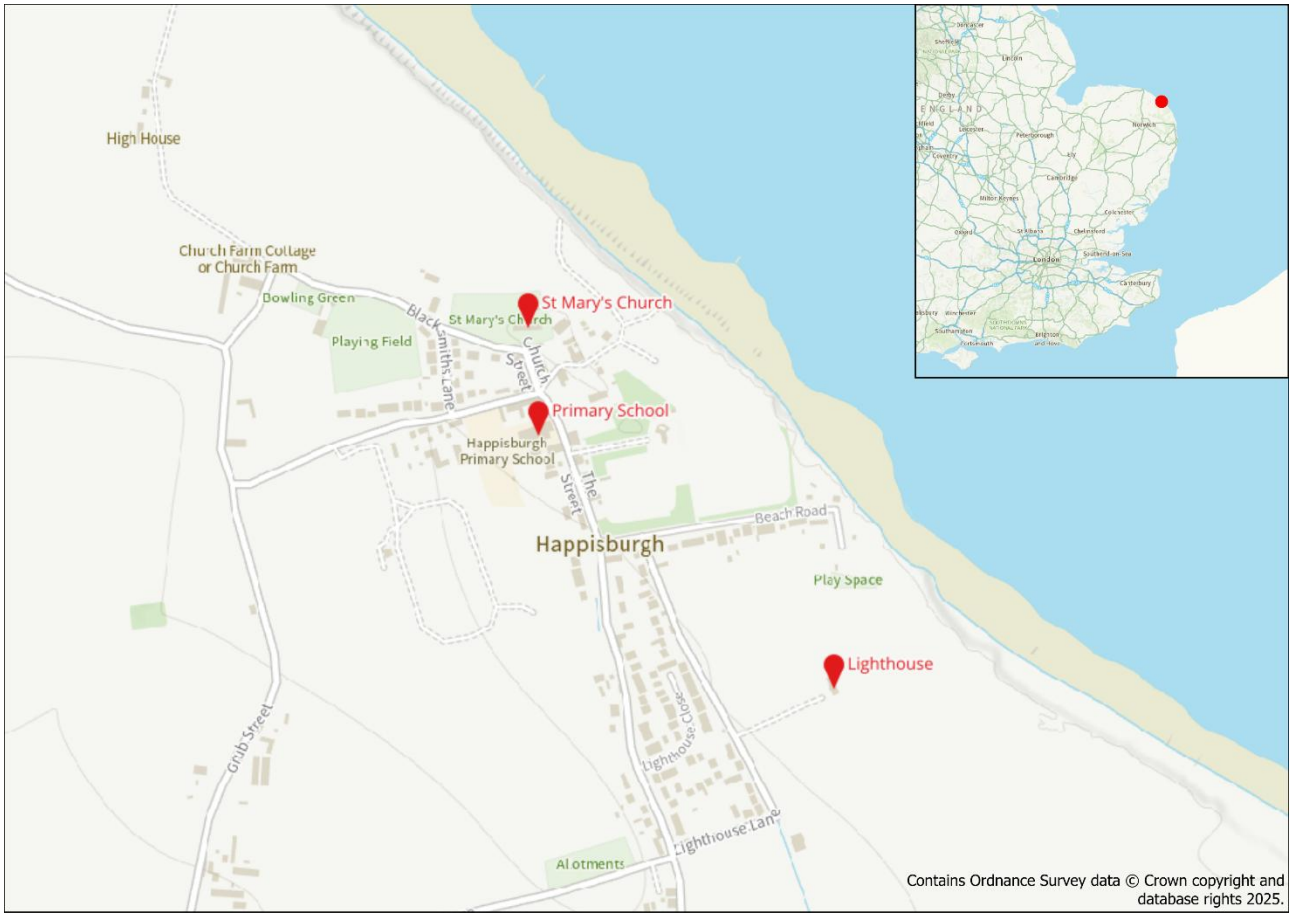


Figure 1-1 Happisburgh study area

Among Happisburgh's most notable landmarks are the Lighthouse and the medieval Church of St Mary the Virgin. The lighthouse is presently just beyond the 2105 erosion zone but St Mary's Church is within it.

Demographics

According to the 2021 Census for England and Wales, Happisburgh has a total population of 1,946 residents. The age distribution reveals a predominantly older population, with the highest percentage of residents falling within the 65–69 age group (Figure 1-2). As age decreases, the proportion of the population in each group also declines. Children and young adults under the age of 20 represent a notably small segment of the community. In comparison, Norfolk as a whole has a more balanced age distribution, with moderate peaks around the 50–54 and 70–74 age groups. Overall, Happisburgh has a greater ageing population trend, suggesting it is attractive to retirees.

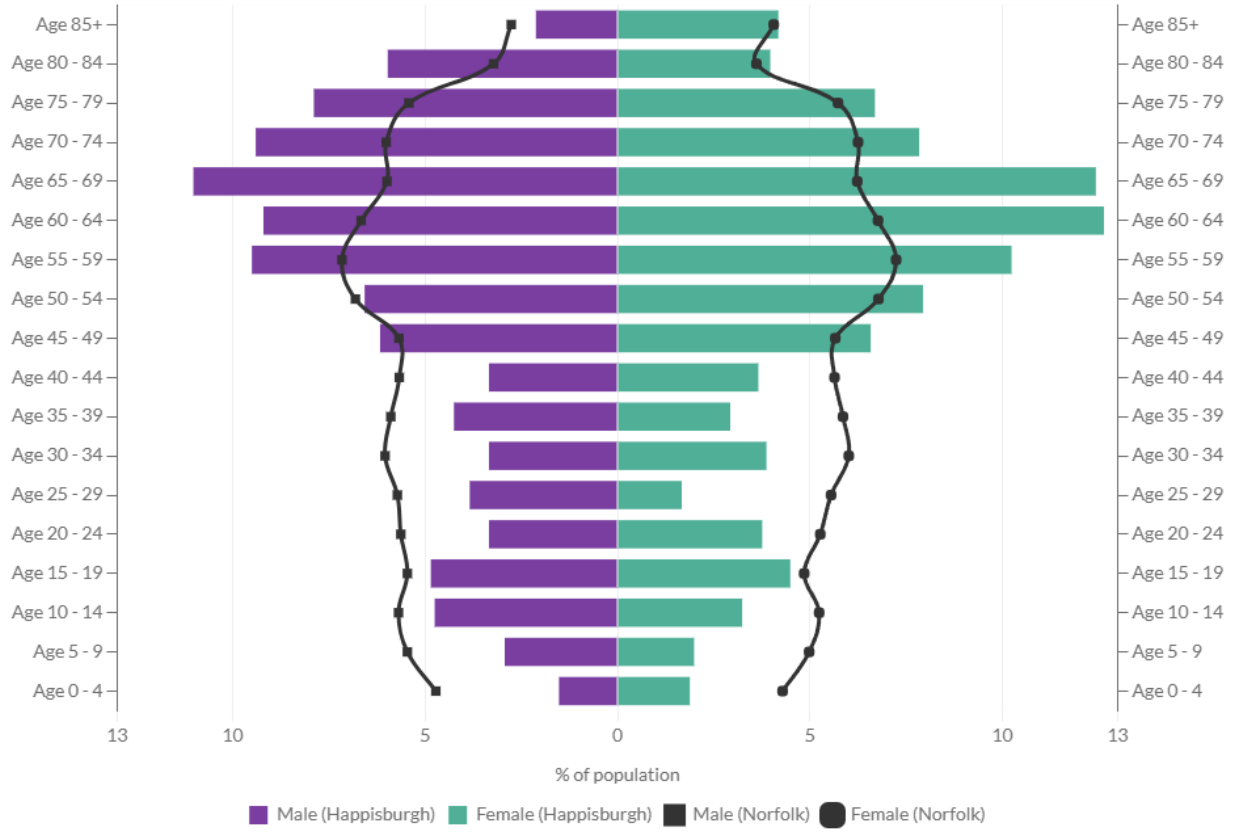


Figure 1-2 Percentage of Population by 5-year age groups (2022) [1]

Physical Geography

Happisburgh has long been subject to significant coastal change, driven by natural erosion processes and increasingly influenced by rising sea levels and storm activity. The soft cliff geology, consisting of sands, clays, and glacial deposits formed during the Ice Age, makes it particularly vulnerable to rapid retreat, and over the years, several properties and stretches of land have been lost to the sea.

Coastal erosion rates in Happisburgh demonstrate long-term trends and short-term accelerations:

[1] Norfolk Insight (2020). Available at: https://www.norfolkinsight.org.uk/quick-profile/?feature=E05011841#/view-report/7eb5828a293f4f9db44dcf451e97b8f5/E05011841/G7

- The average rate of erosion at Happisburgh was 0.8 m/yr between 1885 and 1907, and approximately 0.4 m/yr between 1907 and 1950[2]
- Following the removal of failed defences (timber palisades), the cliffs retreated 50m in a 3-year period from 1996-1999[3] before reaching a new equilibrium and subsequently declining the erosion rate
- Since 1988, a total of 35 residential properties have been lost to coastal change

Historically, various coastal defences such as timber revetments and groynes were installed from 1959 to slow erosion, but many of these structures promptly deteriorated due to the dynamic conditions, and some have had to be removed, leaving the coastline once more exposed. There were multiple attempts to maintain and replace the structures, but they were unsuccessful. This has led to a 'catch-up' coastal erosion effect[4].

The coastline has been eroding here since the last Ice Age and will continue to erode in perpetuity due to the natural erosion processes. However, climate change is exacerbating these natural processes by contributing to rising sea levels, increased frequency and intensity of storm events, and more extreme rainfall patterns. These factors are accelerating coastal erosion and increasing the risk of slope failure, posing growing challenges for the long-term resilience of the Happisburgh coastline and its communities.

Environmental designations

Happisburgh holds two key environmental designations that highlight its geological and ecological importance. The Happisburgh Cliffs are designated as a Site of Special Scientific Interest (SSSI) because they reveal an exceptionally important geological record. Uniquely, the cliffs display three distinct glacial deposits from the Pleistocene epoch, which provide critical evidence of past climate changes and glacial activity in East Anglia[5]. In addition, the coastline forms part of the Greater Wash Special Protection Area (SPA), designated under the Conservation of Habitats and Species Regulations 2017 to safeguard internationally important populations of migratory and overwintering birds[6].

The presence of these designations underscores the need for sustainable and adaptive coastal management. As erosion continues to reshape the Happisburgh's shoreline, any transition plan must carefully balance the protection of these nationally important geological and ecological features with the needs of the local community. Protecting the integrity of natural environments while supporting the long-term resilience of Happisburgh's residents is essential. There is a need for a shared understanding and collaboration between conservation organisations, local authorities, and residents to ensure that both nature and people can thrive in the face of ongoing coastal change.

Coastal Processes and Management

Under the Shoreline Management Plan (SMP6: Kelling Hard to Lowestoft Ness, adopted August 2012), the adopted policy for Happisburgh is "Managed Realignment" in the short (2005-2025), medium (2025-2055), and long term (2055-2105)[7]. *"Where the overall intention is for a natural shoreline, not to encourage new defences. In some areas, where specified in the Shoreline Management Plan, works to repair or construct short*

[2] A Quantitative Assessment of the Annual Contribution of Platform Downwearing to Beach Sediment Budget: Happisburgh, England, UK

[3] https://nora.nerc.ac.uk/id/eprint/518400/1/PresentationTriminghamErosionProject.pdf

[4] Coastal Catch-up Following Defence Removal at Happisburgh | Coastal ManagementChanging coast, changing climate, changing minds | Books Gateway | Emerald Publishing

[5] SSSI Site feature condition

[6] SPA Designated Sites View

[7] Shoreline Management Plans

stretches of defence to provide localised protection (such as to a slipway, access point or isolated properties) may be considered by the Coastal Planning Authority. All works require relevant permissions"[8].

This policy aims to guide the realignment of the coast in a controlled manner, which may involve the relocation of assets, adaptation of land use, and support for community transition through planning and funding mechanisms. A key element of that has been the installation of a low-level rock bund, designed to help manage the erosion in front of Happisburgh village. This is in accordance with the Managed Realignment policy in the Shoreline Management Plan (SMP) (EACG, 2012). It is important to note that SMPs are non-statutory policy documents; they provide a framework to inform decision-making, but the implementation of these approaches depends on available funding and is not legally mandated.

Considering the SMP policy, Happisburgh must prioritise long-term resilience while carefully balancing the preservation of its unique identity against the unavoidable realities of coastal change. An example of this is the Pathfinder adaptation project in which North Norfolk District Council received £3 million from the Government to pilot innovative approaches for managing coastal change and its impacts on communities[9]. The Happisburgh projects, launched in 2010, included clifftop enhancement to create a buffer zone and replace threatened infrastructure, property acquisition for demolition and lease-back schemes to address blighted homes, beach debris removal, a coastal heritage initiative to record and celebrate local history, and relocation support for Manor Farm Caravan Site to sustain the local economy. These pioneering efforts aimed to shape future national strategies for communities affected by erosion and flooding.

Surveys and mapping commissioned by North Norfolk District Council (NNDC) has recorded the change in cliff position over the past two decades where each coloured line represents a survey from a different date.

These illustrate that the ongoing changes that have occurred along the Happisburgh frontage are not linear, i.e. retreating by the same amount year-on-year, but can vary considerably. This is the result of a combination of factors, including storm wave and surge events, tidal energy and sea level rise, fluctuations in beach sediment supply, surface water and groundwater, underlying geology, and the condition or absence of coastal defences.

Sediment input to the beaches here is primarily from the erosion of cliffs further to the north, and material arising from the erosion of the cliffs at Happisburgh itself. But those same transport mechanisms also continually move that material on further to the south. Clay eroded from the cliffs does not form beach building material, so it is removed altogether by waves and tidal currents.

Coastal defences along the Happisburgh frontage have evolved over time, culminating in the current rock bund configuration.

See Appendix A for cliff top lines along the Happisburgh frontage and coastal management works at Happisburgh.

Further information regarding coastal processes at Happisburgh can be found in document B2491800-JAC-RPT-001_Happisburgh Assessment of Rock Bund and Beach Access_P03.

[8] Ostend to Eccles 6.12 | Shoreline Management Plans

[9] Pathfinder – Happisburgh Village Website

2. What is at risk for the community?

Key Issues

A combined approach of community engagement and Geospatial Information Systems (GIS) analysis has been used to identify what is at stake for the community, and what the timescales might be for these features to be impacted by coastal change.

Points raised at prior community engagement events

Coastwise held four Coastwise Cafés in Happisburgh during 2024 and 2025. These were drop-in sessions aimed at meeting local people, sharing information and knowledge, answering specific questions, and starting a process to develop the next steps towards creating community-led Coastal Erosion Transition Plans.

The first Coastwise Café took place on 1 February 2024 with 65 attendees. During this session there were queries over the listed buildings in Happisburgh, in particular the Church, the lighthouse and St Mary's House. There were also concerns regarding beach access, as this is a pull for visitors to the village. Key issues highlighted by the community in this session were housing, beach access, water management and drainage in Happisburgh, heritage, and discussions around sea defences. In particular, residents were very concerned about loss of homes and facilities.

The second Coastwise Café took place on Thursday 18 July 2024 and consisted of 14 attendees. This session consisted of a discussion over the loss of the pub, Church and graveyard. Attendees emphasised that the pub is viewed as a community hub for the village. There was an interest in contributing to the co-design process of the new car park. This included a discussion over the movement of the public toilets and questions over whether they will be made bigger. In addition, a range of ideas for how the land for the old car park should be used. During this session, the local priority highlighted was that there is a limited bus service and, as a result, there is poor connectivity with other communities without driving. Attendees also queried whether the lack of coastal defences was an economic decision and raised concerns over the loss of farmland.

The third Coastwise Café took place on Saturday 23 November 2024 and consisted of 37 attendees. During this event, attendees stated that clearer information on erosion in Happisburgh was needed as some wanted to understand more. There was a request for a workshop on National Coastal Erosion Risk Mapping (NCERM) and NCERM2 data at the next event. Concerns were also raised due to the falling number of pupils at the school. Attendees requested that replacement homes are made suitable for families and young people. The key issue raised during this Coastwise café was regarding the loss of homes.

The fourth Coastwise Café was a combination of two separate events. The first took place on Friday 13 June 2025 and consisted of 24 visitors. The second took place on Saturday 14 June 2025 and consisted of 16 visitors. During both sessions there was concern for the Church and graveyard as the community have a strong connection to the sites. Conversations revealed that long-term residents may feel an impact of repeated losses throughout their lives, through the loss of childhood home, meeting places, favourite walks, and particular landmarks.

Risk analysis

For the purpose of this plan, risk has been divided into three bands (See Table 2-1 for how these were derived). The immediate risk band has been used to identify features that could be impacted by coastal change within one winter period. The medium-term risk band is those features which are unlikely to be impacted over the course of one winter however, they may be potentially impacted by the year 2055. The longer-term risk band is for those features which may be potentially impacted between the years 2055 and 2105.

Table 2-1 Derivation of risk bandings used in this Plan

Risk Band	Methodology
Immediate Risk	Rates of cliff recession in Happisburgh that were developed in Jacobs report B2491800-JAC-RPT-001 (Happisburgh Assessment of Rock Bund and Beach Access) were used to identify the greatest over-winter period of cliff recession experienced in recent years. These can be seen in Figure 1-3 of this report. Data showed that the greatest distance of over-winter cliff loss was experienced during the winter of 2013-14 at transect location 12803 (located due east of Happisburgh Manor), of 18.15m. This figure was used as the basis for the immediate risk zone which is taken as 20m inland from the existing cliff line. Ordnance Survey 2025 data was taken as the basis for the current cliff line and a 20m buffer from this was processed inland from this point.
Medium-term Risk	NCERM was used as the basis for this risk band. The 2055 erosion projection for the 'No Further Intervention' scenario was used with the 'Upper End' climate change allowance to represent the worst-case for the year 2055. Where this data overlaps with the Immediate Risk band, the immediate risk band takes precedent.
Longer-term Risk	NCERM was used as the basis for this risk band. The 2105 erosion projection for the 'No Further Intervention' scenario was used with the 'Upper End' climate change allowance to represent the worst-case for the year 2105.

Assets at Risk

Figure 2-1 below shows buildings, structures and roads at risk according to the risk bands described in Table 2-1. Features identified to be at immediate risk include the former holiday park to the north-east of the village, the existing car park along with access from Beach Road, the garden of Old Coastguard House on Beach Road, and Beach Road itself.

1. Commercial and residential buildings

At medium-term risk there are residential properties accessed by The Hill to the north-east of the village and along Beach Road to the south-east, along with the toilet block and playground adjacent to the car park on Beach Road.

At longer-term risk St Mary's Church and its graveyard are identified to the north of the village. The Hill House Inn is also identified as at risk, along with numerous residential properties in this location. Further residential properties along Beach Road have also been identified, along with Happisburgh Manor and a World War II pillbox east of the lighthouse. Although some buildings are at risk to 2105, access and services to some properties may be lost before the property itself is lost.

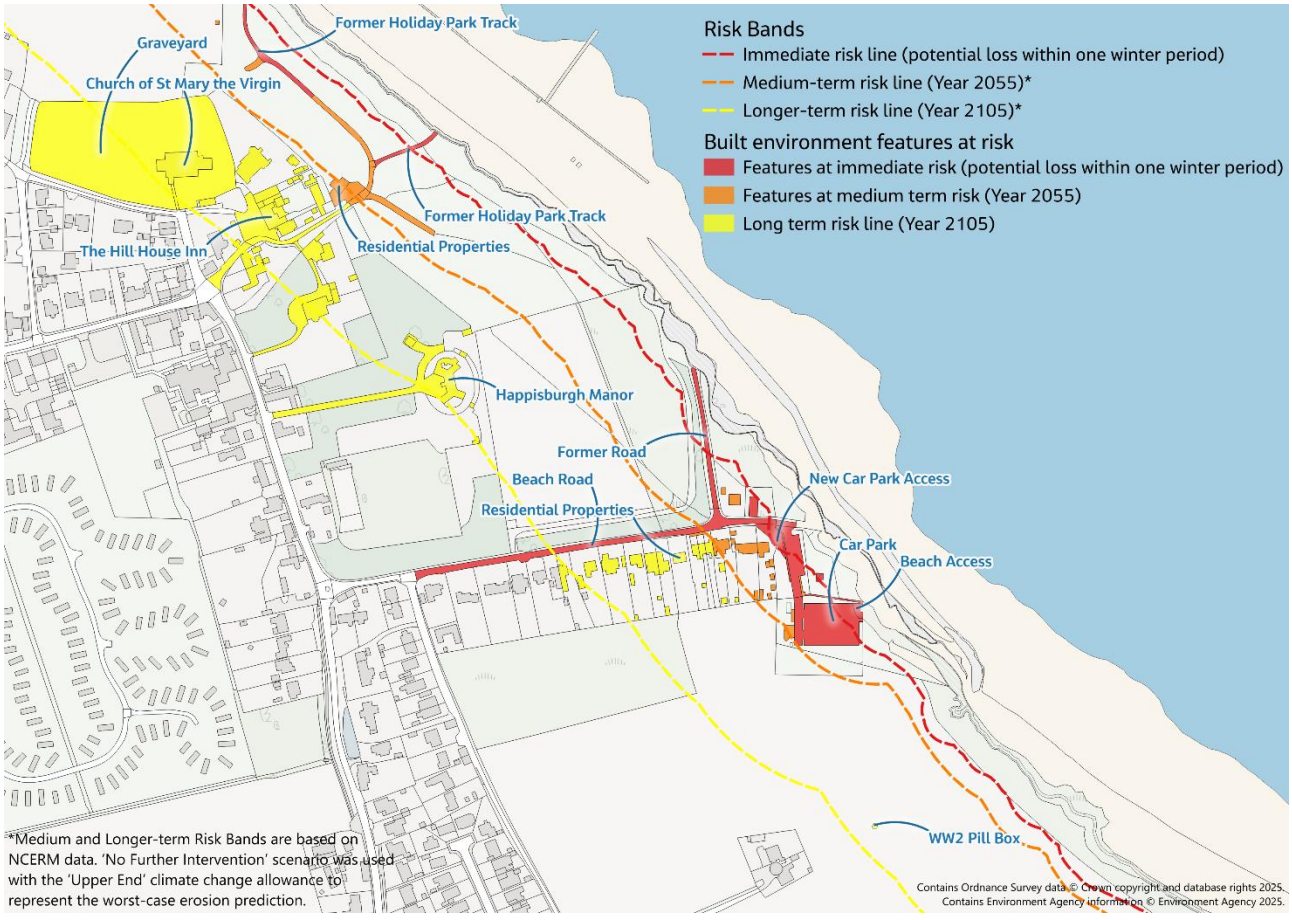


Figure 2-1 Buildings, structures and roads at risk in the immediate, medium and longer-term according to the risk bands defined in Table 2-1.

2. Utilities

Happisburgh is supplied by utilities in the form of electricity from UK Power Networks and water from Anglian Water. Happisburgh does not have a mains gas supply. Analysis has currently only been carried out on overhead electricity transmission; however, it is the intention that buried infrastructure including water supply should be included within this plan in the future.

Although there do not appear to be any utilities assets at immediate risk, there are both low and high voltage poles at risk in the medium-term, and one high voltage pole at risk in the longer-term (See Figure 2-2).

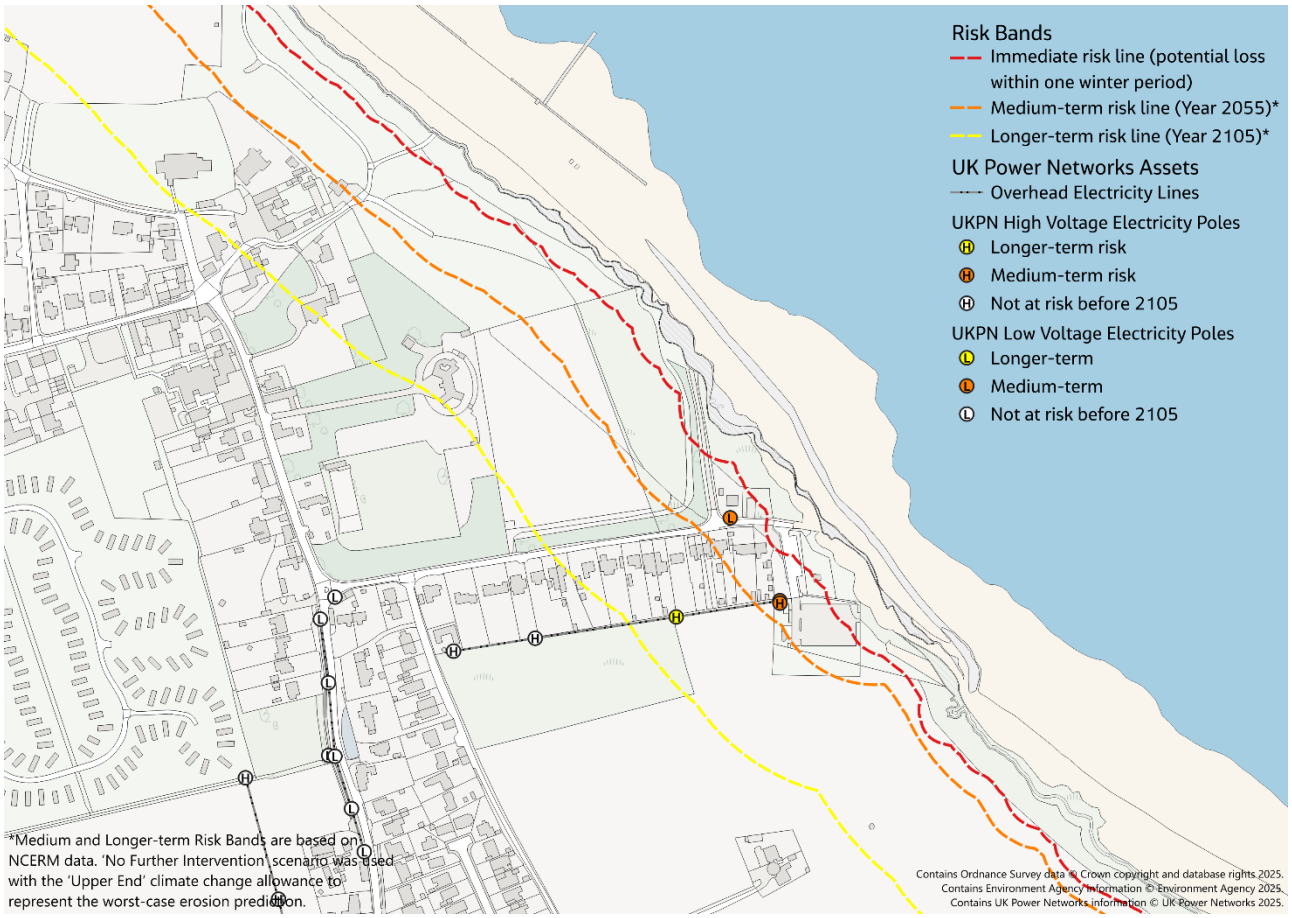


Figure 2-2 Overhead electricity assets at risk in the immediate, medium and longer-term according to the risk bands defined in Table 2-1.

3. Coast Path

Whilst roads at risk run perpendicular to the coast, meaning that the likelihood of access being cut off due to coastal change is low, the King Charles III Coast Path runs largely parallel to the coast as shown in Figure 2-3. Much of the path runs along the cliff top and as such will roll back naturally with incremental coastal change. However, as cliff recession continues in the vicinity of Beach Road, there may be a requirement to reroute the path inland around residential properties.

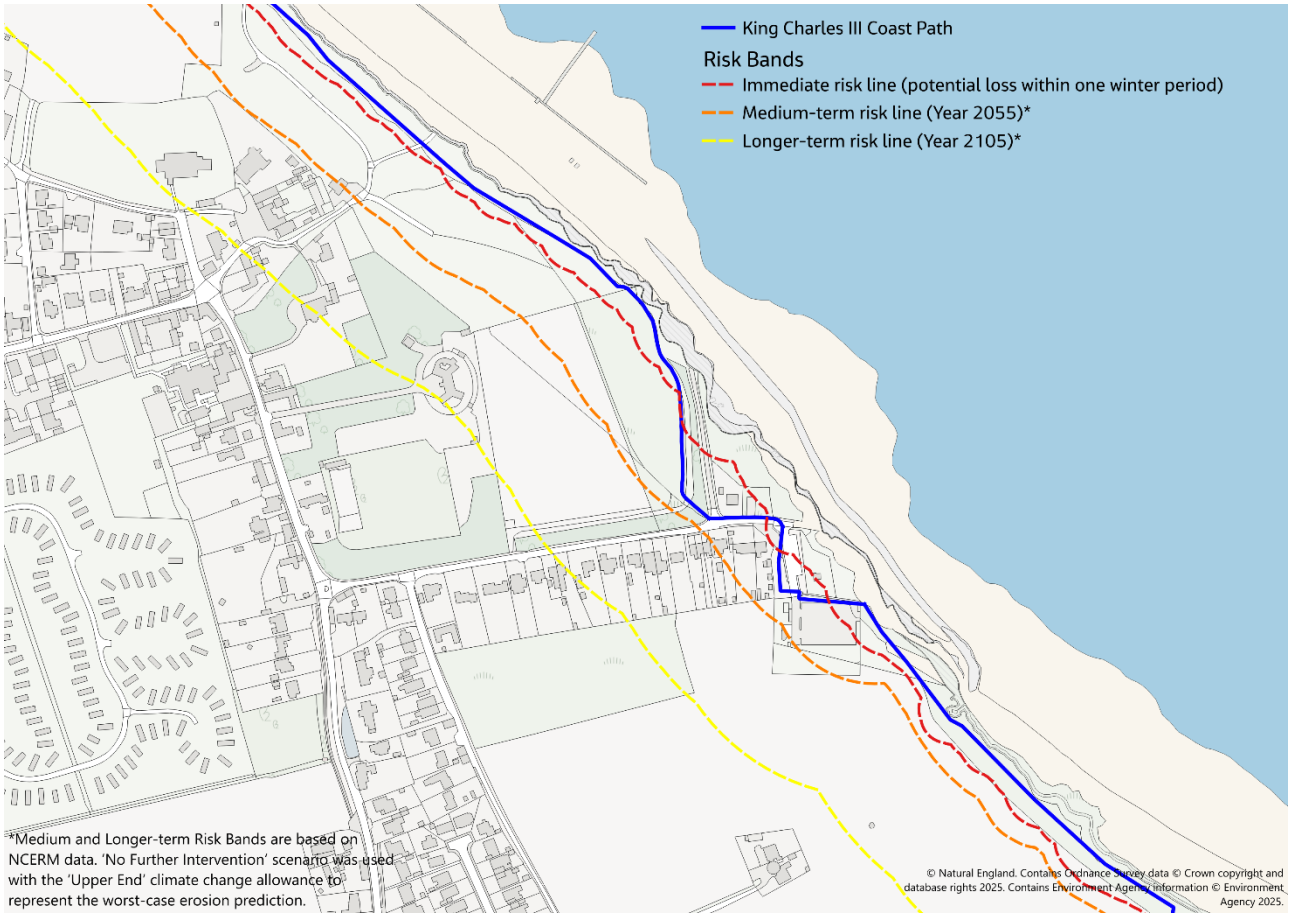


Figure 2-3 King Charles III Coast Path alignment plotted against the risk bands defined in Table 2-1.

4. Agricultural Land

The village is surrounded by agricultural land (See Figure 2-4) which also comprises a significant proportion of the village itself. All agricultural land in the Happisburgh Area is Grade 1, meaning that it is of the highest quality.

There is around 1.2Ha of Grade 1 agricultural land within Happisburgh at immediate risk of being lost to coastal change. In the medium-term, this is around 6.2Ha and around 14.9Ha in the longer-term.

Figure 2-4 Agricultural land in and around Happisburgh shown in comparison against risk bands defined in Table 2-1.

Stakeholder Mapping

A stakeholder mapping exercise has been completed in collaboration with the Coastwise project to identify relevant stakeholders for this plan. Table 2-2 provides an example of some of the organisations identified per each stakeholder category. All contact and personal information has been redacted in accordance with the General Data Protection Regulation (GDPR) requirements.

Table 2-2 Examples of stakeholder categories used as part of stakeholder mapping exercise.

Stakeholder Category	Example Organisations
Education	Local Primary School, local High Schools
Businesses	Local small businesses, SMEs, utility companies, sports centres, caravan park
Homeowners	Residents, holiday homeowners, farmers/haulage, landowners, Happisburgh community groups
Charities	Environmental groups, Norfolk Wildlife Trust, Norfolk and Waveney MIND, RNLI, National Heritage
Policy Makers	North Norfolk District Council, Happisburgh Parish Council, Norfolk County Council, Heritage England, Member of Parliament

Community Visioning

Using insight gained through engagement workshops held on 23 October 2025 and 23 November 2025 with the Happisburgh Coastal Research Group and Happisburgh Parish Council, the following Community Vision has been prepared for the village. It has been written in the first-person perspective since it is designed to capture the hopes and aspirations of the community. It has been divided into key themes:

- Existing residents – focuses on practical solutions to protect heritage
- New residents – focuses on fostering a fostering a welcoming community
- Supporting Tourism, Education, and Local Enterprise – focuses on the services offered by the village
- Legacy and Landmarks – focuses on the heritage and history of the village
- Sustainable Coastal Community – focuses on sustaining the village as a functioning settlement
- Healthier, Happier, Greener – focuses on the natural environment

This Community Vision will form the backbone of the coastal transition and adaptation actions within this plan. All actions should contribute towards realising the vision.

Happisburgh Community Vision

There is no Happisburgh without people.

Happisburgh wants to thrive as a resilient coastal community that embraces the challenges of climate change and adaptation through innovation and action. We want to foster community cohesion and ensure the village is not forgotten about.

We see residents at the heart of this future, as well as the decisions that will shape it. This will ensure every action taken forward reflects what is important to, and will benefit, those who live, work or visit the village.

We aim to create a safe and sustainable environment that celebrates our coastline and our village history, supports local businesses and services as well as leaving a legacy for future generations.

We acknowledge the realities of coastal erosion and climate impacts. Whilst we want to maintain our cultural and heritage assets and iconic landmarks for as long as it is feasible to do so, we support the implementation of some practical solutions, if supported by the community and local landowners, to help protect our heritage while planning for a future shaped by change.

Existing residents

We acknowledge the realities of coastal erosion and climate impacts. Whilst we want to maintain our cultural and heritage assets and iconic landmarks for as long as it is feasible to do beyond funding for sea defences, we support the implementation of some practical solutions, if supported by the community and local landowners, to help protect our heritage while we plan for a future shaped by change. This means being sensitive to the impact of the potential loss of property as a result of coastal erosion for existing homeowners and businesses.

New residents

Happisburgh is committed to fostering a vibrant community that actively supports local businesses and its school, making the village an appealing destination for both new residents and visitors.

As already stated, there is no Happisburgh without its people. For our school to fill its classrooms and remain a valued destination for school trips, Happisburgh must continue to grow. We hope to be valued for our proactive pioneering response to coastal change, ensuring that Happisburgh remains a thriving and inspiring community for residents and visitors alike.

Supporting Tourism, Education, and Local Enterprise

We see great value in repurposing or using existing facilities near the coast to serve as anchors for local enterprise. These venues could thrive as improved spaces for new businesses to grow or host local events, such as craft fairs, workshops and food markets, all led by local makers and producers. This, in turn, would generate more custom for established businesses such as the caravan park and local holiday home rentals.

It is important that local businesses - whether they are well-established, newly founded, or seasonal operators - remain a strong pillar within the Happisburgh community. By supporting a thriving network of enterprises, we aim to ensure that the village continues to serve the needs of both residents and visitors, reinforcing its place as a safe, lively, resilient, and welcoming coastal community.

Legacy and landmarks

Our community recognises the essential role of education in preserving and sharing Happisburgh' s unique history to ensure that its story continues to be told for generations to come.

The Wenn Evans Centre is envisioned as a focal point for sharing local heritage and lifelong learning—a dynamic space where Happisburgh's rich past is not only celebrated but serves as a springboard for future aspirations. By establishing a digital archive, we aim to create a living legacy that honours the history and enduring significance of the Church of St Mary the Virgin. Recording and recognising Happisburgh's long history will make local heritage accessible and engaging for everyone. It will also invite future generations to connect, discover and contribute to the ongoing story of our village.

Sustainable coastal community

Our vision for Happisburgh is of a flourishing and sustainable coastal community; a place where people want to live, work, and visit. We are committed to creating safe, welcoming spaces that foster a strong sense of belonging and enabling all to enjoy access to the beach. By transforming the old toilet block into a vibrant hub supporting local enterprise and offering hands-on workshops, we can showcase adaptation in practice whilst nurturing both innovation and community spirit.

We are excited by the prospect of a Cob Education Centre located on the former caravan park site where we aim to repurpose suitable land as 'living classrooms' for heritage and ecology, demonstrating coastal resilience and providing opportunities for learning and engagement. Through low-carbon, short-term land use and a focus on building community cohesion, we seek to ensure Happisburgh remains vibrant, resilient and thriving in the face of coastal change for the benefit of residents and visitors alike.

Healthier, happier, greener

Our ambition is to see people and nature flourish together. By increasing areas of woodland, hedgerows, grassland, strategic planting and buffer strips as well as ponds and swales, we would encourage a greater diversity of wildlife. This would also support the health and wellbeing of individuals by offering more accessible open spaces and play areas.

As a community we want to adapt to a changing coastline by creating opportunities to build cohesion and by taking actions to benefit residents and visitors. This will ensure Happisburgh remains a chosen destination and a cherished home for generations to come.

Future of the vision statement

This vision is intended to evolve over time, reflecting our ongoing commitment to celebrating our unique coastline. We are dedicated to ensuring the vision remains relevant and impactful by inviting regular review by the Parish Council. Looking ahead, we hope that, in time, a future Coastal Minister will recognise and reflect upon the enduring significance of Happisburgh and its contribution to our coastal heritage.

Developed in partnership with Coastwise, Jacobs, North Norfolk District Council, Happisburgh Coastal Erosion Liaison Group.

3. Action Plan

Table 3-1 below outlines actions that have been completed, are currently in progress, and are planned for the short, medium, and long term. These actions are based on a high-level analysis of options presented in Appendix B, and Appendix C provides details on the associated community and stakeholder engagement. Where actions can be attributed to a specific location, these have been mapped in Figure 3-1.

Table 3-1 Action Timeline

Ref	Action	Action Owner	Trigger	Completion Date	Key Considerations	Next Steps
			Completed Actions			
C1	Demolition of 9 properties	NNDC	Already completed	Completed 2011	Already completed	None identified
C2	Construction of new car park and toilets inland	NNDC	Already completed	Completed 2011	Already completed	None identified
C3	Rerouting water supply for houses	Anglian Water	Already completed	Unknown	Already completed	None identified
C4	RNLI relocation	RNLI	Already completed	Completed 2012	Already completed	None identified
C5	Relocation of holiday park	Manor Farm Holiday Park	Already completed	Completed 2020	Already completed	None identified
C6	Time and Tide Bell	Marcus Vergette and Neil McLachlan	Already completed	Completed 2023	Already completed	None identified
C7	Purchase and repurposing of land (e.g., car park site)	NNDC	Already completed	Completed 2025	Already completed	Construction of additional car park inland (Action O2)
C8	Graveyard management options developed	NNDC	Already completed	Completed 2025	Already completed	Engagement with Diocese of Norwich regarding graveyard (Action O15)
C9	Flora surveys on former caravan site	Norfolk Flora Group	Already completed	Completed 2025	Already completed	-
C10	Rock and Ramp options report shared with community	NNDC	Already completed	Completed 2025	Already completed	Review of Beach Access Options

Ref	Action	Action Owner	Trigger	Completion Date	Key Considerations	Next Steps
						with a view to taking an Option forward (Action S9)
C12	Economic development advisor engaged for local businesses	NNDC	Already completed	Completed 2025	Already completed	Engagement with directly impacted businesses to understand appetite for business continuity plans and mobile business units (Action 011)
C13	Engagement with Happisburgh landowners on drainage	NNDC/FWAG	Already completed	Completed 2025	Already completed	Engagement with landowners regarding management of drainage on agricultural land (Action O11)
C14	Water management investigation report	NNDC	Already completed	Completed 2025	Already completed	Engagement with Norfolk Highways regarding management of drainage at Beach Road (O9), Engagement with landowners regarding management of drainage on

Ref	Action	Action Owner	Trigger	Completion Date	Key Considerations	Next Steps
						agricultural land (Action O11).
C15	**Toilet Block change of use options**	NNDC	Already completed	Completed 2025	Already completed	Repurpose old toilet block (art/shelter/info point) (Action O3).
ONGOING ACTIONS						
O1	**Beach access ramp maintained** This is 'business-as-usual'	NNDC	Access is impacted due to coastal change	Ongoing	Significant maintenance cost incurred to NNDC.	Continue maintenance at least until Action S9 (Review of Beach Access Options with a view to taking an Option forward) has been completed.
O2	**Construction of additional car park inland**	NNDC	Already underway	Ongoing	Ongoing works.	Development of Phase 2 which includes Actions O16 (Replacement Play Area Planning Application), O17 (Replacement Toilet Block Planning Application) and O18 (Information Points Planning Permission).

Ref	Action	Action Owner	Trigger	Completion Date	Key Considerations	Next Steps
O3	**Plan to repurpose existing toilet block** Uses could include electric car charging points, hard standing for mobile catering units, art display or gallery, and shelters.	NNDC	Considerations for repurposing the existing toilet block are underway.	Ongoing	Investment may be short-lived due to coastal change. Planning permission is likely and this will likely set the timescale for delivery. Accessibility and safety regulations will need to be considered. Costs are unclear and may include structural assessment and repair before main works can take place.	Options appraisal to determine preferred future use of toilet block.
O4	**Install electric car points and catering hardstanding**	NNDC	Already underway	Ongoing	Programme to be completed in 2026.	Development of Phase 2 which includes Actions O19 (Replacement Play Area Planning Application), O17 (Replacement Toilet Block Planning Application) and O18 (Information Points Planning Permission)
O5	**Plough farmland parallel to cliffs**	Landowners	Already underway	Ongoing	Technical viability should be advised by landowners.	Monitor effectiveness as part of Action O10 (Engagement with

Ref	Action	Action Owner	Trigger	Completion Date	Key Considerations	Next Steps
						landowners regarding management of drainage on agricultural land)
06	**Mental health support (1:1 and group)**	Norfolk Mind	Already underway	Ongoing	None identified.	None identified.
07	**A scan and 3D model of St Mary's Church** Use of a scan and 3D model to digitally preserve buildings that are at risk of erosion, such as St Mary's Church, providing a lasting record for future interpretation, education, and engagement.	NNDC/Diocese	Already underway	Ongoing	A contractor has been appointed for this work and it is currently underway.	Consider how recording will be stored and used going forward.
08	**Engagement with utilities (UKPN, Anglian Water)**	NNDC	Already underway	Ongoing	Engagement with UKPN and Anglian Water was started by Jacobs whilst this plan was developed. Contact details have been shared where possible such that this engagement can continue.	NNDC to continue engagement with UKPN and Anglian Water, with a focus on planning their networks in accordance with the impacts of coastal change.
09	**Engagement with Norfolk Highways regarding management of drainage at Beach Road**	NNDC	Already underway	Ongoing	Engagement with Norfolk Highways is already underway. No key considerations have been identified in the	Options appraisal to determine a preferred option for the management of

Ref	Action	Action Owner	Trigger	Completion Date	Key Considerations	Next Steps
					development of this plan.	drainage at Beach Road.
O10	**Engagement with landowners regarding management of drainage on agricultural land**	NNDC	Already underway	Ongoing	Engagement with landowners is already underway. No key considerations have been identified in the development of this plan.	Identification of potential sites for drainage improvements within the wider Happisburgh area, with a view to carrying out multiple options appraisals to identify preferred options for improvement management of drainage.
O11	**Engagement with directly-impacted businesses to understand appetite for business continuity plans and mobile business units.**	NNDC	Already underway	Ongoing	Engagement with businesses is already underway. No key considerations have been identified in the development of this plan.	A decision should be made, based on local appetite, whether to progress drafting business continuity plans.
O12	**Engagement with Norfolk Highways surrounding the ongoing impacts of coastal change to highways**	NNDC	Already underway	Ongoing	Engagement with Norfolk Highways is already underway. No key considerations have been identified in the development of this plan.	Should coastal change impact Happisburgh in a such a way that highways are cut-off and access to properties

Ref	Action	Action Owner	Trigger	Completion Date	Key Considerations	Next Steps
						becomes an issue, then an options assessment should be requested from Norfolk Highways.
O13	**Engagement with Norfolk County Council regarding future routing of Coast Path**	NNDC and Norfolk County Council	Already underway	Ongoing	Engagement with Norfolk County Council is already underway. The impact of the new car park development (Phases 1 and 2) should be a key consideration in the routing of the Coast Path through Happisburgh.	Options appraisal of potential Coast Path routes with consideration given to land use changes at the Beach Road car park.
O14	**Engagement with Diocese of Norwich regarding the future options for the church**	NNDC	Already underway	Ongoing	Engagement with the Diocese is already underway. No key considerations have been identified in the development of this plan.	A maintenance and deconstruction plan should be developed as per Action S5.
O15	**Engagement with Diocese of Norwich regarding graveyard**	NNDC	Already underway	Ongoing	Engagement with the Diocese is already underway. No key considerations have been identified in the development of this plan.	An options appraisal should be carried out with a view to identifying a preferred option for the future management of the graveyard.

Ref	Action	Action Owner	Trigger	Completion Date	Key Considerations	Next Steps
O16	**Replacement Play Area Planning Application**	NNDC	Already underway	Ongoing	This forms part of Phase 2 for the new car park development. It is understood that this well be developed under a separate planning permission to the development of the new car park (PF/22/2510)	Seek planning permission.
O17	**Replacement Toilet Block Planning Application**	NNDC	Already underway	Ongoing	This forms part of Phase 2 for the new car park development. It is understood that this well be developed under a separate planning permission to the development of the new car park (PF/22/2510)	Seek planning permission.
O18	**Information Points Planning Permission**	NNDC	Already underway	Ongoing	This forms part of Phase 2 for the new car park development. It is understood that this well be developed under a separate planning permission to the development of the new car park (PF/22/2510)	Seek planning permission.

Ref	Action	Action Owner	Trigger	Completion Date	Key Considerations	Next Steps
O19	**Operate carpark and toilets**	Parish Council	Already underway	Ongoing	Consideration should be given to the transition from operating the existing car park to include the new car park.	A management plan to include the additional car park asset should be developed.
O20	**Generate local funds**	Parish Council	Already underway	Ongoing	Consideration should be given to the extra revenue generated by additional car parking, when this will likely reduce due to loss of existing car parking spaces, and how this is impacted be seasonal demand.	Develop a plan for the use of local funds such as car park revenue, with consideration for the benefits of supporting coastal transition activities (See Action S10)
Short Term Actions (0-2 Years)						
S1	**NNDC support made to owners of properties at imminent risk** NNDC is currently in a position where they were able to make time-limited offers to purchase properties that are at immediate risk of being impacted by coastal erosion. This is funded through the CTAP project and offers were being made on a case-by-case basis.	NNDC	Owners of residential properties that have been identified as being at immediate risk within the timeframe of the Coastwise project (i.e. prior to end March 2027) will be approached by NNDC.	March 2027	The option only applies to properties already identified where purchase is already complete or in train	This option has been deployed and is not extending further.

Ref	Action	Action Owner	Trigger	Completion Date	Key Considerations	Next Steps
S2	**NNDC-led Demolition taken forward for properties at future risk** If a building is considered a dangerous structure requiring urgent action under the Buildings Act 1984 NNDC might choose to issue a Section 78 Order and may take emergency action to demolish the property without waiting for a court order. NNDC's preferred approach is to complete demolition by mutual agreement.	NNDC	Trigger may be when cliff retreat reaches a certain point on the ground, or when it comes within a certain distance from the structure. This will result in a Section 77 Order when a structure is not considered imminently dangerous, and a Section 78 Order, when a structure requires urgent action to make it safe.	Dependent on when a structure requires a Section 77 or Section 78 order.	It is not always clear when it is time to demolish a property. Requires a suitably qualified Council officer or contractor to assess each individual structure.	Early engagement is essential for this to be a viable option.
S3	**Continue to explore options for homeowners in the erosion risk zones**	NNDC	This should begin following the completion of the Coastwise project and should draw on learning from the wider Flood and Coastal Innovation Programme (FCIP).	This is anticipated to be ongoing until options are embedded in national policy.	This should be a coordinated effort with organisations broader than just NNDC, drawing upon the learning of the wider FCIP.	The viability of a cross-organisation working group should be explored as a starting point.
S4	**Community Recording** Recording memories, images/video of heritage, speaking to community members, etc).	To be confirmed.	This does not require a trigger to begin but would benefit from being carried out using a risk-based approach to ensure that assets are adequately	No factors influencing the timescale of this have been identified.	Records will need to be stored in an appropriate format such that they can be accessed in the future.	A gap analysis of existing records would be beneficial such that unrecorded

Ref	Action	Action Owner	Trigger	Completion Date	Key Considerations	Next Steps
			captured before they are impacted by coastal change.		Availability of equipment and technology. Costs of data storage.	assets can be targeted.
S5	**Maintenance and deconstruction plans of heritage assets** Heritage assets will be identified with a view to planning approach to future maintenance and deconstruction. This should include legal advice for asset owners.	Individual asset owners	Heritage assets will be identified as part of this plan. Owners of assets within the immediate and medium-term will be contacted to begin a plan for ceasing maintenance and beginning deconstruction. This should include legal advice.	Timescale depends on the duration of planning and consent processes, the availability of contractors, and any site-specific challenges that may arise.	There may be statutory duties to maintain certain assets.	Owners of assets within the immediate and medium-term to be contacted. Detailed maintenance or deconstruction plans to be developed.
S6	**Suitability assessment of available land adjacent to the coast with a view to repurposing it**	NNDC or Parish Council	Land becomes available due to demolition of existing properties, meaning that an assessment of the land's suitability for the following uses should take place: community gardens, orchards, or allotments, pop-up uses or events, nature and habitat uses, camping, education, social support, arts and	Ongoing, as new land becomes available.	Planning permission and environmental assessments will be required. Health and safety of the site to be considered. Costs involve the assessments, construction	Options appraisal with a view to identifying a preferred option for repurposing any available land.

Ref	Action	Action Owner	Trigger	Completion Date	Key Considerations	Next Steps
			culture, and car parking.			
S7	Repurposing of land	NNDC or Parish Council	A suitability assessment including appropriate consultation has taken place and a preferred option has been chosen.	Timescales linked to acquiring planning permission and time to carry out the works	Planning permission and environmental assessments will be required. Health and safety of the site to be considered. Costs involve the assessments, construction.	Seek planning permission.
S8	Review of available external funding to confirm whether any options outlined in Table B-7 (coastal defence options) can progress	NNDC	Change in Flood and Coastal Erosion Risk Management Grant-In-Aid (FCERMGiA) funding approach or other funding. opportunities present themselves.	Timescales dependent on available funding.	Actions are limited since significant funding is required to progress these. The funding gap for these options is expected to large enough to be a prohibitive factor in taking any of these options forward.	Seek alternative funding if possible.
S9	Review of Beach Access Options with a view to taking an Option forward	NNDC	Funding for reconfiguring access becomes available.	Dependent on time taken to reach preferred option.	Need to account for public preference, cost, limitations, barriers, and timescales.	Identify preferred option.
S10	Funding Contribution towards a Coastal Transition Fund	Parish Council	Does not require a trigger to progress and can be completed immediately.	Ought to be completed prior to the end of the Coastwise project, such that funding	Multiple Parish Councils within the District of North Norfolk have a Coastal Erosion Transition Plan and	Identify whether contribution form Happiburgh Parish Council to a

Ref	Action	Action Owner	Trigger	Completion Date	Key Considerations	Next Steps
				and momentum behind coastal transition continue.	therefore, there is likely benefit in a coordinated approach to delivering these. Consideration should be given to contributions of funding towards a role at NNDC for an officer to oversee Coastal Erosion Transition Plans across the District.	Coastal Transition Fund is viable.
S11	**Define responsible party for reporting UK Power Networks assets at risk**	To be confirmed.	Does not require a trigger to progress and can be completed immediately.	This will be ongoing unless process for reporting assets at risk changes.	The responsible party (or parties) would benefit from making regular visits to the coast at Happisburgh to assess any impacts to UKPN assets. Checks ought to be completed following storms and at regular periods during the storm season as a minimum.	Identify responsible party (or parties) and confirm requirements of reporting.
Medium Term Actions (2-20 Years)						
M1	**Raising Awareness for property owners that are not at imminent risk presently** At-risk properties will be mapped, and homeowners will be proactively informed about their specific risks.	NNDC	Properties within the medium-term and longer-term risk bands will be identified for this action. The nature of the engagement will vary depending on the	Coastwise project may be able to cover these activities until March 2027 and following that date they could be	A trigger-point approach requires early and ongoing resident engagement, careful communication to avoid undue concern, management of	The approach for this option will be set out as part of this Plan

Ref	Action	Action Owner	Trigger	Completion Date	Key Considerations	Next Steps
			risk band that a property is in.	absorbed into the Council's workload/revenue budget going forward.	information gaps when properties change ownership, and sufficient Council resources and skills to support monitoring and implementation.	
M2	**Explore Social Housing Development** Social housing could be developed within the village which would provide housing for impacted residents.	NNDC	To be confirmed.	To be confirmed.	To be confirmed.	To be confirmed.
M3	**Review of suitability of land for repurposing**	NNDC or Parish Council	Ongoing monitoring of coastal change and utilisation of the repurposed land will identify the requirement for a review of how suitable the land is for its current land use at present.	Continuous process	Long-term suitability in relation to coastal change, safety, environmental impacts and opportunities, community value	Continue to monitor coastal change. Assess land stability, access, and environmental condition. Engage with the community to gather feedback.
	Longer-term / Aspirational Actions (20+ Years)					
LX	No actions identified					

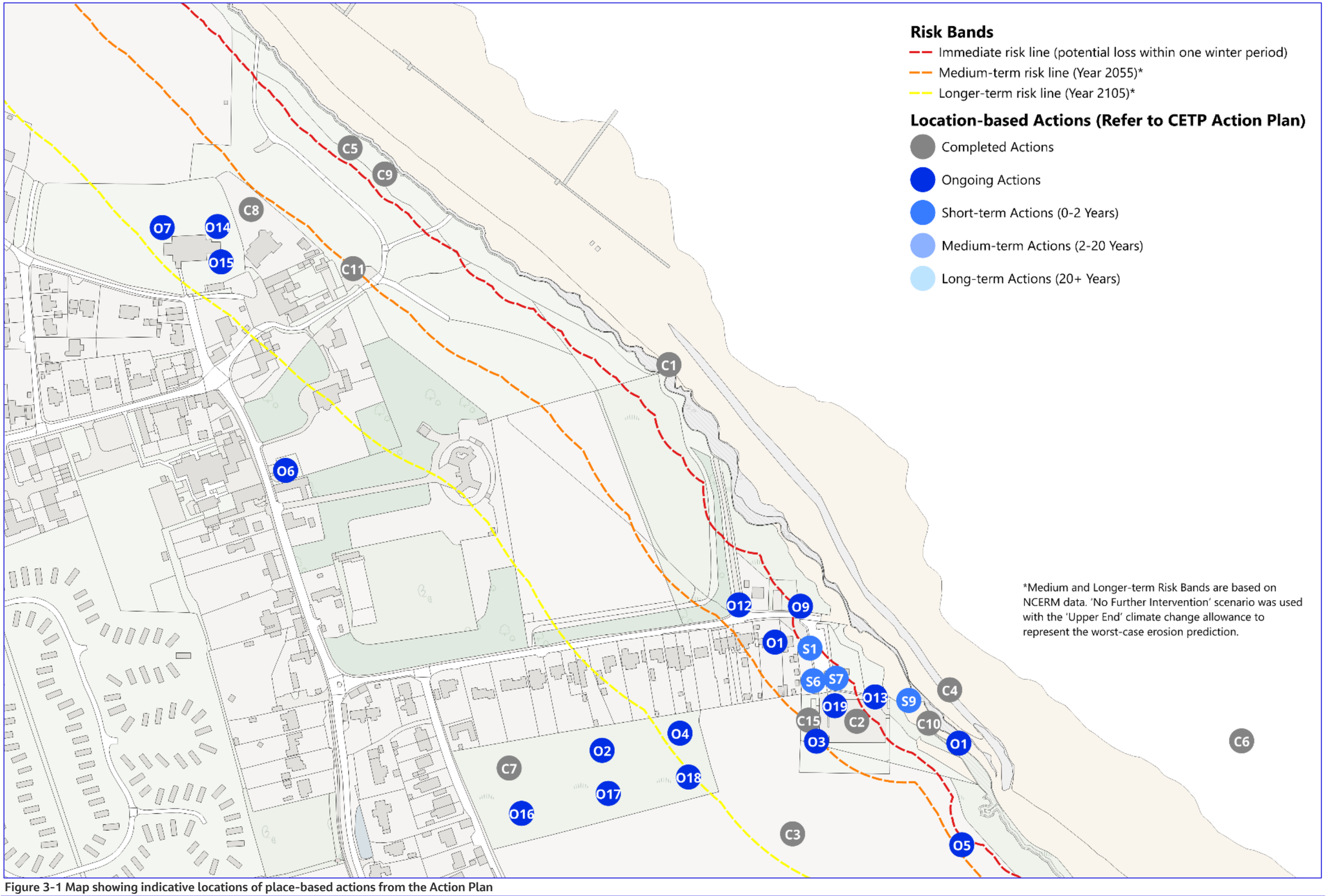


Figure 3-1 Map showing indicative locations of place-based actions from the Action Plan

Adaptation Pathways

Whilst the Action Plan within this document provides a clear list of actions to take to increase resilience whilst also trying to deliver the Community Vision, it is also important to consider the strategic importance of this plan and the governance around it going into the future.

The Coastwise project, through funding provided by the Environment Agency and Defra, has enabled significant investment in coastal transition activities across North Norfolk. This has significantly altered the approach to coastal transition and adaptation within the district. An Adaptation Pathways-based approach has been used to identify the key changes in governance required so that this Coastal Erosion Transition Plan (CETP) can enable these coastal transition activities to continue.

The following scenarios have been identified as part of this approach:

- Business as Usual – This pathway is based on an approach assumed to be taken by the majority of Local Authorities as a bare minimum for managing the impacts of coastal change. It is a reactive approach to managing the impacts of coastal change.
- During Coastwise Project – This pathway represents the actions that have taken place as part of the Coastwise Project and is considered as an enabler for this work to continue into the future.
- Coastal Erosion Transition Plan – This pathway is the long-term coastal transition and adaptation approach that will continue beyond the timescale of Coastwise funding. It is a planned approach to living with the impacts of coastal change, and is aligned with the Happisburgh Community Vision.

Figure 3-3 below shows how these pathways interact with one another. Escalation points in this context are signs that it is now a point in time where a shift in strategy (or pathways) is needed. Decision points here are focused on governance and ownership of the CETP.

Each of these pathways is formed of multiple actions. Whilst Adaptation Pathways can be utilised at a more granular, action-by-action level, given the strategic nature of the CETP, and the number of actions identified within it, it is considered more practical for the pathways to interact as described above. The actions identified within each pathway are shown in Figures 3-4, 3-5 and 3-6 on the following pages.

The Business as Usual Pathway in locations where long-term defence against coastal change is not an option has long been identified by both coastal communities and coastal practitioners as being unsustainable (Escalation Point 1). Funding was awarded to look for new learning and alternative approaches by the Environment Agency and Defra as part of the Flood and Coastal Innovation Programme (FCIP), which is represented at Escalation Point 2. This funding has enabled the Coastwise Project to gather information on alternative approaches to the Business as Usual Pathway, which have helped shape the options and actions within this Coastal Erosion Transition Plan (Escalation Point 3). FCIP funding is due to end in March 2027, which is represented as Escalation Point 4, and triggers Decision Points 1 and 2:

1. Decision on whether to progress CETP in preparation for the end of Coastwise Funding.
2. Decision on Governance and ownership of CETP beyond the Coastwise Project.

Recommendations in regarding these decisions have been made in Section 4 of this document.

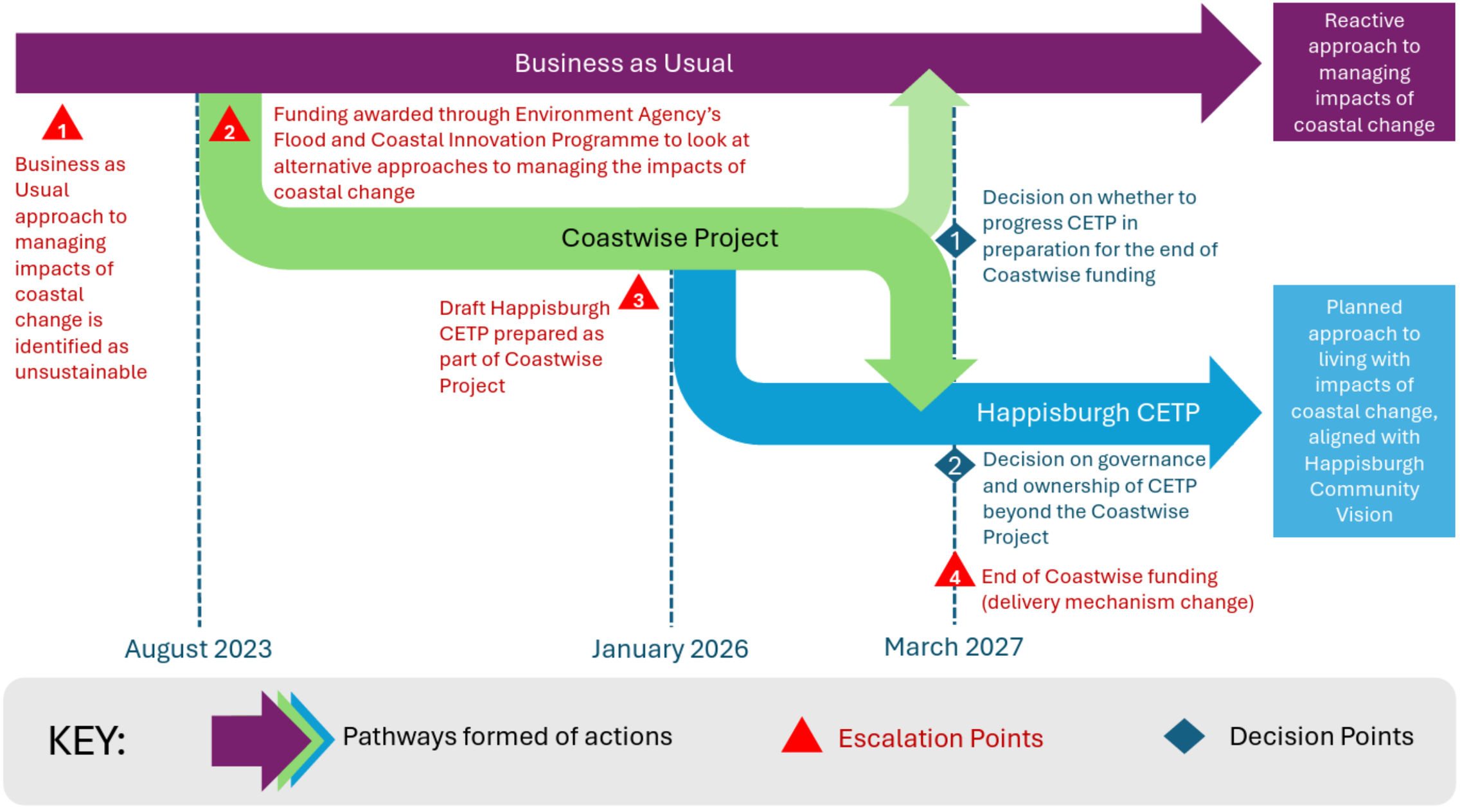
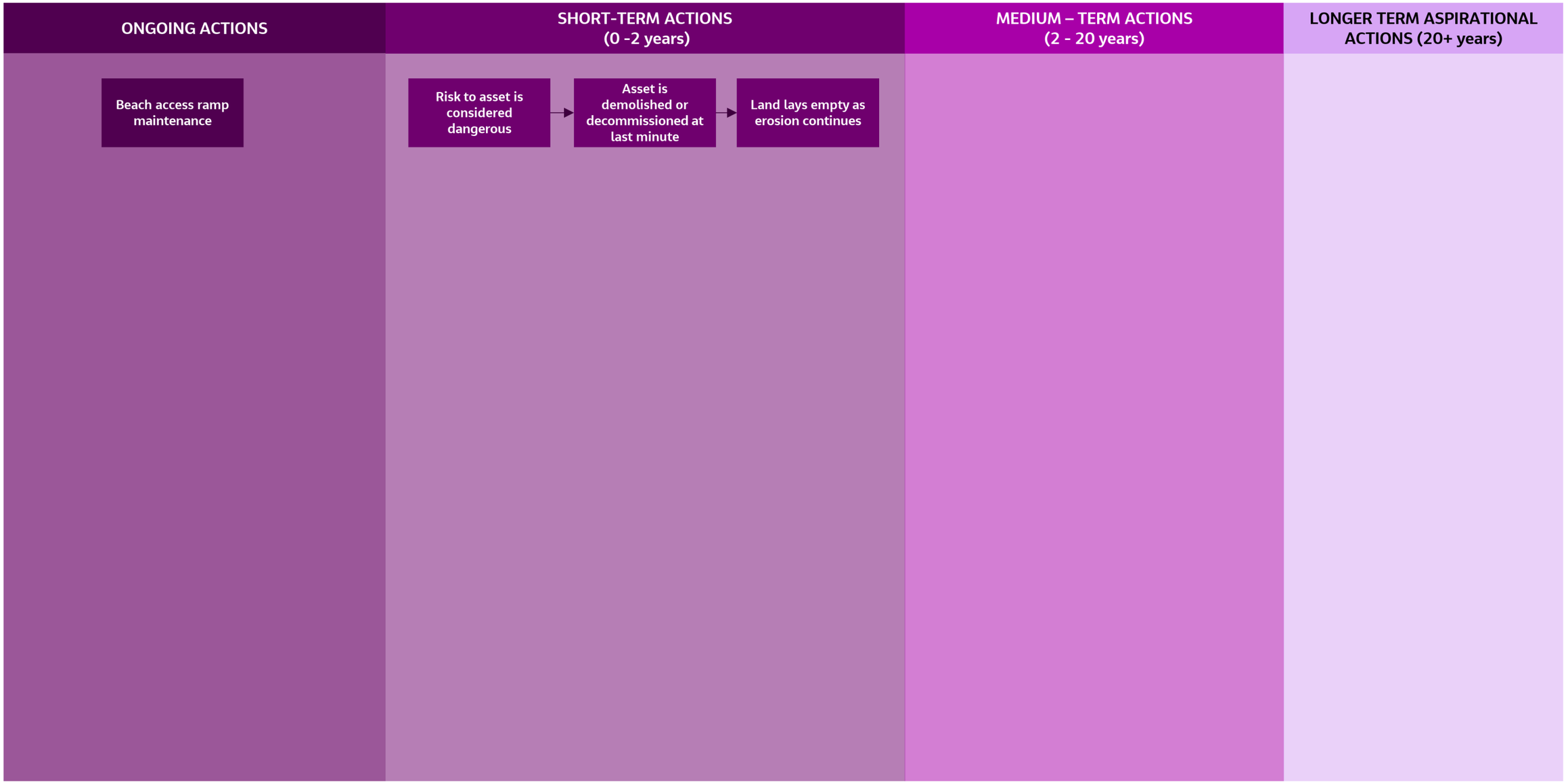


Figure 3-2 Adaptation Pathways diagram for Happisburgh.

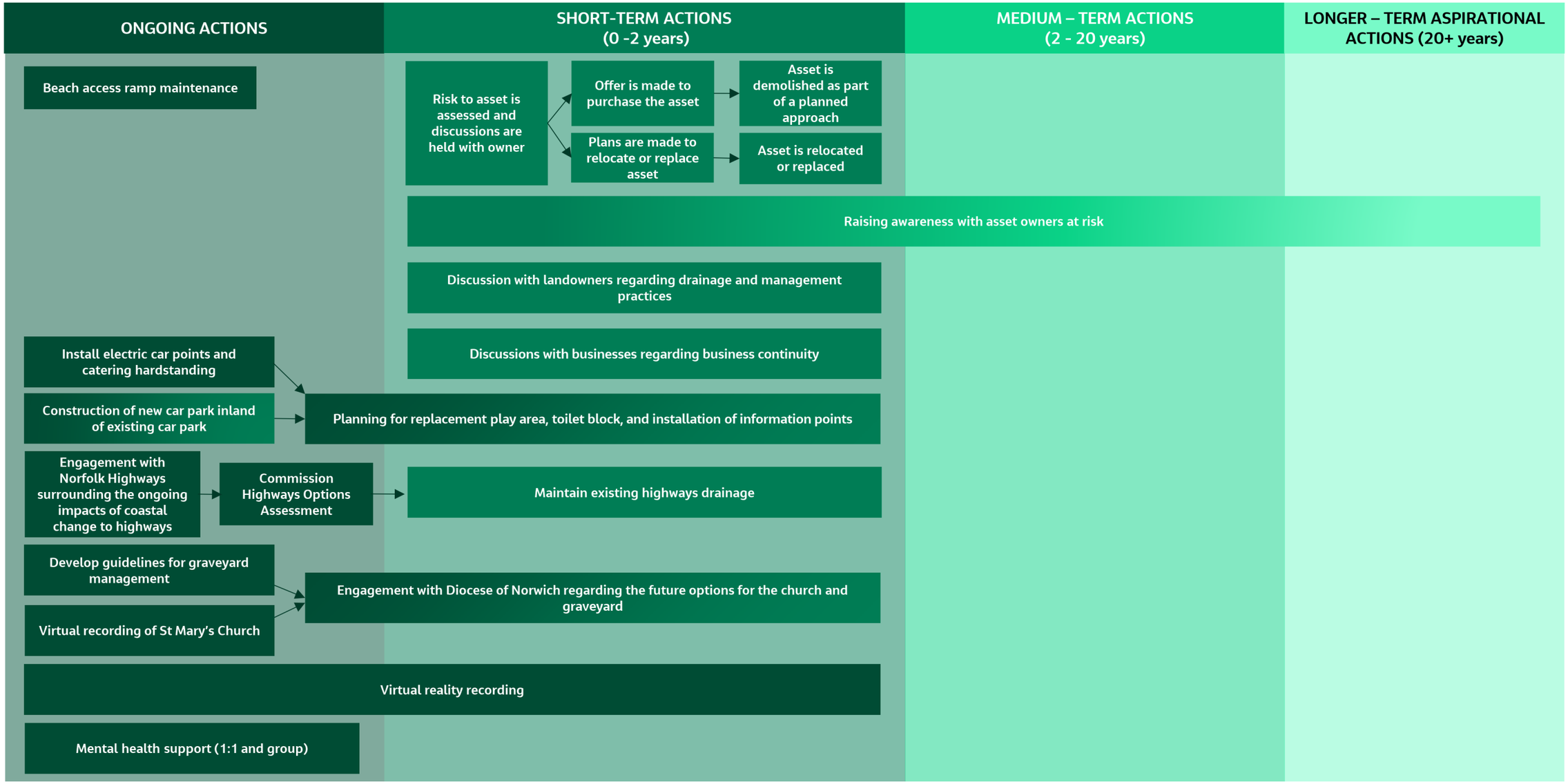
Business as Usual Pathway



- Approach is reactive.
- Asset owners are faced with finding a balance between enjoying their asset and preparing for demolition or decommission.
- Risks blight where properties are demolished and land lays empty.

Figure 3-3 Business as Usual Pathway

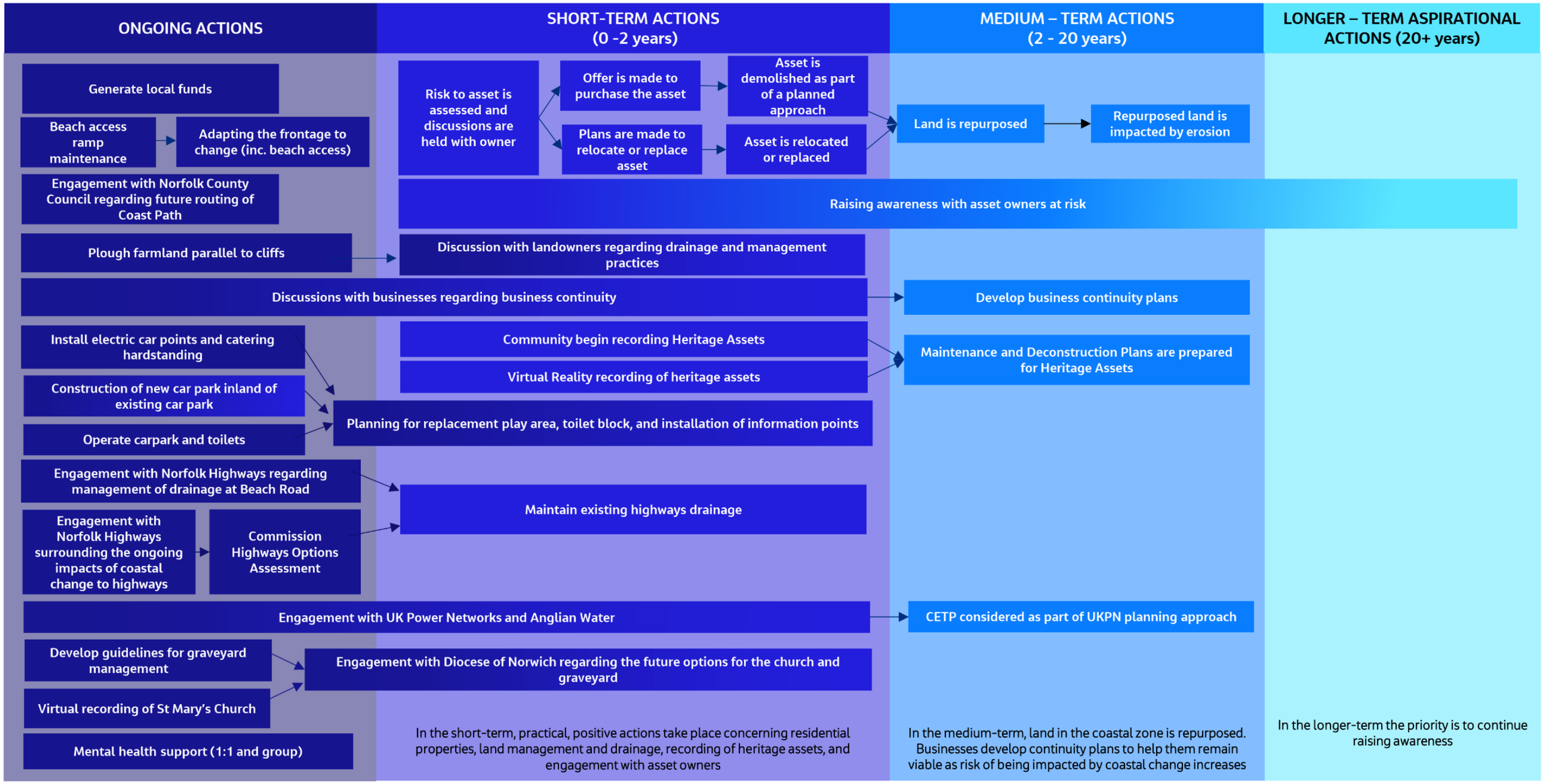
During Coastwise Project Pathway



- Coastwise funding has enabled some actions to take place in the short-term.
- Some asset owners are offered additional options to the business-as-usual approach.
- Risks blight where properties are demolished and land lays empty.

Figure 3-4 During Coastwise Project Pathway

Coastal Erosion Transition Plan Pathway



- Builds upon short-term actions enabled by Coastwise and is a starting point in a move towards a planned approach to living with risk.
- Short, medium and longer-term actions have been identified which serve to achieve the Community Vision.
- Reduces risk of blight where properties are demolished since land can be repurposed.

Figure 3-6 Coastal Erosion Transition Plan Pathway

4. Ownership

Action Owners

This section sets out key contact details for action owners where available, subject to General Data Protection Regulation.

Organisation	Key Contacts (to be completed upon adoption)
North Norfolk District Council	Firstname, Surname, 01XXX XXXXXX, firstname.surname@north-norfolk.gov.uk
Happisburgh Parish Council	Firstname, Surname, 01XXX XXXXXX, firstname.surname@email.co.uk
Happisburgh Coastal Research Group	Firstname, Surname, 01XXX XXXXXX, firstname.surname@email.co.uk
Norfolk And Waveney MIND	Firstname, Surname, 01XXX XXXXXX, firstname.surname@email.co.uk
Asset Owner 1	Firstname, Surname, 01XXX XXXXXX, firstname.surname@email.co.uk
Asset Owner 2	Firstname, Surname, 01XXX XXXXXX, firstname.surname@email.co.uk
Business Owner 1	Firstname, Surname, 01XXX XXXXXX, firstname.surname@email.co.uk
Business Owner 2	Firstname, Surname, 01XXX XXXXXX, firstname.surname@email.co.uk
Landowner Owner 1	Firstname, Surname, 01XXX XXXXXX, firstname.surname@email.co.uk
Landowner Owner 2	Firstname, Surname, 01XXX XXXXXX, firstname.surname@email.co.uk

Plan Review

It is important that this plan undergoes regular reviews to ensure that the information within it is up-to-date, that new options have been included, and that the actions remain relevant.

This plan should be reviewed under the following circumstances:

- New information comes to light that might identify a change in risk or new options for coastal adaptation/transition.

- There has been a significant number of changes to the actions within the plan, such that the action plan is no longer coherent and requires an update.
- The community no longer feels that the Community Vision represents their aspirations.
- Five years has passed since the previous iteration of the plan.

Recommendations

The recommendations below are based on the adaptation pathways in Section 3 of this plan, along with the community engagement carried out in Happisburgh between August and December 2025 (See Appendix C).

- This document should act as both a record and a plan of coastal transition/adaptation activities within Happisburgh.
- Some of the actions identified within this plan extend beyond Happisburgh geographically and may benefit other coastal communities. It is recommended that some form of coordination takes place between Coastal Erosion Transition Plans within North Norfolk such that communities are able to collaborate in respect to these actions.
- The ownership of the Community Vision should sit with Happisburgh Parish Council. The Parish Council have unique ties into the community and a unique understanding of how the village functions. Much of what the Community Vision sets out extends beyond the realm of coastal management and the coastal erosion issue that Happisburgh faces. There may be opportunity for actions that serve to fulfil the Community Vision to also address other issues that the village faces. Happisburgh Parish Council are recommended to meet annually with the sole purpose of discussing the ongoing relevance of the Happisburgh Community Vision.
- It is recognised that the expertise and experience required to deliver the actions within this plan may not always be present within Happisburgh Parish Council as membership changes through time. Therefore, it is recommended that discussions are held between all Parish Councils within the District of North Norfolk who have a Coastal Erosion Transition Plan, regarding contributions of funding towards a role at NNDC for an officer to oversee Coastal Erosion Transition Plans across the District.
- It is recommended that appropriate actions should be incorporated into the Action Plan of Shoreline Management Plan 6 such that they will receive annual review by the Coast Protection Authority.

Appendix A – Coastal Management at Happisburgh

Figure A-1 Cliff top lines from 2000 to 2024 along the Happisburgh frontage (zoomed in view on lower image)

Table A-1 Timeline of Coastal Management Works at Happisburgh

Year	Month	Coastal Management Action
1949		Coast Protection Act passed. Historic erosion rate noted as >1.5m/year.
1950		Mobbs & English commissioned to design sea defences under CP Act. MAFF rejected initial concrete seawall design; timber and steel revetments proposed instead.
1959 - 1961		Timber revetments and groynes constructed between Ostend and Cart Gap.
1968		Groynes constructed at Beach Road.

1974		NNDC assumes coastal responsibility.
1982		Partial reconstruction of damaged revetments and groynes.
1986		Cart Gap seawall constructed; old revetment partially removed.
1989		Major investment need identified.
1991		Storm damage leads to removal of 300m revetment. Halcrow commissioned to assess options.
1992		Halcrow report produced. Scheme advertised but stalled due to unresolved objections.
1994		Shoreline Management Plan initiated.
1995		Revised scheme fails MAFF economic criteria.
1996		SMP completed; Hold the Line policy adopted. Storm damage causes loss of 400m revetment and Beach Road. Halcrow commissioned for second study. Visit by Junior Agriculture Minister.
1997	October	Revised scheme advertised; objections stall progress. MAFF introduces Priority Score. Council requests funding for design work.
1998		Visits by Junior Agriculture Minister and Agriculture Select Committee.
1999	April	MAFF grant aids preliminary design work.
1999	May	Coastal Concern Action Group formed; public meeting held.
2000		MAFF funds Strategy Study (Ostend to Cart Gap). HR Wallingford appointed. Priority Score revised to favour river schemes.
2001	December	HR Wallingford report completed; scheme advertised.
2002	January	Objections received to scheme advertised in December 2001.
2002	February	Negotiations with objectors.
2002	March	Defra announces new priority scoring system.
2002	April	Notification to objectors of NNDC's intention to refer to Minister.
2002	May	NNDC Executive Committee approves referral of objections to Defra.
2002	June	Defra Regional Engineer seeks clarification of technical points.
2002	July	Technical response sent to Defra. English Nature raises concerns over prehistoric axe. Application submitted to Defra.
2002	August	Details of BCR sent to Defra. Agreement reached with Norfolk Landscape Archaeology.
2002	September	Defra and HR in correspondence re financial justifications. Planning application submitted.
2002	October	Defra advises planning and landowner consents needed. NNDC resolves not to implement emergency work. Emergency evacuation plan created. English Nature and English Heritage concerns resolved.
2002	November	Halcrow commissioned to review scheme. Landowner refuses. Defra seeks confirmation of scheme criteria. NNDC seeks legal opinion. Halcrow concludes scheme fails criteria. NNDC considers emergency works. Defra sets hearing date. NNDC resolves to undertake emergency works.

2002	December	Emergency works commence. Defra indicates no new schemes in 2003/04. RNLI access ramp lost. SMP review begins.
2003	January	Emergency works completed. Public meeting held in St. Mary's Church.
2003	February	Plans drawn for temporary pedestrian access steps. Defra notifies councils of threshold score; Happisburgh scores 5.
2003	March	Additional EA rock placed on beach.
2003	April	Access steps constructed west of ramp.
2003	May	Meeting with Parliamentary Elliot Morley. Coastal Group Chairmen present case for Priority Score amendments.
2003	June	New Councillors visit Happisburgh. Health & Safety work undertaken.
2003	August	Meeting with Defra Regional Engineer. More EA rock placed on beach.
2003	October	Visit to Brussels by Norman Lamb, MP. NNDC resolves not to promote capital scheme without funding assurances.
2003	November	Further lobbying by Coastal Group Chairmen. Public meeting held.
2003	December	Minor surge causes Cart Gap wall to be outflanked. Emergency powers considered.
2004	January	St La Haye Ltd appointed to assess consequences of no works at Cart Gap. Complaint received from Ombudsman.
2004	February	Repairs to timber revetment. Report submitted to Ombudsman.
2004	March	Council resolves not to proceed with Cart Gap works. Proposal for beach excavation. Container placed for furniture storage. Asbestos removed.
2004	May	Garages demolished.
2004	June	Archaeological excavations by Natural History and British Museums.
2004	September	Some rocks relocated.
2004	October	Further report submitted to Ombudsman.
2004	November	Ombudsman finds in favour of Council.
2004	December	Draft Shoreline Management Plan published.
2005	June	Second archaeological excavation.
2005	December	New emergency plan issued.
2006	December	Council approves additional expenditure for works. CP Act notices served.
2007	February	Work begins to augment rock berm.
2007	April	Rock berm completed. Natural England assents to emergency works.
2007	August	Third archaeological excavation. Visit by Defra Minister Ian Pearson.
2007	September	Village planning workshop.
2007	November	Meeting with Natural England regarding SSSI works.
2008	January	Visit by East of England Minister Barbara Follett.
2008	June	Visit by Defra Minister Phil Woolas.
2008	August	Fourth archaeological excavation.
2009	January	4-5,000 tonnes of rock delivered to Decca Field. Visit by Royal Commission on Environmental Pollution.

2009	August	CP Act notice published for Decca Field rock revetment.
2009	December	Pathfinder: Pathfinder planning started.
2010	March	Decca Field rock scheme completed. Rock moved into Happisburgh.
2010	May	Fifth archaeological dig conducted.
2010	October	Pathfinder: Council approves Beach Road House acquisition methodology. First offer accepted.
2011	February	Pathfinder: Planning application submitted for car park, toilets, and ramp.
2011	March	Pathfinder: First house purchase completed.
2012	April	Pathfinder: Nine cliff top properties demolished and area landscaped.
2012	August	Pathfinder: New car park and toilets completed; operations transferred to Parish Council.
2012	September	Happisburgh steps removed and stored locally.
2013	February	Short rock bund installed to protect new ramp.
2014	April	Pathfinder: Caravan Park refused planning consent to relocate.
2015	May	Pathfinder: Caravan Park wins planning appeal to relocate.
2015	June	New play space built next to car park.
2015	October	Pathfinder: Rock sill rolled back and beach debris removed.
2015	December	Pathfinder: Second Pathfinder Evaluation released by DEFRA.
2017	December	Erosion episode begins due to low beach levels; ramp access lost.
2018	January	NNDC discusses ramp recut and rock sill relocation with community.
2018	October	Ramp recut regularly throughout year. Planning and MMO license obtained for rock sill relocation.
2019	April/May	Rock sill relocated closer to cliff toe. Earth ramp significantly reshaped.
2021	September	COVID-19 pandemic impacts works. Two significant ground failures near the Lighthouse due to surface water runoff. Earth ramp trimmed multiple times for safe beach access.
2021	December	Earth ramp closed for safety; total recut planned requiring new planning consent.
2022	March	Minister MP Rebeca Pow announces £36m Coastal Transition Accelerator Programme (CTAP) funding for North Norfolk and East Riding of Yorkshire.
2022	May	Earth ramp recut and reshaped with 45° slopes by contractor M Abbs; ramp reopened.
2022	June	Parish Council submits planning consent for new access road.
2022	October	Private bungalow near cliff edge demolished. Ramp regularly recut throughout the year.
2022	December	Instruction issued for another ramp safety recut.
2023	April	Ramp toe recut to maintain health and safety slope and access.
2023	June	Minor reshaping of ramp slope instructed.
2023	September	NNDC commissions Canham Consultants to assess proximity of Beach Road and Car Park entrance road for public safety.

2024	January	Development Committee passes new Car Park access road plans. Householder donates part of drive for Car Park Entrance Road.
2024	April	Initiate new ramp recut and begin removal/relocation of seaward end of car park.
2024	June	Householder donates another part of drive to keep Car Park Entrance Road open.
2024	August	Contractor instructed to remove parts of Car Park surface and store for reuse.
2024	September	Householder donates another part of drive to improve car park access. Earth ramp remains open since April.
2024	October	Contractor continues lifting at-risk Car Park areas for recycling.
2025	January	Contractor M Abbs completes minor ramp surface reshaping. Resident installs temporary double unit accommodation.
2025	May	Beach level remains high; new sand likely from Bacton sandscaping. Mott MacDonald and Jacobs reports finalised on cliff failure and rock bund assessment.

Appendix B – What actions can we take?

What Actions Can We Take?

Stakeholder engagement, risk analysis and work previously completed by the Coastwise project has identified the following categories of assets that are likely to be impacted by coastal change:

- Residential properties
- Land that is no longer suitable for its current or previous use that can be repurposed
- Heritage assets
- Existing coastal defences
- Drainage
- Businesses
- Car park located at Beach Road, along with the ancillary services (toilets, playground, signage)
- Agricultural land
- Highways
- King Charles III Coast Path
- Water, sewerage and electricity supply
- Access to the beach
- Church of St Mary the Virgin
- Graveyard associated with the Church of St Mary the Virgin

The options presented in this section are based on stakeholder engagement and work completed by the Coastwise project. A high-level appraisal of each option has been completed based on the following factors:

- Option practicalities – what does the option involve and are there any issues with its operational feasibility?
- Limitations – if we put this option in place, will it do what we intend it to do and if so, is there a limit to its effectiveness?
- Barriers – are there any hurdles we have to overcome to put this option in place? These could be permissions, licenses or buy-in from organisations or individuals.
- Cost – without providing any specific costs for taking the option forward, are there any cost implications associated with putting it in place?
- Timescales – how long will it take to implement the option and are there any time-limiting factors associated with it?

As part of the engagement process, a workshop was held where members of the Happisburgh community reviewed the proposed options and indicated their level of preference by assigning gold stars to the options they favoured. The total number of stars for each option has been recorded and included in the options table as an indicator of community support. It is important to note that the gold star allocations were not mutually

exclusive, and participants were permitted to assign multiple stars to multiple options. Consequently, the star counts reflect general preference levels rather than a ranked or exclusive voting outcome.

Where a significant issue has been identified for an option, expert judgement has been used to discount unviable actions. Actions may be taken forward subject to a certain condition such as buy-in from an organisation or individual, or availability of funding. An action might not be a decision to fully implement the option, but it can be the first step in a process to implement, or to understand more about the option. A single action may relate to multiple options where there is duplication.

Over time the impacts, issues and options may change and can be added to and updated.

Residential Properties

Options associated with residential properties can be divided into three categories. It is assumed that residential properties that are at immediate risk can benefit from NNDC support for immediately at risk properties providing that these are taken up within the timeframe of the Coastwise project. Residential properties that are not at immediate risk are more likely to benefit from some of the longer-term actions and learning from the Coastwise project that will be embedded into the future day-to-day Coastal Management operations within NNDC. Table B-1 sets out the options for residential properties at risk, based on work to date by the Coastwise project.

Table B-1 Appraisal of options concerning residential properties based on practicalities, limitations, barriers to implementation, costs and timescales.

Residential Property Option	Appraisal/Justification	Actions to be developed?	Community Support
Properties Immediately at Risk			
Option 1 – NNDC support for immediately at risk properties NNDC is currently in a position where they were able to make time-limited offers to purchase properties that are at immediate risk of being impacted by coastal erosion. This is funded through the CTAP project and offers were being made on a case-by-case basis. This approach seeks to advance plan for timely demolition (before crisis point) and enables owners to have some degree of choice and support with regard to their next steps,	**Option Practicalities** Offers need to be acceptable to the property owner based on their individual circumstances. There are numerous factors influencing whether an offer will or will not be accepted, and as such there will likely be times where offers are not accepted by those at imminent risk. Purchases can be made relatively quickly in conveyancing terms since liability for risk is mostly well understood. **Limitations** Funding for this approach was limited to those identified and as such, it is unlikely that properties at immediate risk beyond those already identified will benefit from this option. **Barriers**	**Not applicable** as actions are already in place. All properties that fit into this category have already been identified and purchased so there are unlikely to be further actions developed.	**4** ⭐

ahead of the loss of the property.	Time limitation: The option only applies to properties already identified where purchase is already complete or in train. **Cost** Dependent on individual property. **Timescales** This option has been deployed and is not extending further.		
Option 2 – Homeowner-led Demolition Depending on their situation, homeowners could choose to demolish their properties in good time.	**Option Practicalities** Demolishing a property early offers no discernible advantage for a homeowner. However, this does allow the homeowner to use their 'property rollback opportunity'' planning mechanism CC6 (NNDC Local Plan[10]) to relocate their home using a streamlined planning permission application. Though cost-prohibitive, homeowners can use theirs to build new homes when they have available funds. **Limitations** Demolitions may be limited by planning policy. **Barriers** A homeowner will require demolition notification and, if in a conservation area, conservation area consent via planning to carry out a demolition of this nature; however, some demolitions are treated as permitted development. Prior approval will likely be required for the method of demolition and site restoration plans. As such, there are policy, cost and time implications for this option. More broadly, a piecemeal approach to demolitions in this way would likely cause blight to the village. **Cost**	**No**. The cost implications for the homeowner make this an unviable option.	**0** ⭐

[10] North Norfolk Local Plan

	Grants such as the Coastal Erosion Assistance Grant (https://www.gov.uk/government/publications/coastal-erosion-assistance-grant/coastal-erosion-assistance-grant) are not made available directly to homeowners so it is unclear whether they would be able to access this funding so would need to be discussed with NNDC. This, along with the costs associated for planning permission, indicates that this may be a more expensive and onerous option than a Council-led demolition. **Timescales** Timescales are linked to acquiring planning permission or prior approval of permitted development; and to the time associated with carrying out the works. It would be fair to assume that this process could take three to six months.		
Option 3 – NNDC-led Demolition If a building is considered a dangerous structure requiring urgent action under the Buildings Act 1984 NNDC might choose to issue a Section 78 Order and may take emergency action to demolish the property without waiting for a court order. NNDC's preferred approach is to complete demolition by mutual agreement.	**Option** Practicalities The Council-led approach is underpinned legally by the Buildings Act 1984. Within this legislation there are two orders that can be used in this situation. A Section 77 Order when a structure is not considered imminently dangerous, and a Section 78 Order, when a structure requires urgent action to make it safe. A Section 77 Order is required to go through the courts. A Section 78 Order is more definite and allows the Council to take immediate action. As such, the Section 78 Order is the most useful to a Council in this situation. Good engagement with the impacted homeowners negates the usefulness of the Section 77 Order. NNDC's preferred approach is to complete demolition by mutual agreement It is also important to consider the other actions that may be required to carry this out such as temporary accommodation and storage for residents and their	**Yes**, providing that additional actions concerning the welfare of impacted residents are carefully considered; and that trigger points are used to identify when actions happen.	**0** ⭐

belongings, along with a longer-term plan for those individuals impacted.

This approach could be refined by identifying triggers to set out when actions should happen. An example could be when cliff retreat reaches a certain point on the ground, or when it comes within a certain distance from the structure.

Limitations

None identified.

Barriers

It is not always clear when it is time to demolish a property. Requires a suitably qualified Council officer or contractor to assess each individual structure.

Cost

The Coastal Erosion Assistance Grant (https://www.gov.uk/government/publications/coastal-erosion-assistance-grant/coastal-erosion-assistance-grant) is made available to Local Authorities to cover reasonable demolition costs, providing that certain conditions are met. Whilst in some cases this may cover costs to the council, it may be necessary to group multiple at-risk properties together to make cost savings such that the unit price per demolition falls below £6000 per property.

Timescales

This can be delivered fairly rapidly, providing that conditions are met such that a Section 78 Order can be issued. However, it is important to consider that other actions may need to be completed such as arranging temporary or alternative accommodation for the welfare of the impacted resident. These additional tasks can be complex and will be different for most of the residents impacted so must be considered carefully. Early engagement is essential for this to be a viable option.

Properties at Risk in the Future			
Option 4 – Raising Awareness Properties that are at risk in the future will be mapped, and a protocol for early engagement with homeowners will be put in place so that residents are kept as aware as possible of their own specific risk.	**Option Practicalities** A trigger point-based approach could be broadened to include earlier engagement touchpoints. This approach could include regular communication for residents who are likely to be impacted into the future. Communications will need to be carefully considered such that they do not unduly impact on the resident's enjoyment of the property, whilst ensuring a good understanding of what will trigger future actions regarding the demolition of their property. **Limitations** The trigger point-based approach assumes that residents will be subject to ongoing engagement as the risk of their property being impacted by coastal erosion increases. There is no guarantee that information provided will be passed on should a property change hands. There is a risk that engagement could come as a shock to new owners. Therefore, this needs to be managed carefully. **Barriers** None identified. **Cost** Ongoing monitoring is carried out as part of the Council's current day-to-day coastal management activities. There may be a requirement for some internal upskilling in geospatial analysis to apply this monitoring to agreed trigger points. It is anticipated that the Coastwise project may be able to cover these activities until March 2027 and following that date they could be absorbed into the Council's workload/revenue budget going forward. **Timescales** Some of the approach to this has already been set out as part of this Coastal	**Yes**. The approach for this option will be set out as part of this Plan.	**7** ⭐

	Erosion Transition Plan and it is anticipated that the approach could be adopted soon after the publication of this plan, providing that Council resources are available going forward.		
Option 5 – Social Housing Development Social housing could be developed within the village which would provide housing for impacted residents.	**Option Practicalities** Coastwise to input. **Limitations** Coastwise to input. **Barriers** Coastwise to input. **Cost** Coastwise to input. **Timescales** Coastwise to input.	TBC	2 ⭐

Community support is greatest for the 'Raising Awareness' Option. Actions arising from the options presented in Table 3-1 concerning residential properties at risk are outlined in Table B-2. Actions 1, 2 and 3 are all processes that have been tested already through the day-to-day operations of NNDC and the Coastwise project. Action 4 is concerned with the possibility of a social housing development within the village which could offer housing options to those impacted. However, it must be noted that this is still under development.

Table B-2 Actions arising following appraisal of options concerning residential properties.

Residential property actions taken forward into plan				
	Action	**Owner**	**Trigger**	**Vision Contribution**
1	NNDC support made to owners of properties at imminent risk	NNDC	Owners of residential properties that have been identified as being at immediate risk within the timeframe of the Coastwise project (i.e. prior to end March 2027) have been approached by NNDC.	Sustainable Coastal Community
2	Offer of NNDC-led Demolition taken forward for properties at future risk	NNDC	Owners of residential properties that are at future risk beyond the timeframe of the Coastwise project (i.e. from April 2027 onwards) be approached by NNDC when the property is approaching cliff.	Sustainable Coastal Community

3	Raising Awareness for property owners that are not at imminent risk presently	NNDC	Properties within the medium-term and longer-term risk bands will be identified for this action. The nature of the engagement will vary depending on the risk band that a property is in.	Sustainable Coastal Community
4	Continue to explore options for home owners in with the erosion risk zones	NNDC	To be developed dependent on options	Sustainable Coastal Community

Heritage Assets

There are numerous types of heritage assets within Happisburgh including listed buildings, military structures and other assets which the community consider valuable in terms of the heritage of the village. Options for managing heritage assets are largely confined to maintaining them up to a point in time, prior to deconstructing; with options to take record of them in some way. Table B-3 sets out the options identified for managing these assets based on work by the Coastwise project which includes engagement with the community.

Table B-3 Appraisal of options concerning heritage assets, based on practicalities, limitations, barriers to implementation, costs and timescales.

Heritage Assets Option	Appraisal/Justification	Actions to be developed?	Community Support
Listed Buildings, Military Structures and Features Valuable to the Community			
Option 1 – Community Recording Document the buildings through photography and data records. This option will include community input/event to capture local aspects of the listed buildings and military structures as a village focus	**Option Practicalities** Existing records may go some way to already fulfilling this option. If records are not present then there may be an opportunity for creating and maintaining records led by interested members of the community. A gap analysis of existing records would be beneficial such that unrecorded assets can be targeted. **Limitations** Records will need to be stored in an appropriate format such that they can be accessed in the future. There may be scope to input data into existing records however, this would need to be explored. **Barriers** The ability to comply with rules and requirements surrounding existing data	**Yes**, providing that there is sufficient appetite from the community to manage the project on a voluntary basis.	3 ⭐

	records may present itself as a barrier. Availability of equipment and technology may also be an issue but this is dependent on whether those willing to be involved have access to these. **Cost** There may be costs associated with equipment and physical or data storage. **Timescales** No factors influencing the timescale of this have been identified.		
Option 2 – Maintenance Maintain the buildings and structures as well as possible up to a point in time	**Option Practicalities** Continued maintenance of assets may not be appropriate given that they will likely be impacted by coastal change at some point in the future. It may be appropriate to maintain assets up to a point before ceasing maintenance. This could be incorporated into trigger point-based approach as discussed earlier within this document. **Limitations** There may be statutory duties to maintain certain assets. This will depend on designations (e.g. listed buildings, or conservation areas). **Barriers** It is assumed that the maintenance of these assets is already ongoing and therefore, barriers associated with this are limited to any associated statutory duties. **Cost** It is assumed that the maintenance of these assets is already ongoing and therefore, costs associated with this are likely to represent a saving for those responsible for managing these assets. **Timescales** It is assumed that the maintenance of these assets is already ongoing and therefore, we are considering timescales associated with	**Yes**, if it is a statutory duty. If not a statutory duty, then providing there is funding to do so.	1 ⭐

	the implementation of any plan to cease maintenance. It is anticipated that actions can be incorporated into this plan and therefore, timescales for implementation will be short.		
Option 3 – Deconstruction Deconstructing buildings that are at risk from coastal erosion	**Option Practicalities** A thorough assessment of the building's structural condition and heritage value must be carried out. This includes identifying any statutory designations, such as listed status or inclusion within a conservation area. A detailed deconstruction plan should be developed, outlining how materials and architectural features will be salvaged, reused, or documented. **Limitations** Legal obligations may restrict the ability to deconstruct certain buildings, especially those with protected status. Additionally, the emotional and cultural significance of the building to the local community may result in opposition, which must be managed with care and empathy. Deconstruction can also be logistically challenging and may require specialist contractors. **Barriers** Planning permission is required for any deconstruction activity, particularly involving listed buildings or structures within conservation areas. Consent from Historic England or the local planning authority may be necessary, depending on the asset's designation. **Cost** The cost of deconstruction will vary depending on the size, complexity, and condition of the building. Expenses may include contractor fees, salvage operations, waste management, and public consultation activities. **Timescales** Timescale depends on the duration of planning and consent processes, the	**Yes**, providing there is funding to do so.	**2** ⭐

	availability of contractors, and any site-specific challenges that may arise.		
Option 4 – Digital Recording Use of 3D modelling and scan technology to digitally preserve buildings that are at risk of erosion, providing a lasting record for future interpretation, education, and engagement.	**Option Practicalities** Commissioning a contractor to capture high-resolution scans of the building allows for accurate documentation of architectural features, spatial layout, and contextual surroundings. **Limitations** The process requires specialist equipment and expertise and may not be suitable for all building types or conditions. While 3D modelling can preserve visual and spatial details, it may not fully capture the emotional or cultural significance of the building. **Barriers** It must be ensured that any digital recording complies with data protection and intellectual property regulations, especially if the data is to be shared or published. **Cost** Costs include commissioning contractors, site preparation, data processing, and any interpretive materials or public engagement activities. **Timescales** No factors influencing the timescale of this have been identified.	**Yes**, this action is funded and about to commence.	1 ⭐

Community support is greatest for the 'Community Recording' option. Actions arising from options outlined in Table B-3 are set out in Table B-4 and are split between recording of heritage assets and maintenance or deconstruction. Recording of assets can be community-led, or more specialised approaches such as 3D modeling can be taken. Whilst recording actions do not require a trigger to begin, a risk-based approach could be beneficial to ensure that recordings are captured in a timely manner.

Table B-4 Actions arising following appraisal of options concerning the heritage assets.

Heritage actions taken forward into plan				
	Action	**Owner**	**Trigger**	**Vision Contribution**
1	Community Recording (recording memories,	TBC	This does not require a trigger to begin but would benefit from	Legacy and Landmarks

	images/video of heritage, speaking to community members, etc).		being carried out using a risk-based approach to ensure that assets are adequately captured before they are impacted by coastal change.	Supporting Tourism, Education, and Local Enterprise
2	A scan and 3D model	Coastwise and community	This does not require a trigger to begin but would benefit from being carried out using a risk-based approach to ensure that assets are adequately captured before they are impacted by coastal change.	Legacy and Landmarks Supporting Tourism, Education, and Local Enterprise
3	Maintenance and deconstruction plans	Individual asset owners	Heritage assets will be identified as part of this plan. Owners of assets within the immediate and medium-term will be contacted to begin a plan for ceasing maintenance and beginning deconstruction. This should include legal advice.	Legacy and Landmarks Sustainable Coastal Community

Repurposing Land

Land that becomes available through coastal adaptation actions, such as demolition of properties or the rolling back of land uses such as caravan parks could be repurposed. The new use could be one that is more suited to the dynamic coastal environment, or something that is more temporary and in turn, more resilient. Table B-5 outlines a variety of options concerned with repurposing such land based around work by the Coastwise project and feedback gained from Coastwise Cafe engagement events.

Table B-5 Appraisal of options concerning the repurposing of land, based on practicalities, limitations, barriers to implementation, costs and timescales.

Repurposing Land Option	Appraisal/Justification	Actions to be developed?	Community Support
Repurposing Land			
Option 1 – Community Gardens, Orchards or Allotments These can provide residents with space to grow their own food, promoting healthy eating and community engagement. They can	**Option Practicalities** Existing residential gardens may provide some of the planting required for this option. If planting is not present then this would need to be sourced from somewhere. There may be an opportunity for community involvement in sourcing planting. Fencing, security, anti-social behaviour and access would all need to be considered; as will	**Yes**, providing that there is sufficient appetite from the community to manage the site on a	**4** ⭐

also serve as educational spaces for schools and community groups	ongoing maintenance and coordination of volunteers, schools and community groups. **Limitations** This land will eventually be impacted by coastal change and as such, their use should be carefully planned. Growing condition son cliff top locations may limit possibilities. There may be opportunities to relocate plants and trees inland as additional land becomes available. Growing vegetables or other annuals may be more suited to this approach. **Barriers** Planning permission may be required if the land is to undergo a change of use (e.g. from a car park of brownfield site) or any commercial activities are to be carried out (e.g. selling produce). **Cost** There may be initial set up costs associated with planning permission and making the site secure. In order to take this option forward, there would need to be appetite from the community to manage the site on a voluntary basis. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process could take three to six months depending on the specific requirements of the site.	voluntary basis.	
Option 2 – Pop-up Uses and Events Using the land for food vans, seasonal markets, fairs, or festivals could boost local economies and provide entertainment for the community. These events can be easily moved to different locations as needed.	**Option Practicalities** The site of the site in relation to the nature of the event will need to be considered. **Limitations** May not be suitable for businesses requiring permanent infrastructure or year-round operations. Businesses will need tailored insurance policies that cover both coastal and landward operations, including risks associated with erosion, transport, and temporary structures. Insurers may impose	**Yes**, providing that there is sufficient appetite from potential site users such that there is an economic case for NNDC to manage the site.	**5** ⭐

	higher premiums or specific conditions due to the nature of the setup. **Barriers** Planning permission may be required if the land is to undergo a change of use or any commercial activities are to be carried out (e.g. selling produce). **Cost** There may be initial set up costs associated with Planning Permission and making the site secure. To take this option forward, there would need to be appetite from the community to manage the site on a voluntary basis. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process could take three to six months depending on the specific requirements of the site.		
Option 3 – Fitness Establish temporary outdoor gyms equipped with weather-resistant fitness equipment to promote community health and wellness. Complement these spaces by organising paid fitness classes and offering sports equipment rentals, maximising the use of available space while encouraging active lifestyles	**Option Practicalities** The installation of weather-resistant fitness equipment requires stable ground conditions, even if the equipment is designed for temporary use. In erosion-prone areas, ground stability assessments may be necessary to ensure user safety. **Limitations** This land will eventually be impacted by coastal change resulting in ground instability. Even with weather-resistant materials, the equipment may be vulnerable to saltwater corrosion, high winds, and shifting ground. Opportunities arise if the equipment is modular and relocatable, allowing it to be moved as erosion progresses or if land conditions deteriorate. **Barriers** Planning permission may be required if the land is to undergo a change of use. Health	**No**. There are significant issues related to practicality, set-up costs, equipment maintenance, and health and safety such that this option is not considered feasible.	1 ⭐

	and safety of site users will also need to be carefully considered. **Cost** There may be initial set up costs associated with Planning Permission and making the site secure. Additional costs include equipment purchase, ongoing maintenance, insurance, staffing for fitness classes, and management of equipment. In order to take this option forward, there would need to be appetite from the community to manage the site on a voluntary basis. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process could take 3-6 months depending on the specific requirements of the site.		
Option 4 – Nature and Habitats Creating temporary habitats such as wetlands or wildflower meadows can support local biodiversity. These areas can also serve as natural buffers against erosion and flooding.	**Option Practicalities** Practical challenges include ensuring suitable soil and hydrology; wetlands need consistent water levels, and wildflower meadows require stable, non-saline ground. Carefully selected wildflowers and grasses will thrive in clifftop habitats. Ideally use of green hay from a local clifftop donor site would be ideal as there would be local species that already thrive in habitat affected by salt spray and they will be of local provenance. Maintenance is also needed to prevent invasive species and ensure ecological function. **Limitations** These habitats are vulnerable to coastal erosion and flooding themselves, which may limit their longevity or effectiveness. Wetlands require specific hydrological conditions, and wildflower meadows may struggle in saline or unstable soils. Their ecological benefits may take time to develop and are seasonal in nature. **Barriers** Planning permission may be needed if land is to undergo a change of use. Environmental assessments are likely required to ensure	**Yes**, providing that land available is sited far enough inland to realise ecological benefits prior to being impacted by coastal change.	**3** ⭐

	compatibility with existing habitats. Land ownership and access rights could also pose challenges. **Cost** Costs vary depending on scale and habitat type. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process could take three to six months depending on the specific requirements of the site. Ecological benefits may take one to two years to fully develop.		
Option 5 – Camping Charge fees for temporary camping spots or rent out pre-set glamping accommodations, capitalising on the coastal location for tourism	**Option Practicalities** Camping sites require minimal permanent infrastructure, and pre-set glamping units can be quickly installed and removed, making them suitable for erosion-prone land. Access roads, sanitation, and safety measures must be in place, and regular monitoring is needed to ensure the land remains safe and stable for public use. **Limitations** Sites may become unsafe or inaccessible over time, reducing their viability. Seasonal demand and weather conditions also affect profitability and usability. Insurance and liability risks may increase in erosion-prone zones. **Barriers** Planning permission may be required if the land is to undergo a change of use. **Cost** Basic camping setup costs are relatively low, while glamping units vary in price. Additional costs include planning permission, site preparation, utilities, waste management, and insurance. **Timescales**	**Yes**, providing that land has utilities nearby for sanitation and that planning permission can be granted.	**0** ⭐

	Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process could take three to six months depending on the specific requirements of the site.		
Option 6 – Education The land can be used for environmental education programs, research sites for studying coastal erosion and climate change, or a temporary educational facility to raise awareness of coastal erosion and local environmental issues. This can involve partnerships with local schools, universities, and environmental organisations.	**Option Practicalities** Temporary outdoor classrooms or research stations require minimal infrastructure and can be adapted to changing site conditions. Unstable ground may limit safe access, and any structures must be weather-resistant and easily relocatable. Coordination with schools and universities requires planning and safeguarding measures. **Limitations** The site's vulnerability to erosion may disrupt access or damage temporary facilities. Educational activities are often seasonal and weather-dependent. **Barriers** Planning permission may be required for temporary structures, signage, or public access. Environmental assessments are likely needed due to the coastal erosion status and proximity to protected habitats. Safeguarding protocols must be in place for school visits, and landowner agreements may be necessary. **Cost** Costs are generally low, especially for outdoor learning setups. Expenses include planning permissions and site preparations, in addition to temporary shelters, signage, teaching materials, and insurance. Funding may be available through environmental education grants, university outreach programmes, DEFRA's Nature Recovery schemes, or local authority initiatives. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process	**Yes**, providing that there is appetite from schools to utilise these facilities and that the site meets safeguarding protocols.	**2** ⭐

	could take three to six months depending on the specific requirements of the site.		
Option 7 – Social Support Temporary land use can support social wellbeing by creating spaces for healing, reflection, and community resilience through educational trails, therapeutic gardens, workshops, and memory capsule and storytelling projects that address the emotional impacts of coastal erosion.	**Option Practicalities** Temporary installations such as therapeutic gardens, educational trails, and storytelling spaces can be designed to be lightweight and movable, making them suitable for unstable or transitional land. However, the feasibility of this option depends on the condition and accessibility of the land. Careful site selection and regular monitoring are essential to ensure safety and usability, and any infrastructure must be adaptable to changing coastal conditions. **Limitations** Any installations or gardens may be short-lived, requiring regular monitoring and potential relocation. Emotional projects like memory capsules may be vulnerable to loss if erosion accelerates unexpectedly. Accessibility may also be limited if erosion affects pathways or transport links. Furthermore, the psychological impact of seeing these spaces lost to the sea could be distressing for some community members. **Barriers** Planning permissions required for temporary structures and public access. Environmental impact assessments may be required to ensure no harm to protected habitats. **Cost** The cost of this option includes planning permission and site preparation, design, installation, and maintenance of the physical spaces, as well as staffing or volunteer coordination for workshops and events. Additional costs may arise from insurance, monitoring, and potential relocation due to erosion. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process	**Yes**, providing that there is sufficient appetite from the community or an organisation to manage the site on a voluntary basis.	**1** ⭐

	could take three to six months depending on the specific requirements of the site.		
Option 8 – Innovation and Technology Land repurposing can foster innovation and sustainability through eco-friendly building showcases, green infrastructure, renewable energy demos, urban agriculture pilots, and community hubs for recycling, entrepreneurship, and coastal research	**Option Practicalities** The land must be accessible, safe, and not at immediate risk of collapse or flooding, as this would undermine the viability of any installations. Considerations should be taken as to whether the site can support lightweight, modular infrastructure that can be relocated if erosion accelerates. Renewable energy demonstrations and tech showcases may need access to power, data networks, or monitoring equipment, which could be difficult to install or maintain in erosion-prone areas. **Limitations** Technological installations may be at risk from sudden erosion events, saltwater intrusion, and high winds. Some activities, such as agriculture or green infrastructure, may be limited by poor soil quality and drainage. **Barriers** Planning permission is needed for any structures, even temporary ones. Drone testing must comply with Civil Aviation Authority (CAA) regulations, including flight restrictions and data privacy. Environmental impact assessments may be necessary, especially for renewable energy or agricultural pilots. Collaboration with academic institutions or private companies may require formal agreements, liability coverage, and data-sharing protocols. **Cost** Costs will vary depending on the type and scale of innovation. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process could take three to six months depending on the specific requirements of the site. The operational duration would likely be variable,	**No**. Given the significant investment required for this type of use, and the dynamic nature of the coastal location, it is not considered feasible.	**2** ⭐

	depending on erosion rates and the adaptability of the final use.		
Option 9 – Arts and Culture Temporary installations can celebrate local culture and creativity through sculpture parks, open-air performances, and mobile art installations that engage the community and reflect the region's response to coastal change.	**Option Practicalities** Sculpture parks and open-air performances require safe, accessible terrain that can accommodate foot traffic and lightweight structures. Any installations should be designed to be movable or decommissioned quickly if erosion accelerates. Consideration should also be given to how the arts can be used to interpret and reflect the emotional and historical impact of coastal change, making the space not just functional but meaningful. Seasonal or rotating programmes may extend the life and relevance of the Option, with ongoing monitoring and community input. **Limitations** Large or heavy sculptures may be unsuitable for unstable ground, and open-air performances may be affected by weather and access issues. The emotional impact of losing cultural spaces to the sea may be difficult for some community members, especially if the installations are deeply symbolic or commemorative. Additionally, the success of this option depends heavily on community engagement and participation, which may vary depending on local interest and capacity. **Barriers** Planning permission is required for any public installations or events. Environmental impact assessments may be necessary to ensure that installations do not disturb protected habitats or species. The council must also consider public liability and safety regulations, particularly for events or interactive installations. Collaboration with artists and cultural groups may require formal agreements, and permissions may be needed for sound amplification, signage, or temporary structures. **Cost** Costs include planning permissions and site preparation, artist commissions, materials,	**Yes**, providing that there is sufficient appetite from the community or an organisation to manage the site on a voluntary basis.	**3** ⭐

	installation, event coordination, insurance, and ongoing maintenance. Additional costs may arise from marketing, community engagement, and decommissioning. Funding may be available through Arts Council England, the National Lottery Heritage Fund, local authority cultural grants, and charitable foundations focused on community wellbeing and environmental storytelling. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process could take three to six months depending on the specific requirements of the site. The operational duration may last years, depending on erosion rates and the adaptability of the installations.		
Option 10 – Car Parking Land may be used as a temporary car park	**Option Practicalities** The ground must be stable enough to support cars without risk of subsidence or collapse, and the surface may require reinforcement or temporary surfacing to prevent rutting or waterlogging. The site should be located near areas of demand, such as visitor attractions or community facilities, and must be easily reachable by road. Further considerations include traffic management, access rights, liability for accidents or damage, signage, lighting, and pedestrian safety. **Limitations** The site may become unsafe or inaccessible, requiring closure or relocation. If the land is privately owned, agreements must be secured before use. The location of the site may not provide suitable car parking for people wishing to access amenities (i.e. not near beach access, toilets, attractions, etc). **Barriers** Planning permission is required for change of use to parking. Environmental impact assessments may be required to ensure that the car park does not affect protected habitats or species	**Yes**, providing that the site is in the correct location and that there is an economic case for NNDC or Happisburgh PC to manage the site.	**1** ⭐

	Cost Costs include site preparation, surfacing (e.g. gravel, matting), signage, fencing, and maintenance. Additional costs may arise from drainage improvements, lighting, and security. Funding may be available through local authority infrastructure budgets or visitor economy grants. It is anticipated that a car park could be revenue generating such that costs could be offset. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process could take three to six months depending on the specific requirements of the site.

Community support is greatest for the 'pop-up uses and events' option. Actions arising from the options presented in Table B-5 concerning repurposing of land are outlined in Table B-6. Given that there are numerous options for repurposing land, actions based around the suitability of land that becomes available have been proposed.

Table B-6 Actions arising following appraisal of options concerning the repurposing of land.

Repurposing land actions taken forward into plan				
	Action	**Owner**	**Trigger**	**Vision Contribution**
1	Suitability assessment of available land	NNDC or Happisburgh PC	Land becomes available due to demolition of existing properties, meaning that an assessment of the land's suitability for the following uses should take place: community gardens, orchards, or allotments, pop-up uses or events, nature and habitat uses, camping, education, social support, arts and culture, and car parking.	Supporting Tourism, Education, and Local Enterprise Sustainable Coastal Community Healthier, Happier, Greener
2	Repurposing of land	NNDC or Happisburgh PC	A suitability assessment including appropriate consultation has taken place and a preferred option has been chosen.	Supporting Tourism, Education, and Local Enterprise Sustainable Coastal Community

				Healthier, Happier, Greener
3	Review of suitability	NNDC or Happisburgh PC	Ongoing monitoring of coastal change and utilisation of the repurposed land will identify the requirement for a review of how suitable the land is for its current land use at present.	Supporting Tourism, Education, and Local Enterprise Sustainable Coastal Community Healthier, Happier, Greener

Existing Coastal Defences

Existing coastal defences exist in Happisburgh in the form of a rock bund. Options have been taken from report B2491800-JAC-RPT-001_Happisburgh Assessment of Rock Bund and Beach Access_P03 and are outlined in Table B-7.

Table B-7 Appraisal of options concerning existing coastal defences, based on practicalities, limitations, barriers to implementation, costs and timescales.

Existing Coastal Defences Option	Appraisal/Justification	Actions to be developed?	Community Support
Redundant Defences Decommissioning			
Option 1 – Removal or Repurposing the Redundant Defences Safely removing or repurposing outdated coastal structures to restore natural processes, reduce maintenance costs, and enhance ecological and community resilience	**Option Practicalities** Removing hard structures may accelerate cliff retreat in the short term, particularly in areas where the geology is soft and unconsolidated. Predicting post-removal changes in sediment transport and cliff stability can be complex. Once defences are removed, ongoing observation of erosion rates, sediment movement, and ecological changes will be necessary to inform future decisions and ensure the approach remains sustainable. **Limitations** Happisburgh's cliffs are highly erodible, and removing defences may accelerate land loss, particularly where properties are already close to the cliff edge. Additionally, there is limited space for natural retreat, which constrains the effectiveness of this approach. The success of this option depends on long-term monitoring and adaptive management,	**Yes** however, actions will relate to funding potential options.	0 ⭐

	which require sustained funding and technical capacity. The lack of immediate protective benefit and the need for ongoing observation may limit political and institutional support, particularly in resource-constrained settings. **Barriers** A Marine Management Organisation (MMO) licence is needed for any works below the high-water mark, and planning permission must be obtained from the local authority for demolition and repurposing activities. Environmental assessments, such as a Habitat Regulations Assessment and potentially an Environmental Impact Assessment will be necessary due to the proximity of designated sites and the potential ecological impacts. **Cost** Costs vary dependent on the type of defence, access, and decommissioning approach. **Timescales** MMO licences are currently taking in excess of eight months to grant and as such, the timescales for implementing these measures could range from eight to 18 months.		
Rock Bund			
Option 2 – Higher Bund Over build the bund higher to a desired elevation	**Option Practicalities** This approach is to overbuild by at least one to two metres in height and to let the rocks settle in a similar way as we have seen with the existing bund. However, this approach is somewhat unmanaged and it is not clear how effective it will be. With rocks from the crest displaced onto the beach either side, there may be some rocks that are not contributing very much to the effectiveness of the bund. Therefore, this may not be such an effective way to use the limited material available. **Limitations** There will still be residual erosion taking place regardless of this intervention, such that adaptation actions will still need to be considered. Given the increase in amount of	**Yes** however, actions will relate to funding potential options.	**0** ⭐

	rock required to achieve this Option, it is likely that a shorter length of bund will have to be constructed meaning that it might need to be placed in a targeted location to benefit certain assets. **Barriers** Planning permission/Marine Management Organisation (MMO) Licence will be required dependent on the works to be carried out. **Cost** The costs (resources and time) required for recovering the existing rock and reinstating another rock bund should be similar to the previous work carried out in 2019. However, if excavations find the rock at a lower level, there will be additional costs due to additional effort and intertidal working (including associated downtime). Replacement geotextile will also be an additional cost. **Timescales** MMO licences are currently taking in excess of eight months to grant and as such, the timescales for implementing these measures could range from eight to18 months.		
Option 3 – Deeper Bund Build the bund deeper, directly onto the clay wave-cut platform to improve its structural stability	**Option Practicalities** This involves excavating down through the sand to reach the underlying clay wave-cut platform and founding the structure at that level. The bund will be a stronger structure if built on clay rather than sand as this has more resistance to erosion (although it can still erode). By placing the rock on the clay, it is less likely to suffer the significant and immediate settlement and elevation drop as seen in the 2019 rock bund, as such maintaining an elevation closer to its as-built profile. However, this will require a larger amount of rock to achieve the intended elevations as there will be more rock buried beneath the beach to provide this foundation. Given the trapezium shape of the bund, there could in	**Yes** however, actions will relate to funding potential options.	**1** ⭐

fact be as much or more rock buried in the beach than above it.

Other complications with excavation include health and safety risks if the trench is not cut wide and shallow enough to prevent instability and collapse during construction and dewatering to maintain the excavation open. Although some simple geotechnical tests could establish the level of the clay ahead of construction, until then it is also uncertain how deep the clay layer is beneath the beach and thus the depths of excavation and rock volumes required will be unknown, making planning the extent of works challenging.

These issues are likely to be more significant the further seaward the bund is located – closer to the cliffs, the clay layer is expected to be slightly higher.

When it becomes time to roll back the works once again, recovery of the buried rock will be more difficult as this will be at a much lower depth and may be permanently submerged

Limitations

There will still be residual erosion taking place regardless of this intervention, such that adaptation actions will still need to be considered. Given the increase in amount of rock required to achieve this Option, it is likely that a shorter length of bund will have to be constructed meaning that it might need to be placed in a targeted location to benefit certain assets.

Barriers

Planning permission/Marine Management Organisation (MMO) Licence will be required dependent on the works to be carried out.

Cost

The costs (resources and time) required for recovering the existing rock and reinstating another rock bund should be similar to the previous work carried out in 2019.

However, if excavations find the rock at a lower level, there will be additional costs due to additional effort and intertidal working

	(including associated downtime). Replacement geotextile will also be an additional cost. **Timescales** MMO licences are currently taking in excess of eight months to grant and as such, the timescales for implementing these measures could range from eight to18 months.		
Option 4 – Wider Bund Build the bund deeper, directly onto the clay wave-cut platform to improve its structural stability	**Option Practicalities** An alternative approach is to design the structure to be dynamic enough that it can accommodate changes in the beach level so that it remains effective. This would involve building a wider/flatter structure, so that even with undermining of the toe, the crest rocks remain in place. This may involve a 'falling toe', so that when the toe rocks are undermined, these drop into the scour hole to effectively 'seal' it without the structure slope above being impacted. Increasing the flatness of the seaward slope will also increase the stability of the rock under wave action making it less likely to suffer displacement. This will again require a larger amount of rock to achieve the intended elevations due to the greater width of the bund. **Limitations** There will still be residual erosion taking place regardless of this intervention, such that adaptation actions will still need to be considered. Given the increase in amount of rock required to achieve this Option, it is likely that a shorter length of bund will have to be constructed meaning that it might need to be placed in a targeted location to benefit certain assets. **Barriers** Planning permission/Marine Management Organisation (MMO) Licence will be required dependent on the works to be carried out. **Cost**	**Yes** however, actions will relate to funding potential options.	**1** ⭐

	The costs (resources and time) required for recovering the existing rock and reinstating another rock bund should be similar to the previous work carried out in 2019. However, if excavations find the rock at a lower level, there will be additional costs due to additional effort and intertidal working (including associated downtime). Replacement geotextile will also be an additional cost. **Timescales** MMO licences are currently taking in excess of eight months to grant and as such, the timescales for implementing these measures could range from eight to18 months.		
Reuse of Rock			
Option 5 – Rock at Cliff Toe Placing rock directly against the cliff face to reduce the exposure of clay at the cliff toe and this reduce undercutting of the cliff face above.	**Option Practicalities** Placing rock directly against the cliff toe offers targeted protection to the clay layer, helping to reduce undercutting and slow cliff recession. The structure is flexible and can adjust to wave impacts and foreshore changes. It uses less rock than a bund, allowing for greater height or extended coverage. However, the lack of bedding rock and variable beach levels may affect stability and limit access for construction and maintenance. **Limitations** The revetment does not stop foreshore erosion or prevent upper cliff failure if wave run-up exceeds its height. Without trenching or a deep toe, it risks being undermined. Over time, scouring behind the structure may lead to collapse or transformation into a less effective bund. Its long-term performance is uncertain, as this approach is untested. **Barriers** Planning permission and a Marine Management Organisation licence are required. Environmental constraints, including the SSSI designation and archaeological	**Yes** however, actions will relate to funding potential options.	**3** ⭐

	protections, limit where and how the structure can be built. Public safety is also a concern, as low beach levels may restrict access and increase risk to visitors near the cliff base. **Cost** Construction is more complex and costly than a bund, with higher potential maintenance costs due to access issues. However, material efficiency and reuse of existing rock may reduce some costs. Funding may be available through FCERM Grant-in-Aid, subject to cost-benefit and environmental approvals. **Timescales** MMO licences are currently taking in excess of eight months to grant and as such, the timescales for implementing these measures could range from eight to18 months.		
Option 6 – Rock Groynes Coastal structures built perpendicular to the shoreline to trap sediment moving along the coast, helping to build up beach levels and reduce wave erosion on nearby cliffs	**Option Practicalities** Rock groynes would be built perpendicular to the shoreline to trap sediment moving south from Bacton and the eroding cliffs, aiming to raise beach levels and reduce wave attack at the cliff base. They would use 6–10 tonne armour rock, ideally founded on the clay wave-cut platform over geotextile. However, the clay is often too deep at the seaward end, meaning groynes may settle into sand, reducing effectiveness. Close spacing would be needed to maintain beach height, and groynes would not provide uniform protection along the frontage. **Limitations** Groynes rely on sediment transport along the upper beach. If sediment moves offshore, they will be largely ineffective. Even if sediment is trapped, cliff erosion will continue, and as the cliffs retreat, the landward ends of the groynes may become detached, reducing their ability to retain beach material. Variable beach levels between groynes may also leave gaps in protection. **Barriers** This option would require Marine Management Organisation licensing and	**Yes** however, actions will relate to funding potential options.	**4** ⭐

	planning permission due to the structural change and visual impact. Although outside the North Norfolk AONB, the altered landscape may still require additional approvals. Environmental assessments would be needed to confirm minimal downdrift erosion. Public safety is a concern, as groynes obstruct beach access and may encourage walking near unstable cliffs. **Cost** Construction costs are higher than for bunds due to the need to work further seaward and manage intertidal access. Maintenance is more complex, especially at the submerged seaward ends. Additional costs include design assessments, sediment transport studies, and future rock recovery, which will be more difficult as the shoreline recedes. **Timescales** MMO licences are currently taking in excess of eight months to grant and as such, the timescales for implementing these measures could range from eight to18 months.		
Option 7 – Rock Breakwaters Detached structures built parallel to the shoreline that reduce wave energy and encourage beach build-up behind them, helping to protect cliffs from erosion without directly trapping sediment like groynes.	**Option Practicalities** At Happisburgh, a stepped or curved layout is proposed to align with dominant wave directions, allowing shorter, more robust structures to be built higher and wider using the same volume of rock. hey must ideally be founded on the clay wave-cut platform to avoid settlement. If built on sand, they may need to be overbuilt to maintain effectiveness, increasing rock demand and potentially limiting the number of structures. Wave diffraction around the ends can cause localised scouring, which may create erosion hotspots behind the structures. While they reduce erosion pressure, they will not stop cliff retreat entirely. **Limitations** Breakwaters do not stop cliff erosion and may cause localised scouring at their ends, potentially worsening erosion in some areas. Their effectiveness depends on sediment availability and wave conditions, and they	**Yes** however, actions will relate to funding potential options.	**1** ⭐

	may be less effective if not built to sufficient height or if settlement occurs. **Barriers** This option would require Marine Management Organisation licensing and planning permission due to the structural change and visual impact. Although outside the North Norfolk AONB, the altered landscape may still require additional approvals. Environmental assessments would be needed to confirm minimal downdrift erosion. Public safety is a concern, as groynes obstruct beach access and may encourage walking near unstable cliffs. **Cost** Construction is more complex and costly than a bund, with higher potential maintenance costs due to access issues. However, material efficiency and reuse of existing rock may reduce some costs. Funding may be available through FCERM Grant-in-Aid, subject to cost-benefit and environmental approvals. **Timescales** MMO licences are currently taking in excess of eight months to grant and as such, the timescales for implementing these measures could range from eight to18 months.		
Option 8 – Rock Headlands / Bastions Coastal structures designed to mimic natural promontories, encouraging sand accumulation in sheltered bays between them and helping to reduce cliff erosion by protecting the cliff toe.	**Option Practicalities** Headlands would be large rock structures placed against the cliff to deflect wave energy and form sediment-trapping bays, while smaller bastions would offer localised cliff protection. Due to high wave energy and rapid erosion, headlands would need to be large and are best suited to areas south of the SSSI. Bastions are more flexible but prone to detachment. Both would ideally be founded on the clay platform, but settlement is acceptable due to their size. Erosion would continue between structures, and because benefits take years to develop, this option is less suitable for short-term protection **Limitations** Cliff erosion will continue between structures until a stable bay shape forms, which may	**Yes** however, actions will relate to funding potential options.	**5** ⭐

	occur far inland and over a long timescale. Bastions are particularly prone to outflanking and may lose effectiveness as they detach. Neither approach prevents on-offshore sediment movement, and smaller bastions are unlikely to retain significant beach material. The long lead time before benefits are realised makes this option less suitable for short-term protection. **Barriers** This option would require Marine Management Organisation licensing and planning permission due to the structural change and visual impact. Although outside the North Norfolk AONB, the altered landscape may still require additional approvals. Environmental assessments would be needed to confirm minimal downdrift erosion. Public safety is a concern, as groynes obstruct beach access and may encourage walking near unstable cliffs. **Cost** Construction is more complex and costly than a bund, with higher potential maintenance costs due to access issues. However, material efficiency and reuse of existing rock may reduce some costs. Funding may be available through FCERM Grant-in-Aid, subject to cost-benefit and environmental approvals. **Timescales** MMO licences are currently taking in excess of eight months to grant and as such, the timescales for implementing these measures could range from eight to18 months.		

Community support is greatest for the "rock headlands/bastions" option. Actions arising from the options outlined in Table B-8 are limited since significant funding is required to progress these. Whilst Happisburgh will qualify for some funding (probably most readily Flood and Coastal Erosion Risk Management Grant-In-Aid (FCERMGiA), this is highly unlikely to cover the whole cost of any of these options. The funding gap for these options is, at present, expected to large enough to be a prohibitive factor in taking any of these options forward. Therefore, the actions outlined in Table B-8 are limited to a funding review following a change in FCERMGiA approach.

Table B-8 Actions arising following appraisal of options concerning existing coastal defences.

Existing Coastal Defences actions taken forward into plan				
	Action	**Owner**	**Trigger**	**Vision Contribution**

1	Review of available external funding to confirm whether any options outlined in Table B-7 can progress	NNDC	Change in FCERMGiA funding approach or other funding opportunities present themselves.	Sustainable Coastal Community

Drainage

Happisburgh's cliffs are known to fail due to the behaviour of groundwater and surface water. As such, drainage plays a critical role in managing cliff erosion in the village. Options for managing drainage have been taken from report 100123000-0001-P02_Understanding water and cliff failure at Happisburgh.

Table B-9 Appraisal of options concerning drainage, based on practicalities, limitations, barriers to implementation, costs and timescales.

Drainage Option	Appraisal/Justification	Actions to be developed?	Community Support
Improving Drainage			
Option 1 – Remediate Existing Highway Drainage Clean and inspect the existing highway drainage system, including gullies, pipework, and outlet/soakaway locations, using CCTV surveys and engineering review to assess flow direction and asset condition, ultimately reducing surface water run-off into surrounding ground.	**Option Practicalities** The works are limited to the village section near the cliff edge and are considered routine, with immediate benefits in reducing surface water run-off from the highway into surrounding ground. This may help reduce localised infiltration that contributes to ground instability near the cliff edge. The works are straightforward to deliver but will require temporary traffic management during maintenance. **Limitations** This option has no impact on wider groundwater infiltration across the study area. Gullies and pipework are likely to silt up over time, requiring regular maintenance. The drainage survey may not conclusively identify the outlet or soakaway, limiting the effectiveness of the intervention. **Barriers** None identified **Cost**	**Yes**, through collaboration with Norfolk Highways.	**0** ⭐

	NCC would fund this as part of their schedule of maintenance. The initial cost is low, but ongoing maintenance will be required to keep the system functioning. If regular cleaning is needed, long-term costs and embodied carbon impacts will increase. **Timescales** The works are straightforward and could be completed within weeks, subject to scheduling and access. Surveys and drainage reviews could be undertaken in parallel with other early-stage interventions.		
Option 2 – Remediate Existing Field Drainage Clear any existing blocked drainage channels and pipes that are restricting water flow. Vegetation clearance along the drainage or water course may be required. The solution will direct rain and surface water away from the cliff face rather than infiltrating ground and potentially heading towards the cliffs.	**Option Practicalities** The works are limited to the fields section of the study area and are considered routine, with immediate benefits in reducing water infiltration into the ground near the cliffs. Constructability is straightforward, but access and permissions from landowners will be necessary. The intervention is limited to existing drainage systems and ponds, and its effectiveness depends on the current condition and layout of those systems. **Limitations** The option only addresses drainage in the fields section and does not influence wider groundwater movement or infiltration from other sources. Regular maintenance will be required to prevent re-blocking. The impact is localised and may not significantly reduce erosion risk without being part of a broader strategy. **Barriers** Landowner permission is required to access and carry out works on private land. Depending on the nature of the works, approval from the Environment Agency or Internal Drainage Board may also be needed, particularly if the drainage connects to a watercourse or has environmental implications. **Cost**	**Yes**, through collaboration with landowners.	**3** ⭐

	The initial cost is low, but ongoing maintenance will be required to keep the system functioning. If regular cleaning is needed, long-term costs and embodied carbon impacts will increase. **Timescales** The works are straightforward and could be completed within weeks, subject to scheduling and access. Surveys and drainage reviews could be undertaken in parallel with other early-stage interventions.		
Option 3 – Upgrade/Install New Drainage Upgrade/install new field drainage to catch and direct surface water. The solution will reduce standing water, direct rain and surface water to an outlet rather than infiltrating into the ground and towards the cliff.	**Option Practicalities** The drainage system would need to be designed to be suitable for the intended land use. The option will likely require the excavation of trenches to install the new drainage network. **Limitations** The effectiveness of this option is limited to the areas where new drainage is installed. Without significant infrastructure within roads or gardens, the impact on the village section will be partial. Regular maintenance is needed to ensure long-term performance, and the system must be designed to avoid overloading existing drainage networks. Detailed design and slope stability analysis would be required to ensure the system does not negatively affect cliff stability. **Barriers** Landowner permission is required to access and carry out works on private land. Depending on the nature of the works, approval from the Environment Agency or Internal Drainage Board may also be needed, particularly if the drainage connects to a watercourse or has environmental implications. **Cost**	**Yes**, through collaboration with landowners.	**3** ⭐

	Costs are moderate to high, depending on the scale and intensity of the system. Costs include installation, excavation, land disturbance, or crop loss. Long-term maintenance will also contribute to recurring costs. **Timescales** Installation could be completed within a few months, depending on design complexity, land access, and environmental approvals.		
Improving Drainage and Storage			
Option 4 – Swales and Small Ponds Excavate swales (V-shaped lined shallow channels) that will collect and redirect rainwater away from the cliff towards existing and new lined ponds. This will reduce infiltration and downstream flooding and promote evaporation and rainwater storage.	**Option Practicalities** The swales and ponds would need to be lined (e.g. puddle clay) to prevent infiltration into the sandy soils typical of the Happisburgh area. The works would primarily be located in the fields section, with limited potential in the village due to space and connectivity constraints. Construction is relatively straightforward, involving earthworks and landscaping, but would require landowner cooperation and may reduce the area available for arable farming **Limitations** This option is spatially limited to areas where land is available and suitable for swale and pond construction. It may be difficult to implement in the village due to limited space and the challenge of connecting swales to ponds. The effectiveness of evaporation as a long-term water removal method is uncertain and would require site-specific modelling. Regular maintenance is needed to prevent vegetation overgrowth and sediment build-up. **Barriers** Landowner permission is essential, and land use change may be required. The Environment Agency may need to be notified, especially if the works alter existing drainage patterns or connect to watercourses. However, if water is	**Yes**, through collaboration with landowners.	2 ⭐

	retained on-site, formal consents may not be necessary. Land availability may also be constrained by other proposed developments, such as the Vattenfall project in the southern fields. **Cost** Construction costs are moderate to high, depending on the scale of excavation and whether lining materials need to be imported. Additional costs may arise from land use change or compensation to landowners. **Timescales** Design and construction could be completed within a few months, subject to land access and environmental checks. A flood risk assessment and evaporation modelling would be required to confirm the system's effectiveness and ensure it does not increase risk elsewhere.		
Option 5 – Retention Pond with Discharge Drainage Construct ponds to hold excess rainwater and allow for evaporation but with added discharge chambers or overflow structures to remove water quickly if high rainfall is predicted. This will reduce infiltration and downstream flooding and promote evaporation and rainwater storage.	**Option Practicalities** This option involves constructing deep, lined retention ponds to collect and store rainwater, with additional discharge infrastructure (e.g. overflow chambers or pipes) to allow controlled release of water ahead of forecasted heavy rainfall. The ponds would be lined (e.g. puddle clay) to prevent infiltration into the sandy soils. It would require significant excavation and infrastructure, particularly for the discharge drainage. **Limitations** Requires large areas of land, which may not be available in all locations, particularly in the southern fields where other developments (e.g. Vattenfall) are proposed. It may be difficult to implement in the village due to space constraints and connectivity. The effectiveness of the system depends on the ability to discharge water safely, which may be restricted by the capacity of local watercourses or regulatory constraints. Long-term maintenance is essential to ensure the system functions as designed.	**Yes**, through collaboration with landowners.	**0** ⭐

	Barriers Landowner permission is required, and land use change may be necessary. Discharge of water from the ponds would require consultation with the Environment Agency, and potentially a permit, depending on the receiving environment. Planning permission is likely to be required due to the scale of excavation, land use change, and the introduction of engineered drainage infrastructure. **Cost** Construction costs are high to very high due to the scale of excavation, the need for imported lining materials, and the installation of discharge infrastructure. Additional costs may arise from land acquisition or compensation. **Timescales** Design and construction could take several months, depending on land access, environmental approvals, and the complexity of the discharge system. A flood risk assessment and detailed drainage design would be required before implementation.		
Strategic Planting			
Option 6 – Plant Or Buffer Strips Buffer strips of selected vegetation bordering fields can be added to any cropped open field areas. Vegetation will reduce infiltration of rainwater and promote evapotranspiration	**Option Practicalities** Buffer strips could be implemented in both the fields and, where feasible, in parts of the village section. Early consultation with ecological specialists is recommended to select appropriate species and determine optimal strip width and layout. **Limitations** Their effectiveness is also dependent on correct plant selection, strip width, and maintenance. In village areas, implementation may be constrained by space and land ownership. The option does not address water already infiltrating deeper into the ground or flowing from other sources.	**Yes**, through collaboration with landowners.	**0** ⭐

	Barriers Landowner permission is required, and land use change may reduce productive farmland. In areas near the SSSI, Natural England may need to be informed. **Cost** Initial costs are low, limited to planting and establishment. However, there may be costs associated with land use change or compensation. Funding may be available through Environmental Land Management Schemes (ELMS) or similar agri-environment grants. **Timescales** Planting can be completed quickly, but benefits may take one to two years to fully establish.		
Option 7- Ploughing Farmland Parallel to The Cliffs Ensure that all farmland is ploughed parallel with the cliff face to prevent surface runoff towards the cliff face	**Option Practicalities** Changing ploughing direction can modestly reduce surface runoff, especially on sloped fields, but its effectiveness depends heavily on topography, soil type, and farming logistics. In Happisburgh, sandy soils allow deep infiltration, which may still contribute to groundwater movement toward the cliff. While altering ploughing patterns may disrupt farming operations and require machinery adjustments, the approach works best when integrated with other land management strategies like buffer strips or swales. Long-term monitoring and adaptability are essential, particularly after heavy rainfall, and farmers may need support to refine practices if erosion persists **Limitations** The benefits are limited to reducing shallow surface runoff and will not significantly affect deeper groundwater infiltration or water movement during heavy rainfall. The effectiveness depends on consistent implementation and may vary with soil type, slope, and rainfall intensity.	**Yes**, through collaboration with landowners.	1 ⭐

	Barriers Landowner agreement is essential. There may be concerns about potential impacts on crop yield or operational efficiency, depending on field layout and machinery use. **Cost** Costs are very low, limited to changes in farming practice. However, there may be indirect costs if the change affects crop productivity or requires adjustments to farm operations. **Timescales** This option can be implemented immediately, within a single growing season. Benefits to surface water management would be realised quickly, though limited in scale.		
Option 8 – Convert Cropland to Grassland Convert existing cropland to grassland through suitable land management measures and activities. Grassland will reduce infiltration of rainwater and promote evaporation and transpiration compared to cropland	**Option Practicalities** Converting cropland to grassland is a straightforward and well-understood land management activity. It can be implemented with routine agricultural techniques and does not require specialist construction. The benefits, particularly in terms of reduced infiltration and increased evapotranspiration, may take up to two years to become fully established. However, the practical impact on erosion near the cliff edge is expected to be limited, and the success of the intervention depends on correct flora selection (via specialist consultation) and ongoing maintenance. **Limitations** The change in land use may also be resisted by landowners, especially if the land is currently productive cropland. Long-term success depends on sustained ecological health and landowner cooperation **Barriers**	**Yes**, through collaboration with landowners.	**2** ⭐

	Planning permission may be required for land use change, and consultation with environmental bodies such as Natural England could be necessary due to biodiversity implications. **Cost** The initial cost of converting cropland to grassland is relatively low to moderate, covering soil preparation, planting, and basic infrastructure. However, securing land use change may incur higher costs, particularly if compensation or incentives are needed. Funding may be available through Environmental Land Management Schemes (ELMS), which support sustainable land use practices. Maintenance costs should also be considered over the long term. **Timescales** The conversion process can be completed within two years, with ecological and hydrological benefits gradually emerging during this period. Once established, the grassland can provide long-term environmental value if properly maintained. Monitoring and adaptive management should continue beyond the initial implementation to ensure the intervention remains effective.		
Option 9 – Agroforestry (Planting of Specific Flora) Plant specific trees and vegetation to reduce rainwater infiltration and promote interception, evaporation and transpiration	**Option Practicalities** Consultation with environmental specialists is necessary to ensure suitable species are planted and to avoid ecological risks. **Limitations** The effectiveness of agroforestry is limited to surface and shallow water absorption, with minimal impact on deeper groundwater movement. In areas where erosion is expected to progress rapidly, trees may not reach maturity before being lost. Additionally, the selection of flora is critical; inappropriate or invasive species could destabilise the	**Yes**, through collaboration with landowners.	**5** ⭐

	cliff further, undermining the intended benefits of the scheme. **Barriers** None identified. **Cost** Construction costs are moderate and depend on the type and maturity of trees selected. The cost of securing land use change from landowners could be high, especially if compensation is required. **Timescales** Initial planting can be completed quickly, but the full benefits of agroforestry may take many years to develop. The design life is long if the trees are properly maintained and erosion does not compromise their location. Ongoing monitoring and adaptive management will be necessary to assess the impact on groundwater and ensure the scheme remains effective over time.		
Reducing Groundwater Levels			
Option 10 – Vertical Dewatering Pipes Drill a series of deep (up to 40m) vertical boreholes along the study area and install slotted pipe drains. This will allow higher perched groundwater to drain into the lower geological layers, ultimately lowering the groundwater level adjacent to the cliff.	**Option Practicalities** This option involves drilling deep vertical boreholes, up to 40 metres, and installing slotted pipe drains to lower perched groundwater levels adjacent to the cliff. The construction requires specialist equipment and expertise, and the location of the pipes must be carefully planned to avoid areas of active landslides or unstable ground. **Limitations** Previous attempts at similar interventions have failed due to silting or pipe damage in unstable areas. The long-term effectiveness depends on the ability to maintain and clean the pipes, which may be challenging in a dynamic coastal environment. There is also uncertainty about whether the system can achieve a meaningful and permanent reduction in	**No**, due to evidence of failed previous attempts, high associated cost and complexity of construction.	**0** ⭐

groundwater levels without causing unintended consequences.

Barriers

The installation of dewatering pipes may require access to privately owned land, which could present legal and logistical challenges. Groundwater lowering near buildings could lead to settlement issues, raising concerns for residents and planners. Environmental approval from the Environment Agency would be necessary, especially as the area lies near a groundwater Source Protection Zone (SPZ), and deeper drainage could affect the underlying chalk aquifer.

Cost

The construction cost is expected to be high to very high due to the depth and number of boreholes required, as well as the need for durable materials and specialist drilling equipment. Land use change costs may also be significant, depending on landowner negotiations. Maintenance costs are medium but ongoing, as regular inspection and cleaning will be essential to prevent silting and maintain functionality.

Timescales

Initial investigations and design work would take time, followed by a complex construction phase. The full implementation could span several years, especially if phased across different sections of the study area. Once installed, the system would require continuous monitoring and maintenance to remain effective. The design life could be long, but only if the pipes are properly maintained and not compromised by erosion or ground movement.

Community support is greatest for the Agroforestry option. Options outlined in Table 3-9 require the involvement of key stakeholders. These being landowners and Norfolk Highways. Therefore, at this stage actions (see Table B-10) are concerned with engaging with these stakeholders to understand what their appetite is for exploring these options.

Table B-10 Actions arising following appraisal of options concerning drainage.

Drainage actions taken forward into plan				
	Action	**Owner**	**Trigger**	**Vision Contribution**
1	Engagement with Norfolk Highways regarding management of drainage at Beach Road	NNDC	Currently ongoing.	Sustainable Coastal Community
2	Engagement with landowners regarding management of drainage on agricultural land	NNDC	Currently ongoing.	Sustainable Coastal Community Healthier, Happier, Greener

Businesses

There are numerous businesses in Happisburgh and for the purpose of this plan their impacts have been divided into businesses that are directly impacted (i.e. their premises is likely to be impacted by coastal change) and those which are indirectly impacted (i.e. their customer base, surroundings, access, etc. are likely to be impacted by coastal change). The options identified in table B-11 are based on engagement completed by the Coastwise project. Options for directly impacted businesses are focused on business continuity and adaptation of the premises whereas indirectly impacted businesses have options specific to their nature centred around diversification.

Table B-11 Appraisal of options concerning businesses, based on practicalities, limitations, barriers to implementation, costs and timescales.

Businesses Option	Appraisal/Justification	Actions to be developed?	Community Support
Directly Impacted Businesses			
Option 1 – Business Continuity Plan Develop a business continuity plan that includes identifying alternative business site, potential to expand landward, and adapting business practices	**Option Practicalities** Practical challenges include the availability of suitable land for relocation, potential disruption to operations during the transition, and the difficulty of maintaining customer engagement if the business moves away from its original coastal setting. **Limitations** Businesses with fixed infrastructure or those heavily reliant on coastal tourism may find relocation or adaptation less viable. Additionally, the emotional and cultural attachment to place can hinder	**Yes**, through collaboration with businesses.	1 ⭐

	decision-making and delay action, especially for long-standing family-run enterprises. **Barriers** Planning permission is required for any new development or landward expansion, and environmental constraints may restrict available options. Environmental impact assessments may be triggered depending on the scale and location of the proposed changes. **Cost** Costs associated with this option include site identification and planning permissions, land acquisition or leasing, construction or refurbishment of new premises, staff retraining, and marketing to re-establish the business in a new location. Indirect costs may arise from business disruption and potential loss of clientele. **Timescales** Planning applications, securing funding, and beginning relocation or adaptation may take six to 18 months. Full implementation, including operational transition and monitoring, could extend the timeline to years, depending on the complexity of the business and the availability of resources.		
Option 2 – Temporary Business Units Temporary (seasonal) coastal units to work from during summer months when coastal erosion is lowest. Then relocate businesses and equipment landward during winter months when coastal erosion is greatest.	**Option Practicalities** This strategy requires reliable logistics and storage solutions, and businesses must be able to operate flexibly across two locations, which may not be feasible for all types of enterprises. Temporary units must be placed on land that is geotechnically stable and regularly monitored to ensure safety. This may require frequent site assessments and contingency planning. Additionally, temporary units may have limited access to utilities such as water, electricity, and waste disposal. Ensuring adequate service provision (especially for food outlets or hospitality businesses) can be challenging and may require portable solutions or temporary connections.	**Yes**, though initially to understand whether there is appetite from businesses.	**3** ⭐

	Limitations The temporary nature of the units means they may not be suitable for businesses requiring permanent infrastructure or year-round operations. Businesses will need tailored insurance policies that cover both coastal and landward operations, including risks associated with erosion, transport, and temporary structures. Insurers may impose higher premiums or specific conditions due to the nature of the setup. **Barriers** Planning permission is required for any new development or landward expansion, and environmental constraints may restrict available options. Environmental impact assessments may be triggered depending on the scale and location of the proposed changes. **Cost** Costs include those associated with planning permissions, purchase or rental of temporary units, transportation, seasonal setup and takedown, storage during the off-season, and insurance. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process could take 3-6 months depending on the specific requirements of the site. Once established, the seasonal cycle of setup and relocation would continue annually	
Business Diversification		
Option 3 – Mobile Food and Drink Units Food vans or beer trailers that can operate inland or at events such as festivals, markets, or weddings.	**Option Practicalities** A mobile catering unit would be stored and maintained on site that could operate at various locations, in and beyond Happisburgh. Storage of perishable goods would remain on site.	**Yes**, though initially to understand whether there is appetite from business.

	Limitations Mobile catering units need access to clean water and facilities for waste disposal. These services may be limited or unavailable, requiring portable solutions such as water tanks, greywater containers, and arrangements for regular waste collection. Additionally, reliable electricity is needed for cooking, refrigeration, and lighting. Mobile units often rely on generators, which must be safely stored, fuelled, and maintained. Noise and emissions from generators may also be a concern in sensitive or residential areas. **Barriers** Operating mobile units requires various permissions, including street trading licenses from local councils and event-specific approvals. If trading near the coast, permissions from landowners or local authorities may be needed. Food hygiene certification, vehicle safety checks, and insurance are also essential regulatory requirements. **Cost** Initial costs include purchasing or converting a suitable vehicle, fitting it with catering equipment, branding, and securing licenses. Ongoing costs involve fuel, maintenance, insurance, staff wages, and event fees. **Timescales** Mobile units can be operational relatively quickly, with setup times ranging from three to six months depending on vehicle availability, licensing, and equipment installation.	
Option 4 – Brewery subscription and delivery Launch a beer subscription box with seasonal brews. Include local delivery. This can be off-site.	**Option Practicalities** A brewery subscription and delivery service requires a secure and scalable off-site facility for brewing, packaging, and dispatch. Practical considerations include the need for reliable packaging, inventory management, and a delivery system that	**Yes**, though initially to understand whether there is appetite from business.

	can handle seasonal fluctuations and rural logistics. **Limitations** This option may not fully replace the experiential aspect of a coastal brewery or taproom, which often draws visitors for its location and atmosphere. The subscription model relies heavily on marketing, customer retention, and consistent product quality **Barriers** Requires compliance with alcohol licensing laws, food safety regulations, and delivery logistics. If brewing occurs off-site, planning applications are required for inland development or conversion of existing buildings. Branding and packaging may also require trademark registration and labelling compliance. Businesses must also ensure GDPR compliance for managing customer data in subscription systems. **Cost** Costs include developing the subscription platform, branding and packaging design, brewing equipment (if off-site production is needed), and delivery infrastructure. Ongoing costs involve brewing operations, packaging materials, courier services, and marketing. **Timescales** This option can be implemented relatively quickly, with setup times depending on the readiness of brewing facilities and the development of the subscription system.	
Option 5 – Event Catering Provide off-site catering	**Option Practicalities** The kitchen facilities may still be located within an erosion-prone zone, meaning that food preparation remains at risk unless relocated or upgraded inland. Transporting food and equipment introduces logistical complexity. There may be a necessity for inland kitchen	**Yes**, though initially to understand whether there is appetite from business.

	upgrades or temporary food preparation units. **Limitations** The success of the event catering model depends on the availability of suitable venues and consistent demand for catered events. **Barriers** The business will need to update its food hygiene certification to reflect off-site operations and may require additional licenses for alcohol service at external venues. Planning permission may be needed for any land undergoing a change of use. Insurance policies must be revised to cover mobile operations, staff working off-site, and liability at third-party venues. Coordination with local authorities and event organisers is essential to ensure compliance with health and safety standards, waste management protocols, and access requirements. **Cost** Costs include upgrading kitchen facilities, purchasing or leasing transport vehicles, acquiring portable catering equipment, and developing branding and marketing materials. Ongoing expenses include fuel, vehicle maintenance, packaging, insurance, and event-specific fees. **Timescales** This option can be implemented relatively quickly, with setup times depending on the readiness of the business to providing this service.	
Option 6 – Relocatable Accommodation Offer glamping experiences that can be moved inland if needed	**Option Practicalities** Camping sites require minimal permanent infrastructure, and pre-set glamping units can be quickly installed and removed, making them suitable for erosion-prone land. Access roads, sanitation, and safety measures must be in place, and regular monitoring is needed to ensure the land remains safe and stable for public use.	**Yes**, though initially to understand whether there is appetite from business.

	Limitations Sites may become unsafe or inaccessible over time, reducing their viability. Seasonal demand and weather conditions also affect profitability and usability. Insurance and liability risks may increase in erosion-prone zones. **Barriers** Planning permission may be required if the land is to undergo a change of use. **Cost** Basic camping setup costs are relatively low, while glamping units vary in price. Additional costs include planning permission, site preparation, utilities, waste management, and insurance. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process could take three to six months depending on the specific requirements of the site.	
Option 7 - Mobile shop Operate a mobile shop van serving nearby inland villages or caravan sites	**Option Practicalities** By shifting retail operations to a van, the business can continue serving the community even if the original shop is affected by cliff retreat. The van must be equipped to safely store and display a range of products, including perishables, dry goods, and household items. **Limitations** Limitations to what can be stocked and sold due to space constraints. **Barriers** Operating a mobile shop requires a street trading license from the local authority. The van must comply with food safety regulations, vehicle safety standards, and insurance requirements. If the shop sells alcohol, additional licensing is required.	**Yes**, though initially to understand whether there is appetite from business.

	Cost Costs include purchasing or converting a suitable van, fitting it with retail fixtures and refrigeration, branding, and securing licenses. Ongoing costs include fuel, maintenance, insurance. **Timescales** A mobile shop can be operational within months, depending on vehicle availability, licensing approvals, and route planning.	
Option 8 – Eco-tourism and Nature Experiences Develop inland eco-camping or wild camping options.	**Option Practicalities** Eco tourism sites require minimal permanent infrastructure, making them suitable for erosion-prone land. Access roads, sanitation, and safety measures must be in place, and regular monitoring is needed to ensure the land remains safe and stable for public use. **Limitations** Sites may become unsafe or inaccessible over time, reducing their viability. Seasonal demand and weather conditions also affect profitability and usability. Insurance and liability risks may increase in erosion-prone zones. **Barriers** Planning permission may be required if the land is to undergo a change of use. **Cost** Basic setup costs are relatively low. Additional costs include planning permission, site preparation, utilities, waste management, and insurance. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process could take three to six months depending on the specific requirements of the site.	**Yes**, though initially to understand whether there is appetite from business.

Community support is greatest for the temporary business unit option. Individual businesses were not presented as part of the engagement works, consequently only options 1 and 2 were presented for community feedback. The options identified in Table B-11 are reliant on engagement with impacted businesses and as such, the actions developed in Table B-12 are focused on engagement at present.

Table B-12 Actions arising following appraisal of options concerning businesses.

Businesses actions taken forward into plan				
	Action	**Owner**	**Trigger**	**Vision Contribution**
1	Engagement with directly-impacted businesses to understand appetite for business continuity plans and mobile business units.	NNDC	Currently ongoing.	Supporting Tourism, Education, and Local Enterprise Sustainable Coastal Community

Car Park

The car park at Beach Road was built in 2011 as part of the Pathfinder project as a replacement for an existing car park that was impacted by coastal change at that time. As this car park is now under threat from coastal change, options need to be explored for moving this vital, revenue-generating asset inland. Work to relocate the car park under the Coastwise project is already underway and as such, options in Table B-13 are divided into two phases. Phase 1 relates to the car park relocation and Phase 2 relates to the ancillary services that the wider car park site provides (play area, toilets, signage).

Table B-13 Appraisal of options concerning the car park on Beach Road, based on practicalities, limitations, barriers to implementation, costs and timescales.

Car Park Option	Appraisal/Justification	Actions to be developed?	Community Support
Phase 1			
Option 1 – New Car Park Construction of new car park inland of existing car park	**Option Practicalities** Planning Permission has been granted (ref: PF/11/0169**)** and a contractor has been appointed for the works to build an additional car park inland on the existing beach road car park. The new car park will be accessed from Lighthouse Lane. **Limitations** It is likely that the new car park will be impacted by coastal change in the longer-term such that further provision for rollback may be required.	**Yes**, actions are currently ongoing.	**3** ⭐

	Barriers No further barriers identified. **Cost** The costs for these works have been funded by the NNDC Coastwise project. **Timescales** The new car park is due to be completed in 2026.		
Phase 2			
Option 2 – Play Area Relocation of play area	**Option Practicalities** The physical requirement for relocation requires identifying a suitable inland site that is geotechnically stable. The land must be surveyed and prepared, which may include levelling, drainage installation, and soil reinforcement to ensure safe foundations for play equipment. Construction will typically involve laying safety surfacing, and fencing may be required to ensure child safety, particularly if the new site is near roads or open fields. If the original play area included fixed equipment, it may be possible to reuse some elements, but this depends on their condition and whether they meet current safety standards. **Limitations** The main Limitation is the availability of suitable inland land for relocation. **Barriers** Planning permission is required for changing land use. There must also be compliance with health and	**Yes**, actions are currently ongoing.	**0** ⭐

	safety standards, accessibility regulations, and public liability requirements. **Cost** Costs arise from planning applications, environmental assessments, site preparation, equipment removal and reinstallation, surfacing, landscaping, and accessibility improvements. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process could take 3-6 months depending on the specific requirements of the site.		
Option 3 – Replacement Toilet Block Construction of new toilet block	**Option Practicalities** Site preparation will include ground levelling, installation of drainage systems, and connection to water and sewage networks. In areas without mains drainage, alternative solutions such as composting toilets or sealed tanks may be required. Accessibility features such as ramps, handrails, and signage must be incorporated to meet equality standards and serve a wide demographic. **Limitations** It is likely that the new toilet block will be impacted by coastal change in the longer-term such that further provision for rollback may be required. **Barriers** Planning permission is required for changing land use. The facility must comply with building regulations, water and waste management standards, and accessibility legislation.	**Yes**, actions are currently ongoing.	**0** ⭐

	Cost Costs include planning applications, environmental assessments, site preparation, construction, plumbing, electrical installation, accessibility features, and landscaping. If off-grid solutions are required, composting or sealed waste systems may increase capital costs. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process could take 3-6 months depending on the specific requirements of the site.		
Option 4 – Information Points Creation of information points linking to Deep History Coast installation	**Option Practicalities** Physically, the installation of information points requires stable ground, ideally away from active erosion zones. Foundations may be minimal (e.g. concrete pads or ground screws) but must be secure enough to withstand coastal weather, wind exposure, and foot traffic. Panels should be made of durable, weather-resistant materials, with anti-corrosion finishes and UV protection to ensure longevity. The design must allow for easy removal or relocation, and signage should avoid obstructing views or access routes. **Limitations** The educational impact of the information points depends on footfall, which may decline if erosion affects access routes or nearby attractions. **Barriers** Planning permission may be required for permanent signage. There should be compliance with accessibility standards, including	**Yes**, actions are currently ongoing.	2 ⭐

	readable fonts, tactile features, and inclusive design. **Cost** Costs include design, fabrication, installation, and maintenance of signage. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process could take three to six months depending on the specific requirements of the site.		
Option 5 – Repurposing Existing Toilet Block Repurposing the existing toilet block into electric car points, hard standing for mobile catering units, art display, shelters	**Option Practicalities** There existing toilet block has a water, sewerage and electricity feed such that there are several ways in which it could be repurposed. **Limitations** Since the toilet block is located within a location where coastal erosion is taking place, investment may be short-lived unless the site is stabilised or the installations are designed to be temporary. **Barriers** Planning permission is required for change of use and installation of new infrastructure. EV charging points must comply with electrical safety standards and may require coordination with energy providers. Public shelters and art installations must meet accessibility and safety regulations. **Cost** Costs may include structural assessment and repair, installation of EV charging units, surfacing for catering vehicles, shelter construction, and art display	**Yes**, actions are currently ongoing.	**4** ⭐

	infrastructure. Additional expenses may arise from planning applications, utility upgrades, and ongoing maintenance. **Timescales** Timescales are linked to acquiring planning permission and to the time associated with carrying out works to make the site secure. It would be fair to assume that this process could take three to six months depending on the specific requirements of the site.	

Community support is greatest for the option to repurpose the existing toilet block. Options outlined in Table B-13 have been used to develop actions in Table B-14. Since work is already underway, with a contractor for the construction of the new car park appointed, actions in respect of Phase 1 are limited to the construction works. Actions concerning Phase 2 are centred around planning permission for the ancillary services and for repurposing the existing toilet block.

Table B-14 Actions arising following appraisal of options concerning the Car Park at Beach Road.

Car park actions taken forward into plan				
	Action	**Owner**	**Trigger**	**Vision Contribution**
1	Replacement Car Park construction	NNDC	Currently ongoing.	Supporting Tourism, Education, and Local Enterprise Sustainable Coastal Community
2	Replacement Play Area Planning Application	NNDC	Currently ongoing.	Supporting Tourism, Education, and Local Enterprise Sustainable Coastal Community
3	Replacement Toilet Block Planning Application	NNDC	Currently ongoing.	Supporting Tourism, Education, and Local Enterprise Sustainable Coastal Community
4	Information Points Planning Permission	NNDC	Currently ongoing.	Supporting Tourism, Education, and Local Enterprise

				Sustainable Coastal Community
5	Toilet Block change of use options	NNDC	New toilet block has been developed.	Supporting Tourism, Education, and Local Enterprise Sustainable Coastal Community

Agricultural Land

Happisburgh has been described by some residents as an agricultural village which happens to be by the coast. The village is bordered by agricultural land as shown in Figure 2-4. Table B-15 outlines options based on work completed by the Coastwise project that can be taken concerning agricultural land that hopes to manage it in a way that may help stabilise soil and in turn reduce cliff failures. Options have been divided into Environmental Land Management Schemes (ELMS), strategic planting and agriculture trials.

Table B-15 Appraisal of options concerning agricultural land, based on practicalities, limitations, barriers to implementation, costs and timescales.

Agriculture Option	Appraisal/Justification	Actions to be developed?	Community Support
ELMS			
Option 1 – ELMS Introduction of Environmental Land Management Schemes (ELMS) such as creating coastal buffer zones and regenerative (low/no till) agricultural practices to stabilise soil	**Option Practicalities** Implementing ELMS (such as the Maritime Cliffs and Slopes ELMS) requires changes to existing land management practices, which may involve retraining, investment in new equipment, and a shift in business models. Some landowners may be reluctant to reduce productive acreage for buffer zones. **Limitations** Farmers may face Limitations in integrating ELMS with existing land uses. For example, buffer zones may conflict with drainage systems, access routes, or livestock movement patterns. In some cases, the physical layout of the farm may not lend itself easily to rewilding or low-till methods, requiring costly redesigns or operational changes. **Barriers** Implementing ELMS requires compliance with scheme guidelines and environmental	**Yes**, providing there is appetite from the landowner.	2 ⭐

	regulations. Landowners must apply through Defra or relevant agencies and may need to submit land management plans or environmental assessments. In some cases, planning permission may be required for physical changes to the landscape, such as regrading or planting large-scale buffer zones. Coordination with Natural England or local conservation bodies may be necessary, especially if the land borders protected habitats or designated coastal zones. **Cost** Initial costs include changes to farming equipment, soil testing, planting buffer vegetation, and potentially reducing productive land area. However, ELMS are supported by government funding, including payments for public goods such as carbon sequestration, biodiversity enhancement, and erosion control. **Timescales** Implementation of ELMS can begin within six to 12 months, depending on the scale of intervention and the availability of funding. Buffer zones can be established relatively quickly, while regenerative practices may take several seasons to show full benefits. Long-term monitoring and adaptation are essential.		
Strategic Planting			
Option 2 – Plant Or Buffer Strips Buffer strips of selected vegetation bordering fields can be added to any cropped open field areas. Vegetation will reduce infiltration of rainwater and promote evapotranspiration	**Option Practicalities** Buffer strips could be implemented in both the fields and, where feasible, in parts of the village section. Early consultation with ecological specialists is recommended to select appropriate species and determine optimal strip width and layout. **Limitations** Their effectiveness is also dependent on correct plant selection, strip width, and maintenance. In village areas, implementation may be constrained by space and land ownership. The option does not address water already infiltrating	**Yes**, providing there is appetite from the landowner.	**2** ⭐

	deeper into the ground or flowing from other sources. **Barriers** Landowner permission is required, and land use change may reduce productive farmland. In areas near the SSSI, Natural England may need to be informed. **Cost** Initial costs are low, limited to planting and establishment. However, there may be costs associated with land use change or compensation. Funding may be available through Environmental Land Management Schemes (ELMS) or similar agri-environment grants. **Timescales** Planting can be completed quickly, but benefits may take one to two years to fully establish.		
Option 3- Ploughing Farmland Parallel to The Cliffs Ensure that all farmland is ploughed parallel with the cliff face to prevent surface runoff towards the cliff face	**Option Practicalities** Changing ploughing direction can modestly reduce surface runoff, especially on sloped fields, but its effectiveness depends heavily on topography, soil type, and farming logistics. In Happisburgh, sandy soils allow deep infiltration, which may still contribute to groundwater movement toward the cliff. While altering ploughing patterns may disrupt farming operations and require machinery adjustments, the approach works best when integrated with other land management strategies like buffer strips or swales. Long-term monitoring and adaptability are essential, particularly after heavy rainfall, and farmers may need support to refine practices if erosion persists **Limitations** The benefits are limited to reducing shallow surface runoff and will not significantly affect deeper groundwater infiltration or water movement during heavy rainfall. The effectiveness depends on consistent implementation and may	**Yes**, providing there is appetite from the landowner.	**0** ⭐

	vary with soil type, slope, and rainfall intensity. **Barriers** Landowner agreement is essential. There may be concerns about potential impacts on crop yield or operational efficiency, depending on field layout and machinery use. **Cost** Costs are very low, limited to changes in farming practice. However, there may be indirect costs if the change affects crop productivity or requires adjustments to farm operations. **Timescales** This option can be implemented immediately, within a single growing season. Benefits to surface water management would be realised quickly, though limited in scale.		
Option 4 – Convert Cropland to Grassland Convert existing cropland to grassland through suitable land management measures and activities. Grassland will reduce infiltration of rainwater and promote evaporation and transpiration compared to cropland	**Option Practicalities** Converting cropland to grassland is a straightforward and well-understood land management activity. It can be implemented with routine agricultural techniques and does not require specialist construction. The benefits, particularly in terms of reduced infiltration and increased evapotranspiration, may take up to two years to become fully established. However, the practical impact on erosion near the cliff edge is expected to be limited, and the success of the intervention depends on correct flora selection (via specialist consultation) and ongoing maintenance. **Limitations** The change in land use may also be resisted by landowners, especially if the land is currently productive cropland. Long-term success depends on sustained ecological health and landowner cooperation	**Yes**, providing there is appetite from the landowner.	**2** ⭐

	Barriers Planning permission may be required for land use change, and consultation with environmental bodies such as Natural England could be necessary due to biodiversity implications. **Cost** The initial cost of converting cropland to grassland is relatively low to moderate, covering soil preparation, planting, and basic infrastructure. However, securing land use change may incur higher costs, particularly if compensation or incentives are needed. Funding may be available through Environmental Land Management Schemes (ELMS), which support sustainable land use practices. Maintenance costs should also be considered over the long term. **Timescales** The conversion process can be completed within two years, with ecological and hydrological benefits gradually emerging during this period. Once established, the grassland can provide long-term environmental value if properly maintained. Monitoring and adaptive management should continue beyond the initial implementation to ensure the intervention remains effective.		
Option 5 – Agroforestry (Planting of Specific Flora) Plant specific trees and vegetation to reduce rainwater infiltration and promote interception, evaporation and transpiration	**Option Practicalities** Consultation with environmental specialists is necessary to ensure suitable species are planted and to avoid ecological risks. **Limitations** The effectiveness of agroforestry is limited to surface and shallow water absorption, with minimal impact on deeper groundwater movement. In areas where erosion is expected to progress rapidly, trees may not reach maturity before being lost. Additionally, the selection of flora is critical; inappropriate or invasive species could destabilise the cliff further,	**Yes**, providing there is appetite from the landowner.	**4** ⭐

	undermining the intended benefits of the scheme. **Barriers** None identified. **Cost** Construction costs are moderate and depend on the type and maturity of trees selected. The cost of securing land use change from landowners could be high, especially if compensation is required. **Timescales** Initial planting can be completed quickly, but the full benefits of agroforestry may take many years to develop. The design life is long if the trees are properly maintained and erosion does not compromise their location. Ongoing monitoring and adaptive management will be necessary to assess the impact on groundwater and ensure the scheme remains effective over time.		
Agriculture Trials			
Option 6 - Agriculture Pilot Projects Pilot innovative farming techniques, such as vertical farming, hydroponics, or aquaponics. This could serve as a learning hub for sustainable agriculture practices.	**Option Practicalities** These systems require significant initial investment in infrastructure, technology, and training. They also depend on reliable access to electricity, clean water, and climate control systems, which may be difficult to maintain in rural coastal regions. Additionally, these techniques may not be suitable for all crops or farming models **Limitations** There is a high cost and technical complexity of setting up and maintaining these systems. Vertical farming and hydroponics require specialised equipment, controlled environments, and ongoing monitoring, which may be beyond the capacity of small or traditional farms. **Barriers** Planning permissions are required for change of land use. Environmental assessments may be needed if water use or	**Yes**, providing there is appetite from the landowner.	**0** ⭐

	waste discharge is significant. Farmers and project leads must also comply with food safety regulations and building codes. **Cost** Costs include planning permissions, purchasing or leasing land or buildings, installing growing systems, climate control, lighting, water filtration, and automation technologies. **Timescales** Smaller hydroponic setups may be operational within months, while larger vertical farms or aquaponic systems may require longer lead times for construction, commissioning, and training.

Community support is greatest for the agroforestry option. Similar to the actions arising from options concerning drainage, the actions that arise from the options outlined in Table B-15 are centred, at present, around engagement with relevant landowners. These actions should be grouped in the Action Plan section of this report, such to avoid duplication. Please see Table B-16 for actions arising from options concerning agricultural practice.

Table B-16 Actions arising following appraisal of options concerning agricultural land.

Agricultural land actions taken forward into plan				
	Action	**Owner**	**Trigger**	**Vision Contribution**
1	Engagement with landowners regarding management practices	NNDC	Currently ongoing.	Supporting Tourism, Education, and Local Enterprise Healthier, Happier, Greener

Highways

Highways impacted within the timespan of this Plan largely run perpendicular to the coast and as such, it is not anticipated that any access to properties or services will be cut off due a highway being lost to coastal change. Highways, however, are a source of surface water runoff, with Beach Road in particular appearing to exacerbate cliff recession through the direction that surface water is presently draining. Options for management of highways at present are a duplication of an option identified within the Drainage section of this report.

Table B-17 Appraisal of options concerning Highways, based on practicalities, limitations, barriers to implementation, costs and timescales.

Highways Option	Appraisal/Justification	Actions to be developed?	Community Support

Option 1 – Remediate Existing Highway Drainage Clean and inspect the existing highway drainage system, including gullies, pipework, and outlet/soakaway locations, using CCTV surveys and engineering review to assess flow direction and asset condition, ultimately reducing surface water run-off into surrounding ground.	**Option Practicalities** The works are limited to the village section near the cliff edge and are considered routine, with immediate benefits in reducing surface water run-off from the highway into surrounding ground. This may help reduce localised infiltration that contributes to ground instability near the cliff edge. The works are straightforward to deliver but will require temporary traffic management during maintenance. **Limitations** This option has no impact on wider groundwater infiltration across the study area. Gullies and pipework are likely to silt up over time, requiring regular maintenance. The drainage survey may not conclusively identify the outlet or soakaway, limiting the effectiveness of the intervention. **Barriers** None identified. **Cost** The initial cost is low, but ongoing maintenance will be required to keep the system functioning. If regular cleaning is needed, long-term costs and embodied carbon impacts will increase. **Timescales** The works are straightforward and could be completed within weeks, subject to scheduling and access. Surveys and drainage reviews could be undertaken in parallel with other early-stage interventions.	**Yes**, providing there is buy in from Norfolk Highways

Highways-related options were not included for community feedback during the engagement events, as responsibility for these options rests with the asset owners. Although options identified in Table B-17 are a duplication of those set out within the Drainage section of this report; the actions associated with highways are not. There remains a need for the management of highways in Happisburgh when impacted by coastal change and therefore, actions outlined in Table B-18 relate to engaging with Norfolk Highways to identify an approach to managing the ongoing impacts of coastal change to highways.

Table B-18 Actions arising following appraisal of options concerning Highways.

Highways actions taken forward into plan

	Action	Owner	Trigger	Vision Contribution
1	Engagement with Norfolk Highways surrounding the ongoing impacts of coastal change to highways	NNDC	Currently ongoing.	Supporting Tourism, Education, and Local Enterprise Sustainable Coastal Community

King Charles III Coast Path

The King Charles III Coast Path runs parallel to the coast as shown in Figure 2-3. Options concerning the path are confined to maintenance and re-routing, as set out in Table B-19.

Table B-19 Appraisal of options concerning the King Charles III Coast Path, based on practicalities, limitations, barriers to implementation, costs and timescales.

Coast Path Option	Appraisal/Justification	Actions to be developed	Community Support
Option 1 – Maintain Maintain the current coast path throughout the car park construction	**Option Practicalities** Heavy machinery, vibration, and changes to drainage patterns can accelerate ground movement, increasing the risk of collapse or subsidence. The path may require temporary reinforcement, such as fencing, matting, or geotechnical stabilisation, to remain safe during construction, in addition to rerouting foot traffic away from active work zones. **Limitations** Maintaining the path may also limit the flexibility of construction operations, as access routes and work zones must be planned around pedestrian use. **Barriers** Maintaining the path may require temporary planning consent or amendments to existing public rights of way. Health and safety regulations must be strictly followed, including fencing, signage, and surface maintenance. Coordination with contractors is essential to ensure construction does not interfere with public access or compromise safety. **Cost**	?	5 ⭐

	Costs include temporary surfacing, fencing, signage, erosion monitoring, and staff time for inspections and public communication. Additional costs may arise if emergency repairs or rerouting are needed during construction. **Timescales** Maintenance of the path would be ongoing throughout the car park construction period.	
Option 2 – Re-Route Now Establish a new Coast Path route which includes the installation of trail signs and information boards	**Option Practicalities** The new route must be surveyed and mapped to ensure it avoids erosion-prone areas and is safe for public use. Ground preparation may be required, including vegetation clearance, path surfacing (e.g. gravel, compacted earth, or boardwalks), and drainage improvements to prevent waterlogging. Trail signs must be installed at key junctions and decision points, using weather-resistant materials and secure fixings to withstand coastal conditions. Information boards should be placed at entry points or scenic locations, with durable and clear accessible content. **Limitations** In some areas, topography, land ownership, or environmental constraints may restrict options. The re-routed path may lack the scenic appeal of the original coastal route, potentially affecting visitor satisfaction and tourism value. **Barriers** Planning permission may be required for new path infrastructure. Landowner consent is essential for any sections crossing private property, and legal agreements may need to be negotiated. Environmental assessments may be necessary if the route passes near protected habitats or designated landscapes. The trail should ensure accessibility compliance standards and public safety regulations. **Cost**	1 ⭐

	Costs include route surveying, ground preparation, path construction, signage fabrication and installation, and information board design, legal agreements and environmental assessments. **Timescales** The re-routing process timescale depends on the complexity of the route, land negotiations, and planning approvals, and site preparation.	
Option 3 – Re-Route Later Reroute the Coast Path when the end of Beach Road is lost. Includes the installation of trail signs and information boards	**Option Practicalities** Waiting until the path is lost may result in sudden closure, safety hazards, and a gap in public access. Emergency rerouting may be required, which could be more costly and less coordinated than a planned transition. **Limitations** Lack of control over timing: erosion may occur faster than expected, leaving insufficient time to prepare a safe and accessible alternative. **Barriers** Planning permission may be required for new path infrastructure. Landowner consent is essential for any sections crossing private property, and legal agreements may need to be negotiated. Environmental assessments may be necessary if the route passes near protected habitats or designated landscapes. The trail should ensure accessibility compliance standards and public safety regulations. **Cost** Costs include route surveying, ground preparation, path construction, signage fabrication and installation, and information board design, legal agreements and environmental assessments **Timescales** The timescale is uncertain and dependent on erosion progression.	0 ⭐

Community support is greatest for the option to maintain the coast path.

Table 0-20 Actions arising following appraisal of options concerning the King Charles III Coast Path.

King Charles III Coast Path actions taken forward into plan				
	Action	**Owner**	**Trigger**	**Vision Contribution**
1	Engagement with Norfolk County Council regarding future routing of Coast Path	NNDC and Norfolk County Council	Currently ongoing.	Supporting Tourism, Education, and Local Enterprise Healthier, Happier, Greener Sustainable Coastal Community

Utilities

Happisburgh is supplied with electricity by UK Power Networks and with water and sewerage by Anglian Water. There is no gas supply to Happisburgh. Options in Table B-21 have been developed through engagement with the utility providers and where possible, are based on existing processes for reporting issues and managing their assets.

Table B-21 Appraisal of options concerning utilities, based on practicalities, limitations, barriers to implementation, costs and timescales.

Utilities Option	Appraisal/Justification	Actions to be developed?	Community Support
UK Power Networks			
Option 1 – Assets are decommissioned when they are no longer required, or become at imminent due to coastal change A reactive approach where now-redundant assets or assets imminently at risk are reported to UK Power Networks for action.	**Option Practicalities** A responsible party would identify an asset that is redundant or is at imminent risk, before reporting it to UK Power Networks through existing communication channels by dialling 105 from a telephone. **Limitations** Whilst this is an existing, formalised process; it remains reactive and as such, is reliant on a responsible party to report the issue to UK Power Networks. **Barriers** None identified. **Cost** None identified.	**Yes**, centred around the responsible party.	

	Timescales Already in operation.	
Option 2 – Assets are relocated as part of a scheduled replacement programme Assets have a set lifespan and as such, undergo replacement as part of a planned approach to upgrading the network. When assets in Happisburgh reach their time for renewal, a decision can be made whether to re-route the network to accommodate coastal change.	**Option Practicalities** UK Power Networks planners would identify parts of the network expected to be impacted by coastal change that would still be expected to deliver a supply after they have been impacted (i.e. the customers that this part of the network serves wouldn't also be impacted by the coastal change). The plan for replacing these assets would be altered such that the network would be re-routed to maintain the supply. **Limitations** Assets may be impacted before they come to the end of their useful life. **Barriers** None identified. **Cost** TBC **Timescales** TBC	TBC
Anglian Water		

Utilities options were not presented for community feedback as part of the engagement events, as the options responsibilities lie with the asset owners. Further engagement with utilities providers is required.

Table B-22 Actions arising following appraisal of options concerning utilities.

Utilities actions taken forward into plan				
	Action	**Owner**	**Trigger**	**Vision Contribution**
1	Define responsible party for reporting UK Power Networks assets at risk	?	?	Sustainable Coastal Community

Beach Access

Options for maintaining beach access are outlined in Table B-23. These have been taken from report B2491800-JAC-RPT-001_Happisburgh Assessment of Rock Bund and Beach Access_P03.

Table B-23 Appraisal of options concerning beach access, based on practicalities, limitations, barriers to implementation, costs and timescales.

Beach Access Option	Appraisal/Justification	Actions to be developed?	Community Support
Shore-Parallel Ramps			
Option 1 – Maintain the existing ramp as present This is 'business-as-usual' and simply involves continuing to carry out operations as in the past, at the same location.	**Option Practicalities** This option involves continuing to carry out existing operations and as such, the practicalities of the action are already established. **Limitations** This approach results in a steep ramp with an uneven surface which impacts pedestrian access. Although the location benefits from the presence of the rock bund, erosion does still occur, resulting in its temporary closure at times and ongoing works to maintain this as a usable access point. **Barriers** None identified. **Cost** Costs associated with this option are currently covered by NNDC revenue budget for coastal management. **Timescales** This option is currently underway.	?	1 ⭐
Option 2 - New shore-parallel ramp at the existing car park This would be a ramp similar in orientation to the existing ramp, but cut further to the north than the current location,	**Option Practicalities** A benefit of making this new cut further north is that this provides a longer distance behind the bund to cut a shallower slope than the present ramp, meaning that it is more accessible by pedestrians. The land in this location is also owned by NNDC, meaning that landowner permission may		1 ⭐

in front of the existing car park.	be more forthcoming, given their interest in maintaining the access. **Limitations** Although the location benefits from the presence of the rock bund, erosion would likely still occur, resulting in its temporary closure at times and ongoing works to maintain this as a usable access point. **Barriers** Planning permission (and an MMO License, depending on the design) may be required for beach access. Landowner consent from NNDC would be a requirement. Environmental assessments may also be necessary. A new access should seek to adhere to accessibility compliance standards and public safety regulations. **Cost** There would likely be significant cost implications with constructing the ramp however, it is anticipated that maintenance budget for the existing ramp would be transferred to maintain any new ramp. **Timescales** This is largely dependent on whether Planning Permission and/or an MMO licence is required. MMO Licenses are currently taking in excess of eight months to grant and as such, the timescales for implementing these measures could range from six to 18 months. There may also be a requirement to carry out the works at a certain time of year to avoid unfavourable weather or significant numbers of tourists.	
Option 3 – New shore-parallel ramp further to the south A ramp similar in orientation to the existing ramp, but created further to the south where recession of the cliffs is slower than the north	**Option Practicalities** A benefit of making this new cut further south is that a slower rate of erosion may mean that the maintenance costs are reduced. The land in this location is privately owned and therefore, would require landowner permissions or for NNDC to acquire the land. For vehicular access to use the ramp, there would be a requirement to track across an agricultural field. If track improvements are required,	0 ⭐

	this would an involve additional repeated cost since the track would also be vulnerable to erosion. **Limitations** A ramp in this location would not benefit from the existing rock bund and therefore, rock would either need to be moved from its existing location or sought from elsewhere to protect the ramp from erosion. **Barriers** Planning permission (and an MMO License, depending on the design) may be required for beach access. Landowner consent from NNDC would be a requirement. Environmental assessments may also be necessary. A new access should seek to adhere to accessibility compliance standards and public safety regulations. **Cost** There would likely be significant cost implications with constructing the ramp. Additional costs are also associated with the requirement for additional rock, or repurposing of existing rock to act as a defence for the ramp. It is anticipated that maintenance budget for the existing ramp would be transferred to maintain any new ramp. **Timescales** This is largely dependent on whether Planning Permission and/or an MMO licence is required. MMO Licenses are currently taking in excess of eight months to grant and as such, the timescales for implementing these measures could range from six to 18 months. There may also be a requirement to carry out the works at a certain time of year to avoid unfavourable weather or significant numbers of tourists.	
Option 4 – New ramp facing north Cutting a ramp facing the opposite way – with the downslope going	**Option Practicalities** This would involve cutting a ramp facing the opposite way to the existing ramp, with	0 ⭐

northwards rather than southwards.	the downslope going northwards rather than southwards. **Limitations** This ramp orientation would be open to the predominant wave direction. That means it will be subject to wave run-up during storms which will lead to direct erosion and damage to the ramp itself. The toe of the ramp where it meets the beach will be regularly eroded by waves. This will create a step which will prevent access until further maintenance has been undertaken. **Barriers** Planning permission (and an MMO License, depending on the design) may be required for beach access. Landowner consent from NNDC would be a requirement. Environmental assessments may also be necessary. A new access should seek to adhere to accessibility compliance standards and public safety regulations. **Cost** There would likely be significant cost implications with constructing the ramp. Additional costs are also associated with the requirement for additional maintenance to retain access. It is anticipated that maintenance budget for the existing ramp would be transferred to maintain any new ramp however, this would likely need to be increased. **Timescales** This is largely dependent on whether Planning Permission and/or an MMO licence is required. MMO Licenses are currently taking in excess of eight months to grant and as such, the timescales for implementing these measures could range from six to 18 months. There may also be a requirement to carry out the works at a certain time of year to avoid unfavourable weather or significant numbers of tourists.
Shore- Normal Ramps	

Option 5 – Create a shore-normal ramp south of the current ramp

Rather than a ramp running along the cliff face, this option would be to cut a ramp through the cliff face.

Option Practicalities 1 ⭐

Rather than a ramp running along the cliff face, the approach would be to cut a ramp through the cliff face. An advantage of this is that it may be possible to create a shallower slope than the present ramp (e.g. closer to 1:12 minimum), which would make it more likely to be pedestrian-friendly. This orientation would also remove the risk of erosion of the ramp along its seaward edge which would not need to be maintained in the same way as the existing ramp.

The toe of the ramp, even with the desired shallow slope will be contained within the body of the cliffs, i.e. not exposed at the foreshore. Consequently, although cliff erosion will continue, there will be a longer period of time before this reaches the base of the ramp and any maintenance starts to become necessary. This ramp would be close to the new car park, and the road, so no additional works are required to make it accessible for maintenance vehicles or pedestrians. This would involve a large cut being made in the existing cliffs, close to properties and other infrastructure, and could be perceived to be increasing vulnerability to erosion. The depth and steepness of the cut would mean a significant change to the landscape and appearance of the area. This ramp would remain behind the higher section of the rock bund, so would be afforded some protection from erosion.

Limitations

Although the location benefits from the presence of the rock bund, erosion would likely still occur, resulting in its temporary closure at times and ongoing works to maintain this as a usable access point.

Barriers

Planning permission may be required for beach access. Environmental assessments may also be necessary. A new access

	should seek to adhere to accessibility compliance standards and public safety regulations. **Cost** There would likely be significant cost implications with constructing the ramp however, it is anticipated that maintenance budget for the existing ramp would be transferred to maintain any new ramp. There also may be some savings in the maintenance costs since there would likely be a delay between construction and the need for any significant maintenance. **Timescales** Timescales are linked to acquiring planning permission and the time associated with carrying out the works. It would be fair to assume that this process could take three to six months. There may also be a requirement to carry out the works at a certain time of year to avoid unfavourable weather or significant numbers of tourists.	
Option 6 - Create a shore-normal ramp through the existing car park Rather than a ramp running along the cliff face, this option would be to cut a ramp through the cliff face, at the location of the existing car park.	**Option Practicalities** A ramp would be cut through the existing car park, and through the cliff face, instead of parallel to the cliff face. Plans are already in place to close this and create a new car park in the field set further inland. This land is owned by NNDC and it is possible to extend the top of the ramp much further inland. The toe of the ramp, even with the desired shallow slope will be contained within the body of the cliffs, i.e. not exposed at the foreshore. Consequently, although cliff erosion will continue, there will be a longer period of time before this reaches the base of the ramp and any maintenance starts to become necessary. This ramp would be close to the new car park, and the road, so no additional works are required to make it accessible for maintenance vehicles or pedestrians. This would involve a large cut being made in the existing cliffs, close to properties and other infrastructure, and could be perceived to be increasing	3 ⭐

	vulnerability to erosion. The depth and steepness of the cut would mean a significant change to the landscape and appearance of the area. This ramp would remain behind the higher section of the rock bund, so would be afforded some protection from erosion. **Limitations** Although the location benefits from the presence of the rock bund, erosion would likely still occur, resulting in its temporary closure at times and ongoing works to maintain this as a usable access point. **Barriers** Planning permission may be required for beach access. Environmental assessments may also be necessary. A new access should seek to adhere to accessibility compliance standards and public safety regulations. **Cost** There would likely be significant cost implications with constructing the ramp however, it is anticipated that maintenance budget for the existing ramp would be transferred to maintain any new ramp. There also may be some savings in the maintenance costs since there would likely be a delay between construction and the need for any significant maintenance. **Timescales** Timescales are linked to acquiring planning permission or prior approval of permitted development; and to the time associated with carrying out the works. It would be fair to assume that this process could take three to six months. There may also be a requirement to carry out the works at a certain time of year to avoid unfavourable weather or significant numbers of tourists.	
Access South of Happisburgh		
Option 7 – 'Grand Canyon'	**Option Practicalities**	3 ⭐

This gap through the cliffs is already used as an informal access by the public, but does require them scrambling down the cuts which can be slippery and unstable

A slope could be graded to make it easier to walk down, potentially also adding some surfacing material or matting that provide a better grip and make the surface less slippery. However, this existing slope is already steep, at approximately 1:6 (not dissimilar to the existing beach access ramp at Happisburgh). To achieve a slope closer to 1:12 more suitable pedestrian use would require cutting further back inland. The land is not owned by NNDC. The existing feature reduces the amount of excavation that would be required. The stability of the upper cliff either side of the gap onto the beach ought to be assessed and possibly trimmed back to avoid falls into the gap which are a safety hazard.

Limitations

The processes that have formed this feature include surface water runoff and subsurface ground water seepage, which will continue as this evolves. Therefore, this pathway may remain slippery and unstable even with some form of surfacing. Increased pedestrian use of this pathway will also cause some further erosion through wear and tear. Consequently, if access is simply improved in this way, there will be certainty of suitable access on a continual basis and may need to be closed off at times if deemed unsafe. As such it will need ongoing monitoring and maintenance if it is to be adopted as an approved access point.

Barriers

Planning permission (and an MMO License, depending on the design) may be required for beach access. Landowner consent from NNDC would be a requirement. Environmental assessments may also be necessary. A new access should seek to adhere to accessibility compliance standards and public safety regulations.

Cost

There would likely be significant cost implications with constructing this access

	however, it is anticipated that maintenance budget for the existing ramp would be transferred to maintain any new ramp. There may be additional costs associated with the stability assessment and monitoring. **Timescales** Timescales are linked to acquiring planning permission and the time associated with carrying out the works. It would be fair to assume that this process could take three to six months. There may also be a requirement to carry out the works at a certain time of year to avoid unfavourable weather or significant numbers of tourists.			

Community support is equally greatest for the option to create a shore-normal ramp through the existing car park, and the 'Grand Canyon' option. TBC following input from NNDC.

Table B-24 Actions arising following appraisal of options concerning the beach access.

Beach access actions taken forward into plan				
	Action	**Owner**	**Trigger**	**Vision Contribution**
1	Review of Beach Access Options with a view to taking an Option forward	NNDC	Funding becomes available.	Supporting Tourism, Education, and Local Enterprise Sustainable Coastal Community

Church of St Mary the Virgin

Table B-25 Appraisal of options concerning the church, based on practicalities, limitations, barriers to implementation, costs and timescales.

Church Option	Appraisal/Justification	Actions to be developed?	Community Support
Option 1 – Recording the Church Recording the church building with a scan and 3D model. This option will include community input/event to capture local	**Option Practicalities** A specialist contractor would carry out a specialist survey of the church with a view to inputting the data into software so that it can be viewed as a scan and 3D model. This would	**Yes**, work concerning this option is currently out to tender.	**5** ⭐

aspects of the church as a village focus	enable the church to be viewed into the future once it has been impacted by coastal change. **Limitations** The survey would be captured using the technology of today however, into the future this may become outdated. With this kind of technology rapidly evolving, this option could be redundant by the time that the church is lost to coastal change. **Barriers** None identified. **Cost** Funding has been made available for this work through the Coastwise project. **Timescales** This contract is due to be completed in 2026.		
Option 2 – Maintenance Continue to maintain the Church building	**Option Practicalities** This option involves continuing to carry out existing operations and as such, the practicalities of the action are already established. **Limitations** As cliff recession gets closer to the church, maintenance may reach a point where it becomes economically unviable since the timespan of the benefits could be cut short by decommissioning. **Barriers** None identified. **Cost**	**Yes**, this forms part of the day-to-day operations of the church.	**1** ⭐

	It is assumed that the costs of maintenance are currently business as usual for the Diocese. **Timescales** Currently ongoing.		
Option 3 – Decommissioning Deconstruction/deconsecrating of buildings. The church can be used as an example of a "significant building preparing for erosion" to be commissioned	**Option Practicalities** The church would be deconstructed and deconsecrated prior to being impacted by coastal change. There may be important artefacts that would require preserving and therefore, care would need to be taken as to how this is approached. **Limitations** There will likely be some materials from the building that cannot be repurposed or reused in some way and as such, they may go to waste. **Barriers** Planning Permission may be required for deconstruction of this nature since it would not be carried out under the Buildings Act 1984. **Cost** This approach is likely to have significantly higher costs associated with it than a demolition since the constituent parts of the building would need to be carefully deconstructed and stored appropriately. Parts of the building may have a value which could help to offset some of the deconstruction costs. **Timescales** Due to the complex nature of deconstruction it is difficult to set out a timescale. Specific advice from organisations such as the Church of England may be able to provide an indication of timescales.	**Yes**, providing there is appetite from the Diocese.	**0** ⭐

Community support is greatest for the option to record the church. Actions outlined in Table B-26 have been identified from the options set out in Table B-25 through work completed by the Coastwise project and engagement with relevant stakeholders. Both actions identified are currently ongoing.

Table B-26 Actions arising following appraisal of options concerning the church.

Church actions taken forward into plan				
	Action	**Owner**	**Trigger**	**Vision Contribution**
1	**A scan and 3D model recording of St Mary's Church**	NNDC/ Diocese	Ongoing - Contract is live.	Legacy and Landmarks
2	Engagement with Diocese of Norwich regarding the future options for the church	NNDC	Ongoing.	Legacy and Landmarks Sustainable Coastal Community

Graveyard

Options for the graveyard have been taken from RPA report titled Coastwise Graveyards Transition Options. These have been outlined in Table B-27 below.

Table B-27 Appraisal of options concerning the graveyard, based on practicalities, limitations, barriers to implementation, costs and timescales.

Graveyard Option	Appraisal/Justification	Actions to be developed?	Community Support
Option 1 – Legal Compliance Only (Do Minimum) The churchyard would remain open, and burials would continue to occur. Coastal erosion will persist, posing a continuous threat to the site and the graves within it	**Option Practicalities** The threat posed to the graveyard by coastal change would not be dealt with until it is imminent. There would likely need to be health and safety considerations for users of the graveyard and those of the beach below the adjacent cliff. This approach could result in the exposing of human remains. **Limitations** The impact of coastal change on the graveyard is not being mitigated under this option. **Barriers**	?	0 ⭐

	There may be significant environmental concerns raised with this approach and as such, liabilities might arise for the landowner. **Cost** The costs associated with this approach are largely associated with health and safety **Timescales** The timescale associated with this option is dependent on the rate of coastal change.		
Option 2 – Defend To allow burials to continue and the existing space to remain intact, sea defences could be constructed.	**Option Practicalities** The SMP policy for Happisburgh is Managed Realignment, where the overall intention is for a natural shoreline and not to encourage new defences. There are currently no defences that offer the coast adjacent to the graveyard protection. **Limitations** If coastal defences were able to be placed along this stretch of coast, they would not prevent erosion entirely because of cliff recession due to groundwater and surface water runoff. **Barriers** Planning permission and a Marine Management Organisation (MMO) licence would be required for these types of works. It is unclear whether these would be granted, given that the works would not align with SMP policy. **Cost** The Coastwise project is unable to use its funding for new defences. These works would be unlikely to receive significant in Flood and Coastal Erosion Risk Management Grant-In-Aid (FCERMGiA) funding and therefore, it is likely there would be a funding gap. **Timescales** The SMP Policy is due to remain as Managed Realignment until at least 2105.	**No**, this is not in line with SMP policy.	**13** ⭐

Option 3 – Cease Use and Close Under this option the churchyard could cease being in use and would be closed to new burials.	**Option Practicalities** Closing the churchyard would be a first step in transitioning away from coastal erosion risk. By closing the churchyard, this reduces the number of graves that could potentially have to be reinterred at a future point and reduces the risk of newer graves being at risk of coastal erosion. There would likely need to be health and safety considerations for users of the graveyard and those of the beach below the adjacent cliff. This approach could result in the exposing of human remains. **Limitations** The impact of coastal change on the graveyard is not being mitigated under this option. **Barriers** There may be significant environmental concerns raised with this approach and as such, liabilities might arise for the landowner. **Cost** The costs associated with this approach are largely associated with health and safety **Timescales** The timescale associated with this option is dependent on the rate of coastal change.	0 ⭐
Option 4 – Relocate Relocating the graves is a more permanent and long-term solution alongside “cease use and close” to transitioning away from coastal erosion risk for existing burials.	**Option Practicalities** Relocating the graves is a more permanent and long-term solution alongside “cease use and close” to transitioning away from coastal erosion risk for existing burials. Options for grave relocation include relocating to an alternative existing burial ground, relocating to a new site, or relocating to a memorial site. This would mitigate the issue surrounding exposed human remains. **Limitations** It is unclear the number of burials which will have taken place at the graveyard and therefore, there may be some challenges	0 ⭐

	around understanding the scale of the operation required. **Barriers** An Exhumation Application would be required from the Ministry of Justice if the remains are relocated to non-consecrated land. If they are to be relocated to consecrated land then a license from the Church of England would also be required. For Commonwealth War Graves, the Commonwealth War Graves Commission (CWGC) would need to grant consent to an exhumation and/or removal of a memorial. It is likely that Planning Permission would also need to be sought for any new burial site. **Cost** Costs for exhumation services are not based on the number of graves, but the cost of people involved in delivering the project and the scope of the works as a whole. There would also be costs associated with finding a new site, any Planning Permission, and the physical works of relocation. **Timescales** This is a complex procedure and as such, timescales are difficult to estimate however, from the risk analysis carried out already it is likely that any coastal change impacts will be realised not in the immediate term, but at some point between now and 2055. Therefore, the complexity of the option should not be a deterrent in terms of timescale.	
Option 5 – Long term management Adopt a management approach ensuring that the site is monitored and appropriate actions taken that are ethical and sustainable.	**Option Practicalities** A long-term option to transition away from risk would be to adopt a management approach ensuring that the site is monitored and appropriate actions taken that are ethical and sustainable. The purpose of this option is to ensure that there is a plan in place for sites so that their loss can be managed. NNDC would require a plan to manage the consequences of coastal change including guidance on how to respond if material from	1 ⭐

the churchyard, including human remains or associated debris, is exposed or washed onto the beach. A formal reporting protocol would be developed and incorporated into a broader communication and media strategy.

Limitations

The impact of coastal change on the graveyard is not being mitigated under this option.

Barriers

There may be significant environmental concerns raised with this approach and as such, liabilities might arise for the landowner.

Cost

The costs associated with this approach are largely associated with health and safety

Timescales

The timescale associated with this option is dependent on the rate of coastal change.

Community support is greatest for the option to defend the graveyard; however, this is not in line with SMP policy. The actions outlined in Table B-28 have been developed based on engagement with the Diocese of Norwich.

Table B-28 Actions arising following appraisal of options concerning the graveyard.

Graveyard actions taken forward into plan				
	Action	**Owner**	**Trigger**	**Vision Contribution**
1	Engage with the Diocese of Norwich regarding this issue	NNDC	Ongoing.	Legacy and Landmarks Sustainable Coastal Community Healthier, Happier, Greener

Appendix C – Stakeholder engagement report

1. Introduction

Purpose of this Report

This report summarises the stakeholder and community engagement undertaken in Happisburgh and how this has informed the short, medium and long-term actions set out in this Coastal Erosion Transition Plan.

Feedback from the community also helped create a Community Vision which outlines what the community value about Happisburgh and their aspirations for its future.

This report outlines the methodology of each engagement event, the feedback we received and how that has been reflected in the Coastal Erosion Transition Plan.

These events build on engagement previously led by the Coastwise team, as summarised in Section 2.

2. Engagement Background

Previous Engagement

Coastwise held four Coastwise Cafés in Happisburgh during 2024 and 2025. These were drop-in sessions aimed at meeting local people, sharing information and knowledge, answering specific questions, and starting a process to develop the next steps towards creating a community-led Coastal Erosion Transition Plan.

The first Coastwise café took place on 1 February 2024 with 65 attendees. During this session there were queries over the listed buildings in Happisburgh, in particular the Church, the lighthouse and St Mary's House. There were also concerns regarding beach access, as this is a pull for visitors to the village. Key issues highlighted by the community in this session were housing, beach access, water management and drainage in Happisburgh, heritage, and discussions around sea defences. In particular, residents were very concerned about loss of homes and facilities.

The second Coastwise café took place on Thursday 18 July 2024 and consisted of 14 attendees. This session consisted of a discussion over the loss of the pub, Church and graveyard. Attendees emphasised that the pub is viewed as a community hub for the village. There was an interest in contributing to the co-design process of the new car park. This included a discussion over the movement of the public toilets and questions over whether they will be made bigger. In addition, a range of ideas for how the land for the old car park should be used. During this session, the local priority highlighted was that there is no bus service and, as a result, there is terrible connectivity with other communities without driving. Attendees also queried whether the lack of coastal defences was an economic decision and raised concerns over the loss of farmland.

The third Coastwise café took place on Saturday 23 November 2024 and consisted of 37 attendees. During this event, attendees stated that clearer information on erosion in Happisburgh was needed as some wanted to understand more. There was a request for a workshop on National Coastal Erosion Risk Mapping (NCERM) and NCERM2 data at the next event. Concerns were also raised due to the falling number of pupils at the school. Attendees requested that replacement homes are made suitable for families and young people. The key issue raised during this Coastwise café was regarding the loss of homes and how inheritance tax would work with at-risk homes.

The fourth Coastwise café was a combination of two separate events. The first took place on Friday 13 June 2025 and consisted of 24 visitors. The second took place on Saturday 14 June 2025 and consisted of 16 visitors. During both sessions there was concern for the Church and graveyard as the community have a

strong connection to the sites. Conversations revealed that long-term residents may feel an impact of repeated losses throughout their lives, through the loss of childhood home, meeting places, favourite walks, and particular landmarks.

Feedback from these sessions informed the development of the adaptation and transition options set out in the plan, from which the actions were identified.

Purpose of the Jacobs engagement events

The Jacobs Team led a number of communication, stakeholder and public engagement activities, with support from Coastwise, to gain input from those who live and work in the community, as well as visitors to the area, to inform the options and actions in the plan as well as identify potential owners of those actions.

In total, seven engagement events were held in Happisburgh from August to early December 2025, as set out below:

Table C-1 Location and Times for Happisburgh Engagement Events

Location and Venue	Date & Time	Attendees
Happisburgh Lighthouse	Wednesday 20 August, 10:00am – 16:00pm	Public Drop-in
Happisburgh, Online Meeting	Wednesday 8 October, 10:00am – 11:00am	Invite only, Coastal Research Group
Happisburgh Parish Meeting, Wenn Evans Centre	Monday 13 October, 19:30pm	Parish Council and open to all to attend
Happisburgh, Wenn Evans Centre	Thursday 23 October, 12:00pm – 14:00pm	Invite only, Coastal Research Group
Happisburgh, Wenn Evans Centre	Thursday 23 October, 15:30pm-18:30pm	Public Drop-in
Happisburgh Church Rooms	Tuesday 25 November, 10:00am-12:30pm	Invite only, Coastal Research Group
Happisburgh Church Rooms	Monday 1 December, 10:00am-12:30pm	Public Drop-in

As the Coastal Transition Plans were drafted, members of the public had the opportunity to give feedback and suggestions to be included.

The first event in August acted as an information gathering event. It took place on an open day for Happisburgh Lighthouse to attract as many people passing by. The event had 25 attendees. During this session, members of the public had the opportunity to sign-up to a mailing distribution list which has been used for updates on the Coastal Transition Plan as well as sharing invites for the engagement events held.

The second event was an online introductory session with the Coastal Research Group in Happisburgh. Invites were also sent to local members of mental health charity MIND and the local councillor. There were two attendees at this online event, which introduced the Jacobs and Coastwise staff. The event also explained the Transition Plan and the process which would be undertaken over the next few months. It gave the Group the opportunity to ask any initial questions they may have for the project team.

For the third event, members of the team attended the Happisburgh Parish Council Meeting. These Council meetings are also open to the public. The team provided an update on the Coastal Transition Plan first draft, promoted the first public drop-in event, and answered questions from attendees.

The next two events took place on Thursday 23 October. The morning session consisted of a workshop with the local Coastal Research Group. This was attended by two members of the group. The aim of this meeting was to identify the priorities of those in Happisburgh from a group which knew the area well. Discussions also included the potential ownership of the actions which would be outlined in the Coastal Transition Plan. This set the scene for the afternoon public drop-in event, which examined the potential actions in more detail, the values of the community, and how these could be set out in a Community Vision to be included in the Happisburgh Coastal Transition Plan. Topics discussed in this session included potential pop-up events for the area and an archive or museum to safeguard the history of Happisburgh.

The event ran from 15:30pm to 18:30pm and 27 members of the public attended the event during the three hours. It was acknowledged that the weather may have had an impact on attendance, as there was a yellow weather warning for rain and wind in the area on that day.

This session gave members of the public the opportunity to provide feedback and thoughts on the initial options which were created based on information shared in previous Coastwise Cafés. During the afternoon event, the options relating to residential properties and the repurposing of land gained the most comments, especially relating to raising awareness of the impact of coastal erosion to residential properties and their residents as well as the use of repurposed land for pop-up events.

There was also a significant interest in existing coastal defences and drainage options, with attendees expressing support for rock headlands/bastions and requesting more information about the effectiveness and the cost of defence options. Attendees also showed support for agroforestry - the planting of specific flora to improve drainage. With reference to the graveyard in the village, attendees prioritised defending the coast above suggestions to cease using the graveyard, though there were also comments related to funding and responsibility. Options which attendees deemed of lesser importance included those relating to utilities and highways.

The next session at the end of November was the third meeting with the Coastal Research Group. There were four attendees. This event focused on the Community Vision section of the Coastal Transition Plan and the actions which were drawn from the options that members of the public had previously commented on. The feedback given during this session contributed further to the Community Vision which was shared at the next public drop-in event.

The final event consisted of a public drop-in session held at the beginning of December between 10:00am and 12:30pm in Happisburgh Church Rooms. There were 10 attendees in total at this event. The session presented the actions from the Coastal Transition Plan, the suggested action owners and a revised Community Vision. Members of the public had the opportunity to leave comments and suggestions on the actions. There were also copies of the Community Vision to take away. In addition, postcards of the future were shown. These were created by Year 9 students at Stalham High School, writing about Happisburgh in 2125. They were on display for attendees to view to see what younger people thought about how the community might adapt to coastal erosion in the future.

After each event, a community update was sent to those on the Jacobs stakeholder distribution list and shared with Coastwise to circulate to their contacts. This included a thank you to those who had attended,

details of next steps and the dates of future events. It also gave those who were unable to attend in person the opportunity to share their thoughts with the engagement team.

3. Other Engagement

School Engagement

In October we contacted five schools in the area asking if they would like to participate in an activity relating to adapting to coastal erosion. This was a task that teachers could undertake with classes in their own time and involved asking pupils to write a postcard to those living in Happisburgh now, as if they were from the year 2125.

We received 80 postcards from Year 9 pupils at Stalham High School. The postcards received were then displayed for attendees to view at the Coastal Research Group meeting in November and the public drop-in session in December.

The activity aimed to encourage students to think about a future shaped by coastal erosion. It also gave other members of the community an insight into what the youngsters valued about where they live and their vision and hopes for the future of Happisburgh.

Community Vision Telephone

As an additional method for collecting feedback for the plan and in particular the Community Vision, a vintage-style telephone was placed in the Wenn Evans Centre. This telephone worked as a voice recorder, enabling attendees at the hall to pick up the phone and record a message or answer some prompt questions about what they valued in Happisburgh which were displayed by the telephone. The phone was in situ from 18 November until 12 December. This engagement activity offered an opportunity for members of the community to leave comments in their own words in an easy and novel way.

4. Preparations for Engagement Events

Venues

The venues for the events were chosen based on those that were previously used for the Coastwise Cafés as well as proximity to communities. Initial workshops with the liaison groups were online as these were introductory sessions. The Wenn Evans Centre was chosen as the first venue, as it was easily accessible for the community and provided a large space for the options materials to be presented. The latter events were held in the Church Rooms. These rooms are in the centre of Happisburgh, so they are easily accessible to members of the community. This is also a smaller space than the Wenn Evans Centre so was more suitable for the smaller workshop meeting and the final public drop-in where the suggested actions in the plan were shared.

Sharing Event Details

To publicise the events, the following methods were used:

Stakeholder Communications

Following desk research and local information gathering at the first in-person event held to coincide with the Happisburgh Lighthouse open day, a list of stakeholders was identified that included local businesses, schools, and other interested parties. This stakeholder list also included details of members of the public who had signed up for regular updates. In line with the General Data Protection Regulation (GDPR), all personal details of individuals were stored securely, and they were made aware that their details were not going to be shared with any other organisation and they could opt out of being contacted at any time. Regular email updates and invites for the public drop-in events were sent to this stakeholder list. They were also invited to share details through their own network of contacts and local Facebook group pages to help publicise engagement events.

In addition, invites were sent to the local Coastal Research Group and the Parish Council inviting them to additional meetings with the engagement team to discuss the transition plan options and actions in more detail.

Table C-2 Stakeholder list following desktop research and information gathering

Category	Organisations
Education	Local Primary School, local High Schools
Businesses	Community Centres, small businesses, SMEs, Holiday Homes, Utilities, Caravan Park, sports centres
Policy Makers	North Norfolk District Council, Happisburgh Parish Council, North Norfolk County Council, Heritage England
Charities	Norfolk and Waveney MIND, Norfolk Wildlife Trust, Friends of Happisburgh Lighthouse, Friends of Horsey Seals, RNLI Happisburgh, Save Happisburgh Group, National Heritage, National Farmers Union
Homeowners	Residents who signed up at events

Social Media

North Norfolk District Council (NNDC) published adverts regularly on its Facebook page to promote the public drop-in events, following a social media plan agreed with NNDC prior to the events.

The NNDC Communications team also published details of the events on the Nextdoor App for local residents as an additional communications channel through which to promote the events.

Flyer

A flyer was produced advertising both public drop-in events. Copies of this flyer were emailed to stakeholders, given out at the Parish Council meeting, and printed to be displayed on local noticeboards in Happisburgh.

A letter drop of the flyer was also arranged, in the week commencing 20 October, to promote the drop-in event in Happisburgh on 23 October. This was delivered to 205 properties in and around Happisburgh.

Paid Advertising

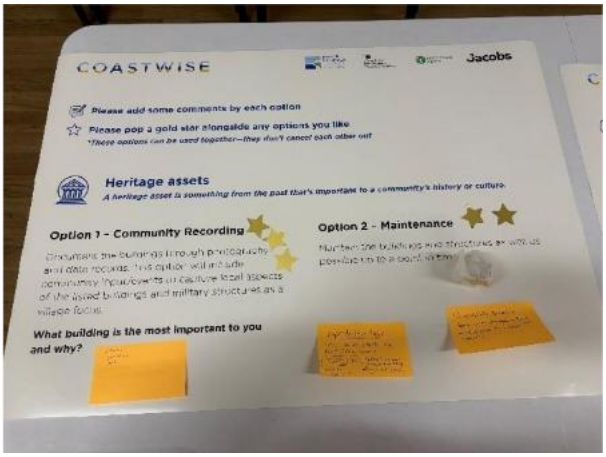
Two adverts were placed in the local magazine Crab Tales. This magazine was then delivered to Happisburgh and the surrounding villages. The magazine is also available online.

Event Materials

Materials for each event consisted of content from the draft Coastal Transition Plan and every attempt was made to make these materials visually appealing and easy to engage with for members of the public. They included:

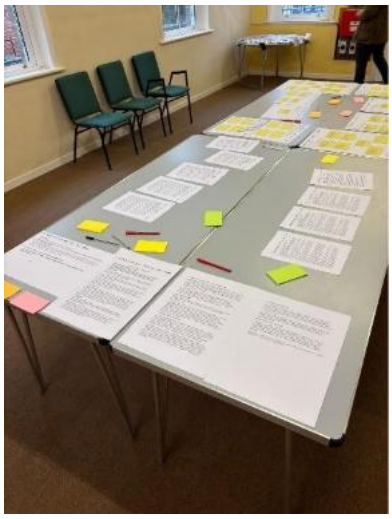
Options Posters

At the first engagement events, large copies of the initial options identified through the Coastwise Cafés were printed and displayed. Attendees were invited to place a gold star beside options they supported and add comments or additional recommendations using Post-it notes, example shown below. This feedback was then used to prioritise and refine the options for the community.



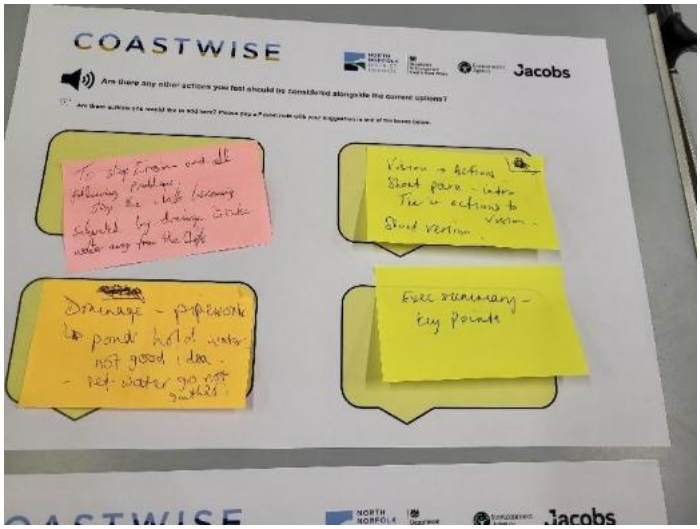
Community Vision

The development of the Community Vision was led by the community to capture what the community values about where they live now and into the future. Copies of the Vision were available for members of the public to view and comment on at the last public drop-in, as well as copies which they could take away with them.



Actions Posters

At the last engagement event, summaries of the short, medium and long-term actions were displayed. These were derived from the options that attendees had commented on at the previous event. Attendees were invited to share their thoughts on these actions as they had done at the options-focussed event. This worked well in practice, making it an easy and accessible way to gather further feedback. This was then used to prioritise the suggested actions and identify potential action owners.



Postcards of the Future

The Postcards of the Future which were created by Stalham High School pupils were displayed at the final public drop-in event. This allowed attendees to read the ideas that the pupils had of what Happisburgh and life in the village could look like by 2125.

Images of the postcards and some quotes from them are below.

"Happisburgh is underwater and you can only see the tip of the lighthouse."

"All the buildings are floating on the water."

"The lighthouse is on stilts."

"We can book an underwater dome hotel for a getaway."

5. Recommendations for Further Engagement and Ongoing Engagement

To build upon the engagement undertaken with the community in Happisburgh and support the actions in the Coastal Erosion Transition Plan being taken forward, our suggested recommendations for further engagement are as follows:

- Expand the membership of the Community Liaison Group to widen representation from the community – this would enable more members of the public to feed into targeted workshops
- Increase use of Facebook as a means to share information with the community – it was clear that members of the Happisburgh community use Facebook as a source of information for events. Going forward, this could be used as a tool to increase awareness of engagement events and drop-in sessions whilst also offering a channel that allows people to give feedback if they are unable to attend face-to-face events.
- In recognition of the concerns and anxiety the threat of coastal erosion can cause some members of the community, creating a social value and equity strategy alongside the plan would enhance the value of the project. This would help the community feel as though the work has been carried out compassionately and that suitable time was taken to understand what the community needed. Making more material available online could increase awareness amongst a wider section of the community, including visitors.
- Consider using the voice-recording telephone in other locations, such as schools, to gather more feedback and from a wider section of the community.

6. Summary

The overall engagement approach was one of collaboration with the Happisburgh community and this has been key to the development of this Coastal Erosion Transition Plan. It has also enabled the community to set out what it values about Happisburgh and its aspirations for the future through the Community Vision which sets the plan, and the actions it contains, in context. Further collaboration with the community will be essential to taking these actions forward.