

Appendix G Policy Appraisal

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G1 INTRODUCTION

This appendix aims to provide an overview of the results of the policy appraisal process, focusing on the selected final policies only. The route by which these policies were chosen is detailed in appendix E and is supported by the technical analysis presented in the other appendices. This appendix only discusses the final policy for each PDZ, how the shoreline is likely to develop under the final policy and the results of the appraisal undertaken for each policy. Section 3.2 of the main SMP document describes the impact of the plan on a range of functions, features and values as defined in the SMP Guidance.

This appendix is linked closely with section 2.4 (Sustainable Shoreline Management: Finding Right Balance), section 3 (Final Plan) and section 4 (Policy Statements) in the main SMP document.

G2 PDZ1 GIBRALTAR POINT TO WOLFERTON CREEK

G2.1 Final Policy Description

The intent of management for this PDZ is to sustain flood defence for the communities and their hinterland in the low-lying areas around the Wash. This includes an increase of management as needed to sustain the current level of flood risk in the face of climate change.

In the short term (epoch 1) the policy to achieve this intent is to hold the existing seabank alignments. In the medium and long term, ideally the existing alignments should continue to be held, but there is a chance that climate change will cause a significant loss of salt marsh and mud flat in front of the seabanks, which would further increase pressure on the defences and affect the integrity of the habitats in the Wash. If this occurs, then the intent is to carry out localised managed realignments (when needed and as far as needed).

G2.2 Shoreline Development for the Plan

In epoch 1, the defence line is as per the current defence line; the coastal response for epoch 1 is expected to be similar to that noted at present. Accretion of the saltmarsh and mudflat is dominant, with the rates of both continuing to outpace sea level rise. In some locations there is the potential for some nett loss of mudflat due to loss at its landward edge at a faster rate than growth at its seaward edge.

Into epochs 2 and 3 there is uncertainty over the shoreline development, which could range between a continued accretional future and a change to an erosional future. If monitoring and research shows that the current accretional trend reverses, and that the subsequent loss of foreshore is likely to threaten the integrity of the flood defences and the habitats, then the intent is to carry out localised managed realignments (when needed and as far as needed). Following realignment the saltmarsh would begin to develop on the newly realigned area, although the saltmarsh would still continue to reduce at its seaward edge.

If the accretional trends continued into epochs 2 and 3 and therefore the current alignment was held, there would be continued growth of the saltmarsh, but a nett loss of mudflat (as a result of saltmarsh growth).

G2.3 Summary of Appraisal Results

Figure G2.1 provides an overview of the appraisal results for the Plan for this PDZ (for epoch 1 only) in the form of a schematic diagram. These scores are based on the appraisal tables provided in table G2.1 to table G2.3. The results for epochs 2 and 3 are not provided because of the conditional nature of the policies and the uncertainty about intertidal development.

Overall, the appraisal results show that the epoch 1 Hold the line policy supports current use of the defended land, and enables the ongoing positive development of the intertidal area. The policy does require continuation of the current levels of flood defence management.

G2.4 Flood Risk Policies

As discussed in section G2.1, in epoch 1 the flood defence function of the defences will be sustained. This includes increased management activity as needed to sustain the existing level of flood risk.

Figure G2.1 PDZ1 Policy Schematics – epoch 1 only

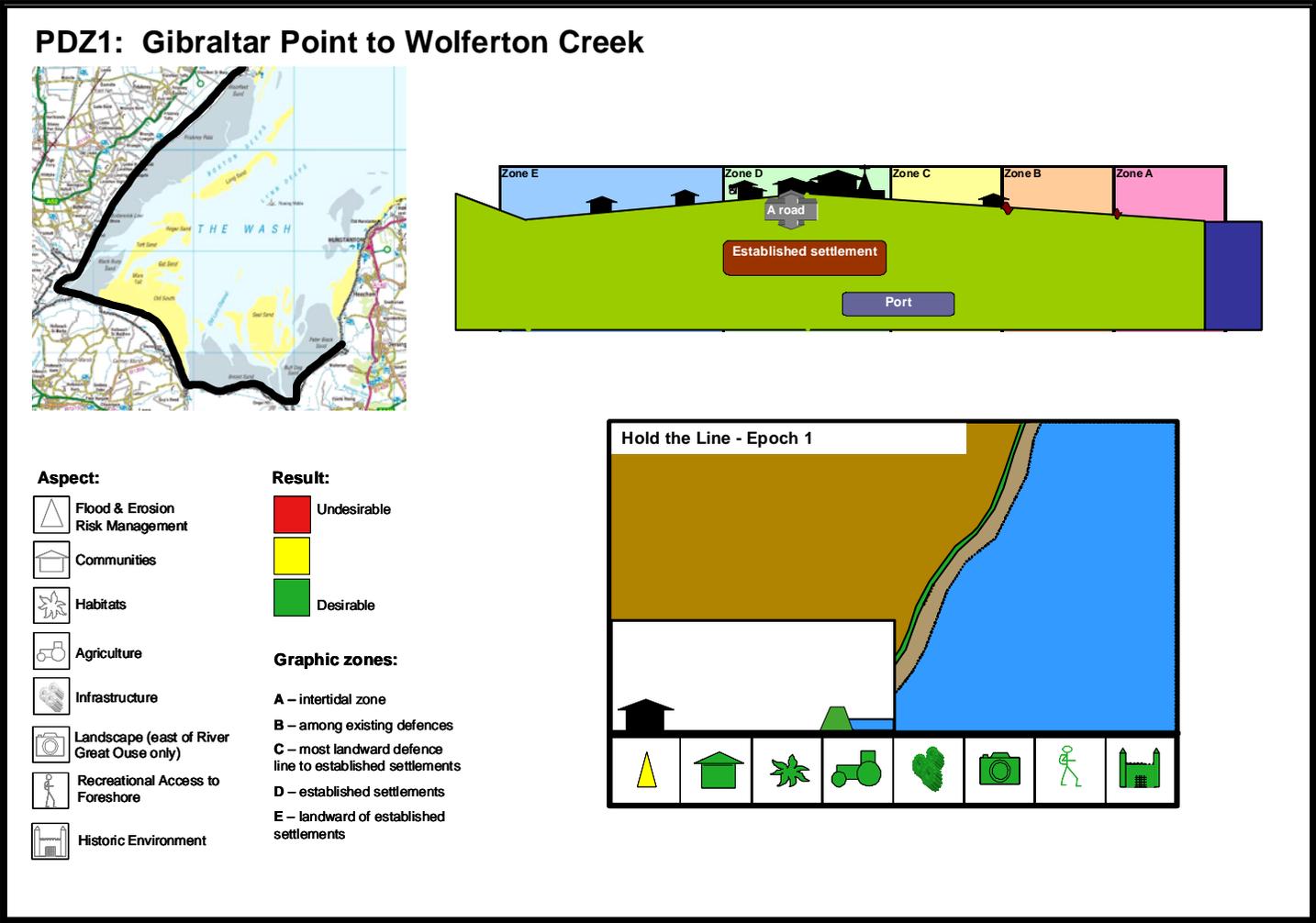


Table G2.1 PDZ1 (Gibraltar Point to Wolferton Creek) - General Objectives (epoch 1 only)

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
Flood and Erosion Risk Management						
Maximise the use of existing man-made or natural defences (e.g. saltmarsh): the inland lines of (historical) defences and the ridge of high ground between Wainfleet and Wrangle	5	The policy continues the use of the existing man-made defences. It does not actively increase its use. However it is expected that the total area of saltmarsh and mudflat will continue to accrete in epoch 1, therefore providing an additional extent of natural defence.	-	-	-	-
Have as little flood and erosion risk management throughout the plan period as possible	6	This policy will require continued maintenance of the current defence line.	-	-	-	-

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
Communities						
Protect as a minimum, throughout the plan period, to an appropriate standard of protection, all established settlements ¹ , and the area landward from these settlements	8	All established settlements will continue to be protected to the existing standard which is considered adequate.	-	-	-	-
Protect as many settlements as possible	8	All settlements will continue to be protected to an adequate standard.	-	-	-	-
Habitats						
Maintain natural processes relating to mudflats, saltmarsh, sand dunes and saline/coastal lagoons (where present)	7	Under the Hold the line policy the 'natural processes' are expected to be similar to today. The saltmarsh/mudflat boundary will continue to move seaward, and there will be a continued vertical and seaward growth of both the saltmarsh and mudflat	-	-	-	-
Maintain and if possible increase the area of mudflats, saltmarsh, sand dunes and saline/coastal lagoons (if present)	8	There is expected to be continued seaward growth of both saltmarsh and mudflat. Saltmarsh growth comes at the expense of mudflat area, so there may be a nett loss of mudflat area.	-	-	-	-

¹ Wainfleet All Saints, Wainfleet St Mary, Friskney, Wrangle, Old Leake, Leverton, Benington, Butterwick, Freiston, Fishtoft, Boston, Wyberton, Frampton, Kirton, Sutterton, Algarkirk, Fosdyke, Wigtoft, Bicker, Swineshead, Donington, Quadring, Gosberton, Surfleet, Pinchbeck and Spalding, Moulton Seas End, Holbeach Clough, Holbeach, Fleet Hargate, Gedney, Lutton, Long Sutton, Sutton Bridge, Holbeach St Marks, Holbeach St Matthew, Gedney Drove End, Walpole Cross Keys, Terrington St Clement, Clenchwarton, West Lynn, King's Lynn, North and South Wootton, Castle Rising and Wolferton.

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
Agriculture						
Protect as much grade 1 and grade 2 land as possible	9	In epoch 1 there will be no Grade 1 or 2 lands lost, and therefore all agricultural land will be protected.	-	-	-	-
Ensure that the impact on the UK's area of grade 1 and grade 2 lands is acceptable.	9	In epoch 1, there will be no Grade 1 or 2 land lost and therefore there will be no impact on the UK's agricultural land as a whole.	-	-	-	-
Infrastructure						
Avoid interruption of the functioning of Boston Port and King's Lynn Port throughout the plan period (note that Sutton Bridge Port is only dealt with in the relevant Timing of Policies Objective, and does not have an individual Objective)	9	In epoch 1 the existing defence line will be held and as a result there will be no interruption of the functioning of Boston Port and King's Lynn Port.	-	-	-	-
Avoid interruption of the drainage function of Rivers Witham, Welland, Nene and Great Ouse throughout the plan period	9	In epoch 1, the existing defence line will be held and as a result there will be no interruption of the drainage function of the Rivers Witham, Welland, Nene and Great Ouse.	-	-	-	-
Avoid interruption of transport connections and utility supply throughout the plan period – ROADS (where present)	9	All roads will be protected to an adequate standard.	-	-	-	-
Avoid interruption of transport connections and utility supply throughout the plan period – ELECTRICITY PYLONS (where present)	9	All electricity pylons will be protected to an adequate standard.	-	-	-	-

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
Avoid interruption of transport connections and utility supply throughout the plan period – SEWAGE TREATMENT WORKS (where present)	9	All sewage treatment works will be protected to an adequate standard.	-	-	-	-
Avoid interruption of transport connections and utility supply throughout the plan period – PRISON (where present)	9	The North Sea Camp prison will remain protected in epoch 1 to an adequate standard.	-	-	-	-
Avoid interruption of transport connections and utility supply throughout the plan period – RAILWAY LINE (where present)	9	The Boston-Skegness railway line will be protected to an adequate standard.	-	-	-	-

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
Landscape						
To maintain the integrity of the coastal landscape	7	This Objective is included to represent the AONB designation in this PDZ (located between the right hand bank of the River Great Ouse and Wolferton Creek/Dersingham). The policy allows the AONB to be maintained throughout the epoch.	-	-	-	-
Historic Environment						
Preserve historic environment assets <i>in situ</i> where feasible	8	Nineteen locally important archaeological and historical sites of predominantly modern and WWII date are located in the foreshore and these would experience continued erosion pressure. 7 locally important sites that are post-medieval sea defences would be maintained through protection though could be affected by coastal management measures. 253 locally important archaeological and historic sites, along with 21 Listed Buildings, 3 Scheduled Monuments, and Terrington St Clement Conservation Area will not experience any additional extreme flooding. Historic landscape character will be unchanged.	-	-	-	-

Table G2.2 PDZ1 (Gibraltar Point to Wolferton Creek) - Timing of Policies Objectives (epoch 1 only)

Objective	Overall Score (epoch 1 only)	Explanation
Provide sufficient time, if required, for community adaptation	9	Under the policy for epoch 1 there will be no need for community adaptation. For the longer term, the overall intent is to provide continued protection to established settlements. The policy will also compensate for sea level rise resulting from climate change.
Provide sufficient time, if required, for change of flood risk management practices	7	Any changes would happen on the medium or long term, which means there is sufficient time for adaptation.
Provide sufficient time, if required, for relocation of regional infrastructure and navigational infrastructure changes, ensuring continued A-road and rail transport links between Boston and Skegness, Boston and Spalding, Boston and King's Lynn, King's Lynn and Hunstanton, and links between the communities	9	Under the policy for epoch 1 there will be no need for infrastructure adaptation. For the longer term, the overall intent is to provide continued protection to established settlements, which in practice also means continued protection for key infrastructure. Any local impacts would only occur on the medium or long term, which means there is sufficient time for adaptation.
Provide sufficient time, if required, for adaptation of Sutton Bridge Port	9	Under the policy for epoch 1 there will be no need for adaptation. For the longer term, the overall intent is to provide continued protection to established settlements, which in practice also means continued protection for Sutton Bridge Port.
Provide sufficient time, if required, for recreational access to the foreshore	8	Any changes would happen on the medium or long term, which means there is sufficient time for adaptation.
Provide sufficient time, if required, for relocation / adaptation of MoD use of the foreshore (where applicable)	8	Any changes would happen on the medium or long term, which means there is sufficient time for adaptation.

Objective	Overall Score (epoch 1 only)	Explanation
Provide sufficient time, if required, for relocation / adaptation of prison facilities (where present)	8	Any changes would happen on the medium or long term, which means there is sufficient time for adaptation.
Provide sufficient time, if required, for relocation / adaptation of sewage works (where present)	9	Any changes would happen on the medium or long term, which means there is sufficient time for adaptation.
Provide sufficient time, if required, for appropriate mitigation of loss or damage to historic environment assets if preservation in situ cannot be achieved	8	Any changes would happen on the medium or long term, which means there is sufficient time for mitigation of archaeological features (bearing in mind these features have already been identified and located). However, 7 locally important sites (MNF42626, MNF42991, MNF45946, MNF45948, MNF45949, MNF45950, and MNF45051) may be at risk of disturbance from coastal management measures and/or erosion in Epoch 1. These sites should be monitored and suitable levels of mitigation carried out as appropriate during Epoch 1.

Table G2.3 PDZ1 (Gibraltar Point to Wolferton Creek) - Assessment per Key Value (epoch 1 only)

Objective Category	Overall Score - Epoch 1	Overall Score - Epoch 2	Overall Score - Epoch 3
Flood and Erosion Risk Management	6	-	-
Communities	8	-	-
Habitats	8	-	-
Agriculture	9	-	-
Infrastructure	9	-	-
Landscape	7	-	-
Recreational Access to Foreshore	8	-	-
Historic Environment	8	-	-

G3 PDZ2 WOLFERTON CREEK TO SOUTH HUNSTANTON

G3.1 Policy Description

The intent of management for this PDZ is to jointly develop a sustainable long-term solution by establishing a process of cooperation between the partner organisations and all people and businesses with an interest in the area. This process has already started through a pre-consultation stakeholder meeting on 24 August 2009.

In the short term (up to 2025) the plan is to hold the defences in their current position. In parallel, there will be a need for all those involved to work together to develop a long-term sustainable shoreline management approach.

In the medium and long term (up to 2105) it is possible that parts of the current alignment can be held, but it is also possible that landward realignment or even No active intervention may be required for part of the frontage. The plan, timing, location and extent of any changes, will need to achieve the best balance between all the socio-economic and environmental constraints and opportunities. There are strong indications that the caravan site owners and residents would be willing to make significant funding contributions to achieve a Hold the line policy.

G3.2 Shoreline Development for the Plan

In epoch 1, the defence line is as per the current defence line; the coastal response for epoch 1 is expected to be similar to that noted at present. There will be continued pressure on the shingle ridge following storm events and there will be a continued requirement to reprofile the shingle ridge on an ad hoc basis and undertaking annual recycling of sediment from the Scalp to the Heacham area.

For epoch 2 and 3, there is as yet no firm policy. For each possible policy, as for PDZ1, there is uncertainty over the shoreline development. Under Hold the line, the shingle ridge would come under increasing pressure and is likely to be breached on a more regular basis. Increased management is likely to be needed to hold the existing line. This could even lead to a need to replace the ridge with hard defences. Landward realignment or even No active intervention will allow the shingle ridge to develop to a more natural (lower, wider) profile. If there is sufficient sediment supply it will respond to sea level rise by rolling back and increasing in height. If there is insufficient sediment supply, the ridge is more likely to undergo breach during storm events and gradually deteriorate as there is insufficient sediment to repair the breach. The area behind the ridge would gradually develop into a saline/brackish habitat as overtopping of the shingle ridge increases as a result of rising sea levels and increased wave heights.

G3.3 Summary of Appraisal Results

Figure G3.1 provides an overview of the appraisal results for the Plan for this PDZ (for epoch 1 only) in the form of a schematic diagram. These scores are based on the appraisal tables provided in table G3.1 to table G3.3. The results for epochs 2 and 3 are not provided because of the conditional nature of the policies.

Overall, the appraisal results show that the epoch 1 Hold the line policy supports current use of the defended land, but also indicates that there are concerns about the sustainability of the current approach (in terms of flood defence management, environment and the location of caravan parks right behind the defence).

Figure G3.1 PDZ2 Policy Schematics – epoch 1 only

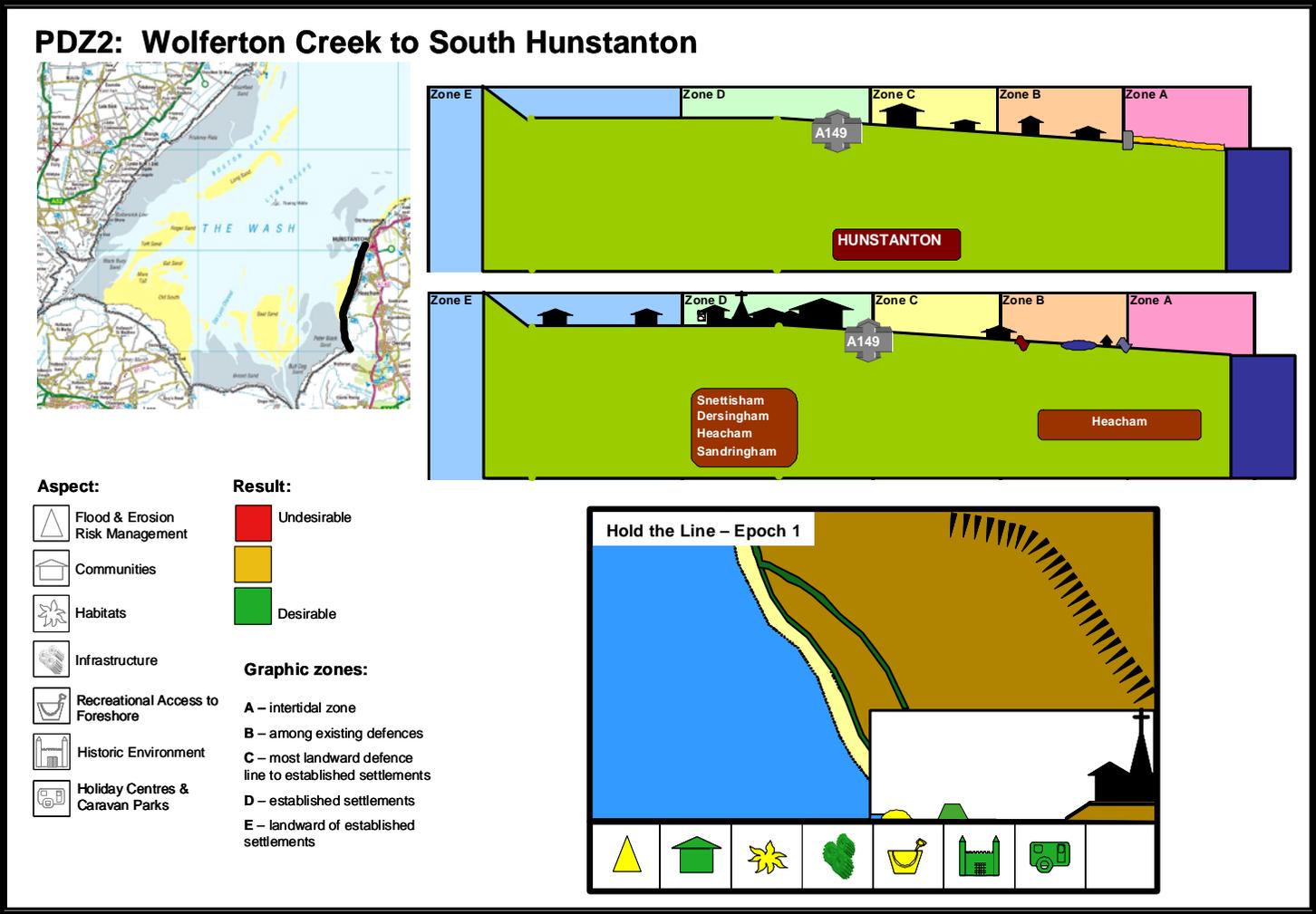


Table G3.1 PDZ2 (Wolferton Creek to south Hunstanton - General Objectives (epoch 1 only))

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
Flood and Erosion Risk Management						
Have as little flood and erosion risk management throughout the plan period as possible	3	Continuation of the current approach requires a significant amount of flood and erosion risk management. These defences will need to be strengthened or raised in order to keep pace with the effects of climate change.	-	-	-	-
Communities						
Protect as a minimum, throughout the plan period, to an appropriate standard of protection, all established settlements ² , and the area landward from these settlements	8	All established settlements are located on high ground. For this epoch, this policy will also ensure continued protection of all tourist facilities to the current standard, including the caravan parks, holiday centres and holiday homes.	-	-	-	-
Protect as many settlements as possible	8	All settlements will be protected to the current standard.	-	-	-	-

² Dersingham, Ingoldisthorpe, Snettisham, Heacham (permanent dwellings)

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
To balance the costs of ongoing shingle ridge maintenance with the cost of loss or relocation of the holiday homes	6	This policy means no loss of holiday homes, however there will be a significant cost associated with maintaining the shingle ridge.	-	-	-	-
Holiday Centres and Caravan Parks						
To balance the costs of long-term sea wall/earth embankment/shingle ridge maintenance with the long-term impacts on tourism and its values on the local economy, taking into account the long-term costs of loss or relocation of the established holiday centres and caravan parks	5	This policy means no loss of holiday centres or caravan parks in epoch 1 as all defences will be maintained, however there will be a significant cost associated with maintaining both the single ridge (where present) and the earth embankment/sea wall.	-	-	-	-
If temporary tourist facilities cease to be defended in future epochs, defences will be provided for an adequate period for possible relocation within the auspices of the land use planning system	8	This policy will mean no loss of temporary tourist facilities and therefore there will be no need to provide temporary defences to allow for relocation.	-	-	-	-
Habitats						
Maintain natural processes relating to sand and shingle shorelines, mudflats, saltmarsh, sand dunes and coastal lagoons	4	The natural processes are expected to be similar to today. However these processes are not entirely natural, and during epoch 1, when the frontline defences remain, coastal processes will continue to be 'squeezed' between the rising sea level and the defence line. There will also be continued beach lowering along the frontage. The saline lagoons continue to be protected	-	-	-	-

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
Maintain and if possible increase the area of mudflats, saltmarsh, sand dunes and coastal lagoons	6	During this epoch it is expected that there will be continued squeeze and beach lowering, and beach steepening	-	-	-	-
Allow for natural interaction between beaches and dune systems	1	This policy does not allow for natural interaction between the beaches and dune systems due to the continued annual reprofiling and nourishment undertaken along the shingle ridge	-	-	-	-
Historic Environment						
Preserve historic environment assets <i>in situ</i> where feasible	8	Sixteen locally important archaeological and historical sites of predominantly modern and WWII date are located in the foreshore and these would experience continued erosion pressure. 17 locally important sites would be maintained through protection though some could be affected by coastal management measures. 127 locally important archaeological and historic sites, along with 5 Listed Buildings, 2 Scheduled Monuments, and Sedgford and Heacham Conservation Areas will not experience any additional extreme flooding. Historic landscape character will be unchanged.	-	-	-	-

Table G3.2 PDZ2 (Wolferton Creek to south Hunstanton) - Timing of Policies Objectives (epoch 1 only)

Objective	Overall Score (epoch 1 only)	Explanation
Provide sufficient time, if required, for community adaptation	5	The Hold the line policy for epoch 1 ensures there is no short term need for adaptation. Time for adaptation, including community impacts, will be an important element in the joint process to develop a long-term sustainable plan for this PDZ.
Provide sufficient time, if required, for change of flood risk management practices	6	The Hold the line policy for epoch 1 ensures there is no short term need for adaptation. Time for adaptation will be an important element in the joint process to develop a long-term sustainable plan for this PDZ.
Provide sufficient time, if required, for relocation of regional infrastructure, ensuring continued A-road links between King's Lynn and Hunstanton and links between the communities	9	The Hold the line policy for epoch 1 ensures there is no short term need for adaptation. Time for adaptation, including infrastructural impacts, will be an important element in the joint process to develop a long-term sustainable plan for this PDZ.
Provide sufficient time, if required, for appropriate mitigation of loss or damage to historic environment assets if preservation in situ cannot be achieved	8	The Hold the line policy for epoch 1 ensures there is no short term need for adaptation. Time for adaptation, including historic assets, will be an important element in the joint process to develop a long-term sustainable plan for this PDZ. However, 15 locally important sites (MNF23145, MNF24558, MNF43016, MNF43019, MNF43020, MNF43021, MNF43022, MNF43029, MNF45970, MNF46180, MNF48440, MNF48497, MNF48500, MNF48540, and MNF57114) may be at risk of disturbance from coastal management measures and/or erosion in Epoch 1. These sites should be monitored and suitable levels of mitigation undertaken as appropriate during Epoch 1. Increased monitoring and mitigation of these sites may be necessary in Epochs 2 and 3 where NAI results in erosion of flood defences.
Provide sufficient time, if required, for recreational access to the foreshore	6	The Hold the line policy for epoch 1 ensures there is no short term need for adaptation. Time for adaptation, including beach recreation, walking and bird watching, will be an important element in the joint process to

develop a long-term sustainable plan for this PDZ.

Table G3.3 PDZ2 (Wolferton Creek to South Hunstanton) – Assessment per Key Value

Objective Category	Overall Score - epoch 1	Overall Score - epoch 2	Overall Score - epoch 3
Flood and Erosion Risk Management	5	-	-
Communities	7	-	-
Habitats	4	-	-
Infrastructure	9	-	-
Historic Environment	8	-	-
Holiday Centres and Caravan Parks	7	-	-
Recreation	6	-	-

G4 PDZ3 HUNSTANTON TOWN

G4.1 Policy Description

Throughout the short, medium and long term (present day to 2105) the current defences will be maintained across the whole of this PDZ.

G4.2 Shoreline Development for the Plan

Holding the line reduces wave attack on the beach and cliffs but reduces the amount of sediment available for transport to other PDZs and offshore which could have an impact upon the processes within PDZ2.

G4.3 Summary of Appraisal Results

Figure G4.1 provides an overview of the appraisal results for the Plan for this PDZ, for all epochs in the form of a schematic diagram. These scores are based on the appraisal tables provided in table G4.1 to table G4.3.

Overall, the appraisal results show that the epoch 1 Hold the line policy supports current use of the defended land and the beach. It does highlight the need for continued defence management and the negative impact on sediment supply to the south.

Figure G4.1 PDZ3 Policy Schematics

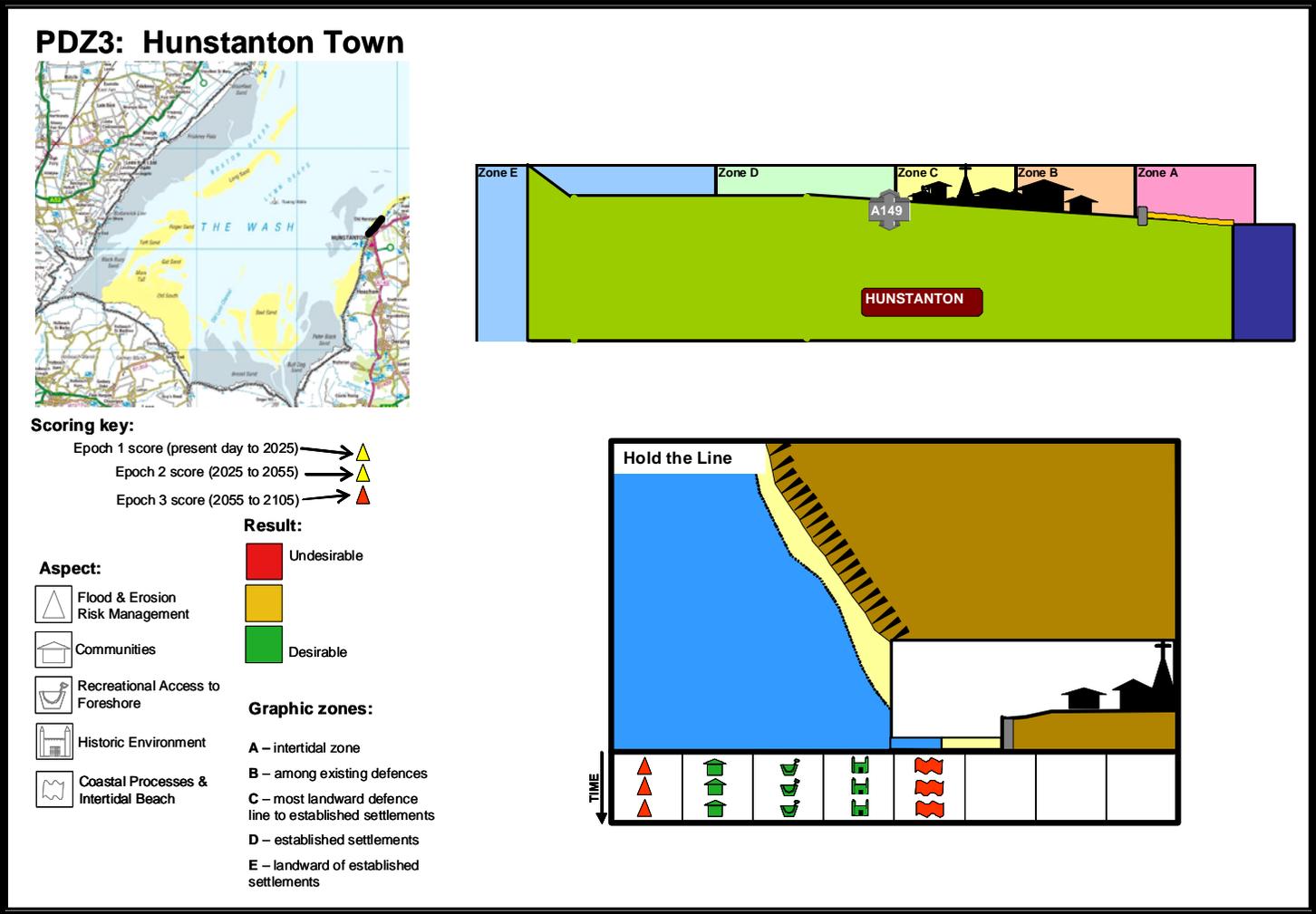


Table G4.1 PDZ3 (Hunstanton Town) – General Objectives

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
Flood and Erosion Risk Management						
Have as little flood and erosion risk management throughout the plan period as possible	3	This policy means that the current defences will need to be maintained and strengthened in all cases to keep pace with sea level rise and the effects of climate change.	2	As with epoch 1, but with an increasing need to improve the defences.	1	As with epoch 2.
Communities						
To maintain Hunstanton as a viable town, seaside resort and regional commercial centre throughout the plan period	9	Hold the line will ensure that Hunstanton is maintained as a viable town, seaside resort and regional commercial centre.	7	As with epoch 1, although there is a (uncertain) possibility that continued erosion of the foreshore in front of Hunstanton will gradually expose an increasing area of mud, which will threaten the existence of Hunstanton as a viable seaside resort	6	As with epoch 2, but with an increased possibility of exposure of mud across the foreshore, which has the potential to threaten the existence of Hunstanton as a viable seaside resort.
To protect as much of the existing development from cliff erosion as possible	9	Under this policy all of the existing development in this frontage will be protected from cliff erosion.	9	As with epoch 1.	9	As with epoch 1.

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
Coastal Processes & Intertidal Beach						
To maintain natural processes relating to cliffs	3	The entire length of this PDZ will remain defended, thus not allowing natural processes.	3	As with epoch 1.	3	As with epoch 1.
To prevent interruption of the role of cliff erosion in supplying sediment to the neighbouring frontages (including Hunstanton beach)	3	The entire length of this PDZ will remain defended and this will continue to restrict sediment supply to the neighbouring frontages.	3	As with epoch 1.	3	As with epoch 1.

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
To maintain the existing level of intertidal beach area throughout the plan period	3	The trend of falling beach levels already noted along this frontage will continue and worsen as sediment supply is minimal. Therefore the existing level of the intertidal beach area may not be maintained.	2	As with epoch 1, but with increasingly lower beach levels.	1	As with epoch 2.
Historic Environment						
Preserve historic environment assets <i>in situ</i> where feasible	8	Six locally important archaeological and historical sites are located in the foreshore and these would experience continued erosion pressure. Five locally important archaeological and historical sites and part of Hunstanton Conservation Area would be protected from erosion, though possible physical and visual disturbance could arise from coastal management measures. Historic landscape character will be largely unchanged though sensitive design must be undertaken fronting	8	Six locally important archaeological and historical sites are located in the foreshore and these would experience continued erosion pressure. Five locally important archaeological and historical sites and part of Hunstanton Conservation Area would be protected from erosion, though possible physical and visual disturbance could arise from coastal management measures. Historic landscape character will be largely unchanged though sensitive design must be undertaken fronting	8	Six locally important archaeological and historical sites are located in the foreshore and these would experience continued erosion pressure. Five locally important archaeological and historical sites and part of Hunstanton Conservation Area would be protected from erosion, though possible physical and visual disturbance could arise from coastal management measures. Historic landscape character will be largely

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
		Hunstanton Conservation Area.		Hunstanton Conservation Area.		unchanged though sensitive design must be undertaken fronting Hunstanton Conservation Area.

Table G4.2 PDZ3 (Hunstanton Town) - Timing of Policies Objectives

Objective	Overall Score (all epochs)	Comments
Provide sufficient time, if required, for appropriate mitigation of loss or damage to historic environment assets if preservation in situ cannot be achieved	8	For this PDZ there are 5 historical assets at risk as a result of foreshore erosion up to epoch 3, all of which are of local ³ importance. This policy would, however, result in gradual changes to the shoreline and foreshore, therefore there would be plenty of time for adequate levels of mitigation of these historic assets (bearing in mind these features have already been identified and located). However, 5 locally important sites (MNF1145, MNF1267, MNF38402, MNF41909, and MNF45994) may be at risk of disturbance from coastal management measures throughout all Epochs depending on when works are implemented, and consequently any scheme development should include sufficient investigation and mitigation of disturbance areas.
Provide sufficient time, if required, for recreational access to the foreshore	9	This policy ensures that the current defences will be maintained, and therefore the current recreational access points will be maintained throughout the three epochs.

³ **Local importance** – cultural heritage sites with some evidence of human activity, but in a fragmentary or poor state, buildings of local importance, and dispersed elements of historic landscapes (such as cropmarks).

Table G4.3 PDZ3: (Hunstanton Town) - Assessment per Key Value

Objective Category	Overall Score - Epoch 1	Overall Score - Epoch 2	Overall Score - Epoch 3
Flood and Erosion Risk Management	3	2	1
Communities	9	8	8
Coastal Processes & Intertidal Beach	3	3	2
Recreation	9		
Historic Environment	8	8	8

G5 PDZ4 HUNSTANTON CLIFFS

G5.1 Policy Description

The intent of management for this PDZ is to continue to allow the cliffs to erode naturally and provide sediment to adjacent PDZs, up to the point where the erosion starts to threaten cliff top properties and the B1161. It is uncertain when this would occur, but based on current knowledge this is likely to occur towards the very beginning of epoch 3 (around the year 2055), although there is a significant degree of uncertainty surrounding this date. From that time on, the intent is to prevent further cliff erosion to sustain the properties and the road; however, a better understanding of the technical, economic and environmental viability are required to confirm this intent.

Therefore, with current knowledge, the epoch 1 (short term) and epoch 2 (medium term) policy for this PDZ will be No active intervention (the cliffs will continue to remain unchanged). Into epoch 3 (long term) erosion may need to be prevented to ensure cliff top properties and the road are protected. This is subject to technical, economic and environmental sustainability.

G5.2 Shoreline Development for the Plan

The current rate of erosion will continue in epoch 1, and is expected to increase significantly into epoch 2 and 3. Following potential protection of the cliffs, there would be a reduction in sediment available for transport southward towards PDZs 3 and 2, and around to the North Norfolk coast. This could cause increased beach erosion along these frontages, and could also lead to increased erosion in PDZ4. Protection of a section of the cliffs could lead to outflanking of the new defences, leading to the need for an extension to the original defence length.

G5.3 Summary of Appraisal Results

Figure G5.1 provides an overview of the appraisal results for the Plan for this PDZ, for all epochs in the form of a schematic diagram. These scores are based on the appraisal tables provided in table G5.1 to table G5.3.

Overall, the appraisal results show that continued No active intervention in epoch 1 and 2 is positive for longshore interaction, and does not detract from current land use, although there may be an impact on some historic features. The intended (but conditional) Hold the line policy for epoch 3 supports current land use but increases defence management and limits longshore sediment supply.

Figure G5.1 PDZ4 Policy Schematics

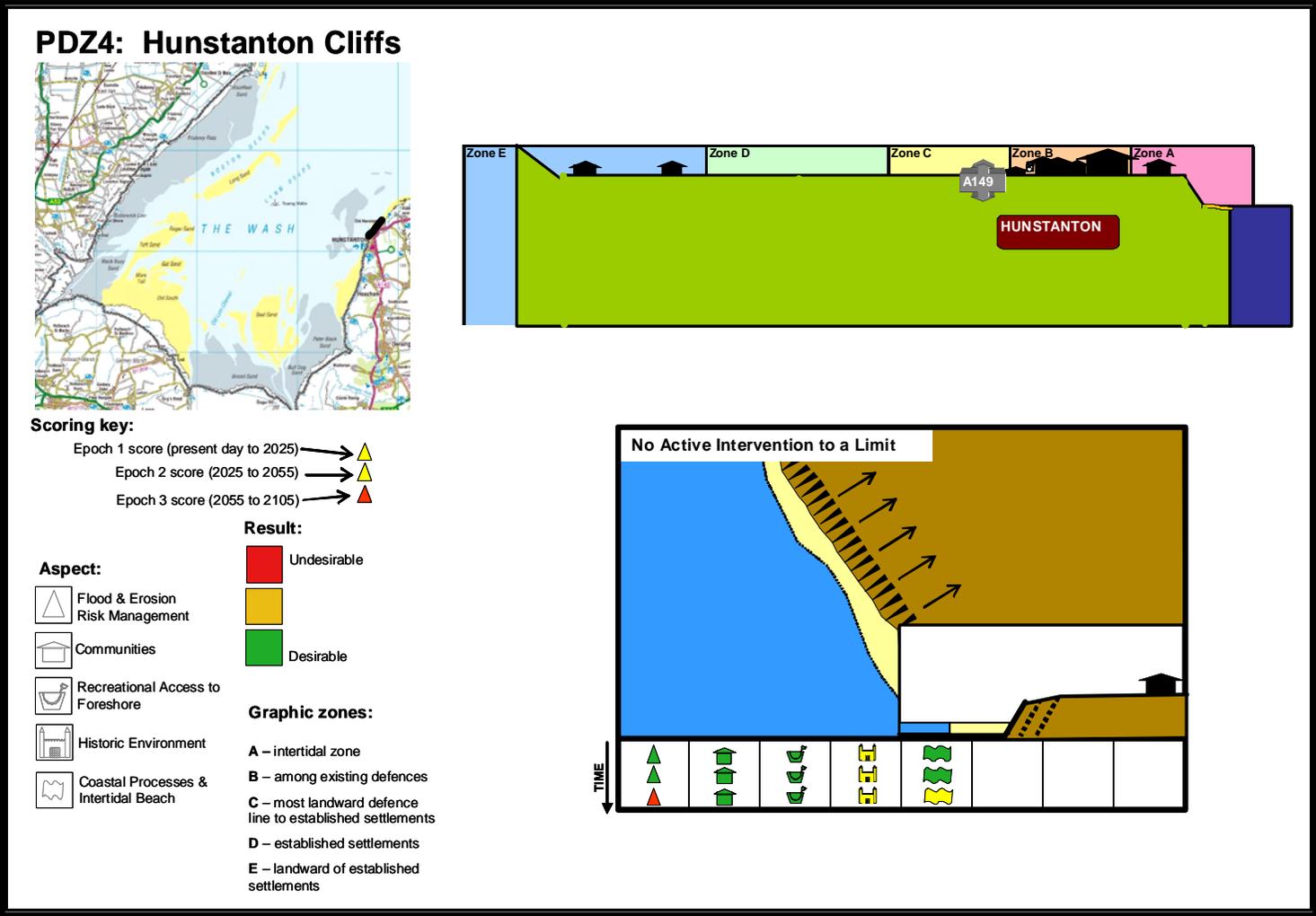


Table G5.1 PDZ4 (Hunstanton Cliffs) – General Objectives

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
Flood and Erosion Risk Management						
Have as little flood and erosion risk management throughout the plan period as possible	9	This policy means no erosion risk management	9	As with epoch 1	3	Defences will be required to protect the cliff top properties and the B1161 at the beginning of the third epoch. This will mean a substantial level of erosion risk management, but not throughout the entire PDZ.
Communities						
To maintain Hunstanton as a viable town, seaside resort and regional commercial centre throughout the plan period	8	Erosion will continue, but is not likely to significantly threaten Hunstanton's viability (there will only be the loss of a small section of the car park).	7	Erosion will continue and may start to threaten the cliff top tourist assets, reduce the size of the cliff top car park, and threaten the lighthouse. However all properties and the B1161 will remain protected.	7	As with epoch 2.
To protect as much of the existing development from cliff erosion as possible	8	Erosion will continue, but is not likely to significantly threaten a significant amount of existing development (there will only be the loss of a small section of the car park).	7	Erosion will continue and may start to threaten the cliff stop tourist assets, reduce the size of the cliff top car park, and threaten the lighthouse. However all properties and the B1161 will remain protected.	7	As with epoch 2.

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
Coastal Processes & Intertidal Beach						
To maintain natural processes relating to cliffs	9	There will be no change in this epoch, as the currently undefended cliffs will remain undefended.	9	As with epoch 1.	6	Defences will be required to protect the cliff top properties and the B1161 at the beginning of the third epoch. This will begin to affect the natural processes relating to the cliffs, although the effect will not be particularly significant due to the fact that defences are not required along the entire length of the PDZ.
To prevent interruption of the role of cliff erosion in supplying sediment to the neighbouring frontages (including Hunstanton beach)	9	There will be no change in this epoch, as the currently undefended cliffs will remain undefended.	9	As with epoch 1.	6	Defences will be required to protect the cliff top properties and the B1161 at the beginning of the third epoch. This will begin to affect the cliff's role in supplying sediment to neighbouring frontages, although the effect will not be particularly significant due to the fact that defences are not required along the entire length of the PDZ.

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
To maintain the existing level of intertidal beach area throughout the plan period	9	There will be no change in this epoch, as the currently undefended cliffs will remain undefended.	9	As with epoch 1.	6	Defences will be required to protect the cliff top properties and the B1161 at the beginning of the third epoch. This will begin to affect the cliff's role in supplying sediment to neighbouring frontages and therefore the maintenance of the level of the intertidal beach area. However it is expected that the effect will not be particularly significant due to the fact that defences are not required along the entire length of the PDZ.
Historic Environment						
Preserve historic environment assets <i>in situ</i> where feasible	6	Four locally important archaeological and historical sites of modern and WWII date are located in the foreshore and these would experience continued erosion pressure. Six locally important archaeological and	5	Four locally important archaeological and historical sites of modern and WWII date are located in the foreshore and these would experience continued erosion pressure Six locally important archaeological and historical sites and an area of Hunstanton	3	Four locally important archaeological and historical sites of modern and WWII date are located in the foreshore and these would experience continued erosion pressure. Six locally important archaeological and

Objective	Epoch 1 (2025)		Epoch 2 (2055)		Epoch 3 (2105)	
	Score	Explanation	Score	Explanation	Score	Explanation
		historical sites and small area of Hunstanton Conservation Area would be lost as a result of erosion. Historic landscape character will be effected on the immediate coastline through the loss of area of Hunstanton Conservation Area would occur, and the setting of the Listed Lighthouse could be adversely affected.		Conservation Area would be lost as a result of erosion. Historic landscape character will be adversely affected within this zone through the loss of area of Hunstanton Conservation Area that would occur, and the setting of the Listed Lighthouse would also be affected.		historical sites, an area of Hunstanton Conservation Area, and a Grade II Listed Building (the Lighthouse) would be lost as a result of erosion; in addition the Listed Grade II Listed Building St Edmund's Chapel could also be at risk. Historic landscape character will be adversely affected within this zone through the loss of area of Hunstanton Conservation Area that would occur, and the loss of one Listed Building and the setting of another would increase the scale of the adverse effect.

Table G5.2 PDZ4 (Hunstanton Cliffs) - Timing of Policies Objectives

Objective	Overall Score (all epochs)	Comments
Provide sufficient time, if required, for appropriate mitigation of loss or damage to historic environment assets if preservation in situ cannot be achieved	6	For this PDZ there are 25 (all of which are of local ⁴ importance only) historical assets at risk as a result of unconstrained coastal erosion and continued foreshore erosion in epoch 1 and epoch 2. This policy would, however, result in gradual changes to the shoreline and foreshore, therefore there would be plenty of time for adequate levels of mitigation of these historic assets (bearing in mind these features have already been identified and located). However, 10 locally important sites (MNF1274, MNF4372, MNF23514, MNF24939, MNF41679, MNF41689, MNF41921, MNF45994, MNF46562, and MNF47480) may be at risk of disturbance from coastal erosion throughout all Epochs, and appropriate monitoring and mitigation may need to be undertaken at regular intervals. The erosion will result in the loss of the Lighthouse (Listed Building Grade II – site MNF1290) and by the end of Epoch 2 appropriate mitigation measures for the lighthouse must be undertaken prior to the structure’s loss, with possible measures including recording and/or relocation. This work will be informed by, or form part of, action 4.1 as detailed in the SMP’s Action Plan. Potentially mitigation may also be needed for St Edmund’s Chapel (Listed Building Grade II – site MNF1291), and monitoring in Epoch 3 shall determine when this may be required.
Provide sufficient time, if required, for recreational access to the foreshore	7	The recreation along this PDZ is generally associated with use of the beach (in terms of walking, crabbing etc.) and cliff top car park. This policy will lead to loss of the seaward edge of the cliff top car park. However this policy will result in no change to the current situation, and

⁴ **Local importance** – cultural heritage sites with some evidence of human activity, but in a fragmentary or poor state, buildings of local importance, and dispersed elements of historic landscapes (such as cropmarks).

therefore a similar level of recreational access will be possible.

Table G5.3 PDZ4 (Hunstanton Cliffs) – Assessment per Key Value

Objective Category	Overall Score - Epoch 1	Overall Score - Epoch 2	Overall Score - Epoch 3
Flood and Erosion Risk Management	9	9	3
Communities	8	7	7
Coastal Processes & Intertidal Beach	9	9	6
Recreation	7		
Historic Environment	6	6	5