

# **Kelling to Lowestoft Ness Shoreline Management Plan**

## **Appendix G: Preferred Policy**



**Appendix G: Preferred Policy**

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# G1 Introduction

This Appendix summarises the assessment and appraisal of the Preferred Plan only and should be read in conjunction with the main SMP document. Maps illustrating the impact of the preferred plan are included in the main document for each Policy Unit.

## G1.1 SHORELINE RESPONSE ASSESSMENT

For each Policy Unit the preferred policy together with the assumed broad-level implementation is outlined in the shaded boxes.

SCENARIO REF: PREFERRED PLAN			
Location	Predicted Change for		
	From present day	Medium term	Long term
<b>6.01 Kelling Hard to Sheringham</b>	Allow shoreline retreat through managed realignment	Allow shoreline retreat through no active intervention	Allow shoreline retreat through no active intervention
	<p>Cliff erosion will continue at similar rates to those experienced historically, with a net retreat of the cliff line of between 5 and 10m by year 2025. As the cliffs erode this will contribute some beach-building sediment (mainly sand), which will maintain beach at the toe of the cliffs, but there will be little other input of shingle to this frontage from alongshore due to the low sediment transport rates. Similarly there will be low transport from this area both to the east and west.</p> <p>There will be a slight beach build-up at the eastern end due to the defences at Sheringham; therefore cliff erosion may be slightly less at this end.</p> <p>As the shingle ridge rolls back the existing short length of palisade will become exposed and local flood defence works could be implemented in a set back position, without impacting upon coastal processes.</p>	<p>Cliff erosion will continue at an increased rate due to sea level rise, with a net change in cliff line position of between 15 and 30m by 2055.</p> <p>The cliffs will supply both sand and shingle to the beach, but under the increased energy conditions this volume may not be sufficient to build beaches, therefore the beaches are expected to narrow.</p> <p>At Weybourne, the shingle ridge will be allowed to retreat in line with the cliffs, but there will be a risk of breach with localised flooding of the small area of low-lying land behind.</p>	<p>There will be continued cliff erosion and shoreline retreat, accelerated by sea level rise, with a net change in cliff line position of 40 to 55m by 2105.</p> <p>It is likely that a beach will remain at the foot of the cliffs, but it is likely that this will be narrower than at present, unless the cliffs are able to keep pace with the rate of sea level rise. It is expected that a shingle barrier will remain at Weybourne, albeit one that is frequently overtopped and breached. There will therefore be frequent flooding of the localised low-lying area behind.</p>
<b>6.02 Sheringham</b>	Hold the line, through maintaining (and extending) existing seawall, rock revetment and groynes.	Hold the line, through maintaining, replacing (and, if necessary, upgrading) existing seawall, rock revetment and groynes.	Hold the line, through maintaining, replacing and upgrading seawall structures.

<b>SCENARIO REF: PREFERRED PLAN</b>			
<b>Location</b>	<b>Predicted Change for</b>		
	<b>From present day</b>	<b>Medium term</b>	<b>Long term</b>
	<p>There will be no change in cliff line position due to the defences. The limited beach that is currently present would not build due to (1) no local input due to protection of the cliffs; (2) little input to the area due to low drift rates; and (3) increased exposure of the beach as the promontory becomes more pronounced. As the natural response of the shoreline is restricted, the beaches will steepen and narrow.</p> <p>Some beach stability will be maintained due to the rock groyne and these will restrict the amount of sediment that is transported eastwards.</p> <p>The defences will restrict the alongshore feed of sediment to the east and there will be no local input of beach material.</p>	<p>There will be no change in cliff line position along the northern section due to the defences and it is likely that the low seawall along East Sheringham may need to be enhanced to provide greater protection. These structures will prevent the natural response of the coast to retreat, in response to continued sea level rise. As a result there will be intertidal squeeze with the beach width significantly reduced, which will be exacerbated by the absence of direct feed from cliff erosion locally, although some material will be fed from the west.</p> <p>This section will become a more pronounced promontory, with beach loss to the west and east. The groyne will initially trap some littoral drift and it is likely that a narrow beach will be maintained along this frontage. As the beach becomes more exposed, the groyne will become increasingly ineffective in holding sediment and will eventually become redundant; it is expected that the beach will be close to disappearing by 2055. This will impact on areas to the east, for although some sediment will still be transported in the nearshore zone, there will be an increase in loss of sand sized (and finer) sediments offshore due to a change in the nearshore hydrodynamics.</p>	<p>The cliffs will continue to be held in their present position by the seawall, but there is unlikely to be any beach fronting the area, therefore the groyne will be redundant. Cutback of the adjacent shoreline will result in this area become increasingly pronounced and exposed to deeper wave conditions. Substantial works would probably be required to retain the seawalls. There may be nearshore sediment movement to the east, but sand and finer sediment will be swept offshore due to the prominence of this frontage into deeper water.</p>
<b>6.03 Sheringham to Cromer</b>	<p>Allow shoreline retreat, but through a policy of managed realignment and not maintaining timber groyne and revetment between Sheringham and West Runton. Two short stretches of masonry wall at East and West Runton Gaps</p>	<p>Allow shoreline retreat through no active intervention.</p>	<p>Allow shoreline retreat through no active intervention.</p>

SCENARIO REF: PREFERRED PLAN			
Location	Predicted Change for		
	From present day	Medium term	Long term
	maintained.		
	<p>Between Sheringham and Cromer, without maintenance, the defences will start to fail during this period. As the timber revetments fail there will be a period of rapid cliff retreat (probably within the first 5 years) followed by the establishment of a more regular annual recession rate; with episodic events separated by periods of low retreat. By 2025, the net amount of cliff erosion is likely to be between 5 and 20m, although a single, localised event may cause over 30m of erosion.</p> <p>Localised input from the cliff will maintain a beach in front of the cliffs, although there will be limited input from the west, due to the groynes at Sheringham.</p> <p>Where the masonry walls protect the beach access points at East and West Runton, there will be no change in cliff position. As the cliffs continue to erode either side of the short stretches of masonry wall, these will start to become outflanked, resulting in these structures becoming more difficult to maintain.</p> <p>There will be continued feed to beaches locally and downdrift.</p>	<p>The short stretches of masonry wall will be close to being outflanked near the start of the period and it is likely that they will fail quite early. When these fail there is likely to be rapid local erosion of the area immediately behind. The structures may temporarily interrupt alongshore drift, but this effect will reduce as the cliffs retreat.</p> <p>Along the remainder of the frontage cliff erosion will continue, at accelerated rates due to sea level rise. A retreat of 15 to 50m is expected by 2055, but a single event could potentially cause over 30m of erosion.</p> <p>Local cliff input should be sufficient to maintain a beach, but there is unlikely to be significant feed from the north, due to defences at Sheringham. There will be continued sediment feed to the east.</p>	<p>There will be continued cliff recession at a rate accelerated by sea level rise. This will, in part, be exacerbated by the lack of sediment input from the north, but cliff recession rates will ultimately be determined by the easily eroded nature of the cliffs. A net retreat of between 50 and 110m is expected by 2105, but there may be localised large-scale failures along this shoreline. The nature of the cliffs means that they are likely to keep pace with sea level rise therefore it is expected that due, to local input of sediment, a beach will be maintained along this frontage despite little or no input from updrift beaches.</p> <p>Due to the prominence of Sheringham there is unlikely to be significant sand or shingle supply to this frontage. Much of the sand at the southern end of this section is likely to be lost offshore, but a small accumulation of shingle may form at the northern end of the Cromer defences. There will be continued sediment feed to the east.</p>
<b>6.04 Cromer</b>	Hold the line, through maintaining (and, if necessary replacing) existing seawall and groynes.	Hold the line, through maintaining, replacing (and, if necessary, upgrading) seawall structures.	Hold the line, through maintaining, replacing and upgrading seawall structures.



SCENARIO REF: PREFERRED PLAN			
Location	Predicted Change for		
	From present day	Medium term	Long term
	<p>The seawall will hold the cliffs in their present position. The beach will experience some narrowing due to the limited input of sand and shingle from alongshore and restricted input from the cliffs. Some stability will be provided by the groynes, which will restrict feed to adjacent beaches.</p>	<p>Erosion of the cliffs will be prevented by the seawall and as the adjacent shorelines are undefended and therefore will cut back, this area will become a more prominent frontage.</p> <p>As the promontory becomes more pronounced, beaches will narrow due to both limited sediment input (from either alongshore or locally) and increased exposure to greater wave energy. Although initially the groynes may help maintain a beach, by the end of the period exposure conditions will make them increasing ineffective at holding sediment and eventually redundant.</p>	<p>Defence of the cliffs at Cromer will result in a well-defined promontory forming, with no beach being present; therefore the groynes will be redundant.</p> <p>As adjacent sections are undefended, substantial works would probably be required in order to prevent outflanking both to the east and the west.</p> <p>With this coastline becoming so prominent it is unlikely that any sediment will bypass to feed areas to the south and there will be increased sediment losses to offshore. It may also not be possible for sediment to move northwards past Cromer, during periods of drift reversal.</p>
<b>6.05 Cromer to Overstrand</b>	<p>Allow shoreline retreat via Managed realignment to allow for defunct revetments and timber groynes to be made safe.</p>	<p>Allow shoreline retreat through no active intervention</p>	<p>Allow shoreline retreat through no active intervention</p>
	<p>There will be continued cliff erosion, although initially the rate will be partly controlled by the existing structures. However, as the revetments fail this will accelerate along certain sections of coast. Along this section a net retreat of between 5 and 35m is expected by 2025.</p> <p>A shallow embayment is likely to start to form between Cromer and Overstrand as these two locations are held. Therefore erosion is likely to be greatest in the northern and central sections of this stretch, before a more stable planform is reached</p> <p>Despite a local input from cliff erosion, the</p>	<p>Erosion of the cliffs will continue at an increased rate due to sea level rise, with a net retreat of 40 to 80m by 2055. The only sediment source for this area will be from the local cliff erosion, due to the interruption of drift as a result of the defences at Cromer. This will exacerbate the erosion problem, but the <i>rate</i> of cliff recession will mainly be driven by the easily eroded nature of the cliffs. Some of the sand released through cliff erosion will be lost offshore, with a proportion moved alongshore to feed downdrift frontages, therefore only a narrow beach is expected to be retained along this frontage.</p>	<p>The cliffs will continue to erode at an accelerated rate due to sea level rise, but by this stage there will be very little or no input of sediment from the north due to the defences at Cromer. Therefore the beach will depend upon the local supply of sediment from cliff erosion. Due to the defences at Overstrand there will be an embayment formed between Overstrand and Cromer and this may become quite stable during this period, possibly resulting in some greater sediment retention, which should sustain beaches, similar to today, at the toe of the cliffs.</p> <p>A net retreat of between 80 and 130m is expected</p>

<b>SCENARIO REF: PREFERRED PLAN</b>			
<b>Location</b>	<b>Predicted Change for</b>		
	<b>From present day</b>	<b>Medium term</b>	<b>Long term</b>
	beaches are not likely to build as sediment will continue to be transported eastwards (with fines moved offshore); this feed increasing once the groynes fail. There will also be a limited input from Cromer and north of Cromer. This area is an important sediment source area for frontages to the south and through this policy the alongshore feed of sediment can continue.		by 2105.
<b>6.06 Overstrand</b>	Hold the line through maintaining the seawall, groynes and timber revetment until failure.	Allow shoreline retreat through managed realignment.	Allow shoreline retreat through managed realignment.
	<p>The seawall will maintain the cliffs in their present position and the groynes will help hold the beach, although this will become increasingly difficult as this area becomes more exposed. Where the frontage is only protected by timber revetment, to the south, there may be some slow cliff erosion, at rates similar to those experienced today, with between 5 and 20m cliff line recession by 2025.</p> <p>There will be some sediment supply across this frontage, predominately from north to south, although feed from the north will be limited. Local cliff feed will be prevented, so beaches may start to narrow, although the groynes will help maintain a beach.</p>	<p>Initially, the seawall will continue to hold the cliffs in their present position, but this frontage will develop as a promontory as adjacent areas erode. The increased exposure of this shoreline will mean that it will become increasingly difficult to maintain a beach in front of the seawall. There will therefore be increased pressure on the defences, prompting their failure, with breaches occurring along sections. This will result in rapid erosion of the cliffs behind and will in turn accelerate failure of adjacent sections. A net retreat of between 30 and 135m is expected by 2025 (with greatest erosion along the section historically held by seawalls), as the coastline has been held artificially seaward for decades. Some sediment will be supplied from the north and this, together with local cliff inputs should maintain a beach along this stretch. There will be continued sediment transport to the south.</p> <p>Potentially this retreat could be managed during this period in order to temporarily slow erosion, but</p>	<p>Without defences in place there would be continued cliff erosion with relatively linear retreat of this shoreline. A beach is likely to be maintained through local cliff erosion and from sediment supplied from the north. Net retreat by the end of this period is likely to be between 75 and 175m by 2105; this will help feed beaches both locally and to the south.</p> <p>There is potential for shoreline retreat to be managed during this period, particularly once a shoreline position more commensurate with the prevailing wave conditions is reached. However, any works must continue to allow some erosion (otherwise a promontory could start to form again) and allow alongshore sediment movement to adjacent areas.</p>

SCENARIO REF: PREFERRED PLAN			
Location	Predicted Change for		
	From present day	Medium term	Long term
		any works must allow alongshore transport of beach material as this and the area to the north are important sediment source areas for downdrift frontages.	
<b>6.07 Overstrand to Mundesley</b>	Allow shoreline retreat via managed realignment to allow for defunct revetments and timber groynes to be made safe.	Allow shoreline retreat through no active intervention	Allow shoreline retreat through no active intervention
	<p>Along undefended sections, there will be continued cliff erosion both through both marine and groundwater processes. As defences fail along the remainder of the shoreline, the erosion will initially be rapid. A net change in cliff line position by the end of this period is expected to be between 5 and 30m, but this area is also susceptible to large-scale single-event failures, which may result in several metres of erosion in one go. Erosion is likely to be greatest around Marl Point, where a slight promontory has formed due to the presence of defences over the last 30 to 70 years.</p> <p>There will be limited feed of sediment from the north, which is likely to maintain rather than build beaches along this section. Some of this will be supplied to downdrift beaches, particularly once the groynes fail.</p>	<p>There will be continued cliff erosion, increasing as a result of sea level rise, which will provide sediment to beach both locally and alongshore. There will be very little sediment input from the north, due to the defences at Overstrand, and continued sediment transport to the south, therefore, the beach will rely on local feed through cliff erosion. Some of this will be lost offshore, so it is likely that only a narrow beach will be maintained at the toe of the cliffs. A bay will develop between Overstrand and Mundesley and a net cliff retreat of between 40 and 95m by the end of this period is expected, with the greater rates at the centre of this section.</p>	<p>There will be continued cliff retreat, the rate of which will be increased both due to accelerated sea level rise and the lack of sediment input from the north.</p> <p>The local input of sediment from cliff erosion will help maintain a beach at the toe of the cliffs, but this is likely to be narrow due to lack of input from the north and continued transport to the south. A bay formation is likely to be well defined between Overstrand and Mundesley by this time. This may help to maintain a more stable beach along this frontage in the long-term, through reducing the rate of alongshore drift. Net cliff retreat expected by 2105 is between 85 and 170m.</p>
<b>6.08 Mundesley</b>	Hold the line, through maintenance and reconstructing seawalls, groynes and timber revetment	Hold the line, through maintenance and reconstructing seawalls, groynes and timber revetment (but not replacement)	Allow coastal retreat through managed realignment.

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<b>Location</b>	<b>Predicted Change for</b>		
	<b>From present day</b>	<b>Medium term</b>	<b>Long term</b>
	<p>Where there is revetment cliff erosion will be restricted to a similar rate as present (i.e. less than 10m of erosion expected over this period, but it may become necessary to replace these structures. Where there are seawalls present, there will be no change in cliff line position. The groynes will help maintain a beach, although this will start to become technically more difficult as the area increasingly becomes a promontory resulting in increased exposure of the beaches and deeper water at the shoreline as the coastal system continues to retreat. Sediment feed to the south will be reduced due to the lack of local sediment input and restriction of alongshore drift due to defences.</p>	<p>Cliff erosion will be prevented along this section due to the seawall (with possible extension of the wall necessary to the south) and this frontage will develop as a promontory, as areas to the north and south cut back.</p> <p>Despite the input of sediment from the north, increased exposure will mean that it become more difficult to maintain a beach here due to deeper water at the shoreline. Initially, sediment will continue to be moved southwards along this frontage, but the promontory will start to interrupt this drift and may result in increased offshore loss of sands and fines, which will start to significantly impact on downdrift area. As the beaches narrow, the groynes will start to become redundant and by the end of this period it is therefore likely that there will be no beach present, particularly along the most prominent sections of coast.</p>	<p>Pressure on the system will increase as sea levels rise and the seawall will probably fail quite rapidly towards the start of this period, with breaches forming along sections, resulting in rapid erosion behind and acceleration of the failure of the rest of the seawall and of the seawall in the adjacent stretch to the south.</p> <p>Cliff retreat immediately following failure will be rapid as large-scale realignment occurs. A rate more similar to that experienced pre-defences, with the added impact of sea level rise, is then expected. A net retreat of between 75 and 150m is expected by 2105.</p> <p>As a result of the cliff failure, there will be increased sediment input to the system, which will help build up a beach again in front of the cliffs and will also feed areas to the south. Following the period of initial retreat there is potential for erosion to be managed, whilst allowing throughput of sediment alongshore to feed adjacent areas; as this, and areas to the north, are important sources of sediment both locally and downdrift.</p>
<b>6.09 Mundesley to Bacton Gas Terminal</b>	<p>Allow shoreline retreat via Managed realignment to allow for defunct revetments and timber groynes to be made safe.</p>	<p>Allow shoreline retreat through no active intervention</p>	<p>Allow shoreline retreat through no active intervention</p>
	<p>There will be erosion of the cliffs, initially at a similar rate to present, but as the defences fail the erosion rate will increase. It is likely that a slight embayment will start to form between the</p>	<p>There will be continued erosion of the cliff at rates more similar to those experienced pre-defences, but with some increase due to rising sea levels.</p> <p>There will be very limited sediment feed into this</p>	<p>Cliff erosion will continue at enhanced rates, due to sea level rise, although there will be increased sediment from cliff erosion to the north which will help offset this. Due to this feed and cliff inputs</p>

<b>SCENARIO REF: PREFERRED PLAN</b>			
<b>Location</b>	<b>Predicted Change for</b>		
	<b>From present day</b>	<b>Medium term</b>	<b>Long term</b>
	<p>two fixed shorelines at Mundesley and Bacton Gas Terminal, which will result in erosion being greatest along the central section of the shoreline.</p> <p>The expected cliff retreat is between 10 and 30m during this period. There will also be a slightly greater throughput of sand as the groynes fail, although this will be countered by the slight stabilising effect as the embayment develops.</p>	<p>area due to defences at Mundesley, which will exacerbate the cliff erosion. The sediment supplied from the cliff erosion may retain a narrow beach at the toe of the cliffs. There will be continued transport to the south, although possibly at a slightly slower rate as the embayment develops. A net retreat of between 40 and 75m is expected by 2055.</p>	<p>locally, a beach will be maintained in front of the cliffs. Net retreat of the cliffs is expected to be 90 to 120m by the end of this period, but with increased cutback immediately updrift of any defences at Bacton Gas Terminal.</p>
<b>6.10 Bacton Gas Terminal</b>	Hold the line through maintaining and possibly reconstructing existing defences	Hold the line through maintaining defences	Hold the line through maintaining defences
	<p>In order to prevent cliff erosion it is likely that the timber revetment will need to be replaced by a seawall; this will prevent cliff retreat. There may be some cutback along the adjacent section to the north, once the timber revetments and groynes fail here.</p> <p>The groynes will help to trap some of the sand supplied from the north, maintaining the beach in a similar form today.</p> <p>There will be reduced inputs from cliffs locally, but this does not represent a significant input to the system.</p>	<p>The cliff line position will be held by the seawall. There will be some continued supply of sand from the north, which will be transported along this frontage and to the south; however, this is likely to be reduced due to defences at Mundesley. There will also be no local sediment supply. It is therefore likely that beaches along this stretch will narrow as a result of sea level rise. This, together with cutback either side of the defences, will make the defences more difficult to maintain over time.</p>	<p>The cliff line position will be held by the seawall. There will be some continued supply of sand from the north, which will be transported along this frontage and to the south; however, this is likely to be reduced due to defences at Mundesley. There will also be no local sediment supply. It is therefore likely that beaches along this stretch will continue to narrow as a result of sea level rise. This, together with cutback either side of the defences, will make the defences more difficult to maintain over time. There may be a need for sediment bypassing to be implemented</p>
<b>6.11 Bacton, Walcott and Ostend</b>	Hold the line through maintaining the seawall, groynes maintained and timber revetment at Ostend	Allow shoreline retreat through managed realignment	Allow shoreline retreat through managed realignment
	The shoreline position will remain unchanged	Initially the shoreline position will be held by the seawall, but as this fails, possibly towards the	Erosion of the cliffs will slow slightly from that experienced immediately following failure, although

<b>SCENARIO REF: PREFERRED PLAN</b>			
<b>Location</b>	<b>Predicted Change for</b>		
	<b>From present day</b>	<b>Medium term</b>	<b>Long term</b>
	<p>due to the defences.</p> <p>There will be some sand supplied from the north and some of this will be trapped by the groynes to maintain a beach similar to present. There will be continued sediment transport to the south.</p> <p>There is a risk of outflanking to the south once the defences between Ostend and Happisburgh fail.</p>	<p>middle of this period, there will be an initial surge in erosion, with 35 to 65m retreat by 2055.</p> <p>Although the cliffs will supply some sand, they are low in height so this supply will be limited and there is also limited supply of sediment from the north. It is therefore likely that only a narrow beach will be retained along this frontage, but this should probably remain quite stable.</p> <p>Where the cliff line drops down to beach level, there is a high potential for inundation of the lower-lying land at Walcott.</p>	<p>there will be an increasing impact of accelerated sea level rise, which will place greater pressure on the system. There will be a limited input of sand from the cliffs as they are low in height but this area will also be fed from areas to the north. A net cliff retreat of between 60 and 110m is expected by 2105.</p> <p>There will be a high potential for inundation of the lower-lying land at Walcott. This inundation is unlikely to be permanent, as the supply of sediment should help maintain a low sand beach in front of the low-lying area, but this could be subject to breach during storm events.</p>
<b>6.12 Ostend to Eccles</b>	Allow shoreline retreat via Managed realignment to allow for defunct revetments and timber groynes to be made safe.	Allow shoreline retreat via managed realignment with minimal intervention to allow for defunct revetments and timber groynes to be made safe.	Allow shoreline retreat via managed realignment with minimal intervention to allow for defunct revetments and timber groynes to be made safe.
	<p>The cliff line will initially be held, but as defences fail there will be significant surge in cliff retreat, with the possibility of 80 to 100m of retreat by 2025. This will in part depend upon frequency of storms. At Happisburgh the existing rock bund would remain but would be unlikely to have a significant impact on cliff erosion.</p> <p>Input from the cliffs should be sufficient to maintain a small beach in front of the cliffs. It should be noted, however that the beaches along this and adjacent sections are extremely volatile and susceptible to stripping during storms with the temporary exposure of the clay layer</p>	<p>During this period the erosion rates should start to slow slightly as the coast tends towards a position more commensurate with wave energy conditions, with a net retreat of between 130 and 150m by 2055. At the southern end of this frontage, erosion of the cliffs may cause outflanking of the seawall along the adjacent section.</p> <p>The input from cliff erosion locally and that from alongshore should maintain a beach at the toe of the cliffs. There will be continued sand transport to the south.</p>	<p>There will be continued cliff erosion, and sand released from the cliffs, and from alongshore, which will help maintain a beach at this location. There will be transport of sediment alongshore to adjacent beaches, feeding downdrift frontages. A net retreat of 170 to 200m is expected by 2105.</p>

SCENARIO REF: PREFERRED PLAN			
Location	Predicted Change for		
	From present day	Medium term	Long term
	beneath. Some of this sand will also be moved southwards to feed adjacent beaches and there will also be offshore losses. Sediment supply from the north will be limited due to defences both locally and further north restricting sediment supply from cliffs and alongshore transport.		
<b>6.13 Eccles to Winterton Beach Road</b>	Hold the line through maintenance of existing seawalls and reef structures, replacing groynes as necessary and continuing to re-nourish beaches with dredged sand	Hold the line through maintenance of existing seawalls and reef structures, replacing groynes as necessary and continuing to re-nourish beaches with dredged sand.	Hold the line, but with a long-term view of implementing managed realignment through the construction and maintenance of a retired defence. timing is currently uncertain and may be beyond the 100 year timescale.
	<p>The seawall will prevent any retreat of the foredunes and at Sea Palling a wide beach, possibly encouraging foredune accretion, will be maintained through the reefs (offshore breakwaters) and continued recharge. There will also be some sand input from cliff erosion to the north. The alongshore transport of the recharge material should enable reasonably healthy beaches to be maintained along this entire stretch, although exposure will gradually increase over time.</p> <p>Should the seawall to the south of Bramble Hill become exposed consideration should be given to constructing a flood embankment on the landward edge of the dunes to prevent flooding to allow the dune to function more naturally.</p> <p>Sand will continue to be transported southwards onto adjacent frontages and this will be</p>	<p>The seawall will maintain the shoreline position and prevent flooding of the low-lying hinterland. At the northern end there may be severe problems of outflanking where the seawall abuts an area of unabated cliff erosion. Significant work will probably be required to ensure the integrity of the wall as a defence.</p> <p>The reefs and recharge will maintain a healthy beach along the Sea Palling frontage and the recharge sediment will also supply downdrift areas. However, along the rest of the frontage the beach is likely to diminish in size, even if recycling were undertaken at current levels, due to increased exposure and rising sea-levels. The reefs will reduce in their sediment-trapping efficiency due to rising sea levels, which is likely to result in increased beach volatility and may require strengthening of the wall between the reefs. Sediment transport will continue both to north and</p>	<p>As long as a hold the line policy is implemented the seawall will maintain the shoreline position and prevent flooding of the low-lying hinterland. As pressure on the seawall increases during this epoch there will be a requirement for increased maintenance and improvements.</p> <p>Under a managed realignment policy, the reefs would probably remain, but their effectiveness would be reduced because of coastal system retreat. Failure of defences would therefore be slower in this area than areas to the south where defences, if not removed, would be likely to fail early during this period. Once a breach occurs in the defences, the dunes are not likely to be sustained, therefore there would be almost immediate inundation of the low-lying land up to the retired defence line. Tidal flooding over the entire area would only be during extreme storm events.</p>

SCENARIO REF: PREFERRED PLAN			
Location	Predicted Change for		
	From present day	Medium term	Long term
	<p>enhanced through continued recharge.</p>	<p>south.</p> <p><i>[Note: Further work is currently being carried out as part of the Happisburgh to Winterton Strategy Review]</i></p>	<p>This is, however an area of high uncertainty as managed retreat on this scale has not been carried out elsewhere in the UK, therefore further studies are recommended to investigate the types of system that could develop and the possibility of a tidal inlet development to the south. Initially this area would probably act as a sediment sink, although a sediment transport pathway would still be likely to exist within the nearshore zone.</p> <p>Due to the natural variability in the position of Winterton Ness and interactions with the offshore there is a great deal of uncertainty regarding its future evolution.</p> <p>Without the seawall in place there will be a more natural response to sea level rise with some dune erosion and possibility of dune rollback. Along this frontage this should not result in any breach due to the width of the dune system, although the northern section, towards Bramble Hill, will be most vulnerable and here it may be necessary to construct a flood embankment should a breach seem imminent. A maximum retreat of between 20 and 40m is expected by 2055.</p> <p>The line will be held for as long as it is sustainable to do so. After this point is reached there will be no option but to implement Managed Realignment.</p> <p>There will be continued sediment transport to the south.</p> <p><i>[Note: Further work is currently being carried out</i></p>



SCENARIO REF: PREFERRED PLAN			
Location	Predicted Change for		
	From present day	Medium term	Long term
			<i>as part of the Happisburgh to Winterton Strategy Review]</i>
<b>6.14 Winterton-on-Sea to Scratby</b>	Allow shoreline retreat via Managed realignment to allow for defunct revetments and timber groynes to be made safe.	Allow shoreline retreat via managed realignment with minimal intervention to allow for defunct revetments and timber groynes to be made safe.	Allow shoreline retreat via managed realignment with minimal intervention to allow for defunct revetments and timber groynes to be made safe.
	<p>Due to the natural variability in the position of the ness and its behaviour, there is a great deal of uncertainty regarding its future evolution. The ness is expected to continue to fluctuate in position with resultant changing trends of erosion and accretion along this frontage. This may result in erosion of up to 40m in places, but the net change in shoreline along the whole of this frontage is expected to be small. The width of the dunes in front of Winterton means that a full breach would be unlikely during this period. This area will also receive sediment from the beach recharge to the north.</p> <p>At Newport and Scratby there will be continued deterioration of the dunes, with 10 to 30m of retreat possible by year 2025. At Scratby this may result in the reactivation of the sand cliffs. During this period it is possible that a breach could occur at the southern end of Newport, but here flooding would be likely to be restricted to the low-lying 'valley' area. The beach will remain in a similar condition to today, with continued</p>	<p>Due to the natural variability in the position of the ness and its behaviour, there is a great deal of uncertainty regarding its future evolution. The ness is expected to continue to fluctuate in position with resultant changing trends of erosion and accretion along this frontage.</p> <p>At Winterton, the reduction in natural sediment supply to this frontage may result in a net trend of dune erosion, which will supply beaches to the south. As the dunes retreat, a beach of similar size to that currently present will remain in front of the dunes.</p> <p>At Newport and Scratby there will be continued deterioration of the dunes, with probable loss of the system by the end of this period. This will result in the reactivation of the sand cliffs at Scratby and more frequent flooding of the low-lying 'valley' area. The sand cliffs may not keep pace with sea level rise therefore the beaches along this stretch may start to narrow. A net retreat of between 35 and 60m is therefore anticipated by 2055.</p>	<p>Although the ness is expected to continue to fluctuate in position with resultant changing trends of erosion and accretion along this frontage, this area will also be affected by the inundation of the area to the north. Along the northern section there will be some backdoor flooding but this will be restricted further south by local topography. However, there may initially also be a reduction in the natural sediment supply to this frontage through littoral drift. This will exacerbate any erosion along this frontage and the volume of Winterton Ness is expected to decrease.</p> <p>At Newport and Scratby there will be continued erosion of the sand cliffs and flooding of the low-lying 'valley' area. The cliffs will release some sediment to the beach system, but beaches are likely to narrow. Net retreat is likely to be between 45 and 100m by 2105.</p>

<b>SCENARIO REF: PREFERRED PLAN</b>			
<b>Location</b>	<b>Predicted Change for</b>		
	<b>From present day</b>	<b>Medium term</b>	<b>Long term</b>
	transport of sediment southwards.		
<b>6.15 California to Caister-on-Sea</b>	Hold the line through maintaining existing seawall, rock bund and rock groynes	Allow shoreline retreat, through managed realignment.	Allow shoreline retreat, through managed realignment.
	<p>Along the section of cliff protected by the rock bund, there would be low rates of erosion, i.e. less than 5m by 2025. This local supply of sediment, together with input from the north, will maintain a beach in front of the bund, but this will narrow, due to increased exposure, during this period. There will be continued feed from the north and some of this may be trapped behind the bund.</p> <p>To the south, the groynes and reefs will continue to trap sand supplied from the north and the beach will be maintained along this section. Along the majority of the frontage the beach will remain quite wide and healthy, although this is in part dependent upon natural fluctuation in the position of the small ness/ accumulation at Caister Point. Even where the beach is narrow, the seawall will prevent any coastal retreat.</p> <p>Some stability to this frontage will be provided by the influence of the reefs and Caister Ness to the south. There will be continued feed to the south, although the reefs and groynes will partially restrict this.</p>	<p>The effectiveness of the rock berm will reduce as it both deteriorates in condition and becomes more detached from the cliffs, as cliff erosion will continue. Therefore over this period the amount of cliff erosion is expected to increase and a net retreat of 30 to 50m is expected by 2055. The increased sediment feed will help maintain beaches both here and to the south.</p> <p>To the south, for much of the period the reefs and groynes will continue to hold a beach at this location, which should extend the life of the seawall. The groynes will continue to trap material transported from the north and the volume of sand arriving at the frontage is likely to increase slightly due to failure of defences updrift and therefore release of cliff sediments, although this area is also likely to be affected by a change in policy along the Happisburgh to Winterton frontage.</p> <p>The future evolution of this frontage is, in part, dependent upon natural fluctuation in the position of the small ness/ accumulation at Caister Point, although the reefs will help to reduce beach volatility. Under increased sea level rise, and the development of this frontage as a promontory, the effectiveness of the reefs will decrease, so that towards the latter part of this period there is likely</p>	<p>This area will have increasingly become a promontory and by this stage will stand several tens of metres seaward of the adjacent shoreline to the north. The rock berm is expected to have failed by the start of this period and therefore will have very little effect on the rate of cliff erosion along this frontage. If the seawall has not already failed it is likely to towards the start of this period, this will result in an increased risk of outflanking on either side of the reefs.</p> <p>This will mean increased cliff erosion rates, and the area will become less of a promontory. A healthier beach is likely to develop in a retreated position. A net retreat of 50 to 100m is predicted by 2105.</p> <p>The reefs and groynes are likely to be ineffective due to coastal system retreat and therefore increased exposure conditions at the shoreline. There will therefore be increased throughput of sediment along the coast.</p>

SCENARIO REF: PREFERRED PLAN			
Location	Predicted Change for		
	From present day	Medium term	Long term
		<p>to be some beach loss behind the reefs and thus increased exposure of the seawall and possible failure towards the end of the period. Should the seawall fail during this period up to 40 to 50m of erosion could take place, as the shoreline would readjust to a location more commensurate with wave energy conditions.</p> <p>Sediment transport will still take place to the south, along the nearshore bar and beach.</p>	
<b>6.16 Caister-on-Sea</b>	Hold the line through maintaining and if necessary renewing the existing seawalls, rock reefs and groyne	Hold the line through maintaining the existing seawalls, rock reefs and groyne	Allow shoreline retreat through managed realignment
	<p>The seawall will maintain the coastline position, but there is likely to be some fluctuation in the width of the dunes and beach in front, due to natural changes in the position of Caister Ness. The net change in dune position is likely to be <math>\pm</math> 20 to 30m by 2025. Sediment feed to the area will partly be affected by reefs and groyne, but should be sufficient to maintain similar beaches to today.</p>	<p>The seawall will hold the shoreline position, but there will be fluctuation of the width of the dunes and beach in front, which will depend on changes in the position of Caister Ness.</p> <p>With accelerated sea level rise the general trend expected is one of beach narrowing and possible dune erosion, particularly as some sediment transport southwards will be restricted by the reefs and the rock groyne along the adjacent section to the north, although there will still be transport along the nearshore bar. The most vulnerable area is along the northern section, adjacent to the reefs, where the beach is narrowest and here the seawall could be at the highest risk of breach</p> <p>To the south the dunes are wide enough to prevent a breach during this period and therefore the shoreline position will be maintained by the</p>	<p>The sediment feed to this area may increase slightly due to increased transport along the Caister frontage, as the reefs and groyne become less effective.</p> <p>There will, however, be continued dune erosion with the likely exposure of the seawall. For much of the frontage the seawall is likely to remain for the first part of this period. It may be necessary, however, to construct a flood defence at the 'Great Yarmouth and Caister' golf course at the southern end of this stretch. By the end of the period, should the seawall remain exposed, there would be failure of the seawall in stages, which would increase pressure on any remaining sections of seawall. Along much of the frontage the seawall fronts dunes with rising ground behind. Where breaches occur, there is likely to be up to 80 to 110m of</p>

<b>SCENARIO REF: PREFERRED PLAN</b>			
<b>Location</b>	<b>Predicted Change for</b>		
	<b>From present day</b>	<b>Medium term</b>	<b>Long term</b>
		seawall, although dune erosion is expected, with a possible 30 to 50m of erosion by 2055.	retreat by 2105. Sediment transport will continue to the south.
<b>6.17 Great Yarmouth</b>	Hold the line through maintaining and, if necessary, replacing the existing defences.	Hold the line through maintaining and, if necessary, replacing the existing defences.	Hold the line through maintaining and, if necessary, replacing the existing defences.
	The seawall will prevent any change in the shoreline position (as defined by the seawall). There may however be some narrowing of the beach in front of the seawall, particularly along the central section of coast and therefore some deterioration in the condition of the remaining dunes.  There will be continued transport of sand to the beaches across the Yare to the south, via the nearshore bar.	The seawall will remain and prevent backshore retreat and inundation of the hinterland. Despite sand input from the north, there will, however, be continued beach narrowing in front of the seawall, with associated deterioration of the dunes due to increased exposure and deeper water as a result of sea level rise. This will place increased pressure on the wall.	The seawall will remain and prevent backshore retreat and inundation of the hinterland. The beach is likely to disappear along the southern section due to sea level rise and increased exposure. This will mean increased expenditure will be necessary to maintain the seawall. There will be continued beach narrowing and loss of dunes along the northern section of this shoreline.  Sediment transport, via the offshore bar, will continue to adjacent areas to the south.
<b>6.18 Gorleston-on-Sea</b>	Hold the line through maintaining and, if necessary, replacing existing defences.	Hold the line through maintaining and upgrading existing defence structures.	Hold the line through maintaining and upgrading existing defence structures.
	There will be no change in the position of the shoreline or mouth of the Yare, due to defences. This frontage will continue to receive sand from the Great Yarmouth frontage, via the nearshore bar.  There will be a continued sediment supply to adjacent beaches, particularly via the nearshore bar, therefore there is a risk of beach narrowing unless beach control structures are in place.	There will be no change in either the cliff line or entrance of the River mouth due to maintenance of existing structures.  There will be a continued sediment supply to adjacent beaches particularly via the nearshore bar.	There will be no change in cliff line position due to defences and the mouth of the river will remain the same.  Due to sea level rise and deeper water closer to the coast there will be some beach narrowing along this section.
<b>6.19 Gorleston-on-Sea to Hopton-on-</b>	Allow shoreline retreat via managed realignment to allow for defunct revetments and timber	Allow shoreline retreat through no active intervention	Allow shoreline retreat through no active intervention

<b>SCENARIO REF: PREFERRED PLAN</b>			
<b>Location</b>	<b>Predicted Change for</b>		
	<b>From present day</b>	<b>Medium term</b>	<b>Long term</b>
<b>Sea</b>	groynes to be made safe.		
	<p>For most of this period the timber revetment will remain and will continue to help slow cliff erosion and therefore for much of this period there will be little change in cliff line position. The groynes will trap some of the sand supplied both from the local cliff erosion and from the north. Once the revetment fails, however, there will initially be rapid cliff retreat for the first 5 years, before the rate slows slightly. The net retreat during this period is therefore likely to be between 5 and 25m, dependent upon the exact timing of revetment failure.</p> <p>Sediment feed both to the north and south will continue from this frontage.</p>	<p>Any remaining timber revetment will initially provide some protection to the cliffs, but these are likely to totally fail early during the period. There will therefore be continued cliff erosion during this period, which will become more rapid along localised stretches as the defences fail. By 2055 there will be a net retreat of 40 to 65m.</p> <p>A beach will probably be maintained at the toe of the beach, even when the groynes fail, due to feed both locally and from the north. There will also be sediment transport to adjacent beaches.</p>	<p>There will be continued cliff erosion at an accelerated rate due to sea level rise. There could be some increase in the sand supplied from the north but predominately this stretch will rely on local inputs from cliff erosion, which should be sufficient to maintain a narrow beach along this frontage. There will also be continued sediment transport to the south.</p> <p>A net retreat of 80 to 130m is expected by 2105.</p>
<b>6.20 Hopton-on-Sea</b>	Allow shoreline retreat via Managed realignment to allow for defunct revetments and timber groynes to be made safe.	Allow shoreline retreat through managed realignment	Allow shoreline retreat through managed realignment
	<p>The timber revetment will continue to help slow cliff erosion and therefore initially there will be little change in cliff line position, however it is possible that the revetment will fail during this period, even with maintenance, which would cause an initial period of relatively rapid erosion. Net cliff line retreat during this period is therefore likely to be between 5 and 25m, depending upon the exact timing of revetment failure. To the south the seawall will hold the cliff position resulting in the development of a promontory</p>	<p>Any remaining timber revetment will initially provide some protection to the cliffs, but these are likely to totally fail early during the period. Similarly, initially the cliff line will be held by the seawall, but this will probably start to fail by the mid part of this period. During this time a narrower beach will be present due to intertidal squeeze. This will exacerbate defence failure, which is likely to occur in sections resulting in very rapid erosion behind, as this area has been held as a promontory for several decades.</p>	<p>There will be continued cliff erosion at an accelerated rate due to sea level rise. This, together with input from the north, should be sufficient to maintain a narrow, relatively stable, beach along this frontage. There will also be continued sediment transport to the south. A net retreat of between 90 and 130m is expected by 2105. There will also be continued sediment transport to adjacent beaches.</p>

<b>SCENARIO REF: PREFERRED PLAN</b>			
<b>Location</b>	<b>Predicted Change for</b>		
	<b>From present day</b>	<b>Medium term</b>	<b>Long term</b>
	along this frontage. The groynes will trap some the sand supplied both from local cliff erosion and from the north and will help maintain a beach and there will still be some sediment transport to the south.	By the end of this period a more steady rate of erosion is expected to occur as the shoreline reaches a position more commensurate with energy conditions. A net retreat of 45 to 70m is expected by 2055.  A beach will probably be maintained at the toe of the beach, even when the groynes fail, due to feed both locally and from the north. There will also be sediment transport to adjacent beaches.	
<b>6.21 Hopton-on-Sea to Corton</b>	Allow shoreline retreat via Managed realignment to allow for defunct revetments and timber groynes to be made safe.	Allow shoreline retreat through managed realignment	Allow shoreline retreat through no active intervention
	Initially the timber revetments will slow the rate of cliff erosion but as these fail there will initially be a period (approximately 5 years) of relatively rapid erosion. A net retreat of between 10 and 25m would be expected by 2025.  Some of the sand released from the cliffs will be moved southwards; this throughput will increase as the groynes fail. Some of this may be trapped updrift of the defences at Corton.	There will be continued cliff erosion at slightly increased rates due to sea level rise and a net retreat of between 45 and 70m is expected by 2055.  A beach will be maintained at the toe of the cliffs due to alongshore transport of sand and input from local cliff erosion. There may be some localised accumulation immediately updrift of the defences at Corton.	There will be continued cliff erosion at slightly increased rates due to sea level rise; a net retreat of between 90 and 130m is expected by 2105.  A beach should be maintained at the toe of the cliffs due to alongshore transport of sand and input from local cliff erosion. Retention of beach material along this section may be helped by the presence of defences at Corton, which could have a slight stabilising influence, but is unlikely to significantly reduce cliff recession rates.
<b>6.22 Corton</b>	Hold the line through maintaining the existing defences	Allow shoreline retreat through managed realignment	Allow shoreline retreat through managed realignment
	The seawall will prevent any cliff retreat, but it is unlikely that a beach will be retained here, apart from along the southern section, despite a possible increase of sediment input from the	It is likely that by mid period the effect of the rock revetment will deteriorate resulting in failure of the seawall behind. Both these structures are likely to help reduced the wave attack and therefore cliff	Erosion of the cliffs will continue, but at a slower rate than experienced immediately following defence failure. A net retreat of between 85 and 170m is expected by 2105. A beach should be

<b>SCENARIO REF: PREFERRED PLAN</b>			
<b>Location</b>	<b>Predicted Change for</b>		
	<b>From present day</b>	<b>Medium term</b>	<b>Long term</b>
	<p>north. This is due to the increased exposure of the site as it becomes more prominent, with deeper water at the seawall.</p> <p>Sediment transport from north to south is likely to diminish due to the prominence of this area as alongshore drift is interrupted and more sediment is lost offshore.</p>	<p>erosion initially, but cliff erosion following failure will still be relatively rapid. The seawall will start to fail in sections but due to erosion of the cliffs behind this will accelerate failure of adjacent areas.</p> <p>Sediment released from the cliffs will be unlikely to initially build beaches significantly in these areas because during the period the beach is likely to be too exposed, particularly taking into account sea level rise. However, a more substantial beach is likely to form once the cliffs have retreated to a position more commensurate with wave energy conditions. At this stage it could be possible to implement some erosion-slowing measures, which should not be detrimental to downdrift feed of sediment. Net retreat of the cliffs of between 50 and 100m is expected by the end of this period, assuming no measures are put in place.</p>	<p>maintained at the toe of the cliffs and there will be continued sediment transport southwards. This retreat could be managed, but should neither restrict alongshore linkages nor allow a new promontory to form.</p>
<b>6.23 Corton to Lowestoft</b>	<p>Allow shoreline retreat via managed realignment to allow for defunct revetments and timber groynes to be made safe.</p>	<p>Allow shoreline retreat through no active intervention</p>	<p>Allow shoreline retreat through no active intervention</p>
	<p>There will be a decreased input of sand from the north due to the defences at Corton; therefore the beach along this section is likely to narrow resulting in deterioration of the dunes backing this section. The dunes are expected to retreat by 10 to 30m, therefore the cliffs behind are not expected to be reactivated.</p> <p>There will be a slightly increased throughput of sediment once the groynes fail.</p>	<p>There will be continued erosion of the dunes and beach narrowing due to sea level rise and the backshore position is likely to retreat by 40 to 90m by 2055, with the loss of the dunes and erosion of the sand cliffs behind.</p> <p>There will be beaches present, fed by dune and cliff erosion locally and also from the Corton frontage once defences fail, and from further north.</p>	<p>There will be erosion of the sand cliffs, and it is likely that a beach will be present in front of the cliffs, fed by cliff erosion to the north.</p> <p>There is likely to be more severe cutback at the southern end of the frontage, where the cliffs meet the seawall at Lowestoft. Net erosion of between 90 and 190m is expected by 2105.</p>

<b>SCENARIO REF: PREFERRED PLAN</b>			
<b>Location</b>	<b>Predicted Change for</b>		
	<b>From present day</b>	<b>Medium term</b>	<b>Long term</b>
<b>6.24 Lowestoft North (to Ness Point)</b>	Hold the line through maintaining (and replacing) existing defences	Hold the line through maintaining (and replacing) existing defences	Hold the line through maintaining (and replacing) existing defences
	The shoreline position (as defined by the seawall) will remain unchanged and the seawall will prevent any erosion or inundation of the hinterland. However, due to the high exposure of the shoreline to wave attack, and limited sediment input, despite a slight increase in feed from the north (which is predominately sand-sized), the beaches along the northern section will continue to narrow and along the southern section the shingle beach is expected to have disappeared by 2025.	The seawall will continue to prevent flooding and will hold the backshore position, however, there will be continued beach narrowing and along much of this frontage there will be no beach present. Any beach sediment will be lost offshore into deeper water.	There will be no beach present along this frontage and this will mean that significant work may be required to maintain the integrity of the seawall. Any beach sediment transported to this frontage is likely to be lost offshore into deeper water.



### G1.2 OBJECTIVE APPRAISAL

The following table indicated whether objectives are achieved: Y indicates the objective is achieved, N indicates the objective is not achieved and P indicates the objective is partially achieved.

#### 6.01 Kelling Hard to Sheringham

										Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105		
										NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan		
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	<i>The short length of palisade along the shingle ridge fails in the first half of period.</i>		<i>No defences (Natural shingle bank at Weybourne)</i>		<i>No defences.</i>		<i>No defences (apart from low timber/ steel palisade at Weybourne retained to prevent breach and flooding).</i>		<i>No defences. (Natural shingle bank at Weybourne)</i>		<i>No defences. (Natural shingle bank at Weybourne)</i>	
Cliff top residential properties at Weybourne	- Potential loss of housing through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent loss of residential properties to erosion	Local	Medium	No	Yes	H4	No loss	Y	Loss of some Coastguard cottages	N	Total loss of Coastguard cottages	N	No loss	Y	Loss of some Coastguard cottages	N	Total loss of Coastguard cottages	N
Weybourne Priory	- Loss of the Priory to erosion - It is considered that there are unexcavated remains alongside the Priory and these will be at risk through continuing erosion	Yes	The Priory is a Scheduled Ancient Monument and remains may be of significant importance	National community	Prevent loss of Weybourne Priory to erosion	National	High	No	No	G2	No loss	Y	No loss	Y	No loss	Y	No loss	Y	No loss	Y	No loss	Y
Heritage sites	- Loss of a number of monument sites of high importance	Yes	Sites identified as high heritage value due to their unique nature	National community	Prevent loss of heritage sites	National	High	No	No	G2	Some sites lost	N	Further sites lost	N	Further sites lost	N	Some sites lost	N	Further sites lost	N	Further sites lost	N
Agricultural land	- Potential loss of Grade 3 land through erosion. Much of National Trust land is in Stewardship/set aside	Yes	Economy/employment through farming	Individual farmers and local community	Prevent loss of farmland to erosion	Sub-regional	Low	Yes	Yes	C5	Loss of farm land	N	Loss of farm land	N	Loss of farm land	N	Loss of farm land	N	Loss of farm land	N	Loss of farm land	N
Weybourne Cliffs SSSI	- Continual erosion of cliffs necessary to maintain a clear face for geological study	Yes	Contribution to understanding of national geological succession	National community	Continued erosion of cliffs to maintain exposures	National	High	No	No	E2	Continued erosion therefore exposures maintained	Y	Continued erosion therefore exposures maintained	Y	Continued erosion therefore exposures maintained	Y	Continued erosion therefore exposures maintained	Y	Continued erosion therefore exposures maintained	Y	Continued erosion therefore exposures maintained	Y
Kelling Hard County Wildlife Site	- Loss of CWS site designated as unimproved, slightly calcareous and neutral grassland	Yes	Important habitats site	Sub-regional conservation interest groups	Maintain the existing habitats	Sub-regional	Medium	No	No	E4	Minimum loss of Kelling Hard CWS	P	Less than 50% loss of Kelling Hard CWS	N	Partial loss of Kelling Hard CWS	N	Minimum loss of Kelling Hard CWS	P	Less than 50% loss of Kelling Hard CWS	N	Partial loss of Kelling Hard CWS	N

Beach Lane County Wildlife Site	- Loss of shingle beach which protects areas of grassland, reedswamp and brackish lagoons which have County Wildlife Status	Yes	Important habitats site	Sub-regional conservation interest groups	Maintain the existing shingle habitats whilst allowing shingle ridge to roll back	Sub-regional	Medium	No	No	E4	Minimum loss of Beach Lane CWS but shingle ridge allowed to roll back	Y	Some loss of CWS but shingle ridge allowed to roll back	Y	Some loss of CWS but shingle ridge allowed to roll back	Y	Minimum loss of Beach Lane CWS but shingle ridge allowed to roll back	Y	Some loss of CWS but shingle ridge allowed to roll back	Y	Some loss of CWS but shingle ridge allowed to roll back	Y
Beach and Foreshore	- Concern over beach condition	Yes	Important recreational feature	Regional users and local community	Maintain a beach suitable for recreation purposes	sub-regional	Low	No	Yes	R4	Beach similar to present	Y	Beach similar to present	Y	Beach present	Y	Beach similar to present	Y	Beach similar to present	Y	Beach present	Y
	- Dredging of offshore banks for aggregate – concern about potential impact on beach levels (Non-policy issue)	No																				
Car park and beach access at Beach Lane	- Potential loss of car park	Yes	Tourist and local parking facilities	Regional users and local community	Maintain car park facilities	Local	Medium	Yes	Yes	F5	Minimum loss	Y	50% car park lost, but low lying-land therefore car park could be moved landwards	P	Total loss of car park, but could be relocated	N	Minimum loss	Y	50% car park lost, but low lying-land therefore car park could be moved landwards	P	Total loss of car park, but could be relocated	N
	- Potential loss of access to beach	Yes	Provides access for local fishing industry, residents, tourists, maintenance contractors & emergency services	Regional users and local community	Maintain access to the beach	Local	Low	Yes	Yes	F6	No loss of beach access	Y	No loss of beach access	Y	No loss of beach access	Y	No loss of beach access	Y	No loss of beach access	Y	No loss of beach access	Y
Sheringham Golf Links	- Loss of golf course through erosion	Yes	Provides recreation and tourist facility	Individual owner and local community	Prevent loss of golf course to erosion	Sub-regional	Low	No	Yes	R4	Loss of golf course land	N	Further loss of golf course land	N	Further loss of golf course land	N	Loss of golf course land	N	Further loss of golf course land	N	Further loss of golf course land	N
National Trail	- Potential loss of Trail through erosion	Yes	Part of national network of trails important for recreation and tourism	National and Local community	Maintain Trail throughout frontage	National	High	No	Yes	R2	Loss of parts of Peddlers Way & Norfolk Coast path but could be relocated	P	Further loss of parts of Peddlers Way & Norfolk Coast path but could be relocated	P	Further loss of parts of Peddlers Way & Norfolk Coast path but could be relocated	P	Loss of parts of Peddlers Way & Norfolk Coast path but could be relocated	P	Further loss of parts of Peddlers Way & Norfolk Coast path but could be relocated	P	Further loss of parts of Peddlers Way & Norfolk Coast path but could be relocated	P
AONB	- The way in which the coastline is managed may have an adverse effect on the landscape which contributes to this status	Yes	High landscape value	National users and local community	Maintain landscape quality	National	High	No	No	L1	Landscape maintained through natural cliff erosion	Y	Landscape maintained through natural cliff erosion	Y	Landscape maintained through natural cliff erosion	Y	Landscape maintained through natural cliff erosion	Y	Landscape maintained through natural cliff erosion	Y	Landscape maintained through natural cliff erosion	Y

### 6.02 Sheringham

										Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105		
										NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan		
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	<i>The timber groynes will fail during this period, as will the seawalls to the west and east. In front of the town the seawall and rock groynes will remain in place.</i>		<i>The central seawall and rock groynes will remain for most of this period.</i>		<i>The central seawall and rock groynes will fail at the start of this period.</i>		<i>Seawall and groynes maintained to prevent any erosion.</i>		<i>Seawall and groynes maintained to prevent any erosion.</i>		<i>Seawall and groynes maintained to prevent any erosion.</i>	
Residential properties	- Potential loss of housing through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent loss of residential properties to erosion	Sub-regional	High	No	Yes	H3	No loss	Y	No loss	Y	Loss of over 400 residential properties	N	No loss	Y	No loss	Y	No loss	Y
Commercial properties	- Potential loss of businesses through erosion	Yes	Local economy Community cohesion Investment of individual business owners	Individual owners, local economy, local community and visitors	Prevent loss of commercial properties to erosion	Regional	High	No	Yes	C2	No loss	Y	No loss	Y	Loss of over 100 commercial properties	N	No loss	Y	No loss	Y	No loss	Y
Community facilities	- Potential loss of community facilities through erosion	Yes	Benefit to local residents Community cohesion	Local community	Prevent loss of community facilities to erosion	Local	High	No	Yes	R4	No loss	Y	No loss	Y	Loss of main town streets and town centre car parks	N	No loss	Y	No loss	Y	No loss	Y
Heritage sites	- Loss of heritage sites including The Lees and Beeston Regis Hill, which are of high importance	Yes	Sites identified as high heritage value due to their unique nature	National community	Prevent loss of heritage sites to erosion	National	High	No	No	G2	Loss of Beeston Regis and other monument sites	N	No further loss	N	No further loss	N	No loss	Y	No loss	Y	No loss	Y
Recreational and tourist facilities	- Potential loss of tourist and recreation sites, accommodation and activities including major attractions, shops, public open space, holiday amenities, and promenade	Yes	Tourism forms the main part of the local economy Sites also of benefit to local residents	Regional and local economies, businesses, residents and tourists	Prevent loss of tourist facilities to erosion	Regional	High	No	Yes	C2	No loss	Y	No loss but promenade properties more exposed	Y	Loss of promenade and seafront shops and amenities	N	No loss	Y	No loss but promenade properties more exposed	Y	No loss but promenade properties more exposed	Y
Infrastructure	- Potential loss of or damage to services and roads through erosion	Yes	Services and facilities for the local business and resident communities	Local community	Maintain services to properties	Sub-regional	High	Yes	Yes	F3	No loss	Y	No loss	Y	Loss of services associated with property loss	N	No loss	Y	No loss	Y	No loss	Y

		Yes	Transportation linkages within Sheringham	Local community	Maintain communication link within Sheringham	Local	Medium	No	Yes	F5	No loss	Y	No loss	Y	Loss of various roads within the town centre	N	No loss	Y	No loss	Y	No loss	Y
Lifeboat Station	- Potential loss of access - Potential loss of building	Yes	The lifeboat is a vital part of the RNLI complement of boats providing lifesaving services around the coast of the UK	National	Maintain Lifeboat Station in the town	International	High	No	Yes	F2	No loss and slipway functional	Y	No loss and slipway functional	Y	Loss of promenade and therefore existing Lifeboat Station	N	No loss and slipway functional	Y	No loss and slipway functional	Y	Building at increased risk of being overtopped - slipway will be functional.	Y
Beeston Cliffs SSSI	- Continual erosion of cliffs necessary to maintain a clear face for geological study	Yes	Contribution to understanding of national geological succession	National community	Continued erosion of cliffs to maintain exposures	National	High	No	No	E2	Cliff erosion, meaning increased SSSI exposure	Y	Cliff erosion, meaning increased SSSI exposure	Y	Cliff erosion, meaning increased SSSI exposure	Y	No cliff erosion therefore poor SSSI exposure	M	No cliff erosion therefore poor SSSI exposure	N	No cliff erosion therefore poor SSSI exposure	N
	- Erosion or regrading could reduce the area of unimproved grassland on the cliff-top, which is also part of the SSSI through its characteristic plant species	Yes	Host to nationally important plants	National community	Maintain the existing habitats	National	High	No	No	E2	Small loss but habitat likely to be able to remain landward	Y	Loss of cliff top grasslands. Possible re-creation inland	N	Loss of cliff top grasslands. Possible re-creation inland	N	Cliff top grassland preserved	Y	Cliff top grassland preserved	Y	Cliff top grassland preserved	Y
Beach and foreshore	- Potential deterioration in condition and appearance of the Blue Flag beach	Yes	Important recreational feature of the town	Regional users and local community	Maintain a beach suitable for recreation purposes	International	High	No	Yes	R1	Similar beach to today	Y	Little or no beach along main frontage. Beach present at Beeston Regis	N	Beach present in a retreated position	Y	Similar beach to today	Y	Little or no beach	N	No beach	N
	- Potential health and safety hazard caused by deteriorating defences at foot of cliffs (Non-policy issue)	No																				
	- Dredging of offshore banks for aggregate – concern about potential impact on beach levels (Non-policy issue)	No																				
National Trail	- Potential loss of Trail through erosion	Yes	Part of national network of trails important for recreation and tourism	National and Local community	Maintain Trail throughout frontage	National	High	No	Yes	R2	No change in trail location along main frontage	Y	No change in trail location along main frontage	Y	Loss of present trail	N	No change in trail location	Y	No change in trail location	Y	No change in trail location	Y
Access to beach	- Potential loss of access to beach	Yes	Provides access for local fishing industry, residents, tourists, maintenance contractors & emergency services	Local community	Maintain access to the beach	Local	Medium	No	Yes	F5	Beach access as today	Y	Beach access as today	Y	Access lost as seawall and promenade fails	N	Beach access as today	Y	Beach access as today	Y	Beach access possible, but no beach	P

### 6.03 Sheringham to Cromer

										Up to 2025 NAI	Up to 2055 NAI	Up to 2105 NAI	Up to 2025 Preferred Plan	Up to 2055 Preferred Plan	Up to 2105 Preferred Plan							
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank												
											<i>Timber revetment will fail early during this period, with failure of timber groynes towards the end of the period. Masonry walls at Gaps will start to fail.</i>	<i>No defences</i>	<i>No defences</i>	<i>Timber groynes between Sheringham and West Runton allowed to fail. Two short stretches of masonry wall at Gaps maintained.</i>	<i>Short stretches of masonry wall at Gaps allowed to fail.</i>	<i>No defences</i>						
Cliff top properties at East Runton	- Potential loss of housing through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent loss of residential properties to erosion	Local	High	No	Yes	H3	No properties lost but potential loss of land	Y	Less than 5 properties lost	N	Seafront properties lost	N	No properties lost but potential loss of land	Y	Less than 5 properties lost	N	Seafront properties lost (as NAI)	N
Cliff top caravan parks	- Loss of cliff-top caravan parks sited on eroding cliffs - Loss of investment on part of local businesses	Yes	Tourist accommodation Local economy	Individual owners. Regional users, local community	Prevent loss of tourist accommodation to erosion	Regional	Medium	Yes	Yes	C3	Partial loss of caravan park land	N	Further loss of caravan park land	N	Further loss of caravan park land	N	Partial loss of caravan park land	N	Further loss of caravan park land	N	Further loss of caravan park land	N
Heritage sites	- Loss of heritage sites including two identified as of high importance	Yes	Sites identified as high heritage value due to their unique nature	National community	Prevent loss of heritage sites to erosion	National	High	No	No	G2	No loss of sites identified as high importance	Y	Loss of one site of high importance and other sites	N	No further loss of sites	N	No loss of sites identified as high importance	Y	Loss of one site of high importance and other sites	N	No further loss of sites	N
Agricultural land	- Potential loss of Grade 3 land through erosion	Yes	Economy/employment through farming	Individual farmers and local community	Prevent loss of farmland to erosion	Sub-regional	Low	Yes	Yes	C5	Loss of farmland	N	Further loss of farmland	N	Further loss of farmland	N	Loss of farmland	N	Further loss of farmland	N	Further loss of farmland	N
Cliffs at West Runton and East Runton	- Continual erosion of the SSSI designated cliffs necessary to maintain a clear face for geological study and re-sampling	Yes	Nationally important SSSI Pleistocene reference site. Internationally important site with respect to its vertebrate faunas Contribution to understanding of national geological succession	National community	Continued erosion of cliffs to maintain exposures	National	High	No	No	E2	Continued exposure therefore improved exposure	Y	Continued exposure therefore improved exposure	Y	Continued exposure therefore improved exposure	Y	Continued exposure, except Gaps, therefore improved exposure	Y	Continued exposure therefore improved exposure	Y	Continued exposure therefore improved exposure	Y

Car park and beach access	- Potential loss of car park	Yes	Tourist and local parking facilities	Regional users and local community	Maintain car park facilities	Local	Medium	Yes	Yes	F5	Loss of car park at West Runton (but possible relocation). Loss of section of East Runton car park	N	Loss of car park at East Runton	N	(Car park lost 20-50)	N	Loss of car park at West Runton (but possible relocation). Loss of section of East Runton car park	N	Loss of car park at East Runton	N	(Car park lost 20-50)	N	
	- Potential loss of access to beach	Yes	Provides access for local fishing industry, residents, tourists, maintenance contractors & emergency services	Regional users and local community	Maintain access to the beach	Local	Low	Yes	Yes	F6	Access at East and West Runton lost	N	(Access lost 0-20 but possible relocation)	N	(Access lost 20-50 but possible relocation)	N	Beach access at Runton gaps maintained	Y	Access lost due to outflanking, but possible relocation	N	(Access lost 20-50 but possible relocation)	N	
Beach and Foreshore	- Loss of County Wildlife site	Yes	Local nature conservation	Local community	Maintain the existing habitats	Sub-regional	Medium	No	No	E4	Similar beach to today	Y	Similar beach to today	Y	Beach present	Y	Similar beach to today	Y	Similar beach to today	Y	Beach present	Y	
	- Potential deterioration in condition/ appearance of beach	Yes	Important recreational feature	Regional users and local community	Maintain a beach suitable for recreation purposes	Sub-regional	Low	No	Yes	R4	Similar beach to today	Y	Similar beach to today	Y	Beach present	Y	Similar beach to today	Y	Similar beach to today	Y	Beach present	Y	
	- Dredging of offshore banks for aggregate – potential impact on beach level (Non-policy issue)	No																					
	- Continuing maintenance necessary for existing concrete defences at foot of cliffs	No																					
	- Potential health and safety hazard caused by deteriorating defences at foot of cliffs	No																					
	- West Runton SSSI includes the foreshore - designation requires continued erosion to keep the exposures clean	Yes	Nationally important SSSI Pleistocene reference site. Contains only rock pool site in East Anglia	National community	Retain foreshore to maintain the marine study value of the site	National	High	No	No	E2	Continued erosion keeps exposures clean	Y	Continued erosion keeps exposures clean	Y	Continued erosion keeps exposures clean	Y	Natural processes allowed and increased exposure	Y	Slight improvement once Gaps allowed to erode	Y	Continued erosion keeps exposures clean	Y	

### 6.04 Cromer

										Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105		
										NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan		
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	<i>Along most of the frontage the seawall will remain in place for this period. The groynes will fail towards the end of the period.</i>		<i>Complete failure of the seawall at the start of this period.</i>		<i>No defences.</i>		<i>Seawall and groynes maintained to prevent any erosion.</i>		<i>Seawall and groynes maintained to prevent any erosion.</i>		<i>Seawall and groynes maintained to prevent any erosion.</i>	
Residential properties	- Potential loss of housing through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent loss of residential properties to erosion	Sub-regional	High	No	Yes	H2	No loss	Y	Loss of over 250 residential properties	N	Further loss of over 250 residential properties	N	No loss	Y	No loss	Y	No loss	Y
Commercial properties	- Potential loss of businesses through erosion - Loss of investment on part of individual business owners	Yes	Local economy Community cohesion Investment of individual business owners	Individual owners, local economy, local community and visitors	Prevent loss of commercial properties due to erosion	Regional	High	No	Yes	C2	No loss	Y	Loss of over 100 commercial properties	N	Further loss of over 100 commercial properties in main town	N	No loss	Y	No loss	Y	No loss	Y
Commercial properties on the promenade	- Potential loss of businesses through erosion or repeated flooding	Yes	Local economy Community cohesion Investment of individual business owners Define the character of Cromer	Individual owners, local economy, local community and visitors	Prevent damage to/loss of commercial properties due to erosion	Regional	High	No	Yes	C2	Promenade maintained	Y	Loss of promenade and associated properties	N	(Promenade lost 20-50)	N	No loss	Y	No loss, but increased risk of overtopping (and no beach)	Y	No loss, but increased risk of overtopping (and no beach)	Y
Heritage sites	- Potential loss of important monuments and Grade II listed properties of Cromer Baptist Church and 'The Gangway'	Yes	Heritage value as listed buildings	Individual owners and regional community	Prevent loss of heritage sites to erosion	Regional	Medium	No	No	G3	No loss	Y	Loss of Grade II properties, and important monument sites	N	Further loss of heritage sites	N	No loss	Y	No loss	Y	No loss	Y
	- Grade I Cromer Church	Yes	Community cohesion and heritage value	National and local community	Prevent loss of church to erosion	National	Medium	No	No	G2	No loss	Y	Loss of church	N	Church lost in years 20-50.	N	No loss	Y	No loss	Y	No loss	Y
Community facilities	- Potential loss of community facilities through erosion	Yes	Benefit to local residents Community cohesion	Local community	Prevent loss of community facilities to erosion	Local	High	No	Yes	R4	No loss	Y	Loss of Post Office and museum	N	Further loss of facilities	N	No loss	Y	No loss	Y	No loss	Y

Recreational and tourist facilities	- Potential loss of tourist and recreation sites, accommodation and activities including major attractions, shops, holiday amenities, public open space and promenade	Yes	Tourism forms the main part of the local economy Sites also of benefit to local residents	Regional and local economies, businesses, residents and tourists	Prevent loss of tourist facilities to erosion	Regional	High	No	Yes	C2	No loss	Y	Loss of seafront properties, promenade and other facilities	N	Loss of main town seafront	N	No loss	Y	No loss	Y	No loss	Y
Pier	- Inappropriate management of beach and nearshore zone could jeopardise stability of pier and/or access to the pier	Yes	Tourism forms the main part of the local economy - Pier is important tourist attraction and leisure facility	Local community and regional users	Prevent loss of recreational facility	Regional	Medium	No	Yes	C3	No loss	Y	Structural integrity of pier threatened once promenade lost	N	Promenade lost and retreat of coast behind, therefore loss of pier	N	No loss	Y	Structural integrity of pier threatened by sea level rise and dropping beach levels	N	Structural integrity of pier threatened by sea level rise and dropping beach levels	N
		Yes	Important heritage feature and adds to character to the town - it is one of relatively few surviving piers in the country	National	Prevent loss of historical pier	Regional	Medium	No	No	G4	No loss	Y	Structural integrity of pier threatened once promenade lost	N	Promenade lost and retreat of coast behind, therefore loss of pier	N	No loss	Y	Structural integrity of pier threatened by sea level rise and dropping beach levels	N	Structural integrity of pier threatened by sea level rise and dropping beach levels	N
Lifeboat Station	- Potential loss of access - Potential loss of building	Yes	The lifeboat is a vital part of the RNLI complement of boats providing lifesaving services around the coast of the UK	National	Maintain Lifeboat Station in the town	International	High	No	Yes	F2	No loss	Y	Station is located at end of pier, therefore loss of station	N	(Station lost 20-50)	N	No loss	Y	Station is located at end of pier, therefore structural integrity may be threatened	N	Station is located at end of pier, therefore structural integrity may be threatened	N
Infrastructure	- Potential loss of or damage to services and roads through erosion	Yes	Services and facilities for the local business and resident communities Transportation linkages within Cromer	Local community	Maintain services to properties	Local	Medium	Yes	Yes	F5	No loss	Y	Loss associated with property loss	N	Loss associated with property loss	N	No loss	Y	No loss	Y	No loss	Y
	- Promenade contains sewage pumping station	Yes	Services and facilities for the local business and resident communities	Local community	Maintain pumping station	Sub-regional	High	Yes	Yes	F3	No loss	Y	Loss	N	Lost (years 20-50)	N	No loss	Y	Possible structural/maintenance problems	Y	Possible structural/maintenance problems	Y
Main Road at Cromer (A149)	- Potential loss of main A road through erosion	Yes	Provides local access within Cromer to properties & businesses	Local community	Maintain communication links within Cromer	Local	Medium	No	Yes	F5	No loss	Y	Many link roads lost	N	Further loss of town centre roads	N	No loss	Y	No loss	Y	No loss	Y



		Yes	Provides main links to adjacent towns and along the coast	Regional economy	Maintain major communication link between Cromer and settlements to the east	Sub-regional	Medium	Yes	Yes	F4	No loss	Y	Loss of section of A149	N	Further loss of A149	N	No loss	Y	No loss	Y	No loss	Y
Sea Wall	- Conserving the sea wall as a Grade II listed structure, which may restrict the options for its maintenance, repair or replacement.	Yes	Historical value	National community	Prevent loss of historical seawall	Regional	Medium	No	No	G4	No loss	Y	Loss of seawall	N	(Seawall lost 20-50)	N	No loss	Y	Work required to maintain structural integrity, which may threaten listing	N	Work required to maintain structural integrity, which may threaten listing	N
Beach and foreshore	- Potential deterioration in condition and appearance of the Blue Flag beach	Yes	Important recreational feature of the town	Regional users and local community	Maintain a beach suitable for recreation purposes	International	High	No	Yes	R1	Narrower beach	Y	Beach in retreated position	Y	Beach in retreated position	Y	Narrower beach	Y	Little or no beach	N	No beach	N
	- Potential health and safety hazard caused by deteriorating defences at foot of cliffs (Non-policy issue)	No			-																	
	- Dredging of off-shore banks for aggregate – concern about potential impact on beach levels (Non-policy issue)	No				-																
Access to beach	- Potential loss of access to beach	Yes	Provides access for local fishing industry, residents, tourists, maintenance contractors & emergency services	Local community	Maintain access to beach	Local	Low	Yes	Yes	F6	No loss	Y	Access lost with promenade	N	(Access lost with promenade 20-50)	N	No loss	Y	Access to promenade, but no beach	P	Access to promenade, but no beach	P

### 6.05 Cromer to Overstrand

											Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105	
											NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan	
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	Timber revetments continue to fail over period, with failure of timber groynes in the first half of the period.		No defences.		No defences.		Revetments and timber groynes allowed to fail.		No defences.		No defences.	
Royal Cromer Golf Course	- Potential loss of golf course through erosion	Yes	Provides recreation and tourist facility	Individual owner and local community	Prevent loss of golf course to erosion	Sub-regional	Low	No	Yes	R4	Loss of coastal strip of golf course	N	Loss of part of golf course	N	Further loss of golf course	N	Loss of coastal strip of golf course	N	Loss of part of golf course	N	Further loss of golf course	N

Cliffs	- Loss of SAC designated site - Continued erosion of cliffs necessary to maintain habitats	Yes	Critical habitat and landscape International community	International community	Maintain the existing habitats	International	High	No	No	E1	Designated as unprotected therefore continued erosion supports this	Y	Designated as unprotected therefore continued erosion supports this	Y	Designated as unprotected therefore continued erosion supports this	Y	Designated as unprotected therefore continued erosion supports this	Y	Designated as unprotected therefore continued erosion supports this	Y
Cliff-top footpath	- Potential loss of footpath through erosion	Yes	Important for recreation and tourism	National and Local community	Maintain footpath throughout frontage	Local	Medium	No	Yes	R4	Paston footpath lost, but possibility for re-routing	P	Paston footpath lost, but possibility for re-routing	P	Paston footpath lost, but possibility for re-routing	P	Paston footpath lost, but possibility for re-routing	P	Paston footpath lost, but possibility for re-routing	P
Beach and foreshore	- Potential deterioration in condition and appearance of the beach	Yes	Important recreational feature of the town	Regional users and local community	Maintain a beach suitable for recreation purposes	Sub-regional	Low	No	Yes	R4	Beach present	Y	Beach present, but possible access issues	Y	Beach present, but possible access issues	Y	Beach present	Y	Beach present, but possible access issues	Y
	- Dredging of off-shore banks for aggregate – concern about potential impact on beach levels (Non-policy issue)	No			-															
AONB	- The way in which the coastline is managed may have an adverse effect on the landscape which contributes to this status	Yes	High landscape value	National users and local community	Maintain landscape quality	National	High	No	No	L1	Landscape maintained through natural cliff erosion	Y	Landscape maintained through natural cliff erosion	Y	Landscape maintained through natural cliff erosion	Y	Landscape maintained through natural cliff erosion	Y	Landscape maintained through natural cliff erosion	Y

6.06 Overstrand

Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	Up to 2025		Up to 2055		Up to 2105							
											NAI	NAI	NAI	Preferred Plan	Preferred Plan	Preferred Plan						
											<i>The seawall will fail during this period, together with the timber revetment and groynes.</i>		<i>No defences.</i>		<i>No defences.</i>		<i>Seawall, timber revetment and groynes maintained.</i>		<i>Seawall, timber revetment and groynes allowed to deteriorate.</i>		<i>No defences.</i>	
Residential properties	- Potential loss of housing within the village through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent loss of residential properties to erosion	Local	High	No	Yes	H3	Loss of over 30 houses	N	Further loss of over 20 houses	N	Further loss of over 70 houses within village	N	Loss of less than 5 houses to the south of Overstrand	N	Loss of over 50 seafront houses	N	Further loss of over 70 houses within village	N

Commercial properties	- Potential loss of businesses through erosion	Yes	Local economy Community cohesion Investment of individual business owners	Individual owners, local economy, local community and visitors	Prevent loss of commercial properties to erosion	Local	Medium	No	Yes	C5	Loss of less than 5 seafront commercial properties	N	Further loss of seafront commercial properties	N	Further loss of seafront commercial properties	N	No loss	Y	Loss of part of High Street, with less than 10 properties lost	N	Loss of less than 5 commercial properties	N
Heritage sites	- Potential loss of heritage sites including 2 Grade II properties: 'The Pleasance' (which includes Lutyens buildings) and 'Sea Marge' Also general historical value due to connections with Sir Winston Churchill	Yes	Heritage value as listed buildings	Individual owners and regional community	Prevent loss of heritage sites to erosion	Regional	Medium	No	No	G3	Loss of 'Sea Marge'	N	No further loss in this epoch.	N	Loss of 'The Pleasance'	N	No loss	Y	Loss of 'Sea Marge'	N	Loss of 'The Pleasance'	N
Community facilities	- Potential loss of community facilities through erosion	Yes	Benefit to local residents Community cohesion	Local community	Prevent loss of community facilities to erosion	Local	High	No	Yes	R4	Loss of school	N	Further loss of community facilities	N	Further loss of community facilities	N	No Loss	Y	Loss of school	N	Loss of community facilities, buildings and land	N
Tourist facilities including the promenade	- Potential loss of recreation sites, including Jubilee Playground, and amenities	Yes	Tourism forms the main part of the local economy Sites also of benefit to local residents	Regional and local economies, businesses, residents and tourists	Prevent loss of tourist amenities to erosion	Sub-regional	Low	No	Yes	R4	Loss of Jubilee Ground, promenade and seafront facilities	N	Further loss of tourist facilities along Overstrand seafront	N	Further loss of tourist facilities along Overstrand seafront	N	Loss of Jubilee Ground but promenade remains	N	Loss of promenade and other tourist facilities along Overstrand seafront	N	Further loss of tourist facilities along Overstrand seafront	N
Infrastructure	- Potential loss of or damage to services and roads through erosion	Yes	Services and facilities for the local business and resident communities	Local community	Maintain services to properties	Local	Low	Yes	Yes	F6	Services lost with properties	N	Services lost with properties	N	Services lost with properties	N	Services lost at southern end only	P	Services lost with properties	N	Services lost with properties	N
		Yes	Transportation linkages within Overstrand	Local community	Maintain communication links within Overstrand	Local	Low	Yes	Yes	F6	Loss of link roads within Overstrand	N	Further loss of link roads within Overstrand	N	Loss of link roads within Overstrand	N	Only access roads to houses lost, not link roads	P	Road linkages within village lost with properties	N	Further road linkages within village lost with properties	N
	- Pumping Station and sewers	Yes	Serves Overstrand and Sidestrand	Local community	Maintain pumping station and sewers	Local	Low	Yes	No	F5	High possibility for pumping station being lost	N	Pumping station lost	N	(Pumping station lost 20-50)	N	Sewers lost with properties at southern end of village	P	Pumping station lost	N	(Pumping station lost 20-50)	N
Overstrand Sea Front County Wildlife Site	- Potential loss of habitat	Yes	Local nature conservation	Local community	Maintain the existing habitats	Sub-regional	Medium	No	No	E4	Ecological interest associated with slumped cliff, therefore status could improve with cliff erosion	Y	Ecological interest associated with slumped cliff, therefore status could	Y	Ecological interest associated with slumped cliff, therefore status could	Y	No change from present	Y	Ecological interest associated with slumped cliff, therefore status could	Y	Ecological interest associated with slumped cliff, therefore status could	Y

												improve with cliff erosion	improve with cliff erosion			improve with cliff erosion	improve with cliff erosion					
Access to beach	- Potential loss of access to beach	Yes	Provides access for local fishing industry, residents, tourists, maintenance contractors & emergency services	Local community	Maintain access to beach	Local	Low	Yes	Yes	F6	Beach access at Overstrand lost	N	No beach access	N	No beach access	N	No change in beach access from present	Y	Beach access at Overstrand lost	N	No beach access	N
Car park on cliff top	- Potential loss of car park top	Yes	Tourist and local parking facilities	Regional users and local community	Maintain car park facilities	Local	Medium	Yes	Yes	F5	Car park lost	N	No car park	N	No car park	N	Part of car park	P	Car park lost	N	No car park	N

### 6.07 Overstrand to Mundesley

											Up to 2025	Up to 2055	Up to 2105	Up to 2025	Up to 2055	Up to 2105						
											NAI	NAI	NAI	Preferred Plan	Preferred Plan	Preferred Plan						
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	Continued failure of any existing timber revetment and groynes	No defences.	No defences.	Timber revetment and groynes to North of Beach Vale Rd allowed to fail. To south Timber revetment and groynes maintained/ replaced.	Timber revetment and groynes allowed to deteriorate and fail.	No defences.						
Residential properties in Sidestrand	- Potential loss of housing within the village through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent loss of residential properties to erosion	Local	Medium	No	Yes	H4	No loss	Y	Some property loss (less than 5) to north of Sidestrand	N	Some property loss (less than 5) in Sidestrand	N	No loss	Y	Some property loss (less than 5) to north of Sidestrand	N	Some property loss (more than 10)	N
Residential properties in Trimmingham	- Potential loss of housing within the village through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent loss of residential properties to erosion	Local	Medium	No	Yes	H4	Some property loss (less than 5)	N	Some property loss (more than 20)	N	More than 40 houses lost	N	Some loss	N	Some property loss (more than 20)	N	More than 40 houses lost	N
Community facilities	- Potential loss of Trimmingham church through erosion	Yes	Benefit to local residents Community cohesion	Local community	Prevent loss of community facilities to erosion	Local	Medium	No	No	G5	No loss	Y	No loss	Y	Church lost	N	No loss	Y	No loss	Y	Church lost	N

MOD communications facility	- Potential loss of MOD mobile communications facility	Yes	Communications base	National	Prevent loss of MOD communication s facility	National	High	No	Yes	F2	No loss of MoD facility	Y	No loss of MoD facility	Y	Loss of MoD facility (but could be relocated)	N	No loss of MoD facility	Y	No loss of MoD facility	Y	Loss of MoD facility (but could be relocated)	N
Coastal Road at Trimingham	- Loss of coastal road through erosion	Yes	Local access within village to properties	Local community	Maintain communication link within Trimingham	Local	Low	Yes	Yes	F6	Loss of minor access roads	N	Loss of section of main coast road	N	Further loss of main coast road	N	Loss of minor access roads	N	Loss of section of main coast road	N	Further loss of main coast road	N
			Main coastal route providing link to adjacent towns	Regional community	Maintain major communication link between Trimingham and adjacent towns and villages	Sub-regional	Medium	Yes	Yes	F4	Loss of local access roads only	N	Loss of section of main coast road	N	Further loss of main coast road	N	Loss of local access roads only	N	Loss of section of main coast road	N	Further loss of main coast road	N
Agricultural land	- Potential loss of Grade 3 land through erosion	Yes	Economy/employment through farming	Individual farmers and local community	Prevent loss of farmland to erosion	Sub-regional	Low	Yes	Yes	C5	Loss of farmland	N	Further loss of farmland	N	Further loss of farmland	N	Loss of farmland	N	Further loss of farmland	N	Further loss of farmland	N
Cliffs	- Continual erosion of SSSI designated cliffs necessary to sustain habitats and exposures	Yes	Contribution to understanding of national geological succession	International community	Retain clean exposure of cliff face to maintain the geological study value of the site	National	High	No	No	E2	Continued erosion maintain geological exposure	Y	Continued erosion maintain geological exposure	Y	Continued erosion maintain geological exposure	Y	Continued erosion maintain geological exposure	Y	Continued erosion maintain geological exposure	Y	Continued erosion maintain geological exposure	Y
	- Continued cliff movements to support cliff face habitat types listed within SSSI designation	Yes	Soft rock cliff habitats for invertebrates	International community	Maintain the existing habitats	National	High	No	No	E2	Invertebrates associated with crevices and fallen debris therefore erosion should improve status	Y	Invertebrates associated with crevices and fallen debris therefore erosion should improve status	Y	Invertebrates associated with crevices and fallen debris therefore erosion should improve status	Y	Invertebrates associated with crevices and fallen debris therefore erosion should improve status	Y	Invertebrates associated with crevices and fallen debris therefore erosion should improve status	Y	Invertebrates associated with crevices and fallen debris therefore erosion should improve status	Y
	- Potential loss of CWS cliff and cliff top habitats	Yes	Cliff top habitats	Local environmental interests	Maintain the existing habitats	Sub-regional	Medium	No	No	E4	Possible loss of cliff top habitats due to coastal squeeze	N	Possible loss of cliff top habitats due to coastal squeeze	N	Possible loss of cliff top habitats due to coastal squeeze	N	Possible loss of cliff top habitats due to coastal squeeze	N	Possible loss of cliff top habitats due to coastal squeeze	N	Possible loss of cliff top habitats due to coastal squeeze	N
Beach and Foreshore	- Potential deterioration in condition and appearance of the beach	Yes	Important recreational feature	Regional users and local community	Maintain a beach suitable for recreation purposes	Sub-regional	Low	No	Yes	R4	Beach present	Y	Beach present (but limited access)	Y	Beach present (but limited access)	Y	Beach present	Y	Beach present (but limited access)	Y	Beach present (but limited access)	Y
	- Potential health and safety hazard caused by deteriorating defences at foot of cliffs (Non-	No			-																	

	policy issue) - Dredging of offshore banks for aggregate – concern about potential impact on beach levels (Non-policy issue)	No																				
Access to beach	- Potential loss of access to beach	Yes	Provides access for local fishing industry, residents, tourists, maintenance contractors & emergency services	Regional users and local community	Maintain access to beach	Local	Low	Yes	Yes	F6	Beach access at Vale Rd will remain but works may be required	Y	Access lost	N	No access	N	Beach access at Vale Rd will remain but works may be required	Y	Access lost	N	No access	N
Cliff-top caravan park at Vale Road and Mundesley Cliffs North	- Loss of cliff-top caravan parks sited on eroding cliffs - Loss of considerable investment on part of local businesses	Yes	Tourist accommodation Local economy	Individual owners. Regional users, local community	Prevent loss of tourist accommodation to erosion	Regional	Medium	Yes	Yes	C3	Some loss of caravan parks	N	Total loss of caravan parks	N	(Lost in 20-50)	N	Some loss of caravan parks	N	Total loss of caravan parks	N	(Lost in 20-50)	N
AONB	- The way in which the coastline is managed may have an adverse effect on the landscape which contributes to this status	Yes	High landscape value	National users and local community	Maintain landscape quality	National	High	No	No	L1	Landscape maintained through natural cliff erosion	Y	Landscape maintained through natural cliff erosion	Y	Landscape maintained through natural cliff erosion	Y	Landscape maintained through natural cliff erosion	Y	Landscape maintained through natural cliff erosion	Y	Landscape maintained through natural cliff erosion	Y

### 6.08 Mundesley

											Up to 2025	Up to 2055	Up to 2105	Up to 2025	Up to 2055	Up to 2105						
											NAI	NAI	NAI	Preferred Plan	Preferred Plan	Preferred Plan						
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	Defences will mostly remain effective until the end of the period.	The seawall will fail at the start of this period.	No defences.	Seawall and groynes maintained.	Seawall (and groynes until redundant) maintained.	Seawall allowed to fail.						
Residential properties	- Potential loss of housing within the village through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent loss of residential properties to erosion	Local	High	No	Yes	H3	No loss along main frontage, but loss of more than 20 houses to north	Y	Further loss of more than 70 houses	N	Further loss of more than 110 houses	N	Loss of less than 5 properties at Cliftonville	P	No further loss	P	Loss of over 200 houses	N
Commercial properties	- Potential loss of businesses through erosion	Yes	Local economy Community cohesion Investment of individual business owners	Individual owners, local economy, local community and visitors	Prevent loss of commercial properties to erosion	Local	High	No	Yes	C4	No loss along main frontage, but loss of less than 5 properties to the north	Y	Loss of over 20 commercial properties	N	Further loss of less than 10 commercial properties	N	No loss	Y	No loss	Y	Loss of more than 30 commercial properties	N

Heritage Sites	- Potential loss of important monument sites and Grade II listed buildings	Yes	Sites identified as high heritage value due to their unique nature or listed	Individual owners, regional and national community	Prevent loss of heritage sites to erosion	National	High	No	No	G2	No loss	Y	All Saint's Church and an important monument site lost	N	Loss of Brick Kiln Grade II building and important monument site	N	No loss	Y	No loss	Y	Loss of heritage sites	N
Community facilities	- Potential loss of community facilities, including Mundesley library and Maritime Museum, through erosion		Benefit to local residents Community cohesion	Local community	Prevent loss of community facilities to erosion	Local	High	No	Yes	R4	Loss of library, but Maritime Museum will remain	N	Loss of Museum and other seafront facilities	N	Loss of other facilities	N	No loss	Y	No loss	Y	Some loss of community facilities	N
Infrastructure	- Potential loss of or damage to services and amenities through erosion. Of particular concern are the AW outfall headworks. - Need to maintain access to outfall screens for Mundesley Beck	Yes	Services and facilities for the local business and resident communities	Local community	Maintain services to properties, outfall headworks and access to outfall screens	Sub-regional	High	Yes	Yes	F3	Services lost with properties	N	Services lost with properties	N	Services lost with properties	N	No loss	Y	No loss	Y	Services lost with properties	N
B1159 at Mundesley	- Potential loss of the road, which is the main thoroughfare in the town and forms the main coast road linking villages between Cromer and Caister	Yes	Important link road for both locals and tourist trade - provides local access within Mundesley to properties & businesses	Regional community /economy	Maintain communication link within Mundesley	Local	Medium	No	No	F5	No loss	Y	Loss of section of road in town centre	N	Further loss of road	N	No loss	Y	No loss	Y	Loss of main links	N
	- Loss of the cliff top section of road would require significant diversions around the town	Yes	Provides main links to adjacent towns and along the coast	Regional community /economy	Maintain major communication link between Mundesley and adjacent towns and villages	Sub-regional	Medium	Yes	Yes	F4	No loss	Y	Loss of section of road in town centre	N	Further road loss	N	No loss	Y	No loss	Y	Loss of main links	N
Mundesley IRB station	- Potential impact on launching of the lifeboat	Yes	Forms part of chain of lifeboats providing rescue services around the coast.	Local community, national mariners	Maintain effective launching site for lifeboat	Local	Medium	No	Yes	F5	Lifeboat station will remain	Y	Lifeboat station lost	N	(Lifeboat station lost 20-50)	N	Lifeboat station will remain	Y	Lifeboat station will remain, but increased risk of overtopping	Y	Lifeboat station will remain but possible issue with launching due to drop in beach levels	N
Beach and foreshore	- The way in which the coastline is managed may have an adverse effect on the condition and appearance of the Blue Flag beach	Yes	Important recreational feature of the town	Regional users and local community	Maintain a beach suitable for recreation purposes	International	High	No	Yes	R1	Narrower beach	Y	Beach in retreated position	Y	Beach in retreated position	Y	Narrower beach	Y	No beach	N	Beach in retreated position	Y
	- Dredging of off-shore banks for aggregate – concern about potential impact on beach levels (Non-policy issue)	No																				

### 6.09 Mundesley to Bacton Gas Terminal

										Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105		
										NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan		
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance ?	Enough?	Replace?	Rank	<i>Both the groynes and timber revetment will fail during this period.</i>		<i>No defences.</i>		<i>No defences.</i>		<i>Timber revetment and groynes allowed to fail.</i>		<i>No defences.</i>		<i>No defences.</i>	
Mundesley Holiday Camp and Hillside Chalet Park	- Potential loss of tourist accommodation due to erosion - Loss of considerable investment on part of local businesses	Yes	Tourist accommodation Local economy	Individual owners. Regional users, local community	Prevent loss of tourist accommodation to erosion	Regional	Medium	Yes	Yes	C3	No loss of Hillside Chalet Camp, but partial loss of Mundesley Holiday Camp	N	Camps close to cliff edge	N	Camps lost	N	No loss of Hillside Chalet Camp, but partial loss of Mundesley Holiday Camp	N	Camps close to cliff edge	N	Camps lost	N
	Loss of heritage site at Mundesley Holiday Camp	Yes	Important heritage feature as it was the first purpose built camp in UK.	Regional	Prevent loss of heritage site to erosion	Regional	Medium	No	No	G4	Partial loss of Mundesley Holiday Camp	N	Partial loss of Mundesley Holiday Camp	N	Camp lost	N	Partial loss of Mundesley Holiday Camp	N	Partial loss of Mundesley Holiday Camp	N	Camp lost	N
Heritage sites	- Potential loss of Saxon Cemetery	Yes	Site identified as high heritage value due to their unique nature	National community	Prevent loss of heritage site to erosion	National	High	No	No	G2	No loss	Y	Loss of heritage site	N	Heritage site lost in 20-50	N	No loss	Y	Loss of heritage site	N	Heritage site lost in 20-50	N
Agricultural land	- Potential loss of Grade 1 agricultural land through erosion	Yes	Economy/employment through farming	Individual farmers and local community	Prevent loss of farmland to erosion	Regional	Medium	Yes	Yes	C3	Loss of farmland	N	Further loss of farmland	N	Further loss of farmland	N	Loss of farmland	N	Further loss of farmland	N	Further loss of farmland	N
Cliffs	- Continual erosion of SSSI designated cliffs to sustain habitats and exposures	Yes	Nationally important site for its extensive Pleistocene sequence	National community	Retain clean exposure of cliff face to maintain the geological and biological study value of the site	National	High	No	No	E2	Continued erosion will enhance geological exposure and habitats	Y	Continued erosion will enhance geological exposure and habitats	Y	Continued erosion will enhance geological exposure and habitats	Y	Continued erosion will enhance geological exposure and habitats	Y	Continued erosion will enhance geological exposure and habitats	Y	Continued erosion will enhance geological exposure and habitats	Y
Beach and Foreshore	- Potential deterioration in condition and appearance of the beach	Yes	Important recreational feature	Regional users and local community	Maintain a beach suitable for recreation purposes	Sub-regional	Low	No	Yes	R4	Beach similar to today	Y	Beach similar to today	Y	Beach present but possible access problems	Y	Beach similar to today	Y	Beach similar to today	Y	Beach present but possible access problems	Y
	- Dredging of off-shore banks for aggregate – concern about potential impact on beach levels (Non-policy issue)	No																				
Paston Way footpath	- Potential loss of footpath	Yes	Important for recreation and tourism	Regional users and local community	Maintain footpath throughout frontage	Local	Medium	No	Yes	R4	Loss of Paston way footpath but could be	P	Loss of Paston way footpath	P	Loss of Paston way footpath	P	Loss of Paston way footpath but could be	P	Loss of Paston way footpath	P	Loss of Paston way footpath	P



											relocated	but could be relocated	but could be relocated	relocated	but could be relocated	but could be relocated
AONB	- The way in which the coastline is managed may have an adverse effect on the landscape which contributes to this status	Yes	High landscape value	National users and local community	Maintain landscape quality	National	High	No	No	L1	Landscape maintained through natural cliff erosion	Y Landscape maintained through natural cliff erosion	Y Landscape maintained through natural cliff erosion	Y Landscape maintained through natural cliff erosion	Y Landscape maintained through natural cliff erosion	Y Landscape maintained through natural cliff erosion

### 6.10 Bacton Gas Terminal

											Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105	
											NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan	
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	<i>Both the groynes and timber revetment will fail during this period.</i>		<i>No defences.</i>		<i>No defences.</i>		<i>Timber revetment replaced by seawall and groynes maintained.</i>		<i>Seawall and timber groynes maintained.</i>		<i>Measures to reduce erosion rate.</i>	
Gas Terminal	- Potential risk of loss or damage to the site and its plant through erosion	Yes	Important nodal point for national energy infrastructure	National	Prevent loss of Gas Terminal	National	High	No	Yes	F2	Loss of seaward edge of terminal site	N	Further loss of terminal site	N	Further loss of terminal site	N	Loss of land but facility will remain	Y	No loss of terminal but possible issues due to drop in beach volume	Y	Loss of seaward edge of terminal site	N
			Provides local employment	Local economy, local community	Prevent loss of employment	Regional	High	No	Yes	C2	Loss of seaward edge of terminal site	N	Further loss of terminal site	N	Further loss of terminal site	N	Loss of land but facility will remain	Y	No loss of terminal but possible issues due to drop in beach volume	Y	Loss of seaward edge of terminal site	N
Cliffs	- Continual erosion of SSSI designated cliffs to sustain habitats and exposures	Yes	Nationally important site for its extensive Pleistocene sequence	National community	Retain clean exposure of cliff face to maintain the geological and biological study value of the site	National	High	No	No	E2	Cliff erosion will enhance geological exposure and habitats	Y	Cliff erosion will enhance geological exposure and habitats	Y	Cliff erosion will enhance geological exposure and habitats	Y	Cliff line held therefore poor exposure of geology	N	Cliff line held therefore poor exposure of geology	N	Cliff erosion will enhance geological exposure and habitats	Y

### 6.11 Bacton, Walcott and Ostend

										Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105		
										NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan		
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	<i>The timber groynes will fail at the start of this period. The seawall along southern section will fail towards the end of the period.</i>		<i>No defences.</i>		<i>No defences.</i>		<i>Seawall and timber groynes maintained.</i>		<i>Seawall and timber groynes allowed to deteriorate and fail.</i>		<i>No defences.</i>	
Residential properties	- Potential loss of housing within the village through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent damage to/loss of residential properties due to flooding	Local	High	No	Yes	H3	Loss of over 100 houses	N	Further loss of over 90 houses	N	Further loss of over 190 houses	N	Loss of less than 40 properties at Ostend	N	Further loss of over 160 houses over whole frontage	N	Further loss of over 190 houses	N
Commercial properties	- Risk of flooding to businesses along the coast road	Yes	Local economy Community cohesion Investment of individual business owners	Individual owners, local economy, local community and visitors	Prevent damage to/loss of commercial properties due to flooding	Local	High	No	Yes	C4	Less than 10 seafront properties lost	N	Further loss of up to 10 properties	N	Further loss of up to 10 properties	N	No loss	Y	Over 15 properties lost	N	Further loss of up to 10 properties	N
Cliff-top caravan parks at Bacton	- Potential loss of cliff-top caravan parks due to erosion - Loss of considerable investment on part of local businesses	Yes	Tourist accommodation Local economy	Individual owners. Regional users, local community	Prevent loss of tourist accommodation to erosion	Regional	Medium	Yes	Yes	C3	Some loss of land	N	Loss of most of caravan parks	N	Further loss of caravan parks	N	No loss of caravan parks	Y	Some loss of land	P	Loss of most of caravan parks	N
Holiday and residential properties at Ostend	- Potential loss of cliff-top properties due to erosion - Loss of considerable investment on part of local businesses	Yes	Tourist accommodation Local economy	Individual owners. Regional users, local community	Prevent loss of tourist accommodation to erosion	Regional	Medium	Yes	Yes	C3	Loss of some seaward properties	N	Further loss of properties	N	Further loss of properties	N	Loss of some seaward properties	N	Further loss of properties	N	Further loss of properties	N
Heritage site	- Potential loss of Ostend House	Yes	Heritage interest as noted in SMR register	Regional community	Prevent loss of heritage site	Regional	Medium	No	N	G4	Building lost	N	(lost in 0-20)	N	(lost in 0-20)	N	Building lost	N	(lost in 0-20)	N	(lost in 0-20)	N
B 1159 at Walcott	- Potential damage to or loss of road through erosion.	Yes	Strategic emergency access to Bacton Gas Terminal	Regional Users	Maintain access to Bacton Gas Terminal	Sub-regional	High	Yes	Yes	F3	Road lost at Walcott but alternative emergency route possible	N	Road lost at Walcott but alternative emergency route possible	N	Road lost at Walcott but alternative emergency route possible	N	No loss	Y	Loss of access roads and high risk at Bacton (but possibility of re-routing road)	N	Road lost at Walcott but alternative emergency route possible	N

	- Flooding of road through overtopping and spray	Yes	Transportation linkages between adjacent towns and villages along the coast	Regional economy	Maintain communication links to adjacent towns and villages	Sub-regional	Medium	Yes	Yes	F4	Local roads lost and road between Bacton and Walcott lost	N	(Local roads lost 0-20)	N	(Local roads lost 0-20)	N	No change from present	Y	Loss of access roads and high risk at Bacton (but possibility of re-routing road)	N	Road lost at Walcott	N
Access to beach	- Potential loss of access to beach	Yes	Provides access for local fishing industry, residents, tourists, maintenance contractors & emergency services	Regional users and local community	Maintain access to beach	Local	Low	Yes	Yes	F6	Access lost when sea wall fails but possibility for relocation	N	Access lost when sea wall fails but possibility for relocation	N	Access lost when sea wall fails but possibility for relocation	N	No loss	Y	Access lost when sea wall fails but possibility for relocation	N	Access lost but possibility for relocation	N
Beach and foreshore	- Potential deterioration in condition and appearance of the beach	Yes	Important recreational feature	Regional users and local community	Maintain a beach suitable for recreation purposes	Sub-regional	Low	No	Yes	R4	Beach similar to present	Y	Beach similar to present	Y	Beach similar to present	Y	Beach similar to present	Y	Narrower beach	Y	Beach similar to present	Y
	- Dredging of offshore banks for aggregate – concern about potential impact on beach levels (Non-policy issue)	No																				

### 6.12 Ostend to Eccles

											Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105	
											NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan	
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	Timber revetment and groynes will fail.		No defences.		No defences.		Timber revetment and groynes allowed to fail.		No defences.		No defences.	
Residential properties at Happisburgh	- Continued loss of housing through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss - Sustainability of the village community reduces with each property loss - Difficulty in justification of scheme to protect properties.	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent loss of residential properties to erosion	Local	Medium	No	Yes	H4	Loss of some seafront houses along Beach Road (less than 15)	N	Further loss of seafront houses along Beach Road (less than 10)	N	Further loss of seafront houses along Beach Road (less than 15)	N	Loss of some seafront houses along Beach Road (less than 15)	N	Further loss of seafront houses along Beach Road (less than 10)	N	Further loss of seafront houses along Beach Road (less than 15)	N

Cliff-top caravan park at Happisburgh	- Loss of cliff-top caravan parks sited on eroding cliffs - Loss of considerable investment on part of local businesses	Yes	Tourist accommodation Local economy	Individual owners. Regional users, local community	Prevent loss of tourist accommodation to erosion	Regional	Medium	Yes	Yes	C3	Loss of caravan park	N	(Park lost in 0-20)	N	(Park lost in 0-20)	N	Loss of caravan park	N	(Park lost in 0-20)	N	(Park lost in 0-20)	N
Listed buildings in Happisburgh	- Potential threat to Grade I St Mary's Church and the Grade II Manor House and Hill House Hotel	Yes	Grade 1 Listed buildings due to national heritage interests	National and Local community	Prevent loss of heritage sites to erosion	National	Medium	No	No	G3	No loss to building but loss of seafront land	Y	Buildings at high risk of erosion	N	Loss of buildings	N	No loss to building but loss of seafront land	Y	Buildings at high risk of erosion	N	Loss of buildings	N
Agricultural land	- Potential loss of Grade 1 land through erosion	Yes	Economy/employment through farming	Individual farmers and local community	Prevent loss of farmland to erosion	Regional	Medium	Yes	Yes	C3	Loss of farmland	N	Further loss of farmland	N	Further loss of farmland	N	Loss of farmland	N	Further loss of farmland	N	Further loss of farmland	N
Cliffs	- Continual erosion of SSSI designated cliffs necessary to maintain a clear face for geological study	Yes	Important geological educational site - important part of the Anglian "jigsaw" of sites which together lead to an understanding of the sequence of glacially related events	National community	Continued erosion of cliffs to maintain exposures	National	High	No	No	E2	Continued erosion will allow exposure of geology	Y	Continued erosion will allow exposure of geology	Y	Continued erosion will allow exposure of geology	Y	Continued erosion will allow exposure of geology	Y	Continued erosion will allow exposure of geology	Y	Continued erosion will allow exposure of geology	Y
	- Erosion of cliffs may lead to outflanking of flood defences to the south	No																				
Access to the beach	- Re-establishment of access to beach at Happisburgh following its collapse in early 2003	Yes	Ramp formerly provided access for residents, tourists, maintenance contractors & emergency services	Local community	Maintain access to the beach	Local	Low	Yes	Yes	F6	Access likely to be difficult	N	No access	N	No access	N	Access likely to be difficult	N	No access	N	No access	N
HM Coastguard Rescue facility	- Potential loss of building through erosion	Yes	Coordination of international marine rescue	International and national mariners	Maintain facility	International	High	No	Yes	F1	Loss of building and no access	N	Loss of building	N	Loss of building	N	Loss of building and no access	N	Loss of building	N	Loss of building	N
Lifeboat access	- Ramp at Happisburgh now derelict forcing RNLI crew to launch at Cart Gap	Yes	The lifeboat is a vital part of the RNLI complement of boats providing lifesaving services around the coast of the UK	National and international mariners	Create and maintain a launching facility in the vicinity that meets the needs of the lifeboat crew	International	High	No	Yes	F2	No lifeboat access	N	No access	N	No access	N	No lifeboat access	N	No access	N	No access	N
Beach and foreshore	- Potential deterioration in condition and appearance of the beach	Yes	Important recreational feature	Regional users and local community	Maintain a beach suitable for recreation purposes	Sub-regional	Low	No	Yes	R4	Small beach present in retreated position	Y	Beach, but access issues	P	Beach, but access issues	P	Small beach present in retreated position	Y	Beach, but access issues	P	Beach, but access issues	P
	- Dredging of off-shore banks for aggregate – concern about potential impact on beach levels (Non-policy issue)	No																				

- Potential health and safety hazard caused by deteriorating defences at foot of cliffs (Non-policy issue)	No																			
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6.13 Eccles to Winterton Beach Road

Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105	
											NAI	Y/N	NAI	Y/N	NAI	Y/N	Preferred Plan	Y/N	Preferred Plan	Y/N	Preferred Plan	Y/N
The Bush Estate, Eccles	- Potential damage/ loss of housing - concern of outflanking of concrete defences - Anxiety and stress to owners and occupiers facing loss - Loss of local unadopted road system - EA embargo on any further development of the Bush Estate	Yes	Homes for people - represents substantial investment for individual property owners Tourist accommodation Restricts property at risk behind the sea wall	Regional users and local community Local economy, local community	Prevent loss of/damage to properties due to flooding	Local	Low	No	Yes	H5	No loss	Y	No loss	Y	Loss of Bush Estate	N	No loss	Y	No loss	Y	Loss (or partial loss) under 3 scenarios	N
Car parks at Cart Gap	- Loss of or damage to car park as a result of erosion or flooding	Yes	Parking facilities for local communities and tourists	Regional users and local community	Maintain car parking facilities	Local	Medium	Yes	Yes	F5	No loss	Y	No loss	Y	Loss	N	No loss	Y	No loss	Y	Loss under 3 scenarios	N
Car parks at Sea Palling and Horsey Gap.	- Loss of or damage to car parks as a result of erosion or flooding	Yes	Parking facilities for local communities and tourists	Regional users and local community	Maintain car parking facilities	Local	Medium	Yes	Yes	F5	No loss	Y	High risk of loss of car parks due to breach and subsequent flooding	Y	Loss	N	No loss	Y	No loss	Y	Loss	N

Marram Hills CWS and Waxham Sands Holiday Park CWS	- Potential loss of or damage to habitats	Yes	Important coastal habitat covered by BAP targets	Regional and local communities	Maintain the existing habitats	Sub-regional	Medium	No	Yes	E4	No loss of dunes behind the seawall and reefs will help maintain a beach in front	Y	No loss of dunes along the Sea Palling stretch, but risk of breach of dunes to south, once seawall fails	Y	Potential recreation of beach-dune system in retreated position, but net loss of dune volume expected	P	No loss of dunes behind the seawall and reefs, together with recharge will help maintain a beach and embryo dunes in front	Y	No loss of dunes behind the seawall and reefs, together with recharge will help maintain a beach and embryo dunes in front	Y	Potential recreation of beach-dune system in retreated position, but net loss of dune volume expected	P
Access to the beach	- Potential loss of access through erosion or management measures - Informal accesses through dune system reduce their effectiveness	Yes	Provides access for local fishing industry, residents, tourists, maintenance contractors & emergency services	Regional users and local community	Maintain access to beach	Local	Low	Yes	Yes	F6	No change to access	Y	No change to access	Y	Present access lost, but possible relocation	N	No change to access	Y	No change to access	Y	Present access lost, but possible relocation	N
Residential properties at Sea Palling	- Potential loss/damage to housing through flooding - Loss of community through inundation if existing defences are allowed to deteriorate - Anxiety and stress to owners and occupiers facing loss - Standard of flood protection may inhibit further development	Yes	Homes for people - represents substantial investment for individual property owners	Local community, residents	Prevent damage to/loss of residential properties due to flooding	Local	High	No	Yes	H3	No loss	Y	No loss	Y	Loss/damage to housing through flooding	N	No loss	Y	No loss	Y	Lost under retired lines 2 and 3 (*possibly retained under retired line 1)	N
Commercial properties at Sea Palling	- Potential damage to or loss of businesses through flooding	Yes	Local economy Community cohesion Investment of individual business owners	Individual owners, local economy, local community and visitors	Prevent damage to/loss of commercial properties due to flooding	Local	Medium	No	Yes	C5	No loss	Y	No loss	Y	Loss/damage to properties through uncontrolled flooding	N	No loss	Y	No loss	Y	Lost under retired lines 2 and 3 (*possibly retained under retired line 1)	N
Infrastructure at Sea Palling	- Potential for damage to or loss of services and amenities through flooding	Yes	Services and facilities for the local business and resident communities	Local communities, residents, businesses and tourists.	Maintain services to properties	Local	Medium	No	Yes	C5	No loss	Y	No loss	Y	Loss/damage to services through uncontrolled flooding	N	No loss	Y	No loss	Y	Lost under retired lines 2 and 3 (*possibly retained under retired line 1)	N
Sea Palling IRB station	- Potential impact on launching of the lifeboat	Yes	Forms part of chain of lifeboats providing rescue services around the coast.	Local community, national and international mariners	Maintain effective launching site for lifeboat	Local	Medium	Yes	No	F5	No loss	Y	No loss	Y	Unlikely to be maintained in current position	N	No loss	Y	No loss	Y	Loss under 3 scenarios	N

Beach and Foreshore	- Potential loss of Blue Flag award	Yes	Important recreational feature of the town	Regional users and local community	Maintain a beach suitable for recreation purposes	Local	Medium	No	Yes	F5	No loss	Y	Narrowing beach	Y	Beach likely in some form, but different from today	Y	Beach present (With recharge)	Y	Beach present (With recharge)	Y	Loss under 3 scenarios – potential for beach in a retreated position, but different form to today	P
	- Potential deterioration in condition and appearance of the beach (Non-policy issue)	No																				
	- Dredging of off-shore banks for aggregate – concern about potential impact on beach levels (Non-policy issue)	No																				
Residential properties at Waxham	- Potential loss/damage to housing through flooding - Loss of community through inundation if existing defences are allowed to deteriorate - Anxiety and stress to owners and occupiers facing loss - Standard of flood protection may inhibit further development	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent damage to/loss of residential properties due to flooding	Local	Medium	No	Yes	H4	No loss	Y	High risk of damage to/ loss of properties due to uncontrolled flooding	N	Damage to/ loss of properties due to flooding	N	No loss	Y	No loss	Y	Loss under 3 scenarios	N
Community facilities at Waxham	- Potential loss of Waxham church through erosion	Yes	Benefit to local residents Community cohesion	Local community	Prevent loss of church to erosion	Local	Medium	No	No	G5	No loss	Y	Damage to/ loss of properties due to flooding	N	Damage to/ loss of properties due to flooding	N	No loss	Y	No loss	Y	Loss under 3 scenarios	N
Waxham Barn	- Potential risk to Grade 1 listed building	Yes	The barn is one of the most important historical buildings in the county	Regional economy, National and local communities	Prevent damage to/loss of Waxham Barn due to flooding	National	High	No	No	G2	No loss	Y	Damage to/ loss of property due to flooding	N	Damage to/ loss of property due to flooding	N	No loss	Y	No loss	Y	Loss under 3 scenarios	N
Winterton Dunes and Ness	- Potential loss of dune and coastal habitats due to coastal squeeze (candidate SAC site) - site is a SSSI geomorphological site and as such is dependent on coastal processes continuing: the integrity of the ness is dependent on a continuing flow of sediment from the north - loss of unique landscape - Interpretation of coastal processes assumed in preparing the CHaMP for Winterton Ness	Yes	Habitat site for rare amphibians and populations of species which nest on foreshore. Beach height is critical. Contribution to understanding of ness geomorphology (Unique landscape - included in AONB)	International and national community	Maintain the existing habitats	International	High	No	Yes	E2	Potential reduction in dune area both due to natural ness fluctuations and reduced sediment feed	N	Dune erosion likely due to breaching to north	N	Dune erosion likely due to breaching to north	N	Potential loss of dune area due to ness fluctuation, but sediment supply via recharge	N	Potential loss of dune area due to ness fluctuation , but sediment supply via recharge to the north at Sea Palling	N	High risk of breach and erosion	N

	- Loss of County Wildlife Site and NNR	Yes	Important habitat site	National users and local and national community	Maintain natural geomorphological processes	National	High	No	No	E2	Natural processes allowed to take place	Y	Natural processes allowed to take place	Y	Natural processes allowed to take place	Y	Natural processes allowed to take place	Y	Natural processes allowed to take place	Y	
Residential properties at Winterton (north of Beach Road)	- Potential damage to or loss of some lower-lying housing through flooding - Concern over reduced protection due to eroding dunes - Anxiety and stress to owners and occupiers facing loss - Impact on sustainability of the village community - Standard of flood protection may inhibit further development - Complaints from residents that windblown sand is migrating onto property (Non-policy issue)	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent damage to/loss of residential properties due to flooding or erosion	Local	Medium	No	Yes	H4	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence.	Y	
AONB	- The way in which the coastline is managed may have an adverse effect on the landscape which contributes to this status	Yes	High landscape value	National users and local community	Maintain landscape quality	National	High	No	No	L1	No change from present condition	Y	Uncontrolled flooding may be detrimental to landscape	N	Uncontrolled flooding may be detrimental to landscape	N	No change from present condition	Y	No change from present condition	Y	Once retired line option constructed a more naturally functioning coast will develop



**(6.13) Happisburgh to Winterton Broadlands**

										Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105		
										NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan		
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	<i>(see Happisburgh to Winterton Dunes)</i>		<i>(see Happisburgh to Winterton Dunes)</i>		<i>(see Happisburgh to Winterton Dunes)</i>		<i>(see Happisburgh to Winterton Dunes)</i>		<i>(see Happisburgh to Winterton Dunes)</i>		<i>(see Happisburgh to Winterton Dunes)</i>	
Residential properties (including Villages of Hickling, Horsey, Potter Heigham, West Somerton)	- Potential damage/ loss of housing through flooding - Anxiety and stress to owners and occupiers facing loss - Standard of flood protection may inhibit further development	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent damage to/loss of residential properties due to flooding	Local	High	No	Yes	H3	No loss	Y	High risk of flooding and uncontrolled inundation	N	High risk of flooding	N	No loss	Y	No loss	Y	Loss varies under 3 scenarios, but proposed that Hickling, Potter Heigham and West Somerton probably would be protected	N
Commercial properties (including Villages of Hickling, Horsey, Potter Heigham, West Somerton)	- Potential loss/damage to commercial properties and community facilities due to inundation	Yes	Tourism is important for local economy Local community cohesion and houses for people Intrinsic part of the Broadland landscape and attractions	Local communities, individual property owners, regional tourism and agricultural economies	Prevent damage to/loss of commercial properties due to flooding	Regional	High	No	Yes	C2	No loss	Y	High risk of flooding and uncontrolled inundation	N	High risk of flooding	N	No loss	Y	No loss	Y	Loss varies under 3 scenarios, but proposed that Hickling, Potter Heigham and West Somerton probably would be protected	N
Broadland Habitats (Note: work in progress on Strategy Study to assess impacts of MR options)	- Potential saltwater penetration of this otherwise freshwater area - Loss/damage to nationally important wetland area for recreation and conservation due to wide-scale inundation of this area - Changes in coastal processes resulting in biological issues on cSAC - Drainage of the land and deep-water seepage are	Yes	Important freshwater systems Lowland grass and dune/dune heath land interest	International community	Maintain the existing habitats	International	High	No	No	E1	No change from present	Y	Total change in habitats – potential for increased biodiversity	Y	Total change in habitats – potential for increased biodiversity	N	No change from present	Y	No change from present	Y	Total change in habitats – potential for increased biodiversity (varies under 3 scenarios)	N

	increasing the salinity of run-off into River Thurne																					
Agricultural land	- Potential damage to or ultimate loss of land through flooding	Yes	Economy/employment through farming	Individual farmers and local community	Prevent damage to/loss of farmland due to flooding	Regional	Low	Yes	Yes	C4	No loss	Y	High risk of flooding and uncontrolled inundation	N	High risk of flooding	N	No loss	Y	No loss	Y	Loss varies under 3 scenarios	N
Tourist related property and facilities	- Unrestricted flooding of the Broads area would lead to a decimation of the tourism economy of the area with loss of pubs, restaurants, boatyards	Yes	Tourism forms the main element of the local economy	Regional users and local economy	Prevent damage to/ loss of tourist facilities due to flooding	Regional	High	No	Yes	C2	No loss	Y	High risk of flooding and uncontrolled inundation	N	High risk of flooding	N	No loss	Y	No loss	Y	Loss varies under 3 scenarios, but Hickling, Potter Heigham and West Somerton would be protected	N
Windmills and other historic buildings/ heritage sites	- Loss/ damage to historic properties/ heritage sites due to inundation including Grade II and II* properties and monuments of high importance	Yes	Characteristic feature of the Broads area Tourist attraction Regional and Local environmental interests	Regional and Local interests	Prevent damage to/loss of historical buildings/ Heritage sites due to flooding	Regional	Medium	No	No	G2	No loss	Y	High risk of flooding and uncontrolled inundation	N	High risk of flooding	N	No loss	Y	No loss	Y	Loss varies under 3 scenarios	N
Infrastructure	- Potential loss of or damage to services and roads through erosion	Yes	Services and facilities for the local business and resident communities	Local community	Maintain services to properties	Sub-regional	High	No	No	F3	No loss	Y	High risk of flooding and uncontrolled inundation	N	High risk of flooding	N	No loss	Y	No loss	Y	Loss varies under 3 scenarios, but Hickling, Potter Heigham and West Somerton would be protected	N
B1159 Coast road	- Potential loss of road through inundation	Yes	Vital communication route for villages between Happisburgh and Winterton	Regional economy, residents, businesses local community	Maintain communication link for villages between Happisburgh and Winterton	Sub-regional	High	No	No	F3	No loss	Y	High risk of flooding and uncontrolled inundation	N	High risk of flooding	N	No loss	Y	No loss	Y	Loss varies under 3 scenarios	N

AONB	- The way in which the coastline is managed may have an adverse effect on the landscape which contributes to this status	Yes	High landscape value	National users and local community	Maintain landscape quality	National	High	No	No	L1	No change from present condition	Y	Uncontrolled flooding may be detrimental to landscape	N	Uncontrolled flooding may be detrimental to landscape	N	No change from present condition	Y	No change from present condition	Y	Once retired line option constructed a more naturally functioning coast will develop	Y
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**6.14 Winterton to Scratby**

											Up to 2025	Up to 2055	Up to 2105	Up to 2025	Up to 2055	Up to 2105						
											NAI	NAI	NAI	Preferred Plan	Preferred Plan	Preferred Plan						
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	No shoreline defences	Y	No defences	N	No defences	N	No shoreline defences	Y	No defences	N	No defences	Y
Residential properties at Winterton	- Potential damage to or loss of housing through erosion - Concern over reduced protection due to eroding dunes - Anxiety and stress to owners and occupiers facing loss - Impact on sustainability of the village community - Complaints from residents that windblown sand is migrating onto property (Non-policy issue)	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent damage to/loss of residential properties due to flooding or erosion	Local	Medium	No	Yes	H4	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	N	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	N	No loss – protection provided by natural dune defence.	Y
Residential properties at Hemsby and Scratby	- Loss of cliff top properties through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss - Sustainability of continued protection	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent loss of residential properties to erosion	Local	Medium	No	Yes	H4	Loss of up to less than 5 seafront properties and associated infrastructure	N	Most-seaward houses lost - up to 60 properties lost	N	Further 100 properties lost	N	Loss of up to less than 5 seafront properties and associated infrastructure	N	Most-seaward houses lost - up to 60 properties lost	N	Further 100 properties lost	N
Winterton Valley Estate	- Potential loss of tourist accommodation through erosion	Yes	Provides tourist facilities - represents significant investment on the part of the owners and provides local employment	Regional users, local economy	Prevent loss of tourist accommodation to erosion	Regional	Medium	Yes	Yes	C3	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	Low risk of loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	Low risk of loss – protection provided by natural dune defence	Y

Holiday development at Hemsby	- Potential erosion of Hemsby Marrams which provides natural protection to the village	Yes	Provides tourist facilities - represents significant investment on the part of the owners and provides local employment	Regional users, local economy	Prevent loss of tourist facilities to erosion	Regional	Medium	Yes	Yes	C3	No loss of holiday development	Y	Some loss of seafront developments	N	Further loss of seafront developments	N	No loss of holiday development	Y	Some loss of seafront developments	N	Further loss of seafront developments	N
Recreation and Tourist facilities at Winterton	- Potential damage to or loss of shops, cafes, pub and holiday accommodation through flooding or erosion	Yes	Important tourist facilities Local economy	Regional users, local economy	Prevent loss of or damage to tourist facilities due to flooding or erosion	Regional	Medium	No	Yes	C3	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence.	Y
Tourism related property and facilities at Hemsby and Scratby	- Potential loss of cliff top amenities and businesses through erosion	Yes	Important tourist facilities Local economy	Regional users, local economy	Prevent loss of tourist facilities to erosion	Regional	High	No	Yes	C2	No loss	Y	Some loss of property	N	Further loss of property	N	No loss	Y	Some loss of property	N	Further loss of property	N
CWSs	- Potential damage if coastal defences breached	Yes	Important habitats	Local environmental interests	Maintain the existing habitats	Sub-regional	Medium	No	No	E4	No change from present	Y	Probably lost	N	Lost	N	No change from present	Y	Probably lost	N	Lost	N
Community facilities at Winterton	- Potential loss of community facilities through erosion	Yes	Benefit to local residents Community cohesion	Local community	Prevent loss of community facilities to erosion	Local	High	No	Yes	R4	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence.	Y
Community facilities at Hemsby and Scratby	- Potential loss of community facilities through erosion	Yes	Benefit to local residents Community cohesion	Local community	Prevent loss of community facilities to erosion	Local	High	No	Yes	R4	No loss	Y	Some loss but majority is tourist-related facilities	N	Further loss	N	No loss	Y	Some loss but majority is tourist-related facilities	N	Further loss	N
Coastguard Station	- Mass movement of the Ness or beach erosion could have an adverse effect on the Station	Yes	Forms part of chain of lifeboats providing rescue services around the coast. § Part of the national system for coordinating search and rescue at sea and other tidal waters	Local community, national and international mariners	Removed Winter 2003/4																	
Infrastructure at Winterton	- Potential loss of or damage to services and amenities through erosion - Loss or damage to local infrastructure	Yes	Provide services and facilities for the local business and resident communities	Local community	Maintain services to properties	Local	Low	Yes	Yes	F6	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence	Y	No loss – protection provided by natural dune defence.	Y
	- Loss of a number of submarine tele-communications cables	Yes	National submarine infrastructure	National community	Prevent loss of /damage to cable landing site	International	High	No	Yes	F1	No loss to site, but possible damage to cables due to dune erosion	Y	No loss to site, but possible damage to cables due to dune	Y	No loss to site, but possible damage to cables due to dune	Y	No loss to site, but possible damage to cables due to dune erosion	Y	No loss to site, but possible damage to cables due to dune	Y	No loss to site, but possible damage to cables due to dune	Y

												erosion		erosion				erosion		erosion		
Infrastructure at Hemsby and Scratby	- Potential loss of or damage to services and amenities through erosion	Yes	Provide services and facilities for the local business and resident communities	Local community	Maintain services to properties	Local	Low	Yes	Yes	F6	Losses related to holiday village	N	Losses related to holiday village	N	Further losses related to holiday village	N	Losses related to holiday village	N	Losses related to holiday village	N	Further losses related to holiday village	N
			Important local link roads	Local community	Maintain communication link within Newport	Local	Low	Yes	Yes	F6	Main linkages not lost, only access roads	N	Some loss of linkage roads	N	Further loss of linkage roads	N	Main linkages not lost, only access roads	N	Some loss of linkage roads	N	Further loss of linkage roads	N
Hemsby Marrams	- Potential erosion of dunes and loss of habitat	Yes	Important habitats	Local environmental interests	Maintain the existing habitats	Local	Low	Yes	Yes	E5	Erosion of dunes will continue	N	Possible loss of dunes	N	Loss of dunes and potential reactivation of sand cliffs	N	Erosion of dunes will continue	N	Possible loss of dunes	N	Loss of dunes and potential reactivation of sand cliffs	N
Beach and foreshore	- Potential deterioration in condition and appearance of the beach	Yes	Important recreational feature	Regional users and local community	Maintain a beach suitable for recreation purposes	Sub-regional	Low	No	Yes	R4	Beach present	Y	Beaches likely to be similar to today	Y	Beaches likely to be similar to today	Y	Beach present	Y	Beaches likely to be similar to today	Y	Beaches likely to be similar to today	Y
	- Dredging of off-shore banks for aggregate – concern about potential impact on beach levels (Non-policy issue)	No																				
Access to beach	- Loss of access to beach through erosion, flood damage or management measures	Yes	Provides access for local fishing industry, residents, tourists, maintenance contractors & emergency services	Regional users and local community	Maintain access to beach	Local	Low	Yes	Yes	F6	Access possible	Y	Possible loss of access due to dune erosion, but provision of alternative	Y	Possible loss of access due to dune erosion, but provision of alternative	Y	Access possible	Y	Possible loss of access due to dune erosion, but provision of alternative	Y	Possible loss of access due to dune erosion, but provision of alternative	Y

6.15 California to Caister-on-Sea

										Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105		
										NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan		
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	Rock berm will remain in place.		The rock berm will remain for much of this period		No defences		Rock bund maintained.		Rock bund allowed to deteriorate.		Rock bund allowed to deteriorate.	
Residential properties at California	- Loss of cliff top properties through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss - Sustainability of continued protection	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent loss of residential properties to erosion	Local	High	No	Yes	H3	Loss of less than 5 seafront properties	N	Further loss of up to 60 seafront residential properties	N	Further loss of up to 35 seafront residential properties	N	Loss of less than 5 seafront properties	N	Further loss of up to 40 seafront residential properties	N	Further loss of up to 50 seafront residential properties	N
Holiday Developments at California	- Potential loss of tourist accommodation and supporting infrastructure through erosion	Yes	Tourist accommodation Local economy	Individual owners. Regional users, local community	Prevent loss of tourist accommodation to erosion	Regional	Medium	Yes	Yes	C3	Some land lost, but not main sites	N	Loss of some sites	N	Further loss of some sites	N	Some land lost, but not main sites	N	Loss of some sites	N	Further loss of some sites	N
Recreational and Tourist facilities	- Potential loss of cliff top amenities and businesses through erosion	Yes	Important tourist facilities Local economy	Regional users, local economy	Prevent loss of tourist facilities to erosion	Regional	High	No	Yes	C2	Facilities should not be affected	Y	Loss of some sites and facilities	N	Loss of some sites and facilities	N	Facilities should not be affected	Y	Loss of some sites and facilities	N	Loss of some sites and facilities	N
County Wildlife Site (CWS)	- Potential risk of damage through erosion to heath land along cliff top	Yes	Medium conservation value Habitat	Local community, conservation groups	Maintain the existing habitats	Sub-regional	Medium	No	No	E4	Minimum loss of CWS site	Y	Some loss of northern end of site, but no loss to south	N	Loss of site	N	Minimum loss of CWS site	Y	Some loss of northern end of site, but no loss to south	N	Loss of site	N
Infrastructure	- Potential loss of, or damage to, services and amenities through erosion - Loss of the promenade which houses a sewage pumping station	Yes	Provide services and facilities for the local business and resident communities. Pumping station is vital part of mains drainage system	Local community	Maintain services to properties	Local	Low	Yes	Yes	F6	No loss	Y	Loss of services associated with property loss	N	Loss of services associated with property loss	N	No loss	Y	Loss of services associated with property loss	N	Loss of services associated with property loss	N
	- Potential loss of local link roads	Yes	Local communication links	Local community	Maintain communication link between Scratby and California	Local	Low	Yes	Yes	F6	Loss of section of road between Scratby and California	N	Loss of road	N	Road lost in 20-50	N	Loss of section of road between Scratby and California	N	Loss of road	N	Road lost in 20-50	N
Beach and foreshore	- Potential deterioration in condition and appearance of the beach	Yes	Important recreational feature of the town	Regional users and local community	Maintain a beach suitable for recreation purposes	Sub-regional	Low	No	Yes	R4	Beach present	Y	Beach present	Y	Beach present in retreated position	Y	Beach present	Y	Beach present	Y	Beach present in retreated position	Y

	- Dredging of off-shore banks for aggregate – concern about the impact on beach levels (Non-policy issue)	No																				
Access to beach at California Gap	- Loss of access to beach through erosion or management measures	Yes	Provides access for local fishing industry, residents, tourists, maintenance contractors	Regional users and local community	Maintain access to beach	Local	Low	Yes	Yes	F6	Access likely to remain	Y	Loss of access, but alternative could be provided	N	Loss of access, but alternative could be provided	N	Access maintained	Y	Loss of access, but alternative could be provided	N	Loss of access, but alternative could be provided	N

### 6.16 Caister-on-Sea

Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105	
											NAI	NAI	NAI	NAI	NAI	NAI	NAI	NAI	NAI	NAI	NAI	NAI
											<i>Seawall, rock reefs and groynes will remain.</i>	Y	<i>Seawall will fail by the end of this period, but rock groynes and reefs will remain.</i>	N	<i>Rock reefs and groynes deteriorate.</i>	N	<i>Seawall, reefs and groynes maintained.</i>	Y	<i>Seawall, reefs and groynes maintained.</i>	Y	<i>Seawall, reefs and groynes allowed to deteriorate.</i>	N
Residential properties	- Loss of properties through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss - Sustainability of continued protection	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent loss of residential properties to erosion	Local	High	No	Yes	H3	No loss	Y	Loss of up to 30 properties in North Caister	N	Loss of up to 110 properties	N	No loss	Y	No loss	Y	Loss of up to 50 properties at northern end of the frontage	N
Community facilities	- Potential loss of community facilities through erosion	Yes	Benefit to local residents Community cohesion	Local community	Prevent loss of community facilities to erosion	Local	High	No	Yes	R4	No loss	Y	Loss of some properties but not in main part of town	N	Loss of some properties but not in main part of town	N	No loss	Y	No loss	Y	Loss of some properties but not in main part of town	N
Recreational and tourist facilities	- Potential loss of amenities and businesses through erosion	Yes	Tourism forms the main part of the local economy Sites also of benefit to local residents	Regional and local economies, businesses, residents and tourists	Prevent loss of tourist facilities to erosion	Regional	High	No	Yes	C2	No loss	Y	No loss	Y	Area of uncertainty due to fluctuation of ness feature. High risk of breach and erosion should the wall be exposed and fail.	N	No loss	Y	No loss	Y	Area of uncertainty due to fluctuation of ness feature. High risk of dune erosion should the wall be exposed and fail.	N

Seafront holiday centres and caravan parks at Caister	- Potential loss of sites through erosion, including holiday properties in private ownership	Yes	Tourist accommodation Local economy	Individual owners. Regional users, local community	Prevent loss of tourist accommodation to erosion	Regional	Medium	Yes	Yes	C3	No loss	Y	Loss of properties	N	Loss of seafront properties	N	No loss	Y	No loss	Y	Loss of a number of caravan parks	N
Caister Point County Wildlife Site	- Potential risk of damage through erosion to heath land at Caister Point County Wildlife Site along the cliff top	Yes	Medium conservation value habitat	Local community; conservation groups	Maintain the existing habitats	Sub-regional	Medium	No	Yes	E4	Minimum loss of CWS site	Y	Some loss at northern end of site, but integrity of site maintained	P	Loss of CWS site likely	N	Minimum loss of CWS site	Y	Some loss at northern end of site, but integrity of site maintained	P	Loss of CWS site likely	N
Caister Volunteer Rescue Service	- Potential impact on launching of the lifeboat	Yes	Forms part of chain of lifeboats providing rescue services around the coast.	Local community, national and international mariners	Maintain effective launching site for lifeboat	Local	Medium	No	Yes	F5	Natural fluctuation of dunes, but no loss expected to building or access.	Y	Natural fluctuation of dunes, but no loss expected to building or access.	Y	Natural fluctuation of dunes, but beach expected to remain healthy.	Y	Natural fluctuation of dunes, but no loss expected to building or access.	Y	Natural fluctuation of dunes, but no loss expected to building or access.	Y	Natural fluctuation of dunes, but beach expected to remain healthy.	Y
Beach and foreshore	- Potential deterioration in condition and appearance of the beach	Yes	Important recreational feature of the town	Regional users and local community	Maintain a beach suitable for recreation purposes	Sub-regional	Low	No	Yes	R4	Beach present	Y	Beach present	Y	Beach present in retreated position.	Y	Beach present	Y	Beach present	Y	Beach present – although initially more narrow once reefs and groynes reduce in trapping-efficiency.	Y
	- Dredging of off-shore banks for aggregate – concern about potential impact on beach levels (Non-policy issue)	No																				
Access to beach	- Loss of access to beach through erosion or management measures	Yes	Provides access for local fishing industry, residents, tourists, maintenance contractors	Regional users and local community	Maintain access to beach	Local	Low	Yes	Yes	F6	Access will remain	Y	Access lost but possible provision of alternative	N	Access lost but possible provision of alternative	N	Access will remain	Y	Access will remain	Y	Access will remain – or possible provision of alternative	N



### 6.17 Great Yarmouth

										Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105		
										NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan		
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	<i>Seawall and groynes will remain. Harbour Arm will remain as a port structure.</i>		<i>Seawall and groynes fail towards the start of this period. Harbour Arm will remain as a port structure.</i>		<i>Harbour Arm will remain as a port structure.</i>		<i>Seawall, Harbour arm (and groynes until redundant) maintained to prevent erosion.</i>		<i>Seawall, Harbour arm (and groynes until redundant) maintained to prevent erosion.</i>		<i>Seawall and Harbour arm maintained to prevent erosion.</i>	
Residential properties	- Loss of properties through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss - Sustainability of continued protection	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local and regional community	Prevent damage to/loss of residential properties due to flooding or erosion	National	Medium	No	Yes	H2	No loss	Y	Increasing risk of erosion and flooding to seafront properties at southern end of frontage	N	High risk of erosion and flooding to seafront properties at southern end of frontage	N	No loss	Y	No loss	Y	No loss	Y
Commercial properties	- Potential loss of or damage to businesses through erosion	Yes	Local and regional economy Investment of individual business owners	Individual owners, local economy, local community and visitors	Prevent damage to/loss of commercial properties due to flooding	Regional	High	No	Yes	C2	No loss	Y	Increasing risk of erosion and flooding to seafront properties	N	High risk of erosion and flooding to seafront properties	N	No loss	Y	No loss	Y	No loss, but increased risk of overtopping	Y
Industrial units at South Denes	- Viability of continued use of this part of the frontage - Will form an important hinterland to the proposed East Port development	Yes	Former industrial area now somewhat neglected but which is likely to be revitalised by East Port development	Local economy and businesses	Protect land to allow for development potential. Once developed, prevent damage/loss of commercial properties due to flooding	Regional	High	No	Yes	C2	No loss	Y	Risk of erosion and flooding	N	High risk of erosion and flooding	N	No loss	Y	No loss	Y	No loss, but increased risk of overtopping	Y
Existing Port	- Need to continue to operate - Flooding causes operational problems	Yes	Important element of local and regional economy.	Local and regional communities	Ensure port can continue to operate	International	High	No	Yes	F1/C1	No issue with port operation with respect to defences	Y	No issue with port operation with respect to defences	Y	No issue with port operation with respect to defences	Y	No issue with port operation with respect to defences	Y	No issue with port operation with respect to defences	Y	No issue with port operation with respect to defences	Y

Recreational and tourist facilities	- Potential loss of tourist and recreation sites, accommodation and activities	Yes	Tourism forms the main part of the local economy Sites also of benefit to local residents East Coast's most popular resort	Regional and local economies, businesses, residents and tourists	Prevent loss of tourist facilities to erosion	National	High	No	Yes	C2	No loss	Y	Risk of erosion and flooding to seafront facilities at southern end of frontage	N	Increased risk of erosion and flooding to seafront facilities at southern end of frontage	N	No loss	Y	No loss	Y	No loss, but increased risk of overtopping for properties on promenade at southern end of frontage	Y
Caravan parks at North Denes	- Loss of caravan parks - Loss of investment on part of local businesses	Yes	Tourist accommodation Local economy Individual owners.	Regional users, local community	Prevent loss of tourist accommodation to erosion	Regional	Medium	Yes	Yes	C3	No loss	Y	No loss	Y	No loss	Y	No loss	Y	No loss	Y	No loss	Y
Great Yarmouth and Caister Golf Club	- Loss of golf course through erosion	Yes	Provides recreation and tourist facility	Individual owner and local community	Prevent loss of golf course to erosion	Sub-regional	Low	No	Yes	R4	No loss	Y	No loss	Y	No loss	Y	No loss	Y	No loss	Y	No loss	Y
Great Yarmouth Race Course	- Loss of the race course through erosion	Yes	Provides recreation and tourist facility	Individual owner and local community	Prevent loss of race course to erosion	Regional	High	No	Yes	R2	No loss	Y	No loss	Y	No loss	Y	No loss	Y	No loss	Y	No loss	Y
Infrastructure	- Potential loss of or damage to services and amenities through erosion		Provide services and facilities for the local business and resident communities	Local communities, residents, businesses and tourists	Maintain services to properties	Sub-regional	Medium	Yes	Yes	F4	No loss	Y	Risk of erosion and flooding	N	Increased risk of erosion and flooding	N	No loss	Y	No loss	Y	No loss	Y
	- Potential loss of beach road		The beach road is a key link for tourist attractions along the promenade and part of the local road network	Local communities, residents, businesses and tourists	Prevent loss of communication link along the beach frontage	Local	High	No	Yes	F5	No loss	Y	Risk of erosion and flooding to beach road	N	Increased risk of erosion and flooding to beach road	N	No loss	Y	No loss	Y	No loss	Y
North Denes SSSI/SPA	- Integrity of the North Denes SSSI/SPA and impact of any future management regime - high vulnerability to any disturbance by works for coastal defence	Yes	Nationally and Internationally designated site which hosts nationally important numbers of breeding little terns; includes the accreting low dune system and beach	National and International community	Maintain the existing habitats	International	High	No	N	E1	Beach present	Y	Beach present – no disturbance from defence works	Y	Beach present, but narrower along northern end.	Y	Beach present	Y	Beach present – no disturbance from defence works. Beach steepening may result in loss of areas for tern nesting - impact on SPA designation	P	Beach present, but narrower along northern end. Subject to natural fluctuations, but input of sediment from allowing defences to fail further north - any beach	P

																					steepening may result in loss of areas for tern nesting. Possible impact of constructing flood defence.	
Heritage sites	- Potential loss of heritage sites including monuments of high importance and Grade I, II* and II properties	Yes	Heritage value as listed buildings	Individual owners and national community	Prevent loss of heritage sites to erosion	National	High	No	No	G2	No loss	Y	Loss of some seafront heritage sites	N	Further loss of seafront heritage sites	N	No loss	Y	No loss	Y	No loss	Y
Access to beach	- Loss of access to beach through erosion or management measures	Yes	Provides access for local fishing industry, residents, tourists, maintenance contractors & emergency services	Regional users and local community	Maintain access to beach	Local	Low	Yes	Yes	F6	No loss	Y	No loss	Y	No loss	Y	No loss	Y	No loss	Y	No loss	Y
Beach and foreshore	- Potential deterioration in condition and appearance of the beach which has a seaside award	Yes	East Coast's most popular resort Important recreational feature of the town	Regional users and local economy and community	Maintain a beach suitable for recreation purposes	National	High	No	Yes	R2	Beach present	Y	Further deterioration of dunes and beach loss at southern end	N	Loss of beach along the southern section and narrowing along the northern section	N	Beach present	Y	Further deterioration of dunes and beach loss at southern end	N	Loss of beach along the southern section and narrowing along the northern section	N
	- Dredging of off-shore banks for marine aggregate (Non-policy issue)	No																				
	- Continued accretion of dune system which can not migrate landwards because of development	Yes	East Coast's most popular resort Important recreational feature of the town	Regional users and local economy and community	Maintain a beach suitable for recreation purposes	Sub-regional	Low	No	Yes	R4	Deterioration of dunes and beach loss at southern end	Y	Beach present although narrower	Y	Beach present along most of frontage, but narrower at northern end	Y	Deterioration of dunes and beach loss at southern end	Y	Beach present although narrower	Y	Beach present along most of frontage, but narrower at northern end	Y
Proposed Great Yarmouth Outer Harbour	- Potential for economic regeneration of the area and long-term implications of this feature for the area - Impact on coastal processes - perceived increased risk of erosion at Gorleston, Hopton and Corton - Maintenance dredging implications (Non-policy issue)	Yes																				

### 6.18 Gorleston

										Up to 2025	Up to 2055	Up to 2105	Up to 2025	Up to 2055	Up to 2105							
										NAI	NAI	NAI	Preferred Plan	Preferred Plan	Preferred Plan							
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	Seawall will remain, but groyne fail during this period. Harbour Arm will remain as a port structure.	Seawall will fail towards the start of the period. Harbour Arm will remain as a port structure.	Harbour Arm will remain as a port structure.	Seawall, Harbour arm and reefs maintained, with recharge, to prevent erosion.	Seawall, Harbour arm and reefs maintained to prevent erosion.	Seawall and Harbour arm maintained to prevent erosion. Reefs will remain.						
Port Entrance	- Need to protect structures	Yes	The pier and training wall keep open the navigation channel to the port and protect Gorleston from flooding and erosion	Regional and local economies, residents and businesses	Maintain an entrance to the port	International	High	No	Yes	F1	No issue with port operation with respect to defences	Y	No issue with port operation with respect to defences	Y	No issue with port operation with respect to defences	Y	No issue with port operation with respect to defences	Y	No issue with port operation with respect to defences	Y		
Residential properties	- Potential loss/damage to housing through flooding - Loss of community through inundation if existing defences are allowed to deteriorate - Anxiety and stress to owners and occupiers facing loss	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent loss of/damage to properties due to flooding	Sub-regional	High	No	Yes	H2	No loss	Y	Loss of over 250 properties	N	Further loss of over 150 properties	N	No loss	Y	No loss	Y	No loss	Y
Commercial properties	- Potential loss of, or damage to, businesses through erosion	Yes	Local economy Community cohesion Investment of individual business owners	Individual owners, local economy, local community and visitors	Prevent loss of commercial properties to erosion	Regional	High	No	Yes	C2	No loss	Y	No loss to main town, but potential loss of over 30 properties near pier	N	No loss to main town, but further loss of over 10 properties near pier	N	No loss	Y	No loss	Y	No loss	Y
Gorleston Pavilion and other heritage sites	- Potential loss of, or damage to, heritage sites, including Grade II Pavilion and Gorleston Old Lighthouse, due to erosion	Yes	Heritage value as listed buildings	Individual owners and national community	Prevent loss of heritage sites to erosion	Regional	Medium	No	No	G4	No loss	Y	No loss	Y	Loss of Pavilion	N	No loss	Y	No loss	Y	No loss	Y
Community facilities	- Potential loss of community facilities through erosion	Yes	Benefit to local residents Community cohesion	Local community	Prevent loss of community facilities to erosion	Local	High	No	Yes	R4	No loss	Y	No loss to main town, but potential loss of facilities near pier	P	No loss to main town, but further loss of facilities near pier	P	No loss	Y	No loss	Y	No loss	Y

Recreational and tourist facilities	- Potential loss of tourist and recreation sites accommodation and activities including major attractions, shops, holiday amenities, public open space and promenade	Yes	Tourism forms the main part of the local economy Sites also of benefit to local residents	Regional and local economies, businesses, residents and tourists	Prevent loss of tourist facilities to erosion	Sub-regional	Low	No	Yes	R4	No loss	Y	No loss to main town, but potential loss along seafront	P	No loss to main town, but potential loss near pier	P	No loss	Y	No loss and reefs will help maintain beaches	Y	No loss but risk of overtopping particularly along the southern section	Y
Infrastructure	- Potential loss of or damage to services and amenities through erosion including Pumping station and sewer	Yes	Provide services and facilities for the local business and resident communities	Local community	Maintain services to properties	Local	Low	Yes	Yes	F6	No loss	Y	Loss of services associated with property loss	N	Further loss of services associated with property loss	N	No loss	Y	No loss	Y	No loss	Y
		Yes	Provide services for the local business and resident communities	Local and wider community	Maintain pumping station	Sub-regional	High	Yes	Yes	F3	No loss	Y	Loss	N	Loss	Y	No loss	Y	No loss	Y	No loss, but may require works to maintain outlet to sea	Y
Beach and foreshore	- Potential deterioration in condition and appearance of the beach which has a Blue Flag award	Yes	Important recreational feature	Regional users and local community	Maintain a beach suitable for recreation purposes	International	High	No	Yes	R1	No change in beach	Y	Beach present but may narrow along southern section	Y	Narrow beach maintained	Y	Beach present and maintained through recharge	Y	Beach present but may narrow along southern section	Y	Narrower beach, particularly along southern section	Y
	- Dredging of off-shore banks for marine aggregate (Non-policy issue)	No																				

### 6.19 Gorleston to Hopton

											Up to 2025	Up to 2055	Up to 2105	Up to 2025	Up to 2055	Up to 2105						
											NAI	NAI	NAI	Preferred Plan	Preferred Plan	Preferred Plan						
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	<i>Timber revetment and groynes will fail by the end of the period.</i>	<i>No defences.</i>	<i>No defences.</i>	<i>Timber revetment and groynes maintained until failure.</i>	<i>Timber revetment and groynes allowed to deteriorate and fail.</i>	<i>No defences.</i>						
Gorleston Golf Course	- Loss of golf course through erosion	Yes	Provides recreation and tourist facility	Individual owner and local community	Prevent loss of golf course to erosion	Sub-regional	Low	No	Yes	R4	Loss of golf course land, including some holes	N	Further loss of golf course land	N	Further loss of golf course land	N	Loss of golf course land, including some holes	N	Further loss of golf course land	N	Further loss of golf course land	N

### 6.20 Hopton

										Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105		
										NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan		
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	<i>Seawall will start to fail by the end of the period.</i>		<i>No defences.</i>		<i>No defences.</i>		<i>Timber revetment and groynes to north maintained until failure. Seawall and groynes maintained.</i>		<i>Timber revetment, seawall and groynes allowed to deteriorate and fail.</i>		<i>No defences.</i>	
Residential properties	- Potential loss of housing through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss - Viability of protecting Hopton in the longer-term	Yes	Homes for people - represents substantial investment for individual property owners	Individual residents and local community	Prevent loss of residential properties to erosion	Local	Medium	No	Yes	H4	No loss	N	Loss of less than 5 seafront houses along Beach Road, once sea wall fails	N	Further loss of less than 10 seafront houses in Beach Road area	N	No loss	Y	Loss of less than 5 seafront houses along Beach Road, once sea wall fails	N	Further loss of less than 10 seafront houses in Beach Road area	N
Commercial properties	- Potential damage to or loss of businesses through flooding or erosion	Yes	Local economy Community cohesion Investment of individual business owners	Individual owners, local economy, local community and visitors	Prevent loss of commercial properties to erosion	Local	Medium	No	Yes	C5	No loss	Y	No loss of non-tourist facilities	Y	No loss of non-tourist facilities	Y	No loss	Y	No loss of non-tourist facilities	Y	No loss of non-tourist facilities	Y
Community facilities	- Potential loss of community facilities through erosion	Yes	Benefit to local residents Community cohesion	Local community	Prevent loss of community facilities to erosion	Local	High	No	Yes	R4	No loss – heart of village not affected by erosion	Y	No loss – heart of village not affected by erosion	Y	No loss – heart of village not affected by erosion	Y	No loss	Y	No loss – heart of village not affected by erosion	Y	No loss – heart of village not affected by erosion	Y
Hopton Holiday Village	- Potential loss of tourist accommodation through erosion	Yes	Tourist accommodation Local economy Individual owners.	Regional users, local community	Prevent loss of tourist accommodation to erosion	Regional	Medium	Yes	Yes	C3	Loss of seafront tourist accommodation	N	Loss of seafront tourist accommodation	N	Loss of seafront tourist accommodation	N	Loss of seafront tourist accommodation	N	Loss of seafront tourist accommodation	N	Loss of seafront tourist accommodation	N
Recreational and tourist facilities	- Protection of tourist and recreation sites, accommodation and activities including major attractions, shops, holiday amenities, public open space and promenade	Yes	Tourism forms the main part of the local economy Sites also of benefit to local residents	Regional and local economies, businesses, residents and tourists	Prevent loss of tourist facilities to erosion	Regional	High	No	Yes	C2	No loss	Y	Loss of facilities associated with Holiday Village and playing field and miniature golf course lost to south	N	Further loss of facilities along the coastal strip	N	No loss	Y	Loss of facilities associated with Holiday Village and playing field and miniature golf course lost to south	N	Further loss of facilities along the coastal strip	N

Infrastructure	- Potential loss of or damage to services and amenities through erosion, including the promenade	Yes	Provide services and facilities for the local business and resident communities. Promenade is key attraction of the resort	Local communities, residents, businesses and tourists.	Maintain services to properties	Local	Low	Yes	Yes	F6	Loss of services associated with non-holiday village properties	N	Loss of services, associated with housing, and promenade lost	N	Further loss of services associated with housing	N	Loss of services associated with non-holiday village properties	N	Loss of services, associated with housing, and promenade lost	N	Further loss of services associated with housing	N
Access to beach	- Loss of access to beach through erosion or management measures	Yes	Provides access for local fishing industry, residents and tourists	Local community	Maintain access to beach	Local	Low	Yes	Yes	F6	Beach access maintained, but loss of temporary/informal accesses	P	Beach access lost	N	No access	N	Beach access maintained, but loss of temporary/informal accesses	P	Beach access lost	N	No access	N
Beach and Foreshore	- Potential deterioration in condition and appearance of the beach	Yes	Important recreational feature of the town	Regional users and local community	Maintain a beach suitable for recreation purposes	Sub-regional	Low	No	Yes	R4	Beach present but narrower until seawall fails and allows retreat	Y	Beach present in retreated position	Y	Beach present, but possible access problems	P	Beach present but narrower	Y	Beach present in retreated position once defences have failed	Y	Beach present, but possible access problems	P
	- Potential health and safety hazard caused by deteriorating defences at foot of cliffs	No			-																	
	- Dredging of off-shore banks for marine aggregate and impact on beach levels (Non-policy issue)	No				-																

6.21 Hopton to Corton

											Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105	
											NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan	
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	Timber revetment will fail during this period		No defences.		No defences.		Timber revetment and groynes allowed to fail.		No defences.		No defences.	
Broadland Sands Holiday Centre	- Potential loss of tourist accommodation through erosion	Yes	Tourist accommodation Local economy Individual owners.	Regional users, local community	Prevent loss of tourist accommodation to erosion	Regional	Medium	Yes	Yes	C3	No loss to Broadland Sands (despite cliff retreat)	Y	Some loss at edge of site	N	Loss of caravan pitches but not main resort buildings	N	No loss to Broadland Sands (despite cliff retreat)	Y	Some loss at edge of site	N	Loss of caravan pitches but not main resort buildings	N
Agricultural land	- Risk of loss of Grade 2 agricultural land through erosion	Yes	Economy/employment through farming	Individual farmers and local community	Prevent loss of farmland to erosion	Regional	Low	Yes	Yes	C4	Loss of farmland	N	Loss of farmland	N	Loss of farmland	N	Loss of farmland	N	Loss of farmland	N	Loss of farmland	N

Beach and foreshore	- Potential deterioration in condition and appearance of the beach	Yes	Important recreational feature	Regional users and local community	Maintain a beach suitable for recreation purposes	Sub-regional	Low	No	Yes	R4	Beach present	Y	Beach present, but possible access issues	P	Beach present, but possible access issues	P	Beach present	Y	Beach present, but possible access issues	P	Beach present, but possible access issues	P
	- Potential health and safety hazard caused by deteriorating defences at foot of cliffs	No			-																	
	- Dredging of off-shore banks for marine aggregate and impact on beach levels (Non-policy issue)	No				-																
Access to beach at Broadland Sands	- Potential loss of access to beach through erosion or management measures	Yes	Provides access for local residents, tourists and local authority maintenance contractors	Regional users, local community and Coast Protection Authority	Maintain access to beach	Local	Low	Yes	Yes	F6	Informal access lost	N	Access lost	N	No access	N	Informal access lost	N	Access lost	N	No access	N
Pumping station	- Potential loss of works	Yes	Services to local residents and businesses	Local residents and businesses	Prevent loss of/damage to Sewage and gas installations	Sub-regional	High	Yes	Yes	F3	No loss	Y	No loss	Y	Loss of part of site	N	No loss	Y	No loss	Y	Loss of part of site	N



## 6.22 Corton

										Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105		
										NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan		
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	<i>Seawall and rock revetment will remain.</i>		<i>Seawall will fail at the start of this period.</i>		<i>No defences.</i>		<i>Seawall and rock revetment maintained.</i>		<i>Seawall and rock revetment allowed to deteriorate and fail.</i>		<i>No defences</i>	
Residential properties	- Potential loss of housing through erosion - Devaluation of neighbouring property - Anxiety and stress to owners and occupiers facing loss - Potential loss of community cohesion through property loss - Viability of protecting Corton in the longer-term – concern over limited life of new defences - Concern expressed by Parish Council that no compensation is payable to property owners - Concern about outflanking of defences from adjoining undefended frontages	Yes	Homes for people - represents substantial investment for individual property owners	Local community, residents	Prevent loss/damage to properties due to erosion	Local	Medium	No	Yes	H4	No loss	Y	Loss of up to 20 properties	N	Further loss of over 60 properties	N	No loss	Y	Some property loss, but at a later stage than NAI	N	Further loss of over 60 properties	N
Commercial properties	- Potential loss of businesses through erosion - Viability of protecting Corton in the longer-term – concern over limited life of new defences	Yes	Local economy Community cohesion Investment of individual business owners	Individual owners, local economy, local community and visitors	Prevent damage/loss of commercial properties due to erosion	Local	Medium	No	Yes	C5	No loss	Y	Loss of over 15 properties	N	Loss of less than 5 properties	N	No loss	Y	Loss of over 15 properties	N	Loss of less than 5 properties	N
Community facilities	- Potential loss of community facilities through erosion, including common land at Bakers Score	Yes	Benefit to local residents Community cohesion	Local community	Prevent loss of community facilities to erosion	Local	High	No	Yes	R4	No loss	Y	Some loss of seafront facilities possible	N	Loss of school and main road through village, also loss of Methodist Church, village hall and Public House.	N	No loss	Y	Some loss of seafront facilities possible	N	Loss of school and main road through village, also loss of Methodist Church, village hall and Public House.	N
Heritage sites	- Potential loss of area of high archaeological interest seaward of Corton Church	Yes	Area identified as high archaeological importance	Local and national interest groups	Prevent loss of site of high archaeological interest	National	Medium	No	No	G3	No loss	Y	Some loss of site	N	Further loss of site	N	No loss	Y	Some loss of site	N	Further loss of site	N

Tourist facilities	- Protection of tourist and recreation sites, accommodation and activities	Yes	Provides facilities for local community and visitors Local economy	Local community, regional users, businesses, residents and tourists	Prevent loss of tourist and recreational facilities	Sub-regional	Low	No	Yes	R4	No loss	Y	Loss of seafront caravan sites/ holiday camps	N	Further loss of caravan sites/ holiday camps	N	No loss	Y	Loss of seafront caravan sites/ holiday camps	N	Further loss of caravan sites/ holiday camps	N
Infrastructure	- Potential loss of or damage to services and roads through erosion, including the main village street and mains drainage	Yes	Provide services and facilities for the local business and resident communities	Local community and regional users	Maintain services to properties	Local	Low	Yes	Yes	F6	No loss	Y	Loss of services associated with holiday camps	N	Loss of services associated with properties	N	No loss	Y	Loss of services associated with holiday camps	N	Loss of services associated with properties	N
		Yes	Links to adjacent towns and villages	Regional community	Maintain communication link to adjacent towns	Local	Low	No	No	F5	No loss	Y	Loss of section of main road through village	N	Loss of main road 'The Street'	N	No loss	Y	Loss of section of main road through village	N	Loss of main road 'The Street'	N
Cliffs	- Erosion of cliff face needs to continue to maintain clean exposures and retain SSSI designation	Yes	Important geological educational site - type-site for the Anglian Glacial Stage	National community	Retain clean exposure of cliff face to maintain the geological study value of the site	National	High	No	No	E2	Standard of protection sufficient to allow acceptable exposure of cliffs	Y	Increased cliff erosion resulting in improved exposure of geology	Y	Increased erosion resulting in continued exposure of geology	Y	Standard of protection sufficient to allow acceptable exposure of cliffs	Y	Increased cliff erosion resulting in improved exposure of geology	Y	Increased erosion resulting in continued exposure of geology	Y
Beach and foreshore	- Dredging of off-shore banks for marine aggregate (Non-policy issue) - Impact of Great Yarmouth Outer Harbour and Gorleston Reefs projects on future beach levels in front of the village - Retention of specialist recreation facility - Public notion that lowering beach levels in front of the village could be improved by restoring the failed groynes	Yes	Important recreational feature of the town and part of beach is designated for use by nude bathers	Local community, visitors and regional users	Maintain a beach suitable for recreation purposes	Sub-regional	Low	No	Yes	R4	Beach narrowing therefore little/ no beach	N	Beach present in retreated position once sea wall fails	Y	Narrow beach, but access issues	P	Beach narrowing therefore little/ no beach	N	Beach present in retreated position once sea wall fails	Y	Narrow beach, but access issues	P
	- Potential health and safety hazard caused by deteriorating defences at foot of cliffs	No																				
Access to beach at Bakers Score and Tibbenham's Score	- Loss of access through erosion or management measures	Yes	Provides stepped access for residents, tourists and maintenance contractors	Local communities, residents, businesses, regional users and tourists.	Maintain access to beach	Local	Low	Yes	Yes	F6	No change in access	Y	Loss of access	N	Loss of access	N	No change in access	Y	Loss of access	N	Loss of access	N

6.23 Corton to Lowestoft

										Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105		
										NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan		
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	Timber groynes will fail.		No defences.		No defences.		Timber groynes allowed to fail.		No defences.		No defences.	
Infrastructure	- Rising mains to Corton Sewage Treatment works and treated water return pipelines cross the site of Gunton Warren	Yes	The rising main and return pipe are essential infrastructure for the treatment and disposal of sewage from Lowestoft	Regional and local economy, local community	Prevent loss of/damage to sewage and treated water mains	Sub-regional	High	Yes	Yes	F3	Possible damage to pipelines through erosion	N	Increased risk of damage to pipelines through erosion	N	Damage to pipelines through erosion	N	Possible damage to pipelines through erosion	N	Increased risk of damage to pipelines through erosion	N	Damage to pipelines through erosion	N
Cliffs	- Erosion of cliff face needs to continue to maintain clean exposures and retain SSSI designation	Yes	Important geological educational site - type-site for the Anglian Glacial Stage	National community	Retain clean exposure of cliff face to maintain the geological study value of the site	National	High	No	No	E2	Erosion will maintain exposure of cliffs.	Y	Erosion will maintain exposure of cliffs.	Y	Erosion will maintain exposure of cliffs.	Y	Erosion will maintain exposure of cliffs.	Y	Erosion will maintain exposure of cliffs.	Y	Erosion will maintain exposure of cliffs.	Y
Gunton Warren	- Loss of beach will threaten future of designated LNR/County Wildlife site	Yes	Important dune and grassland habitats	Regional community	Maintain the existing habitats	Sub-regional	Medium	No	No	E4	Deterioration and loss of dunes likely, so some loss of CWS	N	Loss of dunes (and therefore CWS), but naturally functioning system	N	Exposure of sand cliffs (possible habitat creation?)	N	Deterioration and loss of dunes likely, so some loss of CWS	N	Loss of dunes (and therefore CWS), but naturally functioning system	N	Exposure of sand cliffs (possible habitat creation?)	N
	- Open Space indicated in Local Plan as needing protection	Yes	Public amenity	Local community & tourism	Prevent loss of public open space to erosion	Local	Low	No	Yes	R4	Loss of open space through erosion	N	Loss of open space through erosion	N	Further loss of open space through erosion	N	Loss of open space through erosion	N	Loss of open space through erosion	N	Further loss of open space through erosion	N
Beach and foreshore	- Potential deterioration in condition and appearance of the beach	Yes	Important recreational feature of the town	Regional users and local community	Maintain a beach suitable for recreation purposes	Sub-regional	Low	No	Yes	R4	Beach present	Y	Beach present	Y	Beach present in retreated position	Y	Beach present	Y	Beach present	Y	Beach present in retreated position	Y
	- Potential health and safety hazard caused by deteriorating groyne field	No																				
	- Dredging of off-shore banks for marine aggregate – concern about the potential impact on beach levels (Non-policy issue)	No																				

	- Potential contamination from Eleni V oil dump	Yes	Sea pollution/ cost of removal	-	Prevent exposure of oil dump	-	-	-	-	F2	Risk of old dump exposure	N	High risk of old dump exposure as much of dunes will erode	N	Much of dunes eroded therefore exposure of dump probably occurred years 20-50	N	Risk of old dump exposure	N	High risk of old dump exposure as much of dunes will erode	N	Much of dunes eroded therefore exposure of dump probably occurred years 20-50	N
Access to beach at Tramps Alley	- Potential loss of access through erosion or management measures - Lack of beach access points along this section of coast	Yes	Provides access for local fishing industry, residents, tourists, maintenance contractors & emergency services	Local community	Maintain vehicular access to beach	Local	Low	Yes	Yes	F6	Access possible	Y	Access lost	N	No access	N	Access possible	Y	Access lost	N	No access	N

**6.24 Lowestoft North (to Lowestoft Ness Point)**

											Up to 2025		Up to 2055		Up to 2105		Up to 2025		Up to 2055		Up to 2105	
											NAI		NAI		NAI		Preferred Plan		Preferred Plan		Preferred Plan	
Feature	Issues associated with Feature	Affect Policy?	Why is the feature important?	Who benefits?	Objective	Scale?	Importance?	Enough?	Replace?	Rank	Seawall will remain.	Y	Seawall will remain.	Y	Failure of seawall.	N	Seawall maintained to prevent erosion and flooding	Y	Seawall maintained to prevent erosion and flooding	Y	Seawall maintained to prevent erosion and flooding	Y
Lowestoft commercial properties	- Potential loss of important industrial land and associated assets	Yes	Significant industrial land use, infrastructure assets and strategically important economic sector of the town	Regional and local economies, businesses, residents	Prevent loss of commercial properties to erosion	Regional	High	No	Yes	C2	No loss	Y	No loss	Y	Loss of properties due to flooding and erosion	N	No loss	Y	No loss	Y	No loss	Y
Infrastructure	- Protection of sewage pumping station and headworks. Sewage rising mains and treated water return pipes. - Gas mains and gas holder at Ness Point	Yes	Pumping station and outfall essential components of town's drainage system. Gasholder essential for energy provision Sewage pipes behind sea wall.	Regional and local community, economy and residents	Prevent loss of/damage to Sewage and gas installations	Sub-regional	High	Yes	Yes	F3	No loss	Y	No loss	Y	High risk to infrastructure	N	No loss	Y	No loss	Y	No loss	Y
	- Potential loss or damage to local road network	Yes	Important communication links	Regional and local community, tourists	Maintain communication links within Lowestoft	Local	Low	Yes	Yes	F6	No loss	Y	No loss	Y	Loss of link roads only	P	No loss	Y	No loss	Y	No loss	Y

Recreational and tourist facilities	- Potential loss of tourist and recreation sites, accommodation and activities	Yes	Tourism forms the main part of the local economy Sites also of benefit to local residents	Regional and local economies, businesses, residents and tourists	Prevent loss of tourist facilities to erosion	National	High	Yes	Yes	C2	No loss	Y	No loss	Y	Flood and erosion risk to recreation ground and promenade	N	No loss	Y	No loss, but promenade more exposed to overtopping	Y	No loss, but promenade more exposed to overtopping	Y
Lowestoft North Denes	- Preservation of fishing nets heritage site	Yes	Heritage site	Local environmental interests	Prevent loss of heritage site to erosion	Local	Low	No	No	G5	No loss	Y	No loss	Y	Loss/damage due to flooding	N	No loss	Y	No loss	Y	No loss	Y
	- Open space indicated in Local Plan as needing protection	Yes	Public amenity	Local community & tourism	Prevent loss of public open space to erosion	Local	Low	No	Yes	R4	No loss	Y	No loss	Y	Loss/damage due to flooding	N	No loss	Y	No loss	Y	No loss	Y
	- Potential exposure of former household waste tip	Yes	Sea contamination/cost of removal	-	Prevent exposure of household waste tip					F2	No risk of exposure	Y	No risk of exposure	Y	Risk of exposure	N	No risk of exposure	Y	No risk of exposure	Y	No risk of exposure	Y
Lowestoft Ness Point	- Maintaining the area as mainland Britain's most easterly point	Yes	The local authority is developing the area as a tourist attraction	Regional and local economies, businesses, residents and tourists	Prevent loss of Ness Point as cardinal point	Local	Low	No	No	G5	No loss	Y	No loss	Y	Loss of Euroscope marking position of most easterly point	N	No loss	Y	No loss, but increased works required	Y	No loss, but increased works required	Y
Beach and foreshore	- Potential deterioration in condition and appearance of the beach	Yes	Important recreational feature of the town	Regional users and local community	Maintain a beach suitable for recreation purposes	Sub-regional	Low	No	Yes	R4	Little/no beach particularly at southern end	N	No beach	N	Narrow beach possible	Y	Little/no beach particularly at southern end	N	No beach	N	No beach	N
	- Potential health and safety hazard caused by deteriorating groyne field	No																				
	- Dredging of offshore banks for aggregate (Non-policy issue)	No																				