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Non-technical Summary

Wash East Coastal Management Strategy Environmental Report (Final)

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Published by:

Environment Agency
Horizon House
Deanery Road
Bristol BS1 5AH
Tel: 0870 8506506
Email: enquiries@environment-agency.gov.uk
www.environment-agency.gov.uk

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1 Introduction

We carried out a Strategic Environmental Assessment (SEA) of the developing Wash East Coastal Management Strategy (WECMS). The main purpose of the SEA is to consider any significant positive or negative effects which the Strategy and alternative options may have on, the environment. As part of the SEA we developed a structure for assessing environmental issues associated with different strategic options, and this helped shape the preferred approaches.

The Environmental Report presents the findings of that assessment, and is being published to help inform comments on the draft Strategy. This Non-technical Summary provides an overview of the assessment process and how the Strategy has been developed and influenced by environmental issues relevant to the area.

2 Background

In partnership with the Borough Council of King's Lynn & West Norfolk, the Environment Agency is developing a long-term (100 year) Strategy for managing the risk of flooding and coastal erosion from the northern edge of the Hunstanton Cliffs to Wolferton Creek (as shown on **Figure 1**).

The WECMS objectives are to:

1. determine a sustainable approach to flood and erosion risk management for the people, property and environment between Hunstanton Cliffs and Wolferton Creek;
2. identify and promote a coastal management approach that balances technical, environmental, economic and social issues for The Wash East coast;
3. improve our knowledge of relevant coastal processes, where necessary, to inform key project decisions and the study completion;
4. build on the Pathfinder project¹ to improve public understanding of coastal management issues for The Wash East coast, to gain public support for any changes in approach to coastal management and to pursue possible third party funding mechanisms; and
5. identify appropriate responsibility for future coastal management.

The main town within the Strategy area is Hunstanton and the principal villages are Heacham, Snettisham, with the villages of Dersingham and Wolferton located further afield (see **Figure 1** below).

To enable easier assessment of the various coastal processes and issues which occur in the Strategy area (as shown on **Figure 1**), the coastline has been divided into three units which run from north to south. The units reflect the Policy Development Zones² (PDZs) developed as part of the Wash Shoreline Management Plan 2 (SMP2). Unit A (SMP2 PDZ 4) is small and contains the Hunstanton Cliffs area. Unit B (SMP2 PDZ 3) is the town of Hunstanton itself and Unit C (SMP2 PDZ 2) covers the rest of the coastline down to Wolferton Creek, including Heacham and Snettisham. These units, shown on **Figure 1**, reflect different aspects of the coastline which require different management options.

¹ The Pathfinder project was led by the Borough Council of King's Lynn and West Norfolk and undertaken by Risk Policy Analysts. It was an investigation into local willingness to pay and potential funding mechanisms related to future projects.

² PDZs are a section of coastline which has been defined for the purpose of assessing all issues and interactions in order to develop appropriate management scenarios.

For the SEA, a wider Study Area was used and this was defined as the area that can influence the development of an option for the Strategy, or can be influenced by it. For instance, in terms of landscape and seascape character this is also a far larger area than the direct Strategy area.

The Environment Agency has responsibility for the flood risk management for Unit C. BCKLWN is responsible for the erosion risk of the coastline at Hunstanton Town and Cliffs (Unit A and B). Units B and C have been managed by both parties in recent years.

The current approach to flood protection in the Strategy area has been a combination of structural works, beach renourishment³ and recycling of sand and shingle from Snettisham Scalp in the south, to the beaches further north.

Current sea defences have been in place since the extreme weather event of 1953 when 65 people lost their lives in the area. In December 2012 another significant storm surge affected all of the North Sea coastlines of Europe, including the coast within the Strategy area. This event caused large scale flooding in Unit B, as well as damage to the promenade. In Unit C the sea defences broke in two places and the natural bank at Snettisham was eroded. The threat of erosion in all Units has caused uncertainties over the long term future of the current approach. Therefore there is a need for a clear Strategy. This Strategy will cover the long-term maintenance of the coastline within Units A, B and C.

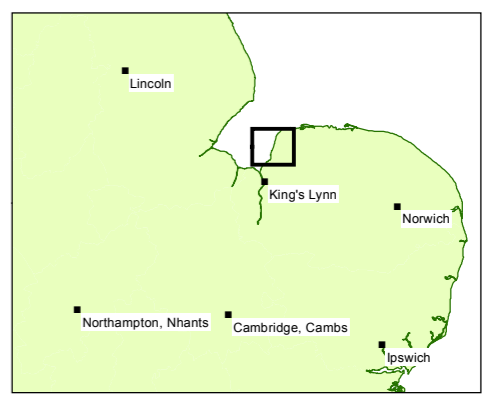
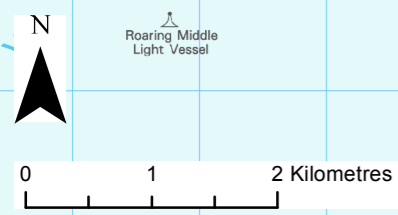
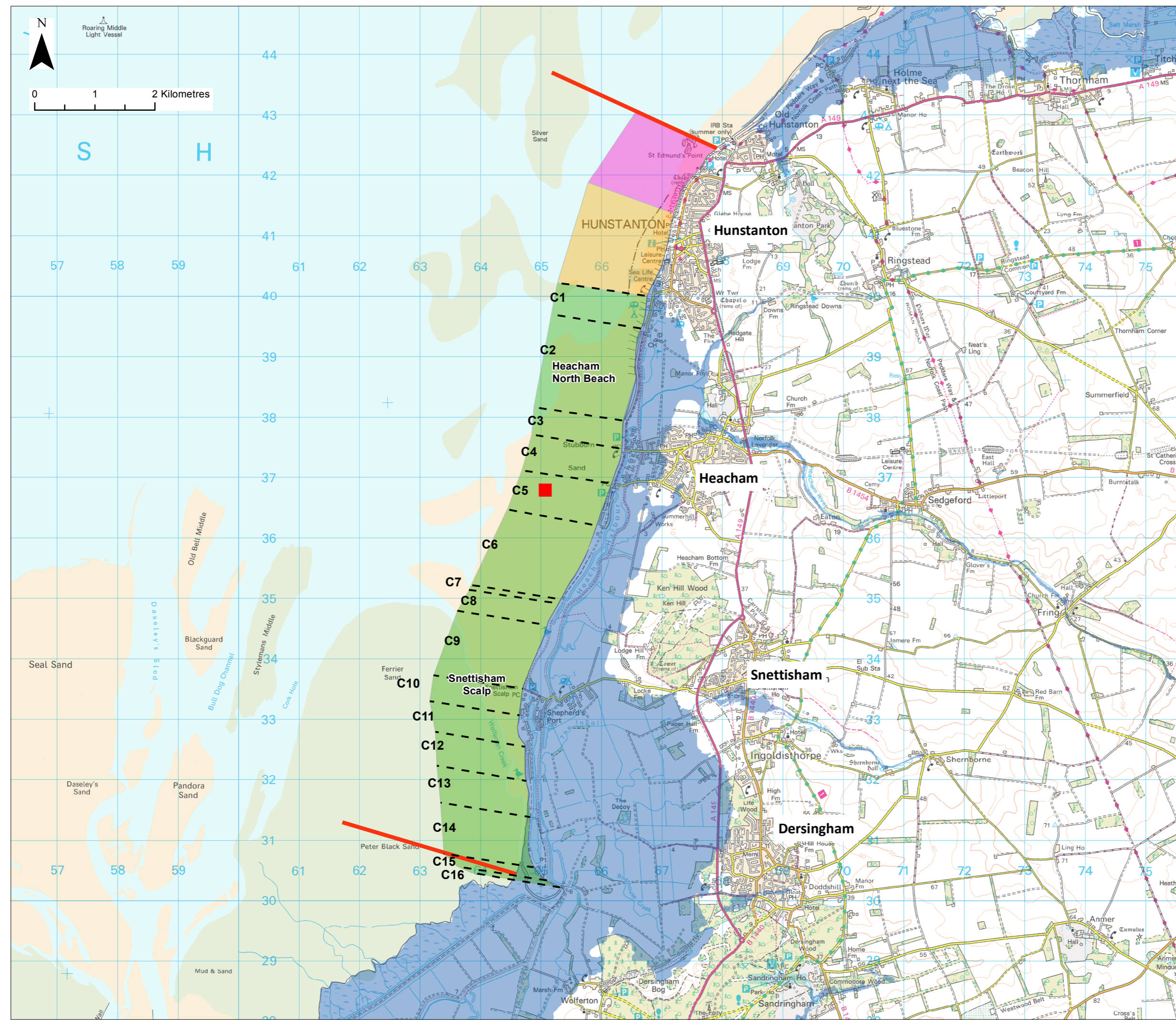
The Strategy aims to set out an integrated, high-level approach to managing the risk of flooding and coastal erosion within Units A, B and C. However the approach recommended can only be delivered if sufficient funding is available. This is likely to be a combination of government funding and external contributions from third parties.

The Strategy has been developed through the help of an Advisory Group. The Advisory Group included:

- Beach Bungalows Associations;
- Regional Flood and Coastal Committee;
- Country Land and Business Association;
- Caravan Park Owners' representative
- Heacham Parish Council;
- English Heritage;
- Hunstanton Town Council;
- Norfolk Historic Environment Service;
- Snettisham Parish Council;
- Hunstanton cliff top residents;
- Hunstanton Chamber of Trade;
- Landowner representative;
- King's Lynn Internal Drainage Board;
- Norfolk County Council;
- Natural England; and
- Royal Society for the Protection of Birds (RSPB).

This group has given direction to the Strategy and provided important local knowledge. In addition, each member of the Advisory Group has been responsible for feeding back discussions to their respective groups which has in turn allowed for any issues or concerns with the Strategy and proposed options to be identified.

³ Beach renourishment is the process where material that has been taken away from a beach by erosion and extreme weather is replaced.



- Key:**
- National Grid Reference Point (TF650368)
 - - - Wash East Unit C Sub Units
 - Wash East Project Area Boundaries
 - Unit A
 - Unit B
 - Unit C
 - Flood Zone 3

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Title:
Strategy Area and Units Location Plan

Project:
Wash East SEA
Non Technical Summary

Client:
Environment Agency

Date:
July 2014

Scale @ A3:
1:60,000

Figure:
1



3 Existing Environment

The existing environment from Hunstanton Cliffs to Wolferton Creek mixes both rural and urban landscapes. Much of the study area is agricultural land. There are also large areas of woodland, managed wetlands, parks and coastal borders.

The southern-most section of the Strategy area is designated as part of the Norfolk Coast Area of Outstanding Natural Beauty (AONB). The AONB was designated to protect the largely undeveloped land between the Wash and Great Yarmouth. Near to the East Wash, the Norfolk Coast AONB is split into two areas: one area covering the inter-tidal, coastal and agricultural land within the south-east of the Wash and the other area wrapping around the outskirts of Heacham and Hunstanton before continuing east along the North Norfolk coastline. The Strategy area also falls within the Natural England National Character Area (NCA) 46: Fens and NCA 76: North West Norfolk (Natural England, 2005). Within these character areas and of relevance to the Strategy area, are the following characteristics:

- Large-scale, flat, open landscape;
- Typically smaller-scale settlements with scattered farmsteads;
- Open marshes directly adjacent to the Wash;
- Varied agricultural land use;
- Bronze Age, Iron Age and Roman landscapes;
- Large estates giving a well-managed quality to the landscape;
- Comparatively few, straight roads which often have wide and few hedgerow trees or copses; and
- Large and widely spaced villages, often clustered around a green or common,

The Strategy area has many important areas for nature conservation. Important sites for nature conservation include:

- Special Protection Areas (SPA): areas of land, water or sea which have been identified as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds found within the European Union. SPAs are European designated sites, classified under the European Wild Birds Directive which affords them enhanced protection;
- Special Areas of Conservation (SAC): areas which have been given special protection under the European Union's Habitats Directive, this provides increased protection to a variety of wild animals, plants and habitats.
- Ramsar sites: wetlands of international importance, designated under the Ramsar Convention; and
- Sites of Special Scientific Interest (SSSI): one of the country's very best wildlife and/or geological sites.

Key sites within the Strategy area include:

- the North Norfolk Coast Special Protection Area (SPA) and Ramsar sites;
 - The North Norfolk Coast consists primarily of intertidal sands and muds, saltmarshes, shingle banks and sand dunes. A wide range of coastal plant communities are represented and many rare or local species occur. The whole coast is also of great interest for birds.
- The Wash SPA and Ramsar sites;

- The Wash intertidal mudflats and saltmarshes represent one of Britain's most important winter feeding areas for waders and wildfowl. The saltmarsh and shingle communities are of considerable botanical interest and the mature saltmarsh is a valuable bird breeding zone. In addition the Wash is also very important as a breeding ground for common seals.
- The Wash and North Norfolk Coast Special Area of Conservation (SAC); and
 - Together, the Wash and North Norfolk Coast form one of the most important marine areas in the UK and European North Sea coast, for both sandbank and saltmarsh habitat. The extensive intertidal flats provide ideal conditions for common seal breeding and hauling-out.
- Hunstanton Cliffs Site of Special Scientific Interest (SSSI) (**Plate 1**).
 - As well as geological interest there is also biological interest due to a breeding colony of fulmars on the cliff face. This is the largest breeding colony on the east coast of England, south of Flamborough Head.

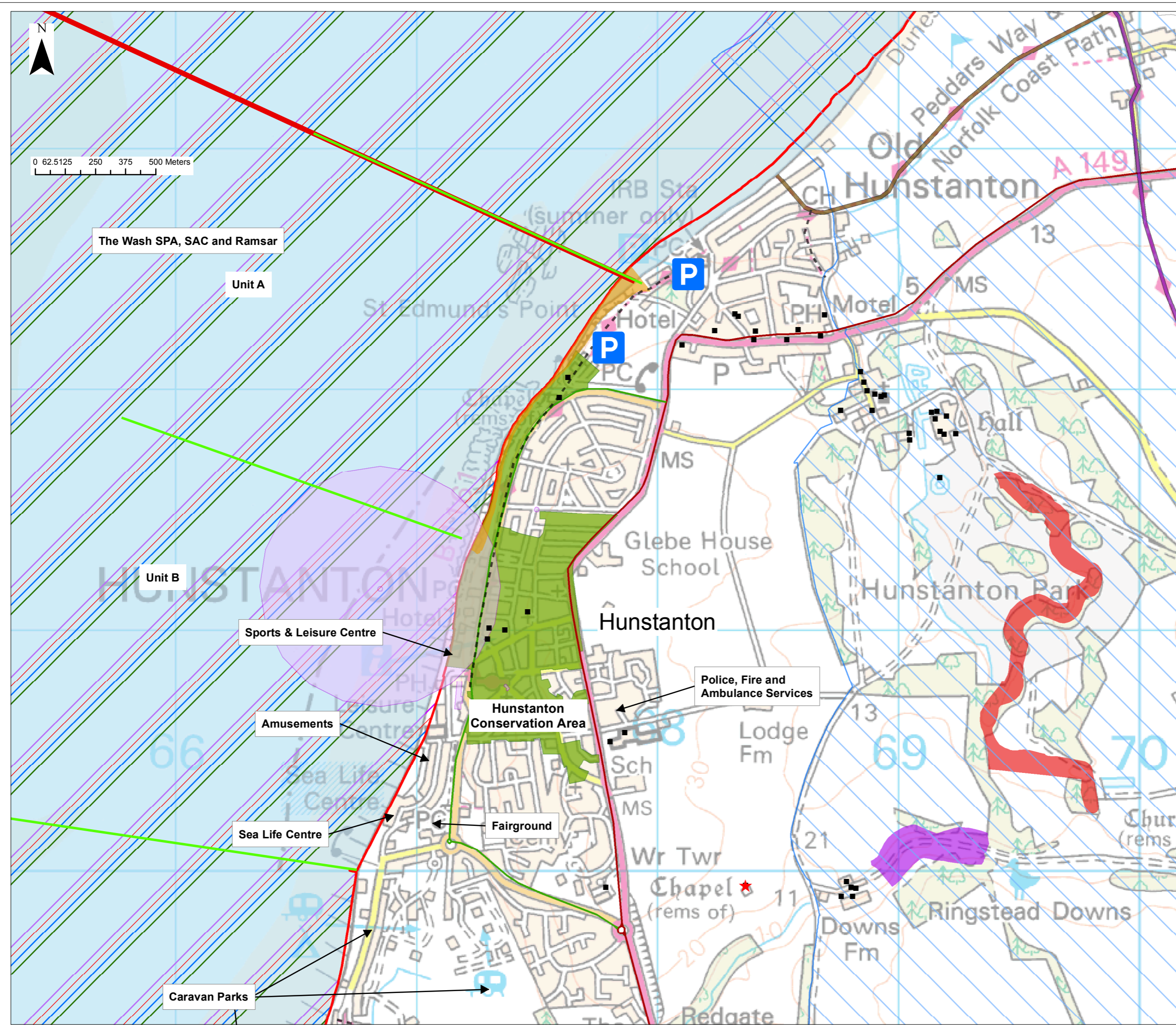


Plate 1: Hunstanton Cliffs SSSI

The Strategy area is also an important area for tourism, with numerous caravan parks, recreation features and other tourism attractions. Hunstanton is the main focus of tourism within the Strategy area and is the main location of employment opportunities. Commercial fishing is also an important source of employment for the area.

The Norfolk coastline is considered to have a diverse range of archaeology with evidence of human settlements from 950,000 B.C.E. to current times. The centre of Hunstanton is designated as a Conservation Area due to the deliberately informal nature of the town centre, as well as the Esplanade Gardens. There are also numerous wreck sites within The Wash which include nine ship and two aircraft wrecks within 1km of the shoreline.

The main environmental features for each Unit are presented on **Figures 2**, and **3**.



Key:

- Wash East Unit Boundaries
- Wash East Project Area Boundaries
- P Car Parks
- ★ Scheduled Monuments
- Listed Buildings
- Footpaths
- Norfolk Coast Path
- Peddars Way Path
- A Road
- B Road
- Norfolk Coast Area of Outstanding Natural Beauty (AONB)
- Historic Wreck Areas
- Conservation Areas
- SPA
- SAC
- Ramsar

SSSI

- The Wash
- Ringstead Downs

Geological Site of Special Scientific Interest (SSSI)

- Hunstanton Cliffs
- Hunstanton Park Esker

Water Framework Directive

- Wash Outer Coastal (GB640523160000)

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Title:
Environmental Constraints
in Units A and B

Project:
Wash East SEA
Non Technical Summary

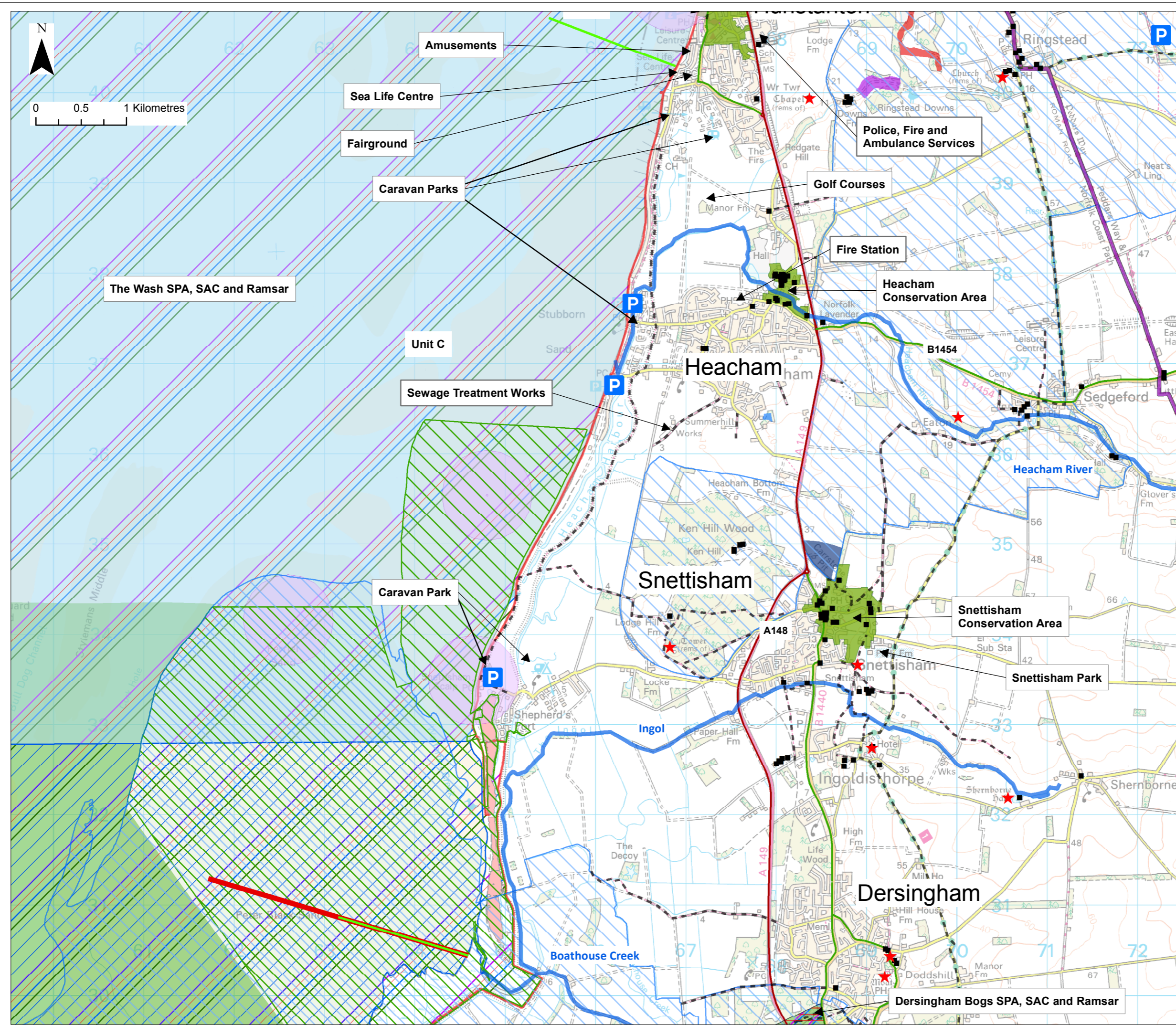
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Environment Agency

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Figure:
2



I:\97518\Technical_Data\T5_GIS\Projects\Figures\NTS\Figure 2 - Environmental constraints in Unit A.mxd



Key:

- Wash East Unit Boundaries
- Wash East Project Area Boundaries
- P Car Parks
- ★ Scheduled Monuments
- Listed Buildings
- - - Footpaths
- Peddars Way Path
- A Road
- B Road
- Norfolk Coast Area of Outstanding Natural Beauty (AONB)
- Historic Wreck Areas
- Conservation Areas
- Snettisham RSPB Reserve
- Dersingham Bog NNR
- The Wash NNR
- SPA
- SAC
- Ramsar

SSSI

- The Wash
- Ringstead Downs
- Dersingham Bog
- Snettisham Carstone Quarry

Geological Site of Special Scientific Interest (SSSI)

- Heacham Brick Pit
- Hunstanton Park Esker

Water Framework Directive

- Coastal
- Wash Inner
- Wolferton Lagoon Complex

Wash Outer (GB640523160000)
Wash Inner (GB530503311300)
Wolferton Lagoon Complex (GB560503316700)

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Environmental Constraints
in Unit C

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Wash East SEA
Non Technical Summary

Client:
Environment Agency

Date:
July 2014

Scale @ A3:
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Figure:
3



I:\9W7518\Technical_Data\T5_GIS\Projects\Figures\NTS\Figure 3 - Environmental constraints in Unit C.mxd

4 Preferred Options & Environmental Impacts

Throughout the Strategy's development, a wide range of potential environmental impacts for each option put forward have been considered. These have informed our development of a 'preferred option' for each Unit within the Strategy.

4.1 Decision Pathways

The Strategy has developed the approach for coastal management option selection in the form of decision pathways. These pathways are built around key triggers which when met require decisions about whether and how to intervene to ensure that measures will be implemented in time to avoid flood and erosion impacts. A decision tree identifying the pathways and triggers has been created for each Unit. These decision trees are shown in **Figures 4, 5 and 6** below.

This approach is based on the expectation that there will be a review every five years of the triggers, based on the results of annual monitoring of the trigger parameters, to assess whether decision points have been reached or are about to be reached. Such reviews will also be initiated if it becomes clear that a particular trigger is about to be reached, or if flood or erosion events occur.

The decision pathways have been developed in an iterative process with the Advisory Group and all of the Strategy partners.

Figure 4: Unit A Decision Tree

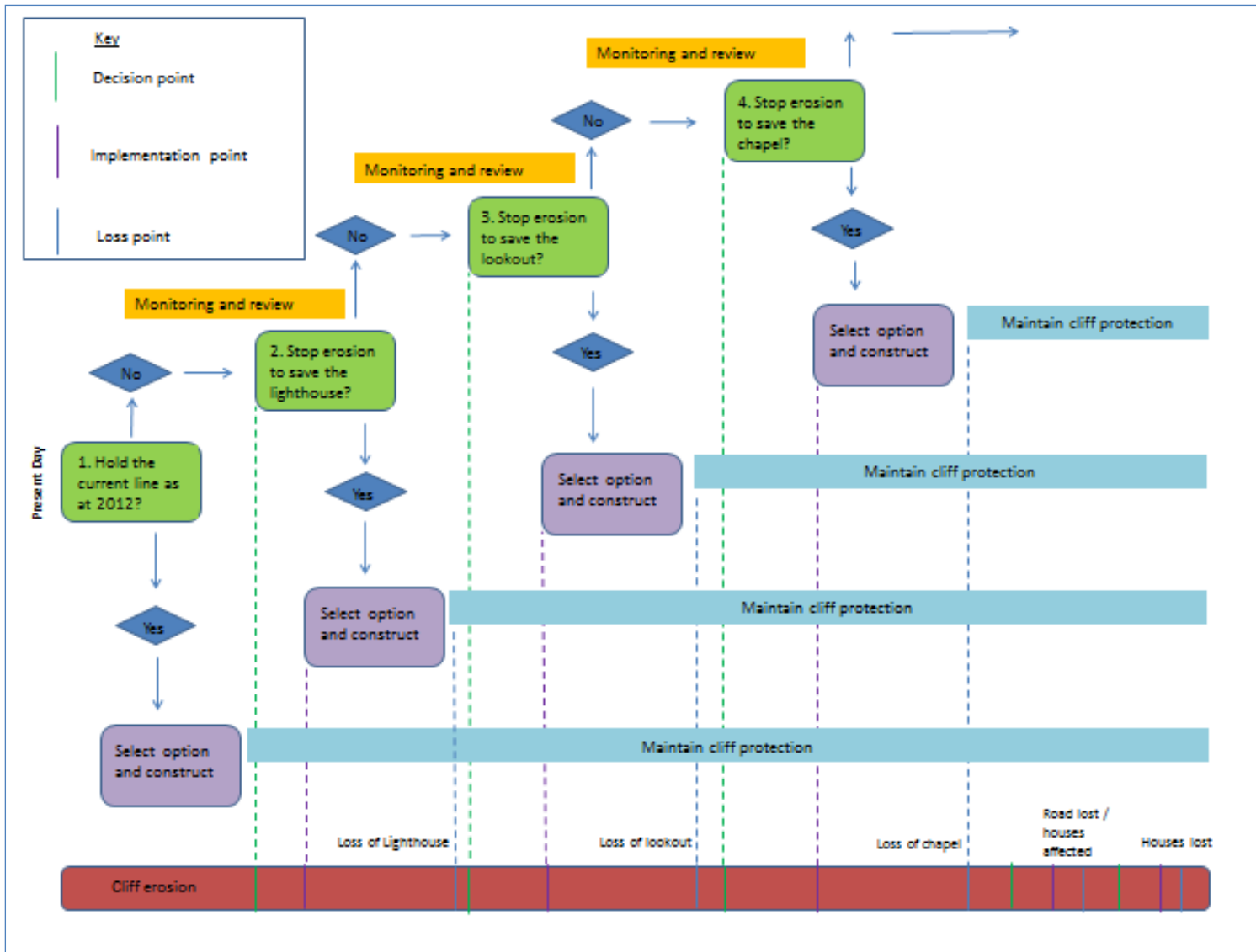


Figure 5: Unit B Decision Tree

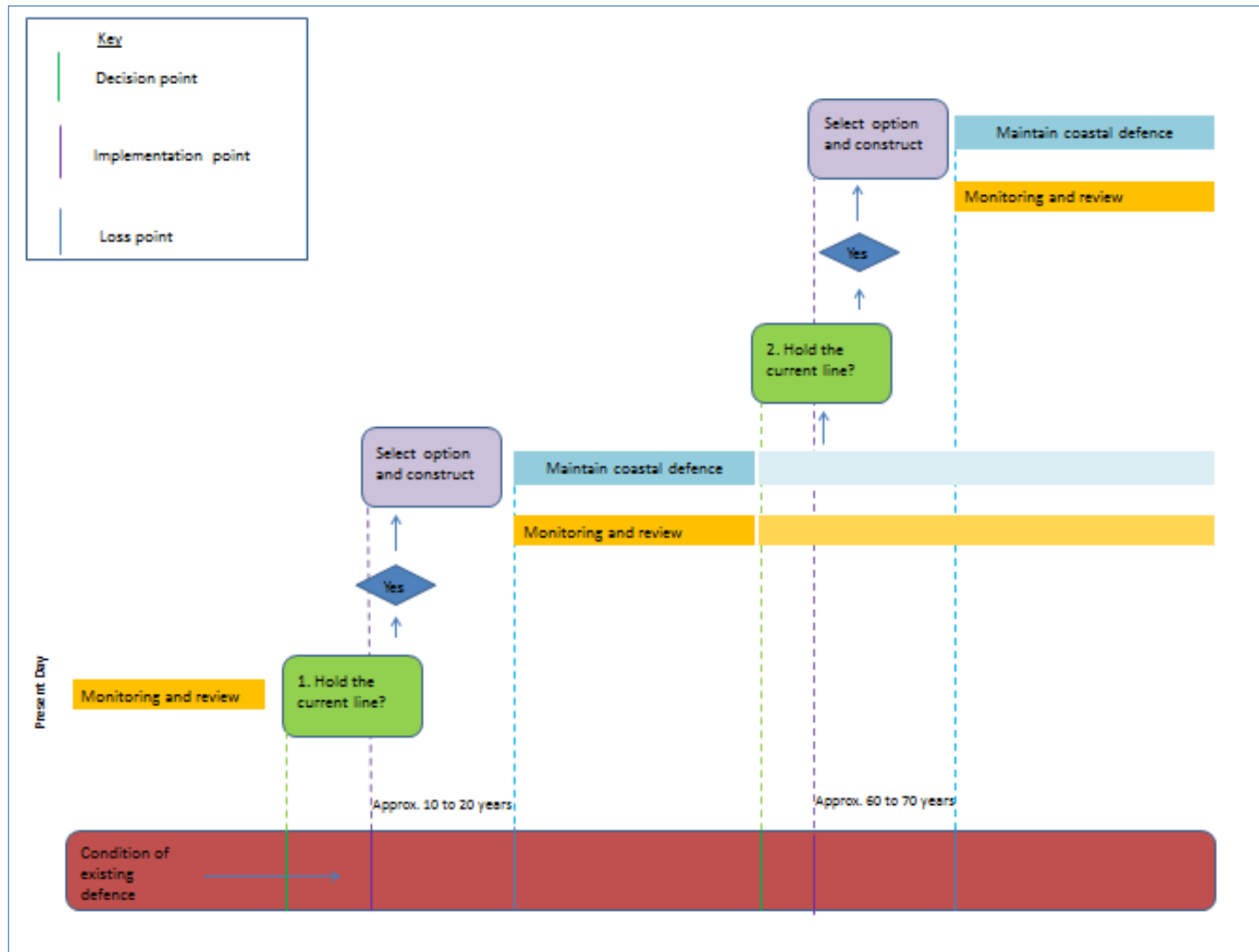
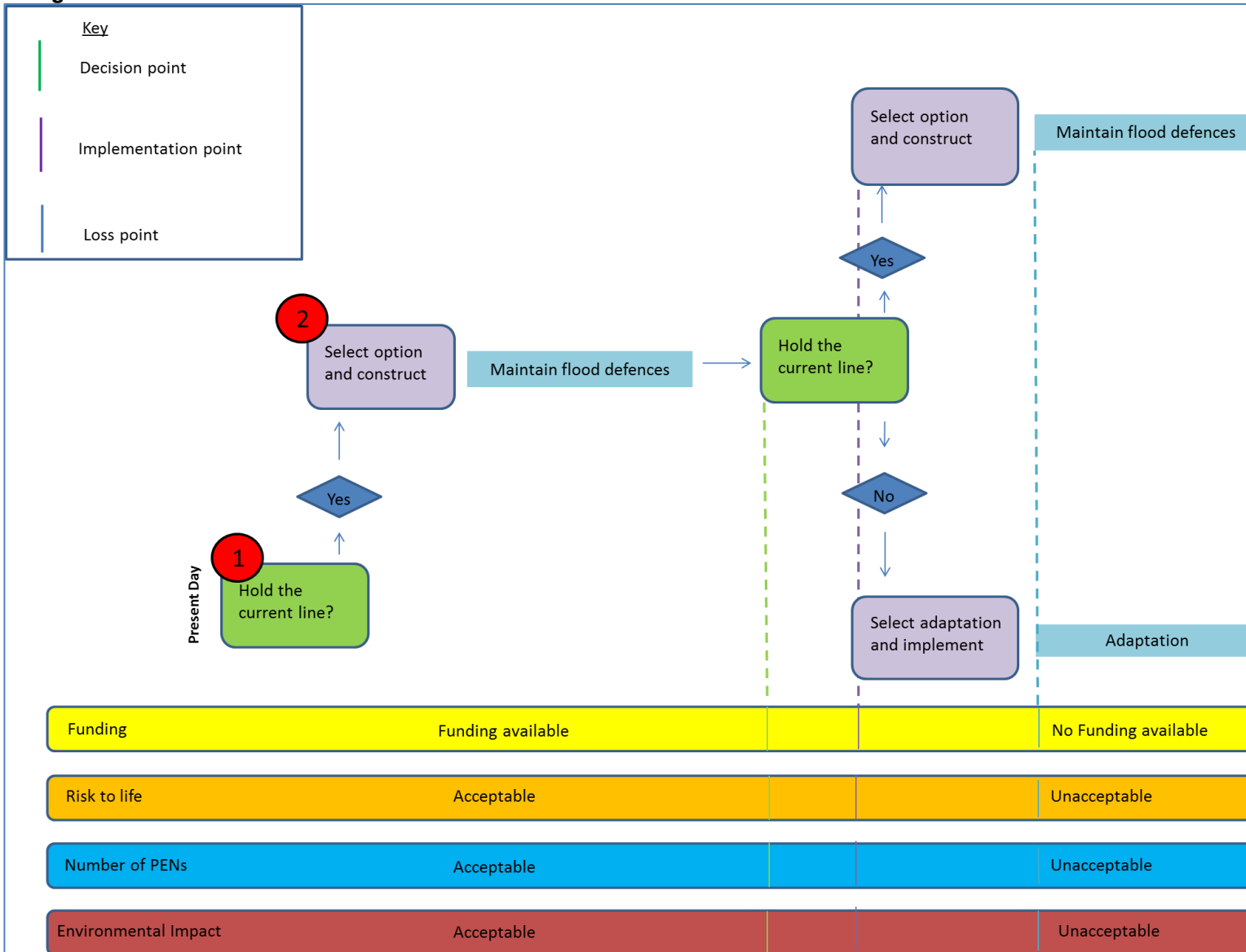


Figure 6: Unit C Decision Tree



4.2 Unit A

Unit A is called Hunstanton Cliffs and was known in the Wash SMP2 as PDZ4. It consists of Hunstanton cliffs incorporating the lighthouse, coastguard lookout, Chapel of St Edmunds ruin, cliff top café, green areas and the Cliff Parade coastal road with numerous residential homes to the northern end of Hunstanton Promenade.

Unit A has never been defended. The cliffs have been allowed to erode and expose their geological value. There is therefore conflict in this Unit between maintaining the nationally designated cliffs and protecting the historical features and other assets which are located on top of the cliffs.

A piloting approach has been selected as the preferred option for Unit A. In this pilot approach, a number of new ideas will be tested to reduce the erosion on Hunstanton cliffs. These methods will include;

- netting the base of the cliffs - place a row of netting at the base of the cliff to retain fallen cliff material. This will reduce the impact of the waves during regular, every day tides;
- using sand bags - sand is taken from a local source, where available, and sealed. They would then be placed at the base of the cliff;
- creating gabions - rocks are placed in steel cages and placed along the cliff base. This aim of this is to encourage sediment deposition; and
- creating a rock sill - a rock sill could be placed either at the toe of the cliff or on the beach to reduce the impact of the waves during regular, every day tides.

These options could later be supported by beach nourishment. Cliff drainage options have also been identified as a potential future implementation in conjunction with the piloting approach. However, these options will be looked into (and assessed) at a later stage, when options are going through detailed design.

The SEA showed that there is very little difference between the various piloting options although the netting of the base was considered to have less of an impact on beach usage and the local landscape. In addition, the rock sill was considered to have more of a visual impact than the others especially with regard to seascape. It is the recommendation of the SEA that netting is the first option used under this piloting approach due to it having lesser impacts than the other options.

Regular monitoring of the options (as shown on **Figure 4**) will be undertaken to ensure that they are performing correctly and there are no unexpected environmental impacts. Should any issues be identified another of the piloting options will be initiated.

The piloting approach will not stop erosion of the Hunstanton Cliffs SSSI, but it will slow down the rate, compared to a 'do nothing' option. This will extend the time period that the important historic building on the top of the cliff have before they are impacted. However, it will not prevent their loss or other impacts such as health and safety risks (as a result of people climbing on the new defences) and longer term impacts to the local economy.

There is also the potential for the cliff to slump as a result of the erosion which would affect the nationally important fulmar colony⁴ (**Plate 2**). However, this slumping could occur with or without the piloting approach, due to the impact of erosion on the cliffs. Cliff

⁴ Fulmars are a type of seabird

drainage options are likely to reduce the potential for cliff slumping if used in combination with the piloting options which protect the base of the cliff.



Plate 2: Fulmars at Hunstanton Cliffs SSSI

There are many positive benefits associated with the piloting approach. For example, the piloting approach has the potential to protect residential properties, community assets, critical infrastructure and the important geological coastline. The piloting approach also maintains the usage of the beach in the Unit, which is a key tourism feature for Unit A.

4.3 Unit B

Unit B is called Hunstanton Town and was known in the Wash SMP2 as PDZ3. It incorporates the defended part of the coastal high ground. This Unit contains tourist attractions such as the funfair and the promenade.

The preferred option in Unit B is to 'Hold the Line' by maintaining the existing sea wall and promenade. The decision about the future maintenance of the promenade will have to be made until the existing structures are in such a condition that they no longer provide a suitable level of flood defence. This is not expected for at least 15 years.

Continued maintenance which would include patch and repair of the wall and promenade is the most likely technical approach for maintaining the defences. This approach will maintain the local flood defences and at a later stage the defences can then be improved. This is a very positive outcome for local residents and businesses as it is likely to result in continued flood protection of their properties.

The promenade is a key tourism feature within this Unit and its maintenance will help the local economy. The local landscape and seascape character will also be protected. The maintenance of local protection will have significant benefit to tourism and local businesses. However, measures will need to be taken to ensure that the repair works which are likely to increase in the future do not significantly affect the local population and other users of the area.

4.4 Unit C

Unit C is called South Hunstanton to Wolferton Creek and was known in the Wash SMP2 as PDZ2. It incorporates the low ground from the southern end of Hunstanton town to Wolferton Creek, including Heacham and Shepherd's Port. This Unit contains the large caravan parks at South Hunstanton, Heacham and Shepherd's Port, the Country Park south of Heacham and the RSPB-owned saline lagoons south of Shepherd's Port. Unit C is at risk of flooding. The coastal flood defence in Unit C is managed by the Environment Agency.

Improving the existing shingle ridge defences and hard defences (i.e. sea walls) is the preferred option for Unit C. This approach would require a similar level of funding in both areas. There would be a requirement for an initial significant amount of funding to improve the defences, followed by recycling, recharge and refurbishment as needed to maintain the improved level (taking account of climate change). The preferred option for Unit C involves improving the standard of protection from a 1 in 10 chance to a 1 in 50 chance of flooding in any one year around Snettisham and from a 1 in 50 chance to a 1 in 75 chance of flooding in any one year around Hunstanton/Heacham.

Using this option the current environment, including internationally and nationally designated nature conservation sites and the AONB, would be maintained, with significant benefits of improved protection to the local population, members of the public and tourism features such as the caravan parks.

However, there is the potential for the works to impact on buried archaeology. As the preferred option involves works to existing structures, the potential to disturb any finds is unlikely.

4.5 Habitats Regulations Assessment

The need for a 'Habitats Regulations Assessment' (HRA) arises from the EC Habitats Directive (92/43/EEC) and its implementation in the UK under The Conservation of Habitat and Species Regulations 2010 (as amended). The assessment is undertaken for internationally designated sites – SAC, SPA and Ramsar. The intention is that adverse effects on site integrity are avoided. An adverse effect is considered to be one that prevents the site from maintaining the current condition of the site.

The first stage of a HRA will be undertaken of the preferred options in the Strategy. This assessment will be based on ecological monitoring which has been undertaken over a number of years between Hunstanton and Snettisham Scalp for a range of ecological features in relation to the existing re-cycling works. Mitigation measures such as the avoidance of the breeding bird season (March to August) and restriction of working areas to avoid damaging surrounding habitat will be implemented.

Further project level assessment will be required under the Habitats Regulations as the detailed design for each project falling out of this strategy is produced

4.6 Water Framework Directive Assessment

In December 2003, the Water Framework Directive (WFD) was transposed into national law by means of the Water Environment (WFD) (England and Wales) Regulations 2003. These Regulations require that all rivers, lakes, estuaries, coastal waters and groundwaters achieve Good Ecological Status (GES) or Good Ecological Potential (GEP) by 2015 (or in some cases by 2021 or 2027).

The preferred options proposed for Units A and B will not affect any water bodies, nor will it affect future improvements to the water bodies present in these Units. These water bodies are coastal, and due to the works being land based and not changing exiting coastal processes, no impacts are considered possible.

Although there are water bodies within Unit C (Ingol and Boat House Creek) the preferred option will help maintain the current environment and not negatively impact these environments. There is no opportunity for implementing mitigation for the water bodies, yet it will not prevent the WFD mitigation measures being implemented in the future.

5 Other Plans and Strategies

Throughout the SEA, key legislation, plans and documents have been identified that have the potential to interact with the Strategy. International and national legislation considered includes:

- EU Directives, particularly the Water Framework Directive, the Habitats Directive and the Birds Directive, the Bathing Water Directive and the Urban Waste Water Directive, and the legislation through which they are implemented in England;
- Marine and Coastal Access Act 2009;
- Climate Change Act 2008;
- Natural Environment and Rural Communities Act 2006;
- Countryside and Rights of Way Act 2000;
- The Wildlife and Countryside Act 1981 (as amended);
- National Planning Policy Framework; and
- UK Sustainable Development Strategy.

A range of regional plans for flood and water management have also been considered with regard to the options proposed. These include Catchment Flood Management Plans, the Anglian River Basin Management Plan, the Wash Shoreline Management Plan (SMP2), and Catchment Abstraction Management Strategies (CAMS). Of these the SMP2 is of greatest relevance.

The Strategy has been designed to integrate with the proposed developments and actions within the following plans or strategies:

- East of England Plan - Regional Spatial Strategy;
- Norfolk and The Wash BAPs;
- The Wash and Fens Green Infrastructure Plan;
- The Wash Estuary Management Plan;
- East Inshore Marine Plan;
- King's Lynn and West Norfolk Borough Council Local Development Framework Core Strategy and Site Specific Allocation and Policies Development Plan;
- King's Lynn and West Norfolk Borough Council Outline Water Cycle Study;
- West Norfolk Tourism Strategy 2005 – 2010;
- Borough Council of King's Lynn and West Norfolk Green Infrastructure Study: Stage 2;
- Hunstanton Town Centre and Southern Seafront Master plan;
- Norfolk Minerals and Waste Development Framework Core Strategy and Minerals and Waste Development Management Policies Development Plan Document 2010-2026;
- Norfolk Rights of Way Improvement Plan 2007 – 2017;

- Norfolk Local Transport Plan 2011 – 2026;
- Tomorrows Norfolk, Today's Challenge: A Climate Change Strategy for Norfolk; and
- Norfolk Coast Area of Outstanding Natural Beauty Management Plan 2009 to 2014.

Consideration of the requirements of these plans has been made through the incorporation of mutually-compatible objectives relating to sustainable development and environmental protection.

6 Consideration of Alternatives

We have considered a wide range of other options in developing the Strategy before focussing the assessment. Each Unit has had a longlist of options developed for it which were subjected to a high level SEA. The subsequent development of shortlist options to the selection of a preferred option has also been supported by SEA.

For all Units, workshops were held with the Advisory Group and partners to consider the longlist of options and through discussion reduce them to a shortlist. A wide range of flood and erosion risk management options were considered which included:

- Do Nothing;
- Do Minimum;
- Defend – hard engineering options (e.g. rock armour or walls);
- Defend – soft engineering options (e.g. beach recycling and renourishment);
- Defend – combinations of the above; and
- Adaptation.

The alternative 'Do Nothing' option would result in the gradual deterioration of the existing structures and ultimately an increased risk of flooding and erosion in the Strategy area. The preferred option for each Unit has been identified as the best for both environmental impacts and cost.

7 Mitigation, Monitoring and Improvements

The main focus in Unit A is to ensure Hunstanton Cliffs SSSI are not impacted. A monitoring programme created in partnership with Natural England will make sure regular checks are undertaken of the SSSI to ensure that its biological and geological qualifying features are not impacted. This will include monitoring of the breeding fulmar colony in relation to available nesting platforms in the event that the cliff does start to slump. The monitoring programme will be adaptable to take account of the different options proposed as part of the pilot approach.

The preferred option in Unit B could create longer term health and safety issues to members of the public as the need for repairs will increase in the future. Best practice methods will be used to mitigate any health and safety risk. There will also be increased communication with local residents and other users throughout the Strategy timeframe (i.e. 100 years) so everyone understands what is happening and when works are proposed.

For Unit C, archaeological experts will input into the design of the preferred option to ensure archaeological finds are not damaged. Supervision and monitoring of the construction works by an archaeologist may be required in this Unit. However, this will be developed in agreement with the County Archaeologist. Detailed design will also take into account the conservation designations of the area with mitigation and monitoring being agreed with Natural England through the Habitats Regulations process for the projects coming out of this strategy.

Annual monitoring will be undertaken of the three Units in relation to the triggers (identified in the decision trees) and future decision making. This will include cliff surveys, assessment of beach profiles and environmental monitoring. In particular, the piloting study approach in Unit A will involve regular monitoring to determine when/if an alternative defence option needs to be implemented. This monitoring will key features such as the Hunstanton Cliffs SSSI to ensure that they are not significantly affected.

As part of the current recycling scheme used along the coastline, annual ecological monitoring has been undertaken. This has included bird surveys, beach profiles, aerial photography monitoring, invertebrate and vegetation surveys and sediment monitoring. This data has been used to influence the design of the preferred option for Unit C and provides confidence that the approach for Unit will not negatively impact the environment. Future monitoring as part of the Strategy will be based on the approach undertaken to date and will be agreed with Natural England.

Figure 7: Summary of Mitigation and Monitoring for all units.

Frontage unit	Mitigation proposed	Monitoring proposed
Unit A	<ul style="list-style-type: none"> • Dependant on the outcomes of the monitoring programme – may involve the removal of sea defences and the implementation of an alternative pilot study option. 	<ul style="list-style-type: none"> • Environmental assessment, using the SEA ER as a basis, will be required as the Strategy is implemented, as the pilot study develops. • A monitoring programme of the geological and ecological features of the Hunstanton Cliffs SSSI produced in partnership with Natural England.
Unit B	<ul style="list-style-type: none"> • Best practice measure in place during construction to reduce health and safety risk to beach users. • Works undertaken outside of tourist season to reduce impact on beach users. • Communication with local residents / tourists used during construction. 	
Unit C	<ul style="list-style-type: none"> • Detailed design will be reviewed by an archaeological expert to ensure archaeological assets are not impacted. • An archaeological watching brief will be put in place for construction if required. • Detailed design will be reviewed with reference to impacts on the conservation designations of the area. 	<ul style="list-style-type: none"> • An ecological monitoring programme based on the existing annual monitoring undertaken for the beach recycling will continue in agreement with Natural England.

8 Conclusions

The SEA process has been undertaken throughout all development stages of the Strategy and its options. This has led to a fully integrated assessment of the various options and the early identification of potential issues and opportunities.

The assessment has identified that the main negative impacts arising from the Strategy would be upon local populations and communities primarily due to disturbance as a result of works, health and safety risk associated with new structures in Unit A and the longer term impacts of erosion on the centre of Hunstanton. There is also the potential for impacts on biodiversity features namely the fulmar colony at Hunstanton Cliff SSSI because of the piloting approach in Unit A.

The preferred options for the Units will have positive impacts on all of the SEA receptors in one form or another. Landscape and seascape character is maintained along the majority of the coastline with the exception of Unit A which could potentially be affected by changing options should any of the piloting options prove to be ineffective. The greatest positive impacts will be in Unit C as a result of improving the standard of flood defence.

As part of the requirements of the SEA Regulations statutory consultees, Natural England, English Heritage and the Environment Agency, the public and other 'interested parties' must be consulted. The draft Strategy will be consulted on, alongside this assessment of the social and environmental impacts of the preferred options. This is anticipated to take place over 6 weeks during July to September 2014.

In light of comments received during the consultation and stakeholder engagement period, the draft Strategy will be amended if necessary, and the assessments of impacts will be updated or revised. Any revisions to the SEA will be documented in a 'Statement of Environmental Particulars'⁵. The final Environment Agency approved Strategy will be adopted by Borough Council of Kings Lynn and West Norfolk. This is expected to take place in 2015. Once the Strategy is in place, a statement will be prepared, which will provide interested parties with details of the location of all documents relevant to the Strategy and its assessment.

Implementation of the Strategy will be subject to the availability of funding, but will be led by the Borough Council of King's Lynn and West Norfolk, working with the Environment Agency. It is likely that a number of schemes will be required in a series of phases to deliver the Strategy's aims. Each of these will be subject to detailed design, which will offer further opportunities for environmental and social enhancement to be built in, and for negative impacts to be minimised or removed.

⁵ This document will show how environmental and consultees considerations were taken into account during the preparation of the Strategy and how the selected approach was adopted in the final Strategy.

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