5 Policy Statements

5.1 Introduction

This section presents the preferred policies and implications for individual sections of coast. These are to provide local detail to support the overall SMP presented in **Section 4**, and consider locally-specific issues and objectives which are presented in **Appendix E**. These statements must be read in conjunction with the wider objectives and in the context of the wider-scale issues and policy implications.

5.2 Content

Each Policy Statement contains the following:

- **Location reference** – This provides the general location covered by the statement, together with the policy unit or units covered by the statement. The policy units are identified by a number which is sequential along the shoreline from east to west (to accord with a new national notation).
- **Summary of the SMP recommendations and justification** – This summarises each location's plan and explains the reasoning behind it. These statements focus upon the long term policy but also note any different short term requirements necessary to achieve the long term aim.
- **Preferred policies** – This describes the preferred policies and activities to be adopted in the short, medium, and long term. In this respect, "short term" is broadly representative of the next 20 years, "medium term" the next 20 to 50 years, and "long term" the next 50 to 100 years or more. These timescales should not be taken as definitive and should be considered as phases in the management of a location. Similarly, the policy unit boundaries shown should not be taken as definitive, as the SMP is based upon high-level assessment and more detailed studies may justify the need to 'go across' boundaries to appropriately deliver the plan's policies.
- **Predicted implications of the preferred policies for this location** – This table summarises the consequences at this location only resulting from the preferred policies. These come under the categories of "property and population", "land use, infrastructure and material assets", "historic environment", "landscape", "earth heritage, soils and geology", "water", and "biodiversity, flora and fauna" and correspond with information being entered into the national database of SMPs. The implications have been assessed for the situation by years 2025, 2055 and 2105 to provide a nationally consistent picture, and consider the impact of the local policy and also policies along adjacent stretches of coast, as necessary.

  Maps – The maps show the erosion that is expected to occur under the preferred policy option in each area. It should be noted that in some areas no erosion is predicted to occur and so the erosion lines shown sit on top of each other (and so only a single erosion line is visible). 2008 Environment Agency flood zone maps have been used. The reader should note that these are continually updated by the Environment Agency (refer to www.environment-agency.gov.uk) but do not include the effects of climate change or raised defences. The maps, where appropriate, show potential realigned defence positions to illustrate possible implications of policies. It should be noted that the realignment extent where managed realignment is proposed will be subject to further studies before any realignment scheme is undertaken (refer to Section 5.2.2). Not all data used in the SMP is shown on these policy unit maps. Additional data used can be viewed on the maps provided in Appendix D.

5.2.1 Policy units

Statements are provided for the following Policy Units:

Policy statement extent	Policy units covered	Page number
Walls Hill to Hope's Nose	6b42 to 6b44	322
Hope's Nose to Beacon Cove	6b45 to 6b47	328
Beacon Cove to Roundham Head	6b48 to 6b55	334
Roundham Head to Churston Cove (East)	6b56 to 6b59	345
Brixham	6b60 and 6b61	353
Berry Head to Kingswear (South)	6b62 and 6b63	359
Dart Estuary	6b64 to 6b70	364
Blackstone Point to Strete	6b71 to 6b74	375
Strete to Limpet Rocks	6b75 and 6b76	384
Limpet Rocks to Beesands	6b77 and 6b78	391
Beesands (South) to Start Point	6b79	397
Start Point to Limebury Point	6c01 and 6c02	401
Salcombe Harbour (Limebury Point to Kingsbridge Estuary – Scoble Point)	6c03	407
Kingsbridge Estuary	6c04 to 6c06	410
Salcombe (Snapes Point to Splat Cove Point)	6c07	416
Splat Cove Point to Bolt Head	6c08	419
Bolt Head to Avon Estuary (East)	6c09 to 6c12	422
Avon Estuary	6c13 to 6c15	431
Warren Point (Bigbury-on-Sea) to Challaborough (West)	6c16	438
Challaborough (West) to Erme Estuary (East)	6c17	442
Erme Estuary	6c18 to 6c20	445
Erme Estuary (West) to Yealm Estuary (East)	6c21	451
Yealm Estuary	6c22 to 6c25	454
Season Point to Wembury Point	6c26	462
Wembury Point to Mount Batten Breakwater	6c27	466
Mount Batten Breakwater to Devil's Point (including Plym Estuary)	6c28 to 6c30	470
Tamar Estuary (East Bank)	6c31	476
Upper Tamar Estuary	6c32 and 6c33	480
Tamar Estuary (West Bank)	6c34 to 6c40	486
Mount Edgcumbe to Rame Head	6c41 to 6c45	497

5.2.2 Additional information

Historic environment features

Where a proposed policy results in the loss of Historic Environment features (known and unknown) it will be important to consider surveys and investigations to record these important sites, and any features not yet identified.

Footpaths

Where a proposed policy results in the loss of footpaths, there is potential, subject to planning consents, for footpaths to be re-routed as the shoreline retreats and/or when defences are realigned. It is important to note, however, that the provision of defences to support a footpath is not sufficient justification alone for

providing the defence, as evidenced by the policy of the South-West Coast Path (www.southwestcoastpath.com).

Land use within defended areas or those affected by policies

Flood and erosion defences reduce the risk to the assets they protect but they do not remove the risk completely. To be suitably adaptable to future change and future risks, all new development in flood and erosion risk areas should be appropriately adaptable, resilient and resistant. Decisions on development land use within flood and erosion risk areas should fully consider the risk and be adaptable to change. This should follow national planning policy, particularly PPG20 and PPS25 which states development should first be directed to low risk areas. Appropriate emergency/contingency plans should also be put in place to manage any residual risks of sudden extreme flooding.

Where the SMP recommends managed realignment of existing defences, the effect on parties currently protected by defences will be part of the 'management' of that change.

Health and safety and removal of defences

All the policies presented will need to be supported by strategic monitoring and must, when implemented, take due account of existing health and safety legislation. Where a policy of No Active Intervention will result in present defences not being maintained, then consideration will need to be given to removing defences so that they do not present a risk to public safety as they deteriorate.

Erosion risk

Within the policy statements, 'total erosion' is stated for a given period and refers to total erosion from the present day and not the erosion during that period. For example, if the 20 to 50 year statement states that there is 10m erosion and the 50 to 100 year statements states there is 25m erosion, then this would mean that there was a potential for 15m recession between years 50 and 100, resulting a cumulative recession of 25m by year 100.

The erosion risk stated is the maximum extent of risk expected along the stretch of coastline discussed. However, it should be recognised that erosion is not linear due to local variations in geology and structure and exposure conditions, and varying rates of erosion will occur along any length of coastline.

Estuaries

The SMP2 has considered the estuaries along the coast up to the tidal limits which, in some cases, extend someway inland, whilst in others, are located at the coast (refer to **Appendix C**, **Annex C.1** for a full list of estuaries considered).

For many of the estuaries along this coastline, there have not be detailed studies undertaken and therefore limited information was available for this SMP. The recently completed Catchment Flood Management Plans (CFMPs) (Environment Agency, 2008) that cover the estuaries have therefore been used as the primary basis for setting policy in the SMP. It should, however, be noted that the policies set by CFMPs are not directly equivalent to SMP policies.

Economic viability

Although economic viability has been considered in putting together this plan, a proposed policy of hold the line or managed realignment does not guarantee funding for defence maintenance and/or capital works along these sections of the shoreline (see **Appendix H** for further detail on the economic appraisal for the preferred policy options presented).

Private defences

Along parts of this coast there are private defences that have been constructed by individual landowners. The policy statements indicate where we believe these existing private defences could, or should not, be maintained for technical and/or environmental reasons. However, it is acknowledged that at some point other individuals may wish to build new defences where presently there are none. In these situations, new defences might be permitted, but the landowner would need to demonstrate that these would have no adverse impacts on coastal processes and designated features, as part of the statutory planning process. It is not possible to prescribe specific policies for this situation as it is unknown as to if, when or where this situation may arise.

Managed Realignment policies

Managed realignment extents are not defined in the following SMP policy unit statements because further studies are needed to:

- identify the best alignment and extent of defences that best manages flood risk on technical, social, economic and environmental grounds;
- define the exact standard of protection of any realigned defences along these frontages;
- investigate implementation methods;
- assess hydrodynamic impacts of managed realignment;
- investigate future morphological evolution;
- assess potential impacts on Designated or Registered Historic Environment assets and their settings;
- assess the potential impact on internationally designated sites; and
- investigate any mitigation measures required for loss of any designated habitats.

Theoretically the maximum extent of any realignment is limited by the extent of the floodplain, but in reality there are a number of other constraints which restrict it further. Within the present SMP, example realignment extents have been identified after considering:

- the provision of a more sustainable estuary alignment;
- the avoidance of built assets, infrastructure and internationally designated habitats where practicable;
- more economic, shorter and sheltered defences, incorporating high land where possible;
- the creation of intertidal habitat; and
- the potential effects on estuary dynamics.

These are indicative extents and definition of the actual realignment extent will depend upon further studies.

There should be detailed consideration of future land use, development and infrastructure improvements in all areas of flood and erosion risk, particularly where the policy is to enable the shoreline, and the assets affected by it, to adapt in a sustainable, controlled and balanced way.

Location reference:	**Durlston Head to White Nothe**
Policy Unit reference:	**5g01 to 5g08**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

There are very few assets at risk of being lost to erosion along this length of coastline, and much of it is also designated for its outstanding landscape and geological value.

The long term Plan is to allow natural processes to continue without any further intervention along most of this coastline. This may result in the damage or loss to some historical features, but protection of these would not be consistent with the broader vision for this area to maintain its natural value, and could be problematic as erosion of adjacent lengths continues in the future. There will also be some erosion of cliff top grassland, but to preserve this would be contrary to wider nature conservation objectives. There may also be an impact on the slipway at Chapmans Pool.

There are two areas where there are existing defence structures: on the eastern side of Kimmeridge Bay and within Lulworth Cove. Because sediment interlinkages along this coast are weak, any interventions would not significantly affect adjacent stretches of coast nor compromise the future natural evolution of those shorelines. The long term Plan for these areas therefore is to continue to allow intervention as necessary to ensure visitor access is maintained and to minimise flood risk. Continued intervention in these areas will not though satisfy national criteria for economic justification so continued defence would be dependent upon alternative funding being sourced (refer also to Section 5.2.2 'Private Defences').

Preferred policies to implement Plan:

From present day (short term):	The short term policy for this entire frontage is **No Active Intervention**, with cliff erosion continuing at similar rates as at present. This varies along the shoreline, dependent upon the differences in geology. Within Kimmeridge Bay and Lulworth Cove, the policy is to allow existing structures to be maintained for as long as technically and economically possible. However, this will not attract public (flood and coastal defence budget) funding and so would depend on the availability of alternative funding to achieve this. Ongoing monitoring is recommended as part of this policy, to inform decisions about if or when any future realignment of these defences.
Medium term:	The medium term policy for Durlston Head to St Alban's Head is to continue with **No Active Intervention**. Within Kimmeridge Bay and Lulworth Cove there should be a continuation of the short term policy to allow these structures to be maintained for as long as possible subject to the availability of alternative funds. Over time it may become increasingly difficult to maintain the integrity of these defences in their current positions as the adjacent shorelines recede. Consideration should then be given to moving the defence lines back in preference to constructing replacements along existing alignments. The decision as to when any realignment of defences would be appropriate would need to be informed by ongoing monitoring. Should alternative funding not be available then the **No Active Intervention** policy would extend across these frontages.
Longer-term:	The long term policy is for a continuation of **No Active Intervention**, so the cliffs would continue to evolve naturally. The clay rich cliffs that dominate much of this stretch are also very sensitive to

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

climate change and the rate of erosion could increase both due to sea level rise and an increase in rainfall. The extent of this is, however, unknown due to uncertainty in the possible future changes in precipitation.

At Kimmeridge Bay and Lulworth Cove, the long term policy is to allow continued minimal intervention should alternative funds be available, to ensure a beach access is maintained and the flood risk at Lulworth is minimised. If alternative funds are available to construct new replacement defences, it is recommended that a realigned defence position be considered, particularly within Kimmeridge Bay where increased exposure to wave action and outflanking due to adjacent eroding cliffs will increasingly be an issue. If defences are retained in these areas it is essential that they do not significantly impact on the natural character of this shoreline or adversely affect wider shoreline processes. The requirement for ongoing monitoring would therefore remain.

Should alternative funding not be available then the **No Active Intervention** policy would extend across these frontages.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
5g01	Durlston Head to St Alban's Head	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.
5g02	St Alban's Head to Kimmeridge Bay	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.
5g03	Kimmeridge Bay (defended length)	Continue to allow existing localised defences to be maintained or replaced, either along existing or realigned positions, if alternative funding is available to reduce the risk of flooding and erosion and maintain visitor access. If alternative funds are not available, then allow natural coastal evolution to continue through **No Active Intervention**.	Continue to allow existing localised defences to be maintained or replaced in a realigned position if alternative funding is available to reduce the risk of flooding and erosion and maintain visitor access. If alternative funds are not available, then allow natural coastal evolution to continue through **No Active Intervention**.	Continue to allow existing localised defences to be maintained or replaced in a realigned position if alternative funding is available to reduce the risk of flooding and erosion and maintain visitor access. If alternative funds are not available, then allow natural coastal evolution to continue through **No Active Intervention**.
5g04	Kimmeridge Bay (undefended) to Worbarrow Tout	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.
5g05	Worbarrow Tout to Lulworth Cove	Allow natural coastal evolution to continue	Allow natural coastal evolution to continue	Allow natural coastal evolution to continue

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
	(East)	through **No Active Intervention**.	through **No Active Intervention**.	through **No Active Intervention**.
5g06	Lulworth Cove (undefended)	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.
5g07	Lulworth Cove (defended length)	Continue to allow existing localised defences to be maintained or replaced, either along existing or realigned positions, if alternative funding is available to reduce the risk of flooding and erosion and maintain visitor access. If alternative funds are not available, then allow natural coastal evolution to continue through **No Active Intervention**.	Continue to allow existing localised defences to be maintained or replaced in a realigned position if alternative funding is available to reduce the risk of flooding and erosion and maintain visitor access. If alternative funds are not available, then allow natural coastal evolution to continue through **No Active Intervention**.	Continue to allow existing localised defences to be maintained or replaced in a realigned position if alternative funding is available to reduce the risk of flooding and erosion and maintain visitor access. If alternative funds are not available, then allow natural coastal evolution to continue through **No Active Intervention**.
5g08	Lulworth Cove (West) to White Nothe	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Durlston Head to White Nothe
Policy Unit reference:	5g01 to 5g08

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

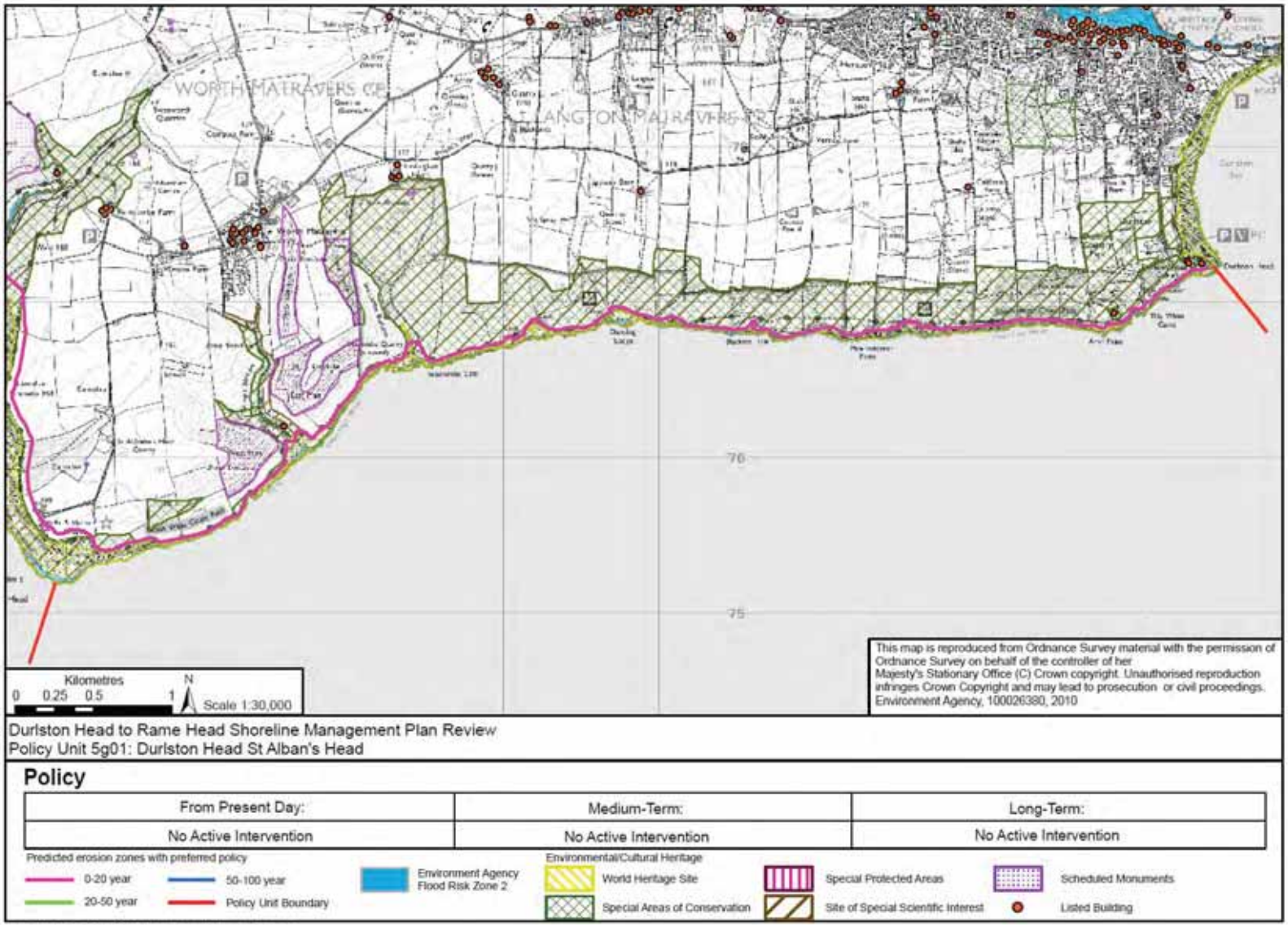
Time Period	Management Activities	Property and Population	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Cliff erosion will continue along this section by a variety of mechanisms controlled by the local geological characteristics. Coarser sediment released from this erosion will be retained within local pocket beaches, whilst finer sediment is removed offshore. Continued maintenance of the existing defences, and ongoing monitoring of both the structures and adjacent cliffs.	Potential permanent loss of some community, recreational and amenity facilities in Kimmeridge Bay (with associated health impacts) due to erosion and at the western end of Lulworth Cove (dependent on location and timing of Managed Realignment) due to erosion and flooding. Potential loss of some tourist assets (e.g. visitor access to the western section of Lulworth Cove beach if alternative funding is not available).	Permanent loss of grades 3, 4 and 5 agricultural land due to erosion and flooding.	Potential partial loss of up to 4 Scheduled Monuments (SMs) due to erosion: Alum Works SM at Kimmeridge Bay, Bowl Barrow SM on Emmetts Hill, Flowers Barrow SM and The Warren Field System SM. Loss of small area of Encombe and Lulworth Castle Registered Parks and Gardens.	Minor change in landscape character of Dorset AONB due to increased erosion and flooding, but not considered detrimental as these are natural processes.	Continuation of natural processes is key to the integrity of the geological interest features of South Dorset Coast Site of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS), therefore the preferred policies in this coastal section would continue to maintain the geological exposures of these features.	No known impacts on water quality. However, the exposed sewage pipeline at Lulworth Cove will require further consideration i.e. covering. Managed Realignment at Kimmeridge Bay and Lulworth Cove should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	No adverse effect on Isle of Portland to Studland Cliffs SAC. Continued loss of unimproved neutral and calcareous grassland within South Dorset Coast SSSI (biological) from erosion and flooding. Opportunities may exist to improve the favourable condition of the designated terrestrial habitats through changes in their grazing/scrub management at Kimmeridge Bay and Lulworth Cove.
2025 – 2055	Cliff erosion will continue along this section by a variety of mechanisms controlled by the local geological characteristics. Coarser sediment released from this erosion will be retained within local pocket beaches, whilst finer sediment is removed offshore. Continued maintenance of the existing defences, and ongoing monitoring of both the structures and adjacent cliffs. Consideration of the need to realign defences.	Potential permanent loss of some community, recreational and amenity facilities in Kimmeridge Bay due to erosion and at the western end of Lulworth Cove (dependent on location and timing of Managed Realignment). Potential loss of some tourist assets (e.g. visitor access to the western section of Lulworth Cove beach if alternative funding is not available).	Permanent loss of grades 3, 4 and 5 agricultural land due to erosion and flooding. Part of the B370 main access road to Lulworth Cove may be affected due to erosion and flooding, depending upon the location of Managed Realignment.	Potential partial loss of up to 4 Scheduled Monuments (SMs) due to erosion: Alum Works SM at Kimmeridge Bay, Bowl Barrow SM on Emmetts Hill, Flowers Barrow SM and The Warren Field System SM. Loss of small area of Encombe and Lulworth Castle Registered Parks and Gardens.	Minor change in landscape character of Dorset AONB due to increased erosion and flooding, but not considered detrimental as these are natural processes. Potential for deteriorating structures to become unsightly.	Continuation of natural processes is key to the integrity of the geological interest features of South Dorset Coast Site of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS), therefore the preferred policies in this coastal section would continue to maintain the geological exposures of these features.	No known impacts on water quality. However, the exposed sewage pipeline at Lulworth Cove will require further consideration i.e. covering. Managed Realignment at Kimmeridge Bay and Lulworth Cove should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	No adverse impact on Isle of Portland to Studland Cliffs SAC. Continued loss of unimproved neutral and calcareous grassland within South Dorset Coast SSSI (biological) from erosion and flooding. Opportunities may exist to improve the favourable condition of the designated terrestrial habitats through changes in their grazing/scrub management at Kimmeridge Bay and Lulworth Cove.
2055 – 2105	Cliff erosion will continue to occur along this section by a variety of mechanisms controlled by the local geological characteristics. Coarser sediment released from this erosion will be retained within local pocket beaches, whilst finer sediment is removed offshore.	Potential permanent loss of some community, recreational and amenity facilities in Kimmeridge Bay due to erosion and at the western end of Lulworth Cove (dependent on location of Managed Realignment) due to erosion and flooding. Potential loss of some tourist assets (e.g. visitor access to the western section of	Permanent loss of grades 3, 4 and 5 agricultural land due to erosion and flooding. Part of the B370 main access road to Lulworth Cove may be affected due to erosion and flooding, depending upon the location of Managed Realignment.	Potential partial loss of up to 4 Scheduled Monuments (SMs) due to erosion: Alum Works SM at Kimmeridge Bay, Bowl Barrow SM on Emmetts Hill, Flowers Barrow SM and The Warren Field System SM. Loss of small area of Encombe and Lulworth Castle Registered Parks and Gardens.	Minor change in landscape character of Dorset AONB due to increased erosion and flooding, but not considered detrimental as these are natural processes. Potential for deteriorating structures to become unsightly.	Continuation of natural processes is key to the integrity of the geological interest features of South Dorset Coast Site of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS), therefore the preferred policies in this coastal section would continue to maintain the geological exposures of these features.	No known impacts on water quality. However, the exposed sewage pipeline at Lulworth Cove will require further consideration i.e. covering. Managed Realignment at Kimmeridge Bay and Lulworth Cove should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement	No adverse impact on Isle of Portland to Studland Cliffs SAC. Continued loss of unimproved neutral and calcareous grassland within South Dorset Coast SSSI (biological) from erosion and flooding. Opportunities may exist to improve the favourable condition of the designated

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

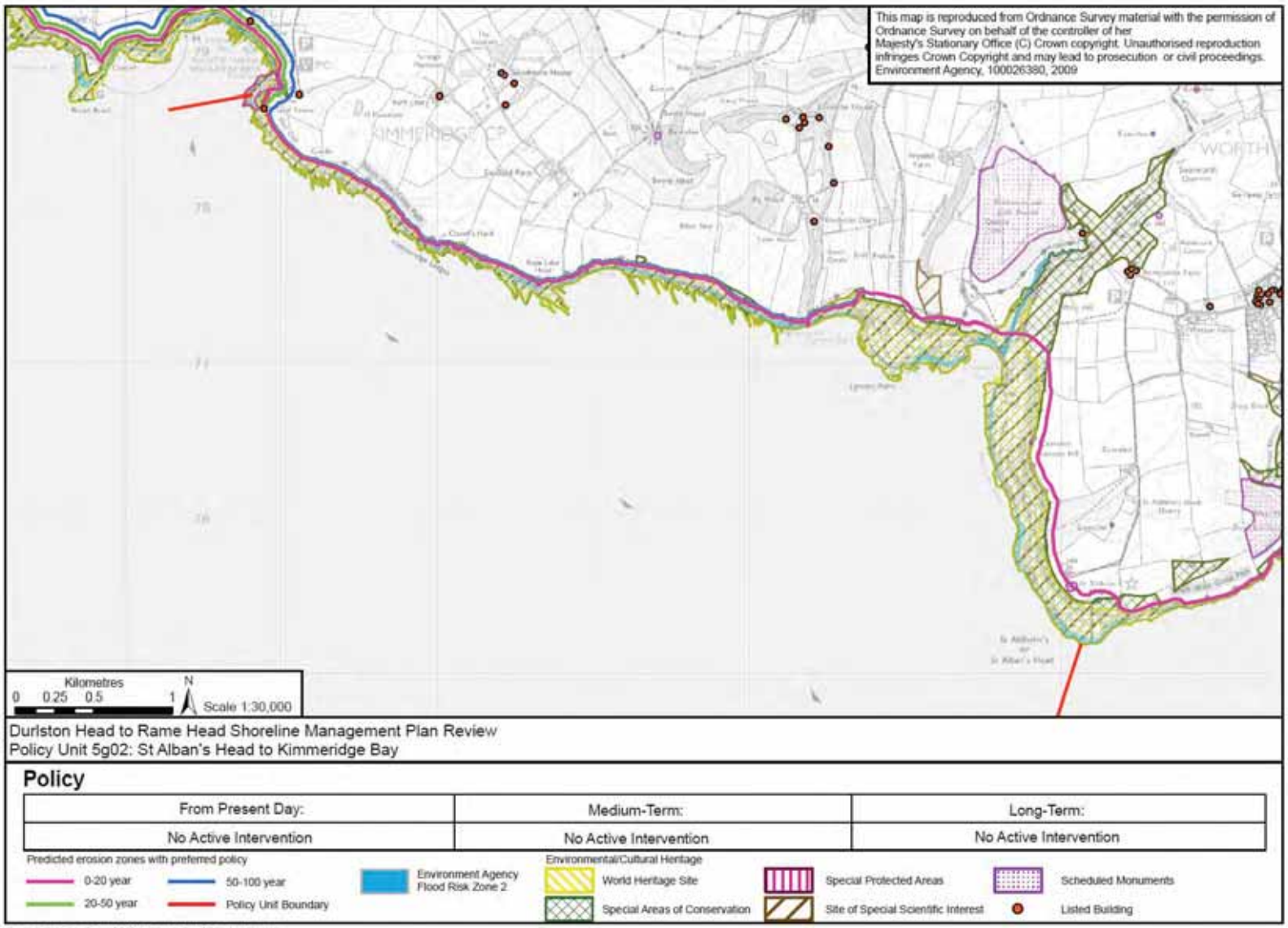
Location reference:	Durlston Head to White Nothe
Policy Unit reference:	5g01 to 5g08

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION								
Time Period	**Management Activities**	**Property and Population**	**Land Use, Infrastructure and Material Assets**	**Historic Environment**	**Landscape Character and Visual Amenity**	**Earth Heritage, Soils and Geology**	**Water**	**Biodiversity, Flora and Fauna**
	Construction of a realigned defence position, the timing of which is to be informed by the ongoing monitoring.	Lulworth Cove beach if alternative funding is not available). Where funding is available, opportunities exist to improve visitor access to the beach/coast.					of WFD water quality targets.	terrestrial habitats through changes in their grazing/scrub management at Kimmeridge Bay and Lulworth Cove.

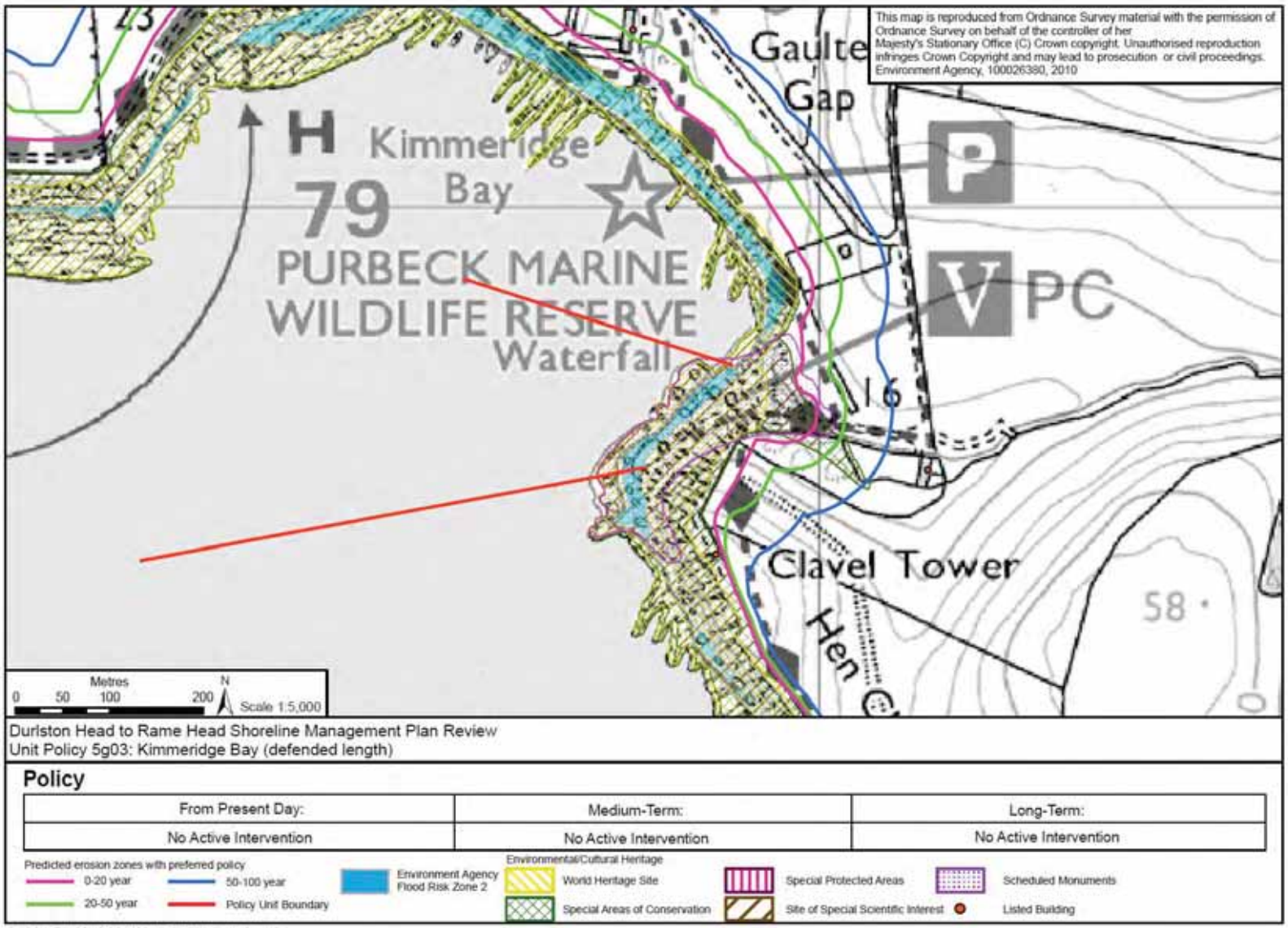
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



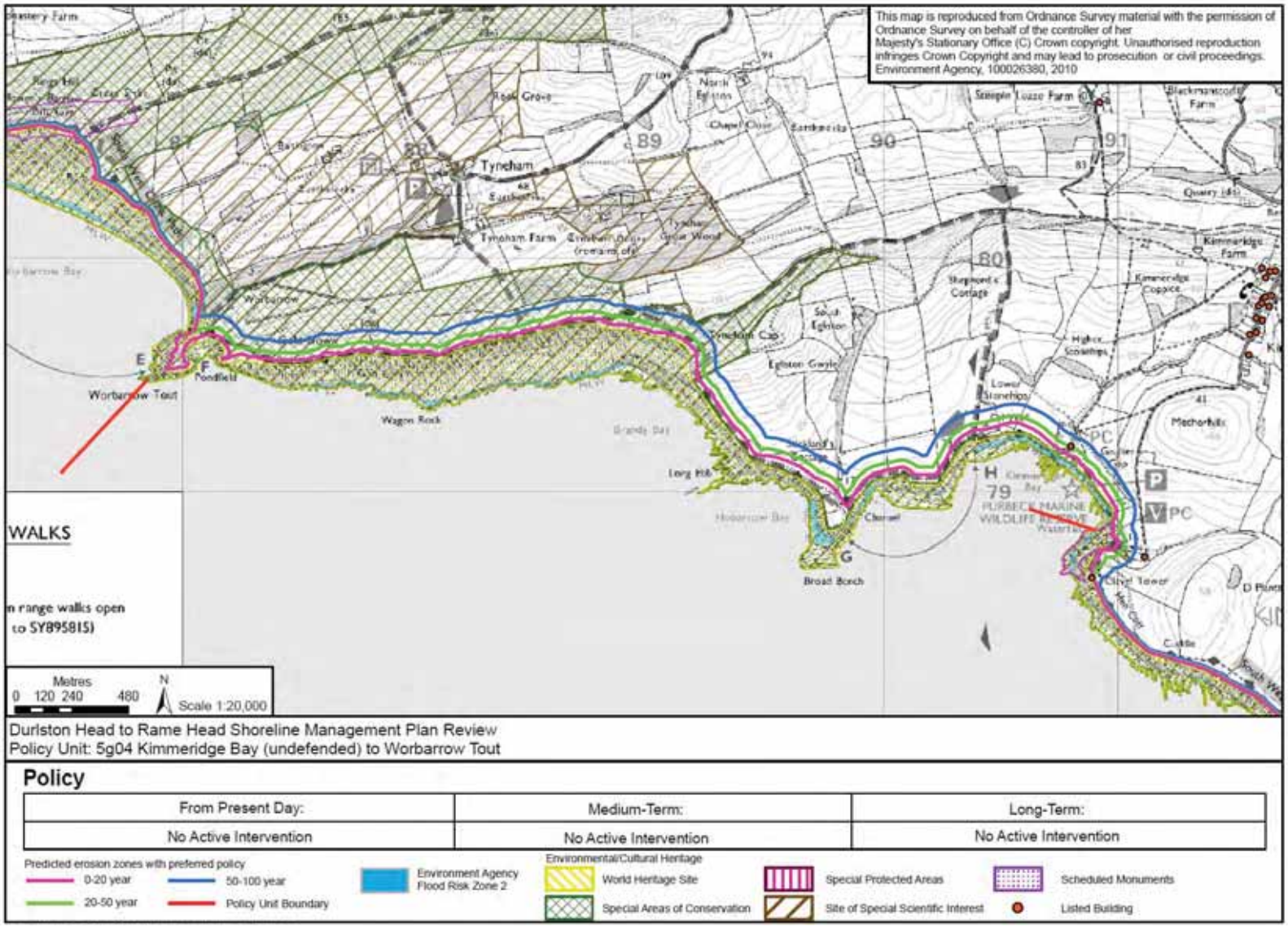
The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



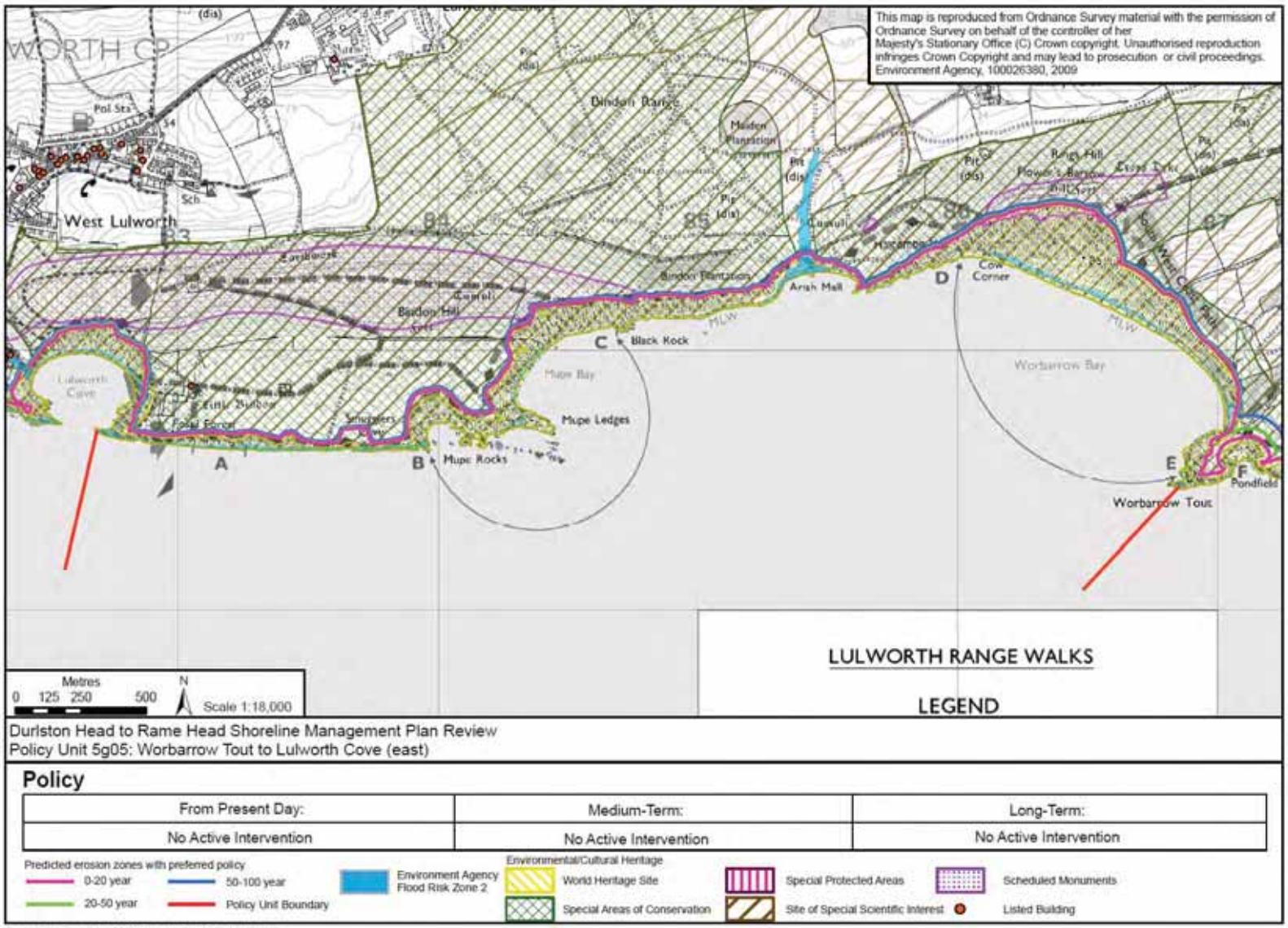
The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



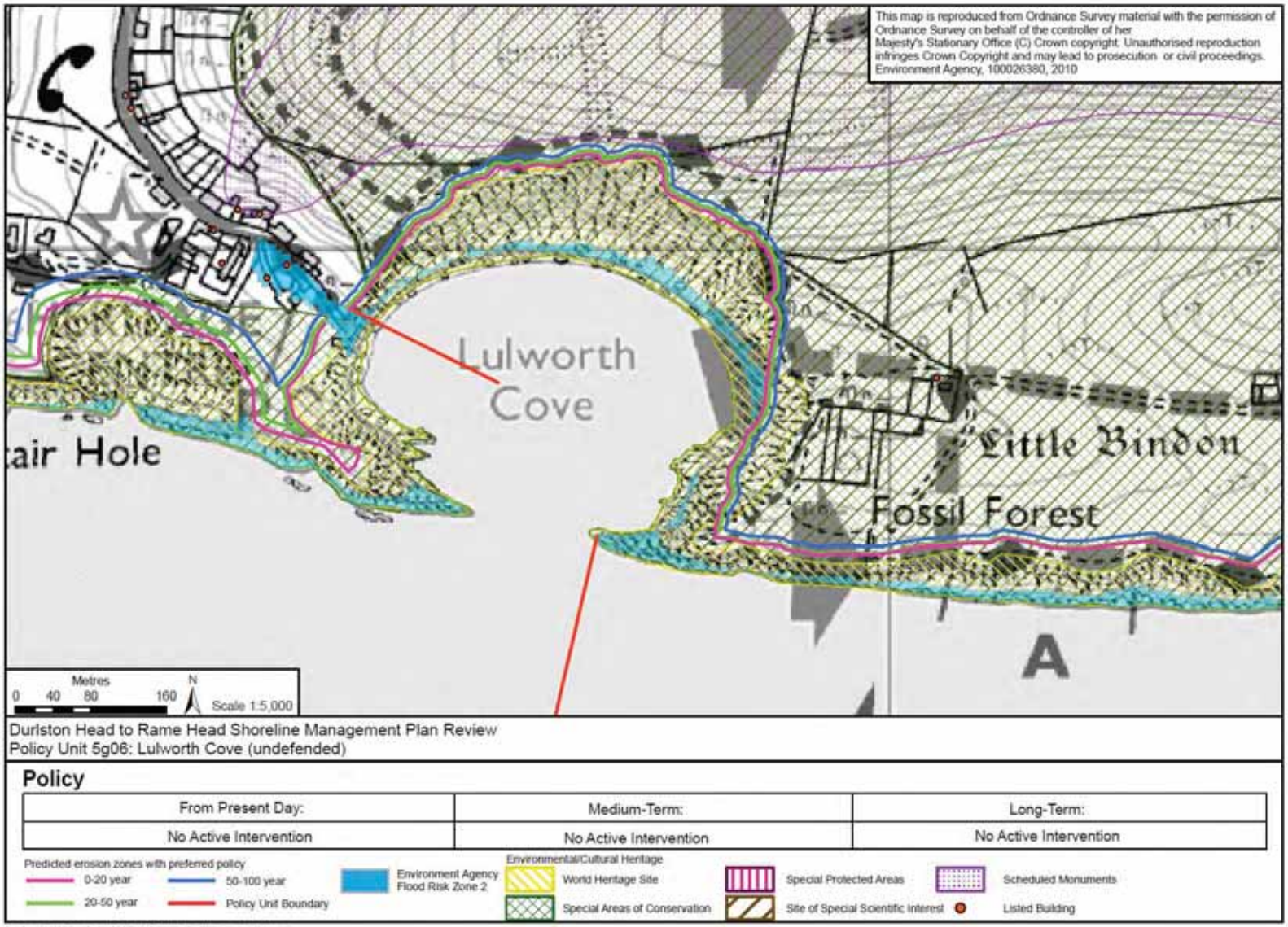
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



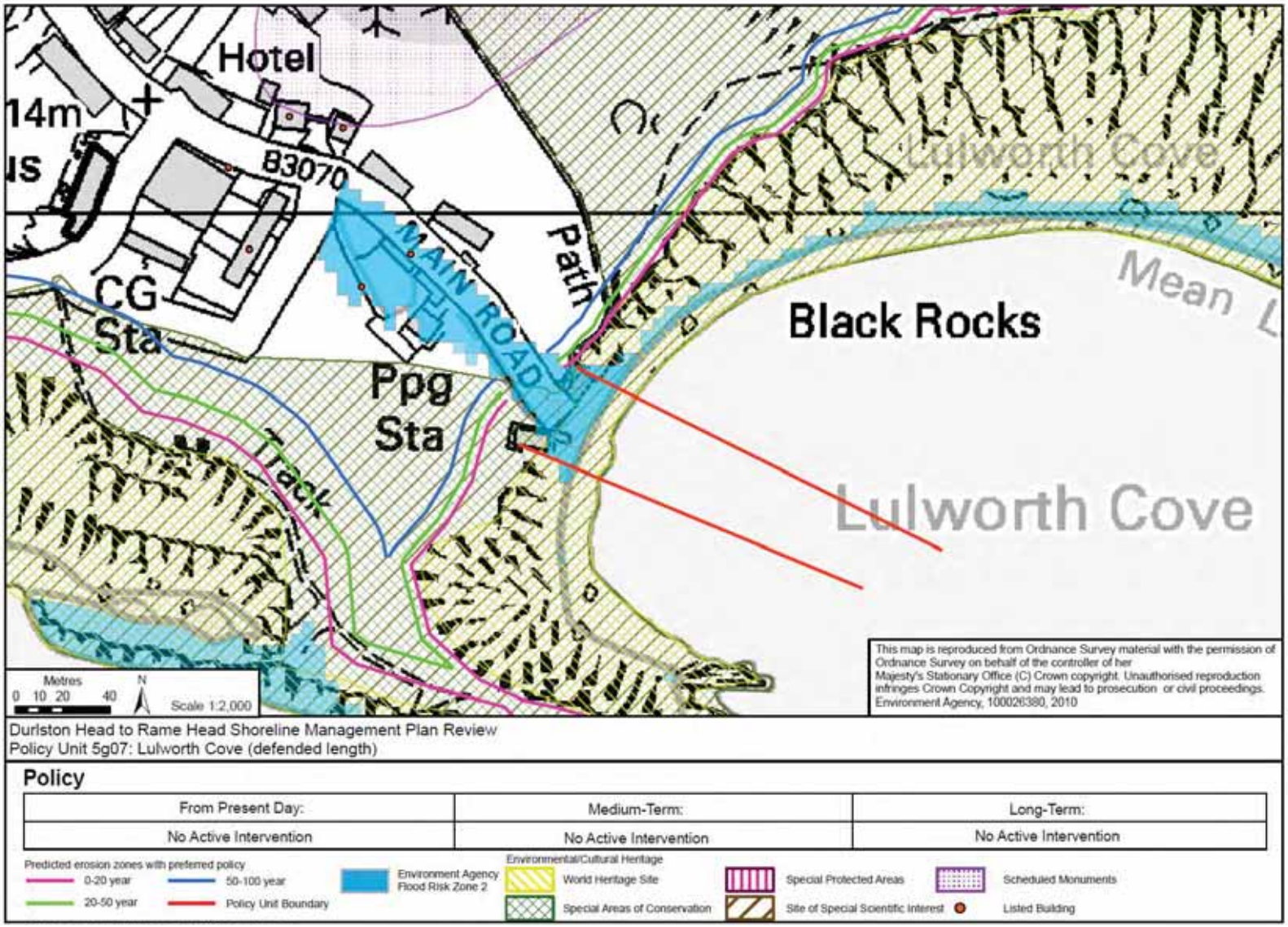
The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



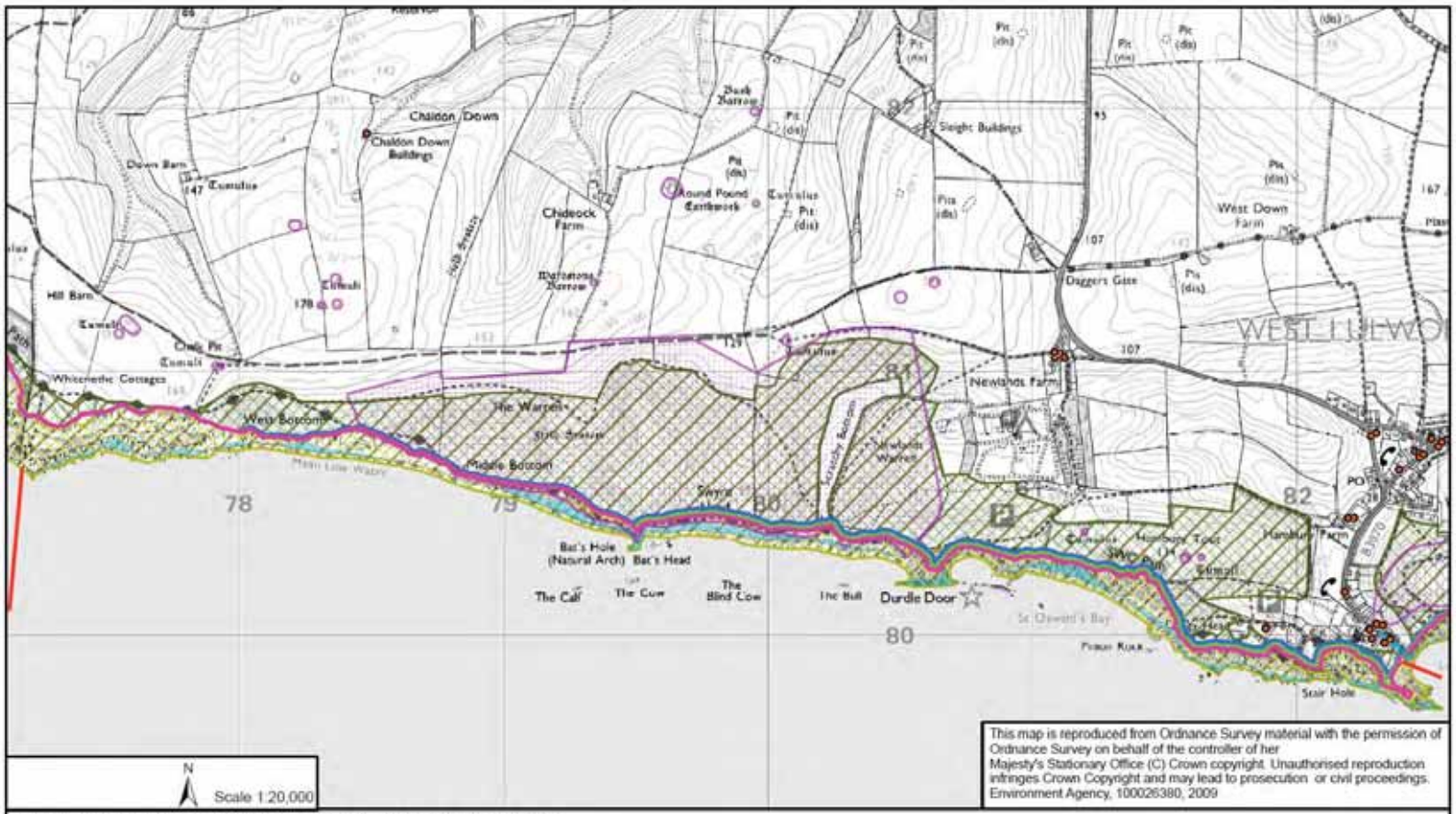
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 5g08: Lulworth Cove (West) to White Nothe

Policy

From Present Day:	Medium-Term:	Long-Term:
No Active Intervention	No Active Intervention	No Active Intervention

Predicted erosion zones with preferred policy
0-20 year
20-50 year
50-100 year
Policy Unit Boundary
Environment Agency Flood Risk Zone 2
Environmental/Cultural Heritage
World Heritage Site
Special Areas of Conservation
Special Protected Areas
Site of Special Scientific Interest
Scheduled Monuments
Listed Building

The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**White Nothe to Redcliff Point**
Policy Unit reference:	**5g09 to 5g11**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This is a largely undefended cliffed section of coast which covers Ringstead Bay and Osmington Bay between White Nothe to the east and Redcliff Point to the west. It is dominated by clay-rich cliffs, which experience episodic landslide events, with the potential to cause ten's of metres of retreat as a result of a single event. In places there is a risk of relic landslide complexes becoming reactivated, which makes management of this coastline more difficult. Such landslides can also have an impact by interrupting local sediment drift, which is predominately from east to west. There is a short length of shoreline within part of Ringstead Bay currently defended by a scheme constructed in the mid-1990s.

The long term Plan for this section of coast is to allow the continuation of the natural erosion processes that are integral to the World Heritage and SSSI status of the cliffs. Allowing the cliffs to continue to erode along this section could impact upon cliff top habitats and a number of cliff top assets, including holiday developments in Ringstead Bay and parts of Osmington Mills Holiday Centre, two Scheduled Monuments and Grade 3 agricultural land. Parts of the South-West Coast Path that extends along the cliff top in this area would be lost to erosion, requiring realignment of the path inland.

This change in medium to long term policy for the presently defended section of coast is necessary as these become increasingly unsustainable due to outflanking from continued erosion of the adjacent undefended cliffs.

There will need to be a transition period, during which mitigation measures should be determined for these potential losses. Therefore in the short term, the existing defences will continue to be maintained.

Preferred policies to implement Plan:

From present day (short term):	The short term policy for the undefended majority of this coast is **No Active Intervention**, thereby allowing the clay cliffs that dominate this section to continue to evolve naturally. Present erosion trends will continue with an average retreat of approximately 10m predicted over this period. Episodic events of larger magnitude do also occur with a frequency of between 10 and 100 years. It is therefore possible that a significant event could be experienced during this period, with erosion of 10 to 50m of land in that single event. Without more detailed technical appraisal, however, is difficult to predict where this might occur. For the short length of currently defended shoreline within part of Ringstead Bay, the short term policy is to **Hold the Line**. This will allow maintenance of the short length of rock revetment and rock groyne for as long as is technically (and economically) feasible. This will provide some protection to assets behind by preventing erosion of the cliff toe by marine action and so delaying on-set of local instability within the cliffs. This could be supported by beach recycling activities to help retain beach material in front of Ringstead village. Impacts and mitigation measures for the loss of assets will need to be developed during this period.
Medium term:	The medium term policy is **No Active Intervention** along the entire length of coast, including the currently defended Ringstead Bay. Maintenance of the existing defences at Ringstead would continue for as long as is technically and economically viable. However, as these reach the end of their design life during this period they would not be replaced and there would be gradual withdrawal of maintenance. This decision would be based upon ongoing monitoring of the defences, beach and cliffs in the area.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	Total failure of these structures may not occur immediately. Therefore some protection would still be afforded unless failed structures are removed for health and safety reasons. Outflanking by erosion of adjacent cliffs would increase the risk to assets here, with the possible loss of cliff-top assets during this period. Measures will need to be put in place to determine how to manage the future erosion situation, both in terms of risk management and appropriate relocation of people, properties and facilities.
Longer-term:	The long term policy is for **No Active Intervention** along the entire length of coast between White Nothe and Redcliff Point, allowing his cliffed section of coast to continue to evolve naturally. Any remaining defences along Ringstead Bay would fail, with removal if necessary should they become a Health and Safety issue. Therefore there would be no formal protection remaining by the middle to end of this period. The lack of defences would result in a naturally functioning coast, with a beach that would adapt to sea level rise by migrating landwards at a rate commensurate with cliff recession in the rest of the bay. The recession of these cliffs are likely to be affected by sea level rise and total erosion could be between 50 and 70m by 2105. This would result in the potential loss of cliff top assets in this area and therefore measures would need to be in place to manage and mitigate this risk. There is a risk of a large scale event occurring along the Osmington to Redcliff Point section during this period, which could result in a localised loss of cliff top in the region of 10 to 50m. These cliffs are also sensitive to climate change and in particular increased precipitation, although uncertainty in the prediction of future precipitation, means that this is not accounted for in the forecast erosion extents.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
5g09	**White Nothe to Ringstead Bay (defended length east)**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.
5g10	**Ringstead Bay (defended length)**	Undertake maintenance of the existing defences in order to provide continued protection to the cliff top assets, as long as this remains feasible, through a **Hold the Line** policy.	Continue to **Hold the Line** by maintaining defences for as long as possible but eventually moving towards **No Active Intervention** during this period.	Allow natural coastal evolution to continue through **No Active Intervention**.
5g11	**Ringstead Bay (defended length west) to Redcliff Point**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	White Nothe to Redcliff Point
Policy Unit reference:	5g09 to 5g11

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property and Population	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Cliff erosion would continue to occur along the undefended majority of this stretch, providing some coarse sediment to local beaches. Maintenance of the existing defences within Ringstead Bay during this period.	Loss of some properties and land at Osmington Mills on Mills Road. Potential loss of parts of caravan site by cliff erosion and some localised flooding. Loss of isolated properties along coastal stretch. Loss of land occupied by caravans at Ringstead. Loss of some properties at Burning Cliff due to erosion.	Loss of sewage works due to erosion. Some loss of grades 3 and 4 agricultural land due to erosion (and flooding).	No loss of any Scheduled Monuments expected.	Potential change in landscape character of Dorset AONB due to flooding and erosion, but not considered detrimental as these are natural, ongoing processes.	Continuation of natural processes is key to the integrity of the geological interest features of South Dorset Coast Site of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS), therefore the preferred policies in this coastal section would continue to maintain the geological exposures of these features (except along the defended length of Ringstead Bay).	Potential for reduced water quality due to loss of the sewage works (which has the potential to affect the achievement of the WFD objectives). Further consideration is required regarding decommissioning the works and constructing new sewage works inland. Holding the line at Ringstead Bay (defended) in short term should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	There will be no adverse effect on the Isle of Portland to Studland Cliffs SAC. It is unlikely that significant erosion of designated terrestrial habitat (e.g. dry grassland) will occur in the short term through holding the line at 5g10. No adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that this policy is affecting the reef habitat at present and therefore no adverse effects are foreseen. Potential loss of some designated limestone grassland habitats at base of cliff within South Dorset Coast SSSI (biological) through flooding and erosion. However majority of grassland currently lost is due to inappropriate scrub control. An opportunity exists to improve the favourable condition of the designated terrestrial habitats through scrub control e.g. at Ringstead Bay.
2025 – 2055	Cliff erosion would continue to occur, providing some coarse sediment to local beaches. Maintenance of the defences along this section would cease during this period, as the structures reach the end of their design life and they become more outflanked by erosion of the adjacent, undefended cliffs.	Loss of some properties and land at Osmington Mills on Mills Road. Potential loss of parts of caravan site by cliff erosion and some localised flooding. Loss of isolated properties along coastal stretch. Increased loss of land occupied by caravans at Ringstead. Loss of some properties at Burning Cliff due to erosion. Osmington Bay Holiday Centre at risk of erosion.	Loss of sewage works due to erosion. Some loss of grades 3 and 4 agricultural land due to erosion (and flooding).	Potential partial loss of Medieval Settlement Scheduled Monument at West Ringstead due to erosion.	Potential change in landscape character of Dorset AONB due to increased flooding and erosion, but not considered detrimental as these are natural, ongoing processes. Potential for deteriorating structures to become unsightly	Continuation of natural processes is key to the integrity of the geological interest features of South Dorset Coast Site of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS), therefore the preferred policies in this coastal section would continue to maintain the geological exposures of these features.	Potential for reduced water quality due to loss of the sewage works (which has the potential to affect the achievement of the WFD objectives). Further consideration is required regarding decommissioning the works and constructing new sewage works inland.	There will be no adverse effects on the Isle of Portland to Studland Cliffs SAC. It is unlikely that significant erosion of designated terrestrial habitat (e.g. dry grassland) will occur in the medium term at 5g10. A move to a policy of NAI in the medium term will promote natural processes and will be beneficial to the European site. No adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that this policy is affecting the reef habitat at present and therefore no adverse effects are foreseen. Potential loss of some

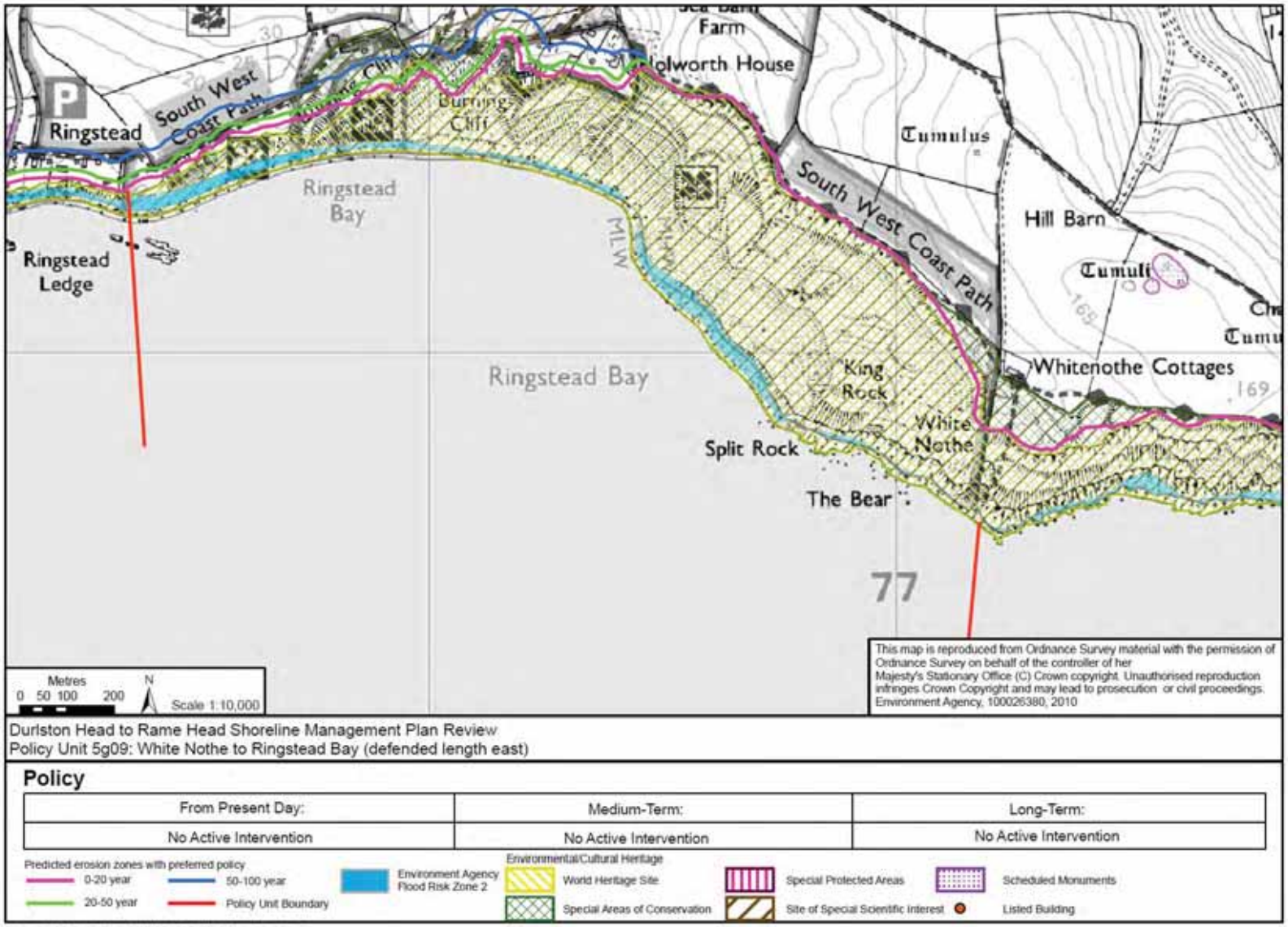
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	White Nothe to Redcliff Point
Policy Unit reference:	5g09 to 5g11

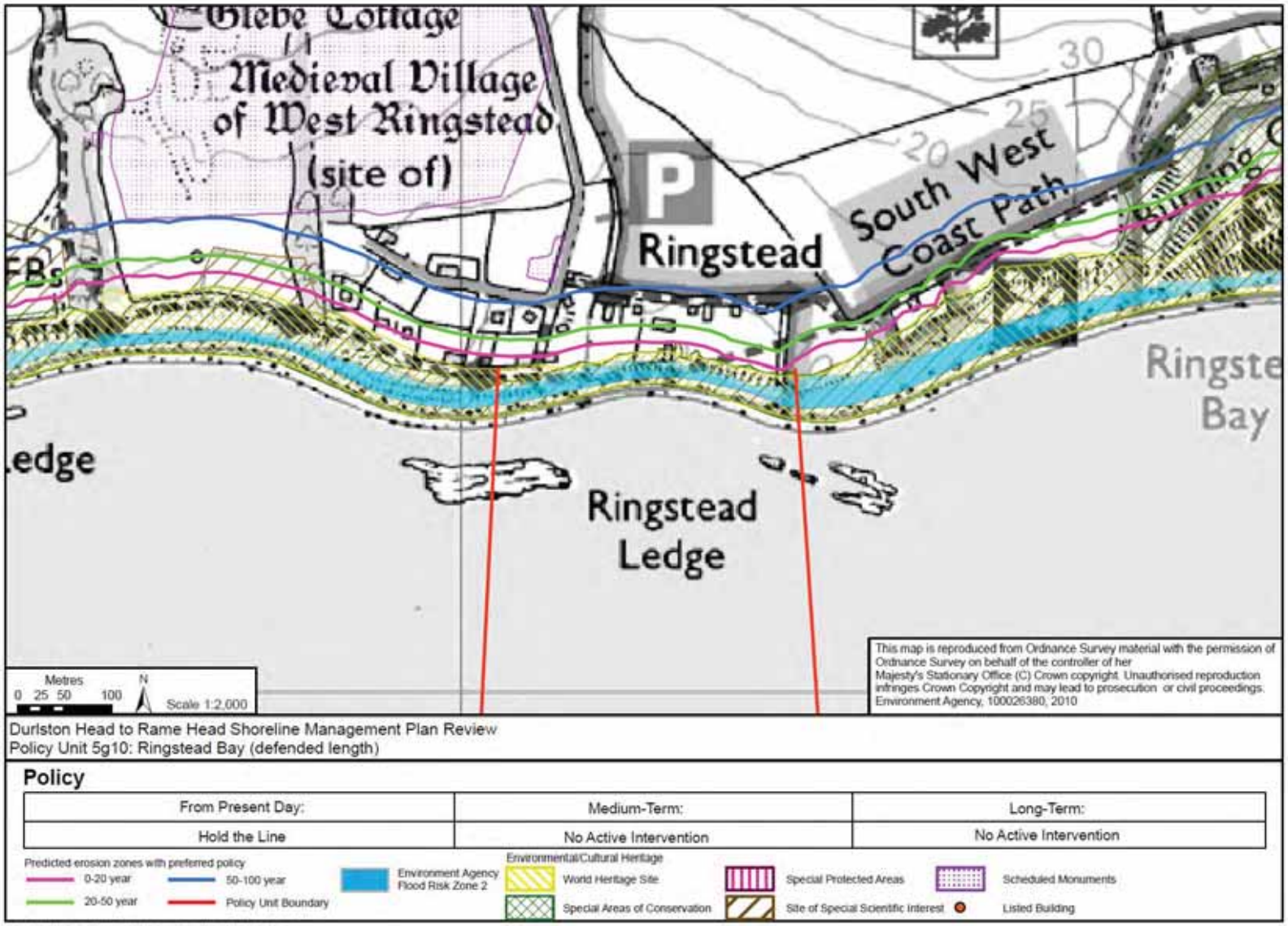
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property and Population	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
								designated limestone grassland habitats at base of cliff within South Dorset Coast SSSI (biological) through flooding and erosion. However majority of grassland currently lost is due to inappropriate scrub control.
2055 – 2105	Cliff erosion would continue to occur as part of a naturally functioning coast, providing some coarse sediment to local beaches.	Loss of some properties and land at Osmington Mills on Mills Road. Potential loss of parts of caravan site by cliff erosion and some flooding (though the latter process to a lesser degree). Loss of isolated properties along coastal stretch. Increased loss of land occupied by caravans at Ringstead. Loss of some properties at Burning Cliff due to erosion. Osmington Bay Holiday Centre at risk of erosion.	Loss of sewage works due to erosion. Some loss of grades 3 and 4 agricultural land due to erosion and flooding.	Potential partial loss of Fishpond Scheduled Monument and further loss of Medieval Settlement Scheduled Monument at West Ringstead due to erosion.	Potential change in landscape character of Dorset AONB due to increased flooding and erosion, but not considered detrimental as these are natural, ongoing processes. Potential for deteriorating structures to become unsightly	Continuation of natural processes is key to the integrity of the geological interest features of South Dorset Coast Site of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS), therefore the preferred policies in this coastal section would continue to maintain the geological exposures of these features.	Potential for reduced water quality due to loss of the sewage works (which has the potential to affect the achievement of the WFD objectives). Further consideration is required regarding decommissioning the works and constructing new sewage works inland.	There will be no adverse effects on the Isle of Portland to Studland Cliffs SAC. A policy of NAI in the long term will promote natural processes and will be beneficial to the European site. No adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that this policy is affecting the reef habitat at present and therefore no adverse effects are foreseen. Potential long term loss of some designated limestone grassland habitats at base of cliff within South Dorset Coast SSSI (biological) through flooding and erosion. However majority of grassland currently lost is due to inappropriate scrub control.

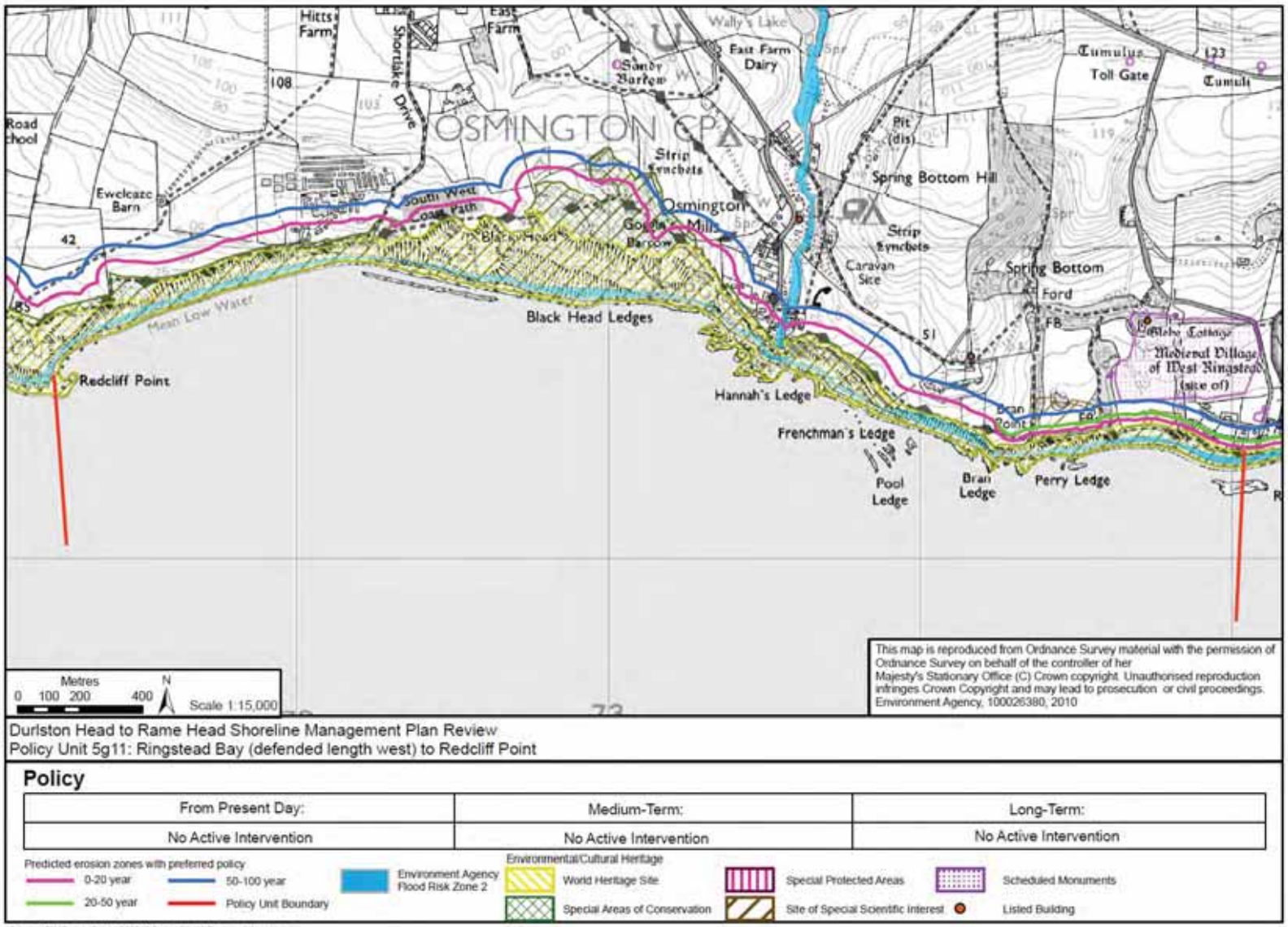
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Redcliff Point to Preston Beach (Rock Groyne)**
Policy Unit reference:	**5g12 to 5g15**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section is comprised of developed and defended lengths of coast that are bounded, either entirely or partly, by the undefended naturally functioning eroding cliffs of Redcliff and Furzy Cliff. These cliffs experience infrequent landslide events which provide geological exposures that are important to the World Heritage Site and SSSI designations of this part of the coast.

The aim is to ensure that these important geological exposures are maintained over the next 100 years, whilst managing the risk of flooding and erosion to the developed areas in a sustainable way which minimises the risk of defences being outflanked. This frontage therefore needs to be managed as a whole to ensure that policies are compatible and working with natural shoreline processes, while accepting that different policies will apply to different stretches of coast.

This area could also be affected by any change in the Portland Harbour Breakwaters, which are believed to have a sheltering effect and therefore influence sediment circulation within Weymouth Bay. In this Plan it is proposed that these breakwaters will remain and be maintained through to the long term (refer to Policy Unit 5g22).

The continued erosion of Furzy Cliff and Redcliff would eventually cause outflanking of defences at Bowleaze Cove and Preston Beach. This would make it increasingly difficult to maintain the existing defence line at Bowleaze Cove so the long term Plan in this area is to establish a more sustainable defence line commensurate with the eroding adjacent cliffs. This could result in some loss of cliff-top assets, therefore measures will need to be put in place to determine how to manage the future erosion situation, both in terms of risk management and appropriate relocation of people, properties and facilities.

The northern part of Preston Beach at Overcombe is currently protected by cliff stabilisation measures and defences that protect the RSPB nature reserve at Lodmoor, the A353 Preston Beach Road and a number of properties, from flooding and erosion. This frontage is already subject to intensive beach management activity to retain a sufficient beach width to provide the required standard of protection to the assets behind the defence line. It is likely to become increasingly difficult to sustain this in the medium to long term, more so as erosion of Furzy Cliff increases the risk of outflanking.

As such, a change in current policy in the long term would see part of this frontage undergo Managed Realignment commensurate with the erosion of the adjacent Furzy Cliff in order to seek to establish a more sustainable defence line. This would need to accommodate realignment of the A353 to ensure this key access route remains provided (albeit in a more landward position) and would cause loss of part of the RSPB nature reserve, as well as a number of properties in the northern part of this section, although a key consideration in undertaking realignment will also be the continued defence of the developed area of Weymouth in he adjacent unit to the south where the policy is to Hold the Line.

Cliffline retreat would therefore continue along both Redcliff and Furzy Cliff, causing the loss of some areas of agricultural land and loss of parts of the coast path, which would need to be realigned inland as a result. Set back from the cliff top along Furzy Cliff is the only road access to the properties and tourist facilities at Bowleaze Cove and the continued erosion of Furzy Cliff could, in the long term, impact upon this road access, as well as cause loss of some cliff top properties that are located beyond the road.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention** along the undefended parts of Redcliff and Furzy Cliff. The clay cliffs at Redcliff and Furzy Cliff erode as a result of episodic events of between 10 and 50m every 10 to 100 years. This trend is expected to continue in the future, with an average recession of 11 to 50m of Redcliff by 2025. Erosion of Furzy Cliff would increase the risk of defences at either end of the cliff being outflanked towards the end of this period.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	Elsewhere, the policy in the short term will be to **Hold the Line** of the existing defences within Bowleaze Cove and along Preston Beach, including the defences along the southernmost end of Furzy Cliff. This would involve maintenance of the defences to ensure the current level of protection is maintained. The gabions to the eastern side of Bowleaze are however in a poor condition and consideration could be given to either replacing or removing these (on health and safety grounds) during this period. Measures would be developed to facilitate the realignment of defences in the medium to long term It is likely that further beach recharge will be required at Preston Beach towards the end of this period to maintain the standard of protection. This may also require consideration of a further shoreline control structure at the northern end of Preston Beach to retain beach material in this area.
Medium term:	Along Preston Beach and the southern-most end of Furzy Cliff, the medium term policy is to continue to **Hold the Line**. This would be through continued maintenance of the existing structures, including any possible additional shoreline control structure at the northern end Preston Beach, and continuing with ongoing beach management activities. During this period, consideration should be given to the long term vision of realigning defences to more sustainable alignments. Measures will need to be put in place during this period to manage any transition, including ongoing monitoring of both beach and cliff. This will need to include establishing requirements for realignment of the A353 as part of any scheme as well as protection of the former landfill site. At Bowleaze Cove the continued maintenance of the defences could become unsustainable as sea levels rise and the risk of outflanking by erosion of the adjacent cliffs increases during this period. This would lead to this area becoming more prominent than adjacent sections. The medium term plan therefore is to change to a policy of **Managed Realignment**. The defence line would be moved landward to a position in line with the retreating adjacent cliffs. This would likely involve the construction of a set back sea wall, which may also help to retain a healthier beach by providing space for the beach to migrate and adapt as sea levels rise. Elsewhere, along the undefended Redcliff and Furzy Cliff, the medium term policy would be to continue with **No Active Intervention**. Total erosion here is predicted to be between 30 to 50m by 2055. This cliff erosion would mainly contribute fines to the system therefore would not build beaches along this section. There is the possibility of cliff erosion of Furzy Cliff leading to the defence at Overcombe standing prominent which could have a significant effect upon littoral drift processes at the northern end of Weymouth Bay. It may also mean that maintenance of these defences becomes unsustainable during this period and necessary to consider bringing forward the long term policy of Managed Realignment.
Longer-term:	Along Preston Beach the policy for the long term is to change to one of **Managed Realignment** as the maintenance of existing defences becomes unsustainable and erosion of the adjacent cliffs increases. Without this change the provision of flood defence through beach management activities will also become increasingly unsustainable along Preston Beach. This will be as a result

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

of this more exposed position interrupting sediment drift and presenting an outflanking issue, and sea levels rise making beach management in this position increasingly difficult and expensive.

Realignment of the defences (along all or part of this section) through construction and maintenance of new defences in a set back location will be required, with realignment of the highway. The aim of this Policy is to provide a more sustainable defence alignment consistent with the position of Furzy Cliff to the north whilst maintaining the key A353 access route that is of importance to the economic well-being of the town of Weymouth.

This scenario would also be likely to require greater defence of the section to the south of Preston Beach (the Greenhill end of Weymouth – refer to Policy Unit 5g16). Development of plans to implement this policy along this section must consider the coast in the southern part of Weymouth Bay.

At Bowleaze Cove, the long term plan is to maintain the realigned defence position established in the medium term under a policy of **Hold the Line**. Whilst realignment of the defences may provide space for a healthier beach for a period, as sea levels rise this will diminish and it may be necessary to consider further realignment of defences at some point. Any such decision would be guided by information from continued monitoring of the recession of the adjacent cliffs and fronting beach.

The long term policy over the rest of this unit is **No Active Intervention**. Total cliff erosion by 2105 is predicted to be between 60 and 100m. The fine grained material from this erosion would not however, contribute to the beaches so there would be a continued trend of beach steepening and narrowing.

The reduction in defence activity along these frontages will enable the shoreline to behave more naturally and adapt to a more sustainable position.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
5g12	**Redcliff Point to Bowleaze Cove (Gabions)**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.
5g13	**Bowleaze Cove (Gabions) to Furzy Cliff**	Undertake maintenance of the existing defences to **Hold the Line** during this period.	Construct new defences inland in a more sustainable position, through **Managed Realignment**.	Continue to maintain the realigned defence position through a **Hold the Line** policy.
5g14	**Furzy Cliff**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.
5g15	**Furzy Cliff to Preston Beach (Rock Groyne)**	Undertake maintenance of the existing defences to continue to afford protection to the key transport link and assets, through a **Hold the Line policy**.	Continue to maintain existing defences, to afford protection to the key transport link and assets, through **Hold the Line**.	Construct new defences in a more sustainable set-back position, through implementing **Managed Realignment**.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Redcliff Point to Preston Beach (Rock Groyne)
Policy Unit reference:	5g12 to 5g15

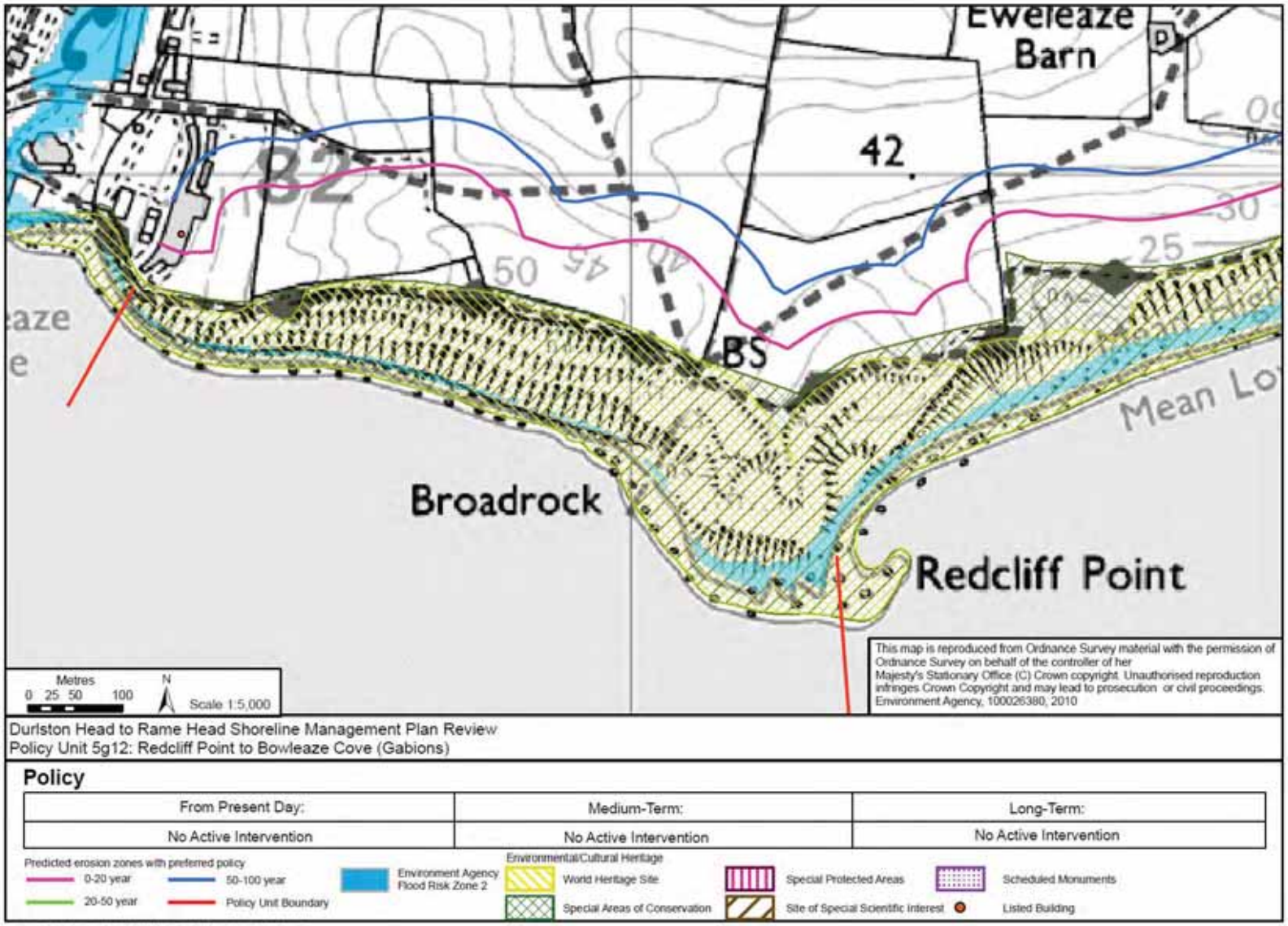
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Cliff erosion would continue to occur along the undefended cliffs along this stretch. Maintenance of existing defence structures along with continued beach management activity. Construction of a shoreline control structure at the northern end of Preston Beach along with additional beach recharge likely to be required towards the end of this period.	Loss of isolated properties along coastal stretch. Waterside Holiday Park at Bowleaze protected from erosion. Loss of South-West Coastal Path in some areas. Properties and facilities within Preston and Overcombe protected from erosion and flooding. Protection of the northern parts of Weymouth from flooding.	Loss of grades 3 and 4 agricultural land due to erosion and flooding in some areas. Flooding of A354 and A353 would remain a possibility.	No known impacts on archaeological features	Minor changes in landscape character of the area.	Continuation of natural processes is key to the integrity of the geological interest features of South Dorset Coast, Site of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS), therefore the preferred policy between Redcliff Point and Bowleaze Cove would continue to maintain the geological exposures of these features. In the short term, holding the line between Bowleaze Cove and Furzy Cliff has the potential to adversely affect the geological interests of South Dorset Coast SSSI and the WHS. Protection of Lodmoor historic landfill site.	No known impacts on water quality. Holding the line at Furzy Cliff and Bowleaze in short term should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	No 'adverse effect' on the Isle of Portland to Studland Cliffs SAC. HTL would affect up to only 3% of the overall site, with limited impact on the ecological functionality of the site. Protection in some areas and losses in other areas of some designated grassland habitat within South Dorset Coast SSSI (biological). The reedbed and brackish grassland at Lodmoor Nature Reserve and SSSI would continue to be protected from flood and erosion risk.
2025 – 2055	Cliff erosion would continue to occur along the undefended cliffs along this stretch. Maintenance of the defence structures along Preston Beach along with continued beach management activity. Construction and maintenance of a realigned defence position at Bowleaze Cove.	Loss of isolated properties along coastal stretch Potential partial loss of Waterside Holiday Park at Bowleaze due to erosion (and implementation of Managed Realignment). Loss of South-West Coastal Path in some areas. Properties and facilities within Preston and Overcombe protected from erosion and flooding. Protection of the northern parts of Weymouth from flooding.	Loss of grades 3 and 4 agricultural land due to erosion and flooding in some areas. Flooding of A354 and A353 would remain a possibility.	No known impacts on archaeological features	Minor changes in landscape character of the area.	Continuation of natural processes is key to the integrity of the geological interest features of South Dorset Coast, Site of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS), therefore the preferred policies in these coastal units would continue to maintain the geological exposures of these features. Protection of Lodmoor historic landfill site.	No known impacts on water quality. Holding the line at between Furzy Cliff and Preston Beach should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	No 'adverse effect' on the Isle of Portland to Studland Cliffs SAC. HTL would affect up to only 3% of the overall site, with limited impact on the ecological functionality of the site. Loss of some designated grassland habitat within South Dorset Coast SSSI (biological). The reedbed and brackish grassland at Lodmoor Nature Reserve and SSSI would continue to be protected from flood and erosion risk.
2055 – 2105	Cliff erosion would continue to occur along the undefended cliffs along this stretch. Construct a realigned defence position along all or part of Preston	Loss of isolated properties along coastal stretch. Potential partial loss of Waterside Holiday Park at Bowleaze due to erosion (and implementation of Managed	Loss of grades 3 and 4 agricultural land due to erosion and flooding in some areas. Flooding of A354 would remain a possibility. Flood risk	No known impacts on archaeological features	Minor changes in landscape character of the area.	Continuation of natural processes is key to the integrity of the geological interest features of South Dorset Coast, Site of Special Scientific Interest (SSSI) and Dorset and East Devon World	No known impacts on water quality.	There will be no adverse effects on the integrity of the cliff habitats within the adjacent Isle of Portland to Studland Cliffs SAC in the long term.

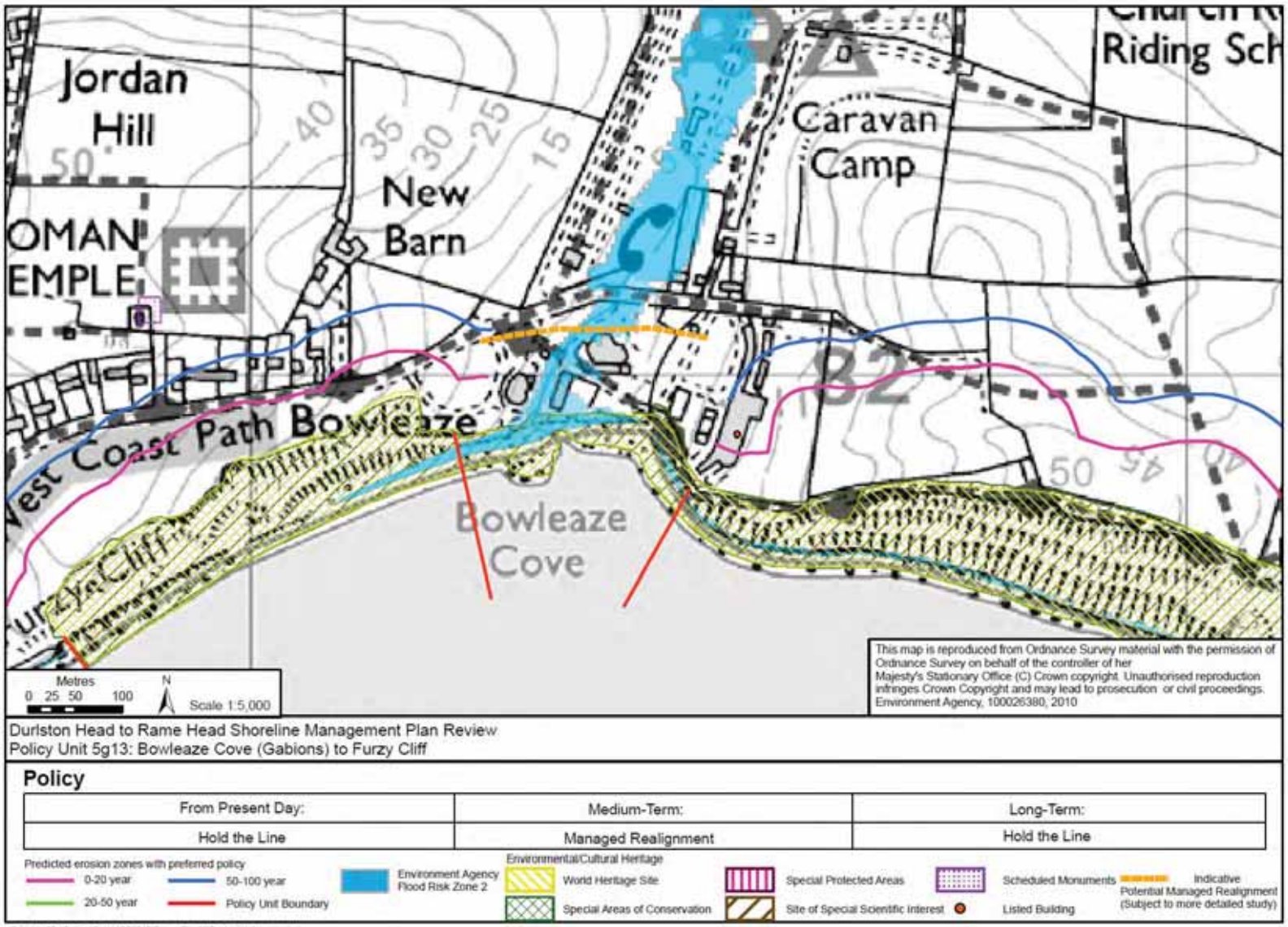
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Redcliff Point to Preston Beach (Rock Groyne)							
Policy Unit reference:	5g12 to 5g15							
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION								
Time Period	**Management Activities**	**Property, Population and Human Health**	**Land Use, Infrastructure and Material Assets**	**Historic Environment**	**Landscape Character and Visual Amenity**	**Earth Heritage, Soils and Geology**	**Water**	**Biodiversity, Flora and Fauna**
	Beach. Continued maintenance of defences and ongoing beach management activity would be required throughout. Maintenance of the realigned defence positions along both Preston Beach and Bowleaze Cove, with ongoing monitoring to inform timings of realignment.	Realignment). Loss of South-West Coastal Path in some areas. Properties and facilities within Preston and Overcombe protected from erosion and flooding. Protection of the northern parts of Weymouth from flooding.	to parts of the A353 would be reduced as a result of Managed Realignment. Railway terminus at Weymouth protected from flooding.			Heritage Site (WHS), therefore the preferred policies in these coastal units would continue to maintain the geological exposures of these features. Further consideration of the current state of Lodmoor landfill site would be required at project level, as a result of a Managed Realignment policy.		Loss of some designated grassland habitat within South Dorset Coast SSSI (biological). Managed Realignment of part of Lodmoor Nature Reserve and SSSI in the long term (e.g. improved tidal exchange across the seawall) would result in the loss of some reedbed and brackish grassland through saline inundation. Measures would need to be considered and discussed with Natural England to retain the brackish/freshwater nature of the remaining reserve.

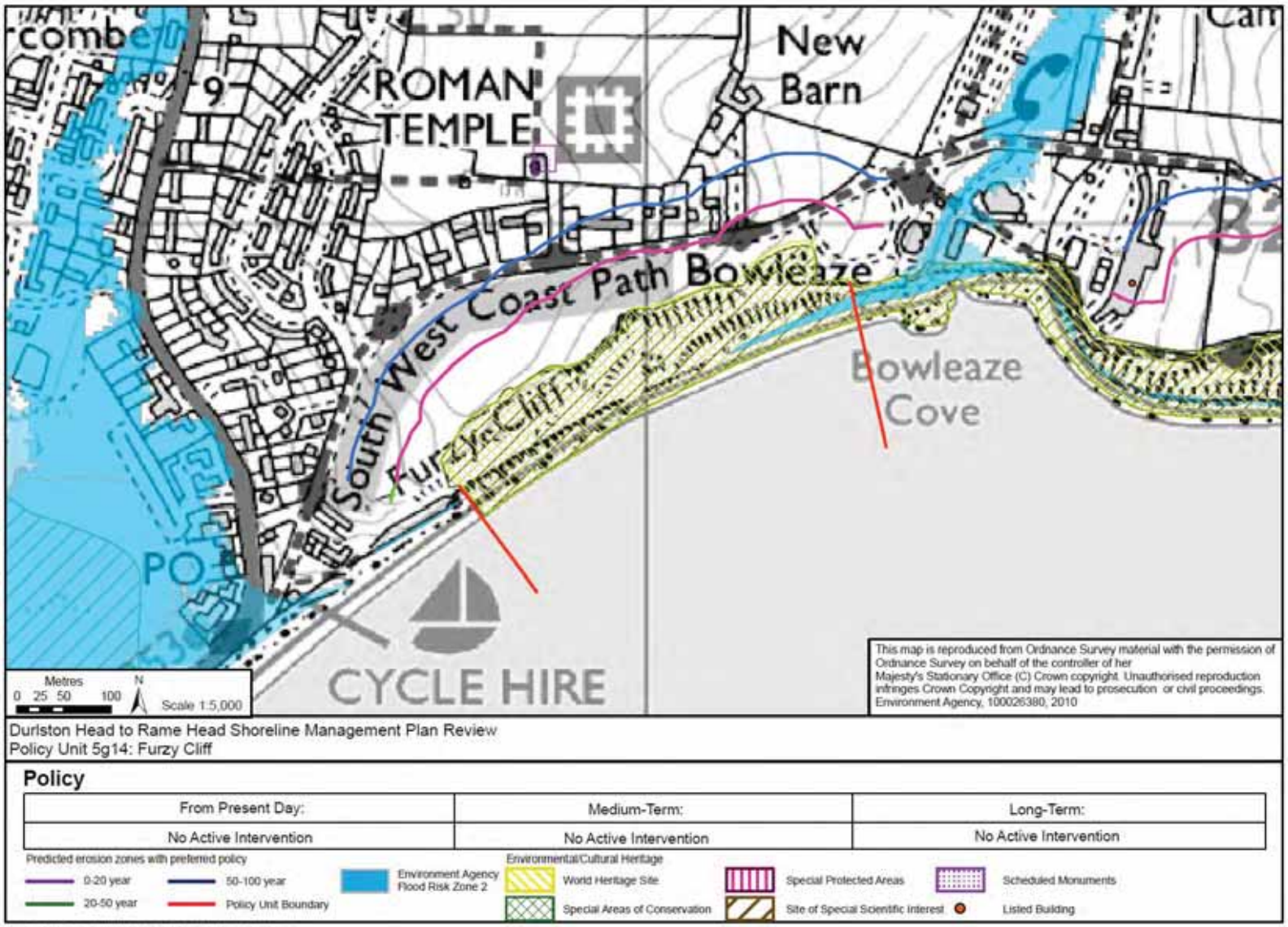
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



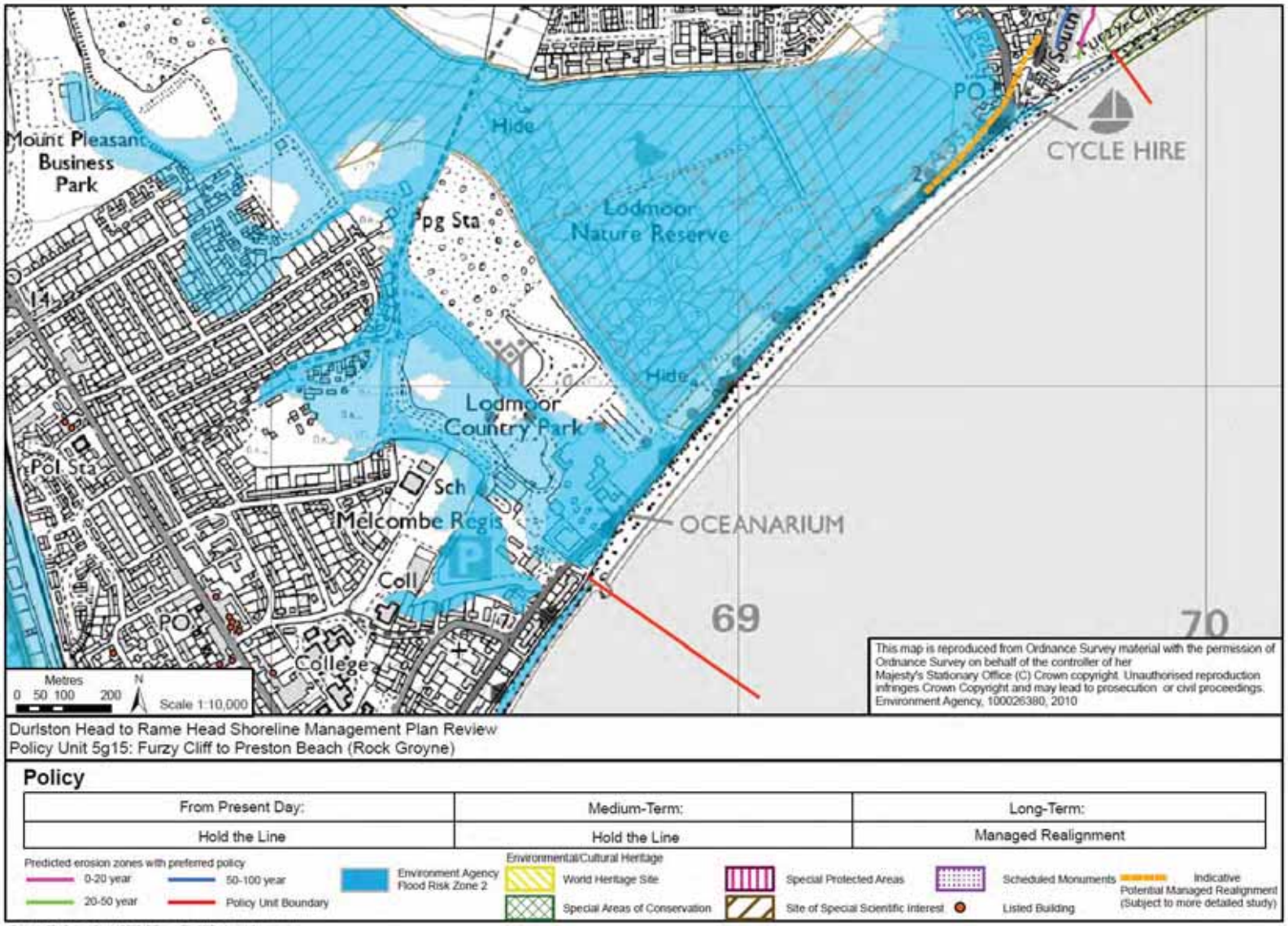
The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Preston Beach (Rock Groyne) to Portland Harbour (North Breakwater) (includes Weymouth Harbour)**
Policy Unit reference:	**5g16 and 5g17**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section encompasses the extensively developed area of Weymouth, including both the open coast frontage along Weymouth Bay, Weymouth Harbour, which represents the completely artificial mouth of the Wey Estuary, and the southern side of the Nothe headland.

This area is identified as a strategically significant city or town and so a primary focus for new development. The long term Plan is to continue to protect the extensive commercial, social, and tourism features here against the increasing risk of flooding and erosion as sea levels rise. This will require raising and maintaining the level of defences along both the open coast and harbour frontages over the next 100 years. The construction of a surge barrier or lock gate towards the harbour entrance might also be considered as part of any future flood risk management solution, although this and possible alternative options requires much more detailed investigation.

The sheltered nature of the central and southern parts of Weymouth Bay, aided by the Isle of Portland and the Portland Harbour breakwaters, means that defence could be sustainably achieved through provision of a beach with future recharge to counter coastal squeeze. This would have additional benefits beyond reducing flood risk by providing a sizeable amenity resource for the wider region. This may become increasing significant in the longer term as other beaches become narrower or are even submerged as sea levels rise.

As sea levels rise, the retention of defences along the Nothe headland may reduce future exposure of the inter-tidal rock platform area which is designated a SSSI for its geological exposure.

The implementation of policy in this area could also be affected by any change in the Portland Harbour Breakwaters, which have a sheltering effect and therefore influence sediment circulation within Weymouth Bay. In this Plan it is assumed that these breakwaters will remain and be maintained through to the long term.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** to provide continued protection to the town of Weymouth against flood and erosion risk. The coastal defences comprise a sea wall and promenade constructed some 100 years ago. It is expected that this would need to be upgraded towards the end of this period, both to replace/repair the ageing structure and to increase the height of the defence to take account of future sea level rise and so maintain adequate levels of protection. This will continue to minimise the risk of flooding of the low-lying hinterland. Within Weymouth Harbour, a section of the inner harbour wall will also need to be upgraded by the middle of this period to maintain current levels of protection. While most of the Nothe headland is currently defended by either the 2002 Newton's Cove scheme or rock armour around the Nothe Fort, there is a short section of coast between these that will require upgrading in the near term to prevent it failing and exposing adjacent defences to the risk of outflanking. Slope stabilisation measures may also be required behind the defence line as the cliffs here are susceptible to landsliding as a result of groundwater conditions.
Medium term:	The medium term policy is to continue to **Hold the Line** both along the open coast areas and within Weymouth Harbour. To maintain adequate levels of protection, further upgrade to defences may be required to reduce the risk of flooding to the low-lying hinterland.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	Sea level rise would cause the beach in this area to narrow and flood risk to increase. The beach may also therefore require recharging, and possibly construction of control structures to maintain the beach, particularly along the narrower northern part of this section. Any works would need to consider alongshore sediment linkages. There is believed to be a drift divide in the vicinity of Lodmoor, making this an area of higher risk. The beach at Weymouth should still be retained, due to sediment feed from the north, but during this period this will start to diminish as the stretch in front of Lodmoor becomes increasingly exposed, unless beach recharge is undertaken. Maintenance and possible upgrade of defences would be undertaken to maintain adequate levels of protection along the Nothe frontage. Sea level rise will also result in the submergence of shore platforms that front this section, with a narrowing of the small pocket beach at Newton's Cove and increased exposure of the defences to wave action.
Longer-term:	The long term policy is to continue to **Hold the Line** of the existing defences through ongoing maintenance and possible upgrade of the structures along both the open coast and harbour frontages, along with ongoing beach management activity along the open coast part Weymouth Bay. Along the open coast this could require further beach recharge and control structures, particularly along the narrower northern part of this section. A beach is still likely to exist at Weymouth, but would be narrower, unless beach recharge is undertaken. The small pocket beach at Newton's Cove would also be expected to narrow and in places may disappear as the rock platforms become submerged, resulting in increased exposure of the defences to wave action. Along the Nothe frontage maintenance of the defences would continue. These may require upgrading during this period to maintain adequate levels of protection, if not undertaken in the medium term.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
5g16	**Preston Beach (Rock Groyne) to Weymouth (Stone Pier) (includes Weymouth Harbour)**	Undertake maintenance and improvement of the existing defences to continue to provide protection to Weymouth, through **Hold the Line**.	Undertake maintenance and improvement of the existing defences to continue to provide protection to Weymouth, through **Hold the Line**.	Undertake maintenance and improvement of the existing defences to continue to provide protection to Weymouth, through **Hold the Line**.
5g17	**Weymouth (Stone Pier) to Portland Harbour (North Breakwater)**	Undertake maintenance of the existing defences to continue to provide protection to Weymouth, through **Hold the Line** during this period. This may involve upgrading defences along a short length of frontage.	Undertake maintenance and improvement of the existing defences to continue to provide protection to Weymouth, through **Hold the Line**.	Undertake maintenance and improvement of the existing defences to continue to provide protection to Weymouth, through **Hold the Line**.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Preston Beach (Rock Groyne) to Portland Harbour (North Breakwater) (includes Weymouth Harbour)
Policy Unit reference:	5g16 and 5g17

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Upgrade of the Esplanade sea wall along the open coast, along with upgrade of part of the inner harbour flood wall. Maintenance of existing defences along the majority of the Nothe frontage. Construction of a short length of defence, along with slope stabilisation measures, along the section in a poor condition to reduce the risk of failure and outflanking of adjacent defences.	Properties and facilities along Preston Beach and at Rodwell will remain protected. Properties and facilities within Preston and Overcombe will remain protected from erosion and flooding. Risk of flooding to large areas of the majority of the town of Weymouth (including residential and commercial districts in the town centre) will be minimised.	Risk to A353, Furzy Cliff/Overcombe and Greenhill from flooding will be minimised. Flood risk to railway terminus at Weymouth protected will be minimised	No loss or damage - Nothe Fort, Tram and Searchlight Battery Scheduled Monument (SM) at The Nothe will remain protected from flooding/erosion.	Little/ no change in landscape character of area.	Holding the line has the potential to adversely affect the geological interest features of Portland Harbour Shore Site of Special Scientific Interest (SSSI) – however the site is already in a degraded condition due to the breakwaters. Continued protection from flooding of Pottery Lane historic landfill site.	Holding the line within these policy units should be implemented so as to not adversely impact on the water quality status of the coastal waters. Protecting Weymouth could potentially lead to impoundment of Weymouth Harbour, which could have permanent effects on the Wey transitional waterbody, thus failing WFD objectives 2 and 3.	No 'adverse effect' on the Isle of Portland to Studland Cliffs SAC. HTL would affect up to only 3% of the overall site, with limited impact on the ecological functionality of the site. The impact of a HTL policy in 5g17 may result in coastal squeeze of intertidal habitats within the Chesil Beach and The Fleet SAC, and the impact of policy implementation is uncertain at this stage (thus potential for 'adverse effect'). Potential loss of some intertidal habitat (e.g. at Portland Harbour Shore SSSI) due to coastal squeeze due to holding the line at Nothe, adjacent to the Ferry Terminal and around to Portland Harbour. Continued protection of reedbeds and freshwater habitats at Radipole Lake SSSI and nature reserve lake from saline flooding.
2025 – 2055	Continued maintenance of all defences along the open coast and harbour. Beach recharge and possible construction of shoreline control structures along the open coast, with ongoing beach management. Possible upgrade of rock revetment along the Nothe frontage to be informed by ongoing monitoring.	Properties and facilities along Preston Beach and at Rodwell will remain protected. Properties and facilities within Preston and Overcombe will remain protected from erosion and flooding. Risk of flooding to large areas of the majority of the town of Weymouth (including residential and commercial districts in the town centre) will be minimised.	Risk to A353, Furzy Cliff/Overcombe and Greenhill from flooding will be minimised. Flood risk to railway terminus at Weymouth protected will be minimised	No loss or damage - Nothe Fort, Tram and Searchlight Battery Scheduled Monument (SM) at The Nothe will remain protected from flooding/erosion.	Little/ no change in landscape character of area.	Holding the line has the potential to adversely affect the geological interest features of Portland Harbour Shore Site of Special Scientific Interest (SSSI) – however the site is already in a degraded condition due to the breakwaters.. Protection from flooding of Pottery Lane historic landfill site.	Holding the line within these policy units should be implemented so as to not adversely impact on the water quality status of the coastal waters. Protecting Weymouth could potentially lead to impoundment of Weymouth Harbour, which could have permanent effects on the Wey transitional waterbody, thus failing WFD objectives 2 and 3.	No 'adverse effect' on the Isle of Portland to Studland Cliffs SAC. HTL would affect up to only 3% of the overall site, with limited impact on the ecological functionality of the site. The impact of a HTL policy in 5g17 may result in coastal squeeze of intertidal habitats within the Chesil Beach and The Fleet SAC, and the impact of policy implementation is uncertain at this stage (thus potential for 'adverse effect'). Potential loss of some intertidal habitat (e.g. at Portland Harbour Shore SSSI) due to coastal squeeze due to

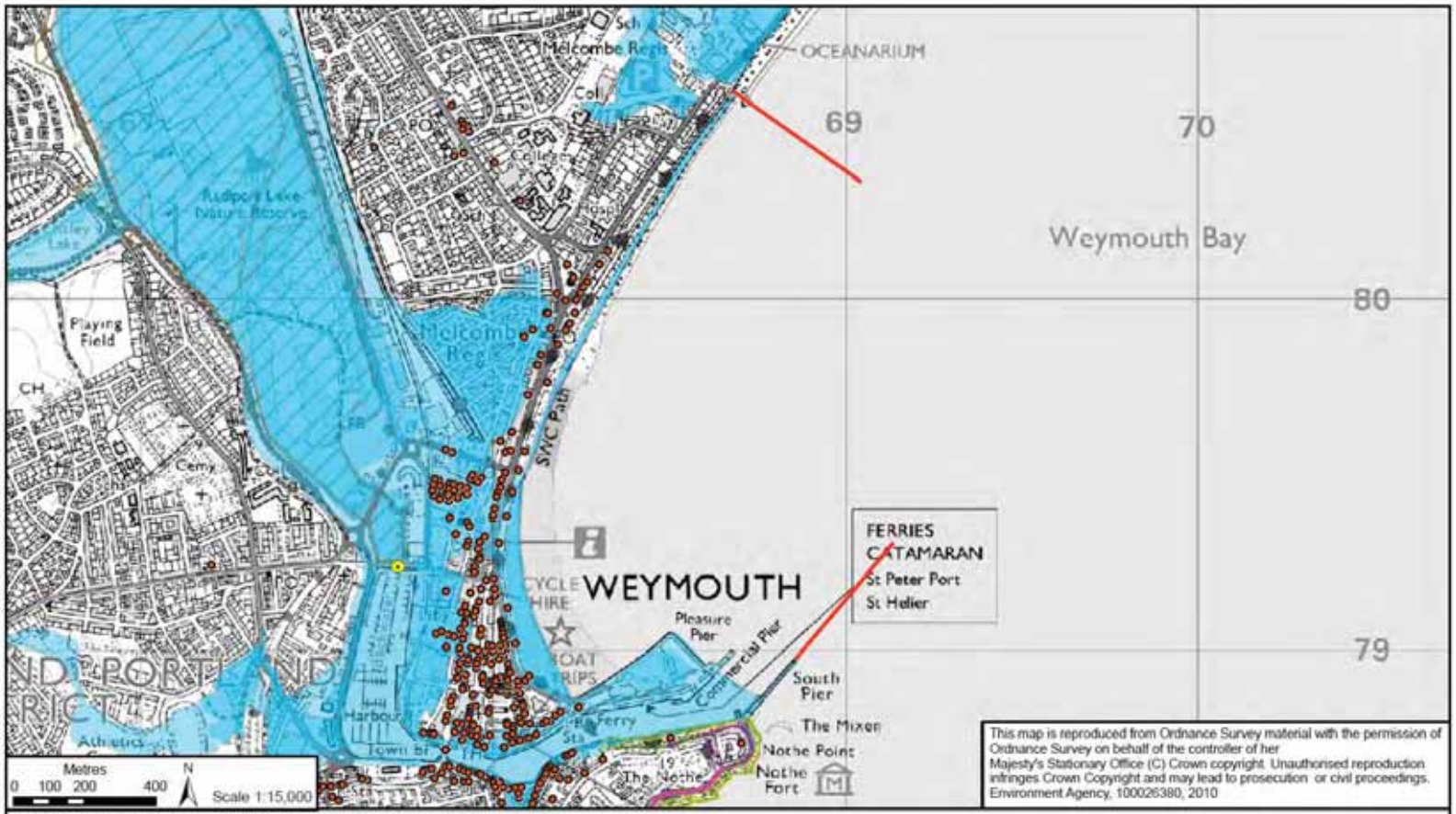
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Preston Beach (Rock Groyne) to Portland Harbour (North Breakwater) (includes Weymouth Harbour)
Policy Unit reference:	5g16 and 5g17

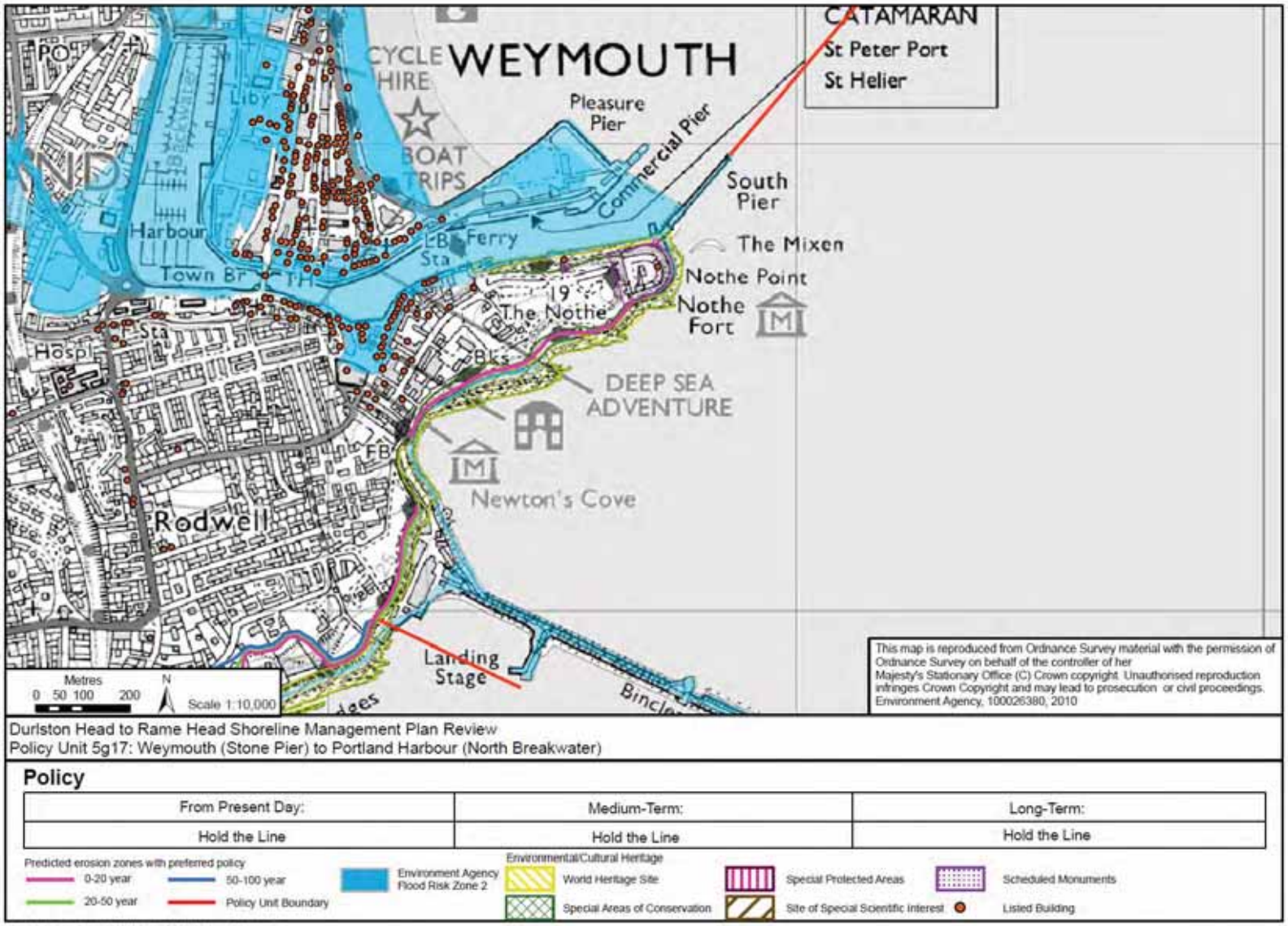
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
								holding the line at Nothe, adjacent to the Ferry Terminal and around to Portland Harbour. Continued protection of reedbeds and freshwater habitats at Radipole Lake SSSI and nature reserve lake from saline flooding.
2055 – 2105	Continued maintenance of all defences along the open coast and harbour. Further beach recharge and possible construction of additional shoreline control structures along the open coast, with ongoing beach management. Upgrade of the harbour defences towards the end of this period. Possible upgrade of rock revetment along the Nothe frontage to be informed by ongoing monitoring.	Protection of properties and facilities along Preston Beach and at Rodwell. Properties and facilities within Preston and Overcombe protected from erosion and flooding. Risk of flooding to large areas of the majority of the town of Weymouth (including residential and commercial districts in the town centre) will be minimised.	Risk to A353, Furzy Cliff/Overcombe and Greenhill from flooding will be minimised. Flood risk to railway terminus at Weymouth protected will be minimised	No loss or damage - Nothe Fort, Tram and Searchlight Battery Scheduled Monument (SM) at The Nothe will remain protected from flooding/erosion.	Little/ no change in landscape character of area.	Holding the line has the potential to adversely affect the geological interest features of Portland Harbour Shore Site of Special Scientific Interest (SSSI) – however the site is already in a degraded condition due to the breakwaters. Protection from flooding of Pottery Lane historic landfill site.	Holding the line within these policy units should be implemented so as to not adversely impact on the water quality status of the coastal waters. Protecting Weymouth could potentially lead to impoundment of Weymouth Harbour, which could have permanent effects on the Wey transitional waterbody, thus failing WFD objectives 2 and 3.	No 'adverse effect' on the Isle of Portland to Studland Cliffs SAC. HTL would affect up to only 3% of the overall site, with limited impact on the ecological functionality of the site. The impact of a HTL policy in 5g17 may result in coastal squeeze of intertidal habitats within the Chesil Beach and The Fleet SAC, and the impact of policy implementation is uncertain at this stage (thus potential for 'adverse effect'). Potential loss of some intertidal habitat (e.g. at Portland Harbour Shore SSSI) due to coastal squeeze due to holding the line at Nothe, adjacent to the Ferry Terminal and around to Portland Harbour. Continued protection of reedbeds and freshwater habitats at Radipole Lake SSSI and nature reserve lake from saline flooding.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Bincleaves to Dowman Place**
Policy Unit reference:	**5g18 to 5g20**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section of coast along the north-western shore of Portland Harbour comprises a highly developed area of property and infrastructure atop slowly receding cliffs that include actively landsliding clay-rich cliffs. The erosion of these is primarily driven by groundwater levels (wave action at the toe is a secondary factor but this has been reduced since construction of the Portland Harbour Breakwaters), and more resistant sandstones which form headlands which then fail as a result of wave undercutting at the base. Wave action at the cliff toe becomes increasingly important in maintaining cliff instability towards the Small Mouth end of this section where fetch lengths across Portland Harbour are greatest, although erosion in this area is still only small scale. These cliffs are also designated as part of the World Heritage Site in their lower part for their geological exposure, although these exposures are presently largely obscured. This is due to the extensive growth of vegetation cover linked to the reduction in exposure to wave action at the base of the cliff since construction of the Portland Harbour breakwaters.

The primary aim of the long term Plan for this section is to reduce the risk to property and infrastructure from cliff recession. Options for achieving this long term plan should, however, seek to improve the status of the designated features of the area if possible. Whilst this long term vision applies to the entire frontage, local variations in erosion risk extents linked to differences in the underlying geology means that the approach to managing this risk over the next 100 years needs to take slightly different forms. As such, management of this section is discussed in the context of three smaller policy units (5g18 to 5g20).

Along parts of this stretch there is already economic justification for public funds to be used to intervene and reduce the risk of further cliff recession. However, along other parts this justification is unlikely to be reached until the second or third epochs, or even beyond the 100 year life of the Plan. In these areas the Plan is to allow limited intervention to manage the realignment of the coast until a time when there is justification to intervene and ultimately Hold the Line at a point in the future.

This whole section of coast could be affected by any change in the Portland Harbour Breakwaters. These prevent significant wave action at the toe of the cliffs and thus limit their erosion. The assumption of the policies for this stretch is that the breakwaters will remain and be maintained. If this was to not be the case and the breakwaters were to deteriorate and have a reduced influence along this frontage, then it would significantly alter the assessments within this current plan. However, it is likely that this would result in providing greater economic justification for intervening along more areas along this frontage earlier than envisaged in the Plan at this current time.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** along the Old Castle Road (unit 5g19) section of this slowly retreating cliffed coast. This is to reduce the immediate risk of cliff recession to cliff top properties and part of the only access road to a number of other properties that are at a much reduced risk of erosion in the short, medium and long term. The existing defences at Castle Cove Sailing Centre can be maintained under this policy if funds are available. There is no benefit in removing these defences as they are substantial structures that contribute to the overall policy in this area. The remaining parts of this section of coast will be subject to a policy of **Managed Realignment** (units 5g18 and 5g20). This would include allowing short term cliff stabilisation measures to be introduced locally within the upper slope to reduce the risk of cliff recession caused by land drainage mechanisms along unit 5g18, subject to technical and environmental criteria being met as well funds being available. During this first epoch, planning should also commence to develop measures that would enable the relocation of assets in the medium to longer term. The

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	implementation of these will be required to achieve the long term policy of Managed Realignment along parts of this frontage, particularly to the east of Castle Cove where economic justification (in terms of public funds) is unlikely to be justified over the next 100 years. This stretch is currently defended in places by ad hoc structures that offer varying degrees of protection to the cliff toe from wave action. These have a minimal effect on reducing the instability in the clay-rich cliffs. Under this policy it is not proposed to maintain those ad hoc defences that do not serve any effective protection function, particularly to the east of Sandsfoot Castle, where slope stabilisation measures in the upper part of the slope would be permitted (subject to private funding). These will be more effective in reducing the risk of cliff top recession for a period of time whilst measures are developed to adapt the cliff top area in the longer term. It is uncertain if any new structures would need to be constructed along the foreshore as part of these intervention measures. This is due to the primary mechanism posing the most immediate risk to cliff top assets being from coastal slope stability and not wave action at the cliff toe. The requirement for such structures needs to be investigated as part of any actual implementation measures and would have to fully assess the potential impacts upon the designation features of this stretch of coast as part of this planning process. It will not be economically viable to intervene along the entire stretch during this period and, consequently, some risk would remain of further erosion occurring. Total recession along these undefended lengths is predicted to be between 5 and 10m during this period, inclusive of episodic landslide events which occur once every 1 to 10 years in the more active cliff areas, and once every 10 to 100 years in the slightly more resistant cliff areas. Ongoing monitoring of the cliffs should also be undertaken to inform future management decisions. Further investigations should take place early in this period to improve understanding of both land instability and coastal erosion risks, as well as the influence of the Portland Harbour Breakwaters, to provide a greater level of information to determine specific implementation measures.
Medium term:	The medium term policy is to continue to **Hold the Line** (unit 5g19) along the lengths of slowly retreating cliffed coast, with the aim of continuing to prevent erosion occurring locally through maintenance of slope stabilisation measures introduced in the short term. As part of a continued policy of **Managed Realignment** (units 5g18 and 5g20), in areas where stabilisation measures are not introduced (especially along unit 5g18), measures to relocate assets should continue to be developed and implemented (as appropriate) during this period. Ongoing monitoring of the cliffs should also be undertaken to inform future management decisions. Additional intervention along other sections may be necessary to reduce the risk of cliff recession locally. Based on current assessments, this may be required during this period at the western end of Old Castle Road (towards the Castle Cove Sailing Centre) and along parts of the Rodwell Trail to the west of the sailing centre. Erosion of the more resistant sandstone cliffs around Sandsfoot Castle tends to be geologically controlled so a noticeable increase in erosion rates due to sea level rise is not expected. The clay-rich cliffs are expected to be more sensitive to sea level rise and any increase in precipitation. This could increase

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	erosion rates in these undefended areas, which in turn may result in it becoming more economically viable to intervene over a wider area. During this period, it may become necessary to start implementing measures developed in the short term to enable the relocation of assets. This might apply if it remains uneconomically viable to intervene in those areas in the future, and in support of the longer-term aim of managing the realignment of the coast to the east of Castle Cove back to a point where it will become economically viable to intervene in the very long term (beyond the 100 year life of this Plan).
Longer-term:	The long term policy is to continue to **Hold the Line** along Old Castle Road (unit 5g19) to continue to defend critical infrastructure in this area. A **Hold the Line** policy will also be implemented to the west of the Castle Cove Sailing Centre (unit 5g20) to protect critical infrastructure beneath Rodwell Trail which, based on current assessments, is likely to become at risk of cliff recession in this period. To the east of Castle Cove (unit 5g18), where there is no critical infrastructure predicted to become at risk over this period, the policy of **Managed Realignment** would continue. This will involve implementing the measures developed in the short and medium terms to relocate assets away from the erosion risk area. It may not be appropriate to renew slope stabilisation measures that might have been introduced previously in this area (by private funds in the preceding epochs) as they reach the end of their design lives and taking account of potential climate change impacts. Future risk to people, property and infrastructure would then continue to be managed through monitoring of cliff recession and pro-active implementation of adaptation measures to relocate these as required until such time (in the very long term beyond the 100 year life of this Plan) that it becomes economically justified (in terms of public funds) to intervene more substantially and effectively Hold the Line in the same way as the adjacent units along this stretch of coast. The rate of erosion due to groundwater conditions within the clay-rich cliffs could increase due to any increase in rainfall. Due to uncertainty in the possible future changes in precipitation resulting from climate change, no direct account has been taken of this in the recession rate predictions. As a result of high sea levels, beaches are expected to narrow and in places may disappear as the rock platforms become submerged, potentially resulting in increased exposure of the defences and cliff toe to wave action. All of this could lead to an increase in erosion rates in the undefended areas which may, in turn, result in it becoming more economically viable to intervene in more areas as a result. This policy of Managed Realignment would retain the option of introducing further slope stabilisation measures in the future if required, and where it is economically viable to do so. This would reduce erosion risk for a period of time to enable adaptation measures to be implemented if, for example, cliff recession exceeds that currently predicted and adaptation measures have not yet been implemented. Defences in the form of rock revetment at Castle Cove Sailing Club would remain and be maintained, and would likely need to be re-built in this period as they contribute to the overall aim of the policy in this area. However under this policy it is not envisaged that other new defences would be constructed

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

along the foreshore.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
5g18	**Bincleaves to Castle Cove**	Privately funded implementation of slope stabilisation measures in the upper parts of the slope along parts of this coast to prevent the risk of further cliff recession in localised areas for a period of time as part of a policy of **Managed Realignment** could occur, whilst adaptation measures are developed for the medium to long term if it remains unviable to intervene on a larger scale using public funds.	Maintenance and possibly further implementation of privately funded slope stabilisation measures in the upper parts of the slope along parts of this coast to prevent the risk of further cliff recession in localised areas as part of a policy of **Managed Realignment** could occur, whilst adaptation measures continue to be developed and begin to be implemented if it remains unviable to intervene on a larger scale using public funds..	Implementation of adaptation measures would occur as part of a policy of **Managed Realignment**.
5g19	**Castle Cove to Castle Cove Sailing Centre**	Implement measures along parts of this coast to prevent the risk of further cliff recession in localised areas where it is economically viable to do so as part of a policy of **Hold the Line**.	Maintain and possibly implement further measures along parts of this coast to prevent the risk of cliff recession in localised areas where it is economically viable to do so as part of a policy of **Hold the Line**.	Continue to maintain and possibly implement further measures along parts of this coast to prevent the risk of cliff recession in localised areas where it is economically viable to do so as part of a policy of **Hold the Line**.
5g20	**Castle Cove Sailing Centre to Dowman Place**	Monitor and if necessary introduce measures if cliff recession threatens the critical infrastructure beneath the Rodwell Trail under a policy of **Managed Realignment**.	Continue to monitor and if necessary introduce measures if cliff recession threatens the critical infrastructure beneath the Rodwell Trail under a policy of **Managed Realignment**.	Implement measures along parts of this coast as necessary to prevent the risk of further cliff recession in localised areas where it is economically viable to do so as part of a policy of **Hold the Line**.

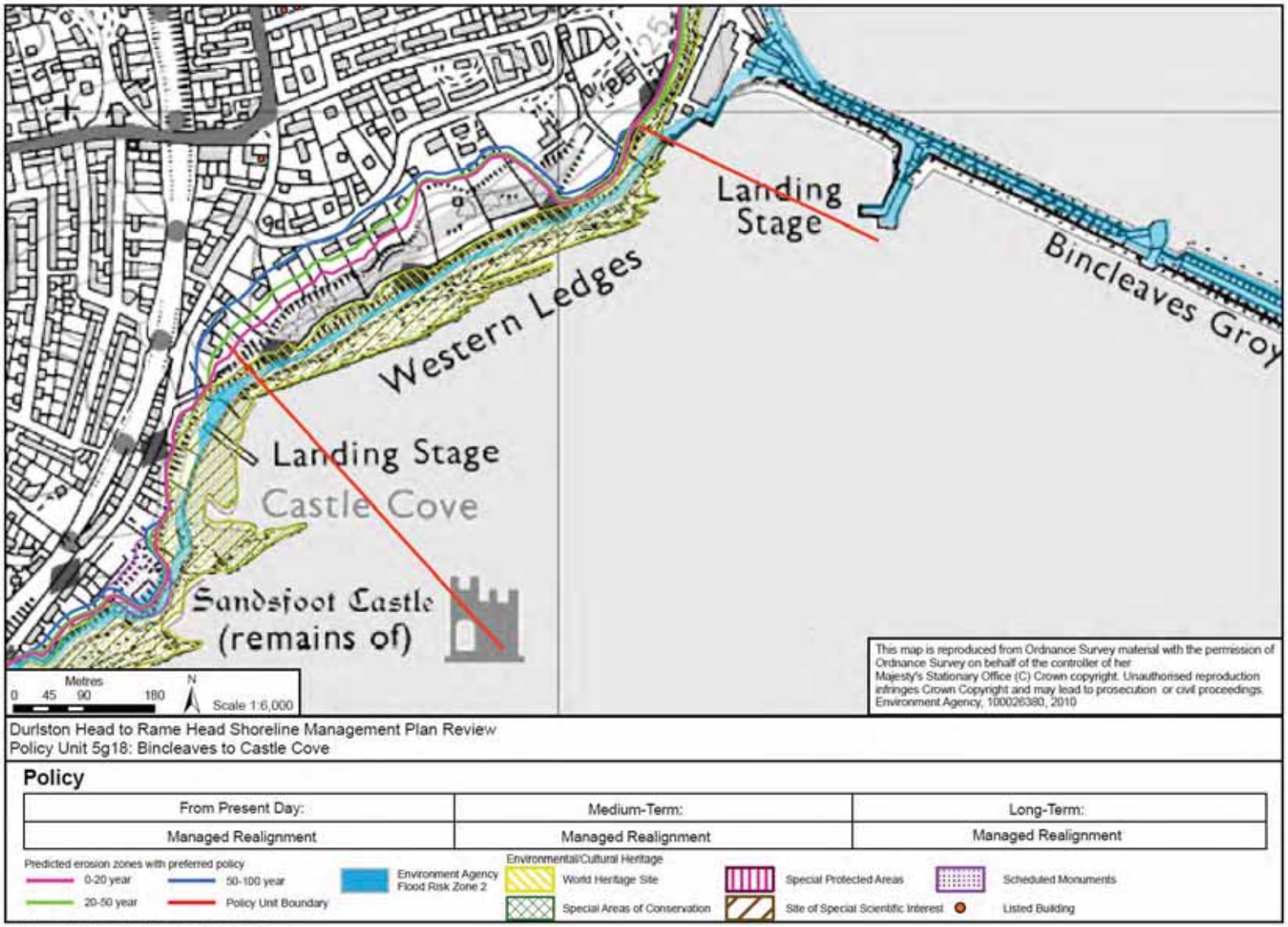
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Bincleaves to Dowman Place
Policy Unit reference:	5g18 to 5g20

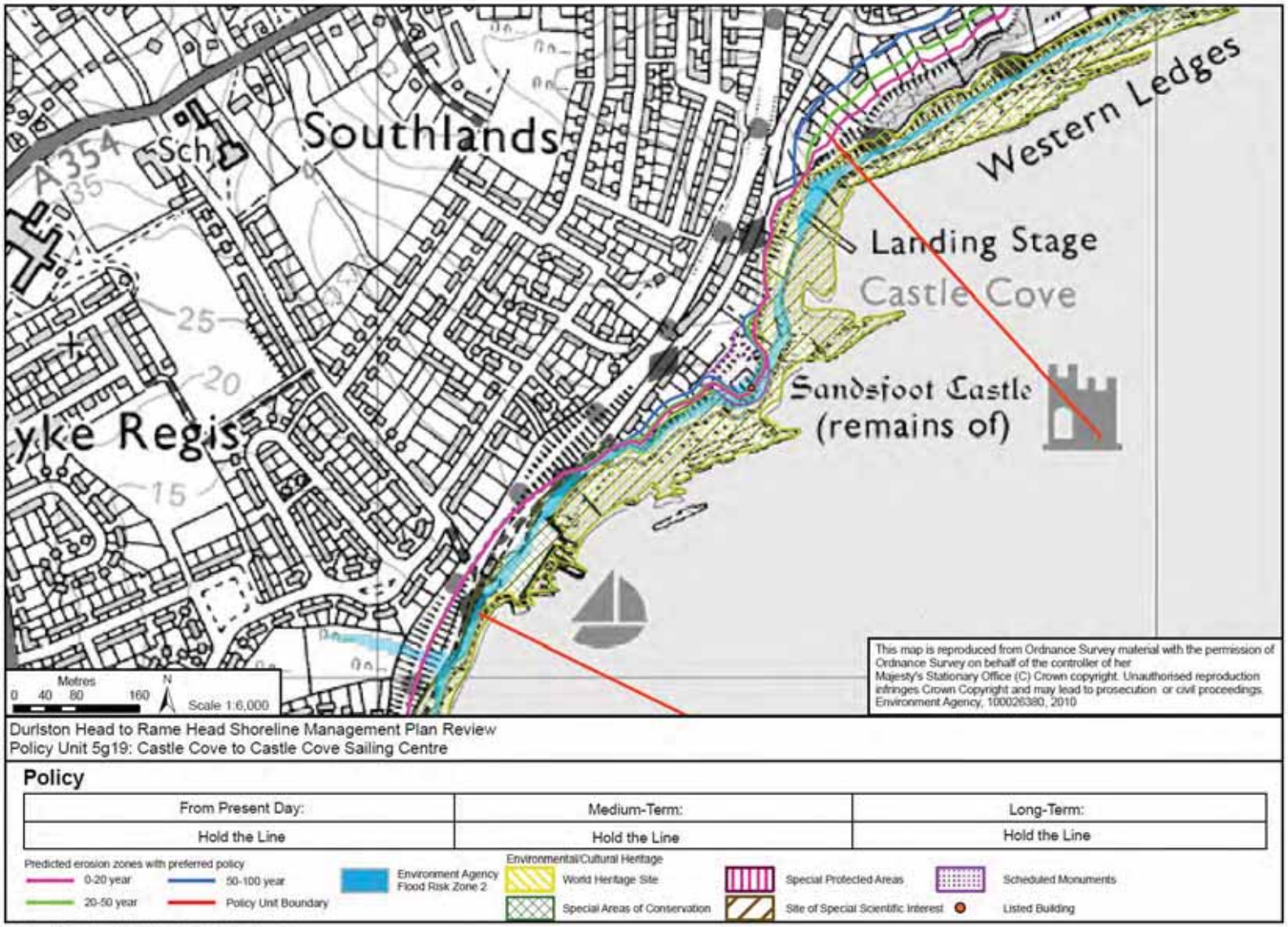
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Implement measures along parts of this coast to prevent the risk of further cliff recession in localised areas where it is economically viable to do so.	Loss of isolated properties along coastal stretch where not economically viable to intervene. Loss of South-West Coastal Path in some areas.	Local road infrastructure will remain protected. Utility services including water mains, gas pipes and electricity supply will be protected.	No impacts on known archaeological features indentified	Potential change in landscape character of area, depending on nature of measures introduced to reduce risk of cliff recession.	Continuation of natural processes is key to the integrity of the geological interest features of South Dorset Coast, Portland Harbour Shore and Isle of Portland Sites of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS), therefore the preferred policies in this coastal section would continue to maintain the geological exposures of these features.	Intervention measures should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Potential reduction in extent of intertidal habitat due to coastal squeeze within Portland Harbour Shore SSSI depending on amount of cliff toe erosion, measures introduced to reduce risk of cliff recession, and rate of sea level rise.
2025 – 2055	Maintain and possibly implement further measures along parts of this coast to prevent the risk of further cliff recession in localised areas where it is economically viable to do so.	Loss of isolated properties along coastal stretch where not economically viable to intervene. Loss of South-West Coastal Path in some areas.	Local road infrastructure will remain protected. Utility services including water mains, gas pipes and electricity supply will be protected.	Potential damage to or loss of Sandsfoot Castle SM from erosion.	Potential change in landscape character of area, depending on nature of measures introduced to reduce risk of cliff recession.	Continuation of natural processes is key to the integrity of the geological interest features of South Dorset Coast, Portland Harbour Shore and Isle of Portland Sites of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS), therefore the preferred policies in this coastal section would continue to maintain the geological exposures of these features.	Intervention measures should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Potential reduction in extent of intertidal habitat due to coastal squeeze within Portland Harbour Shore SSSI depending on amount of cliff toe erosion, measures introduced to reduce risk of cliff recession, and rate of sea level rise.
2055 – 2105	Maintain and possibly implement further measures along parts of this coast to prevent the risk of further cliff recession in localised areas where it is economically viable to do so.	Loss of isolated properties along coastal stretch where not economically viable to intervene. Loss of South-West Coastal Path in some areas.	Local road infrastructure will remain protected. Utility services including water mains, gas pipes and electricity supply will be protected.	Potential damage to or loss of Sandsfoot Castle SM from erosion.	Potential change in landscape character of area, depending on nature of measures introduced to reduce risk of cliff recession.	Continuation of natural processes is key to the integrity of the geological interest features of South Dorset Coast, Portland Harbour Shore and Isle of Portland Sites of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS), therefore the preferred policies in this coastal section would continue to maintain the geological exposures of these features.	Intervention measures should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Potential reduction in extent of intertidal habitat due to coastal squeeze within Portland Harbour Shore SSSI depending on amount of cliff toe erosion, measures introduced to reduce risk of cliff recession, and rate of sea level rise.

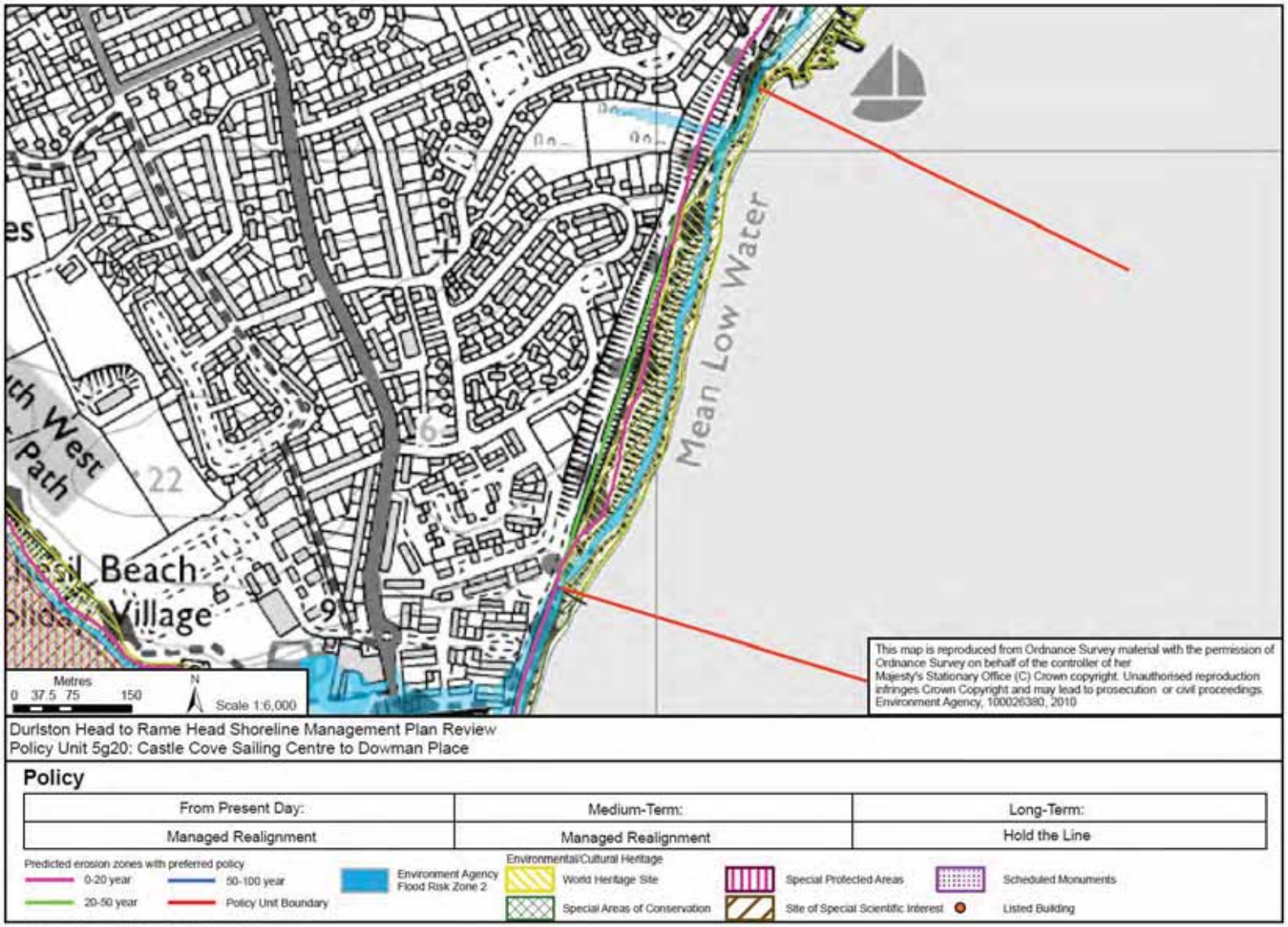
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Small Mouth to King's Pier**
Policy Unit reference:	**5g21 and 5g22**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section covers the extensively developed areas of Portland Port and Osprey Quay, which are important areas for the local and regional economy. There are also some defences towards Small Mouth, largely associated with maintaining the entrance to The Fleet and protecting a recent housing development. The majority of the coast between Small Mouth and Osprey Quay is however undefended, and fronted by a narrow shingle beach (Ham Beach). This fronts a low-lying area on the eastern side of the Chesil Bank, along which runs the only access road to the Isle of Portland.

The long term Plan for these areas is continue to reduce the risk of flooding and erosion along this stretch and also ensure that the key infrastructure link to Portland is maintained over the next 100 years. This is also supported along much of this length by the recommended Policy for the southern end of Chesil Beach (Policy Units 6a02 and 6a03) which is to continue to intervene such that flood risk to this section via overtopping or breaching of Chesil Beach is reduced. Beach management activities along 6a02 and 6a03 would be undertaken to restore the defence function of the beach following storm events.

The Plan also recognises that there will be an increasing risk of overtopping and even breaching of the Chesil Bank in the longer-term, particularly along the stretch between Osprey Quay and Small Mouth. Even if repaired by natural processes (and/or beach management activities as allowed for in Policy Unit 6a03), the beach would be in a realigned (more eastern) position which could impact upon the feasibility of maintaining the A354 infrastructure link in its current form. The Plan has identified that there is also a need to start to plan for how transport links can be provided in the future should this occur.

Preferred policies to implement Plan:

From present day (short term):

The short term policy is to continue to **Hold the Line** of existing defences, which include rock revetment and quay walls associated with Portland Port, as well as the Portland Harbour Breakwaters which it is assumed would be maintained during this period. This would also involve maintenance of the short lengths of low-level rock revetment towards Small Mouth, which would need to be upgraded towards the end of this period to maintain current levels of protection and prevent erosion leading to an increased risk of flooding to low-lying land behind.

The ongoing defence along the base of the cliffs at Portland would continue to prevent any discernable erosion of the cliffs, with the trend of negligible recession over the past century expected to continue over this period.

Along Ham Beach implementation of this policy is only likely to involve monitoring of beach levels during this period. There is likely to be little change in the shingle barrier Ham Beach that dominates the central part of this section, as there has been over the past century. This is as a result of reduced wave exposure along the beach resulting from the presence of the Portland Harbour breakwaters.

Due to the importance of the breakwaters on maintaining the stability of the beach, it could be necessary to undertake maintenance works to these to maintain the levels of protection they currently provide.

This Policy is also affected by the management of Chesil Beach, where the policy is for limited intervention if required to restore the defence function of the beach (but not prevent the beach moving eastwards) along the section that backs this stretch along the Portland Harbour frontage adjacent to the A354 Portland Beach Road. It will be necessary to start to develop plans during this period to consider how best transport links to Portland could be maintained in

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	the long term, should a breach of Chesil Beach ever occur.
Medium term:	The medium term policy is to continue to **Hold the Line** of existing defences along this section through ongoing maintenance, and possibly upgrade of, existing defences to maintain current levels of protection. As for the Short Term, the presence of defences at Portland would result in negligible cliff recession, as has occurred historically in this area. Along Ham Beach, implementation of this policy is likely to involve monitoring of beach levels. Assuming the continued presence of the Portland Harbour breakwaters is retained by maintenance or upgrade works, Ham Beach would remain largely stable. However, sea level rise combined with a lack of new sediment input could begin to result in the beach narrowing and an increased risk of flooding to the low-lying land behind some of the defences. It may be necessary to upgrade existing defences during this period to maintain the current levels of protection.
Longer-term:	The long term policy is to continue to **Hold the Line** of existing defences along this section, through maintenance and possible upgrade of existing shoreline defences. The retention of defences at Portland would continue to result in negligible cliff recession, as has occurred historically in this area. As a result of high sea levels and a lack of new sediment input, Ham Beach could become narrower and in places may disappear as it becomes submerged. This would increase the risk of flooding to the low-lying land behind, including the main road to Portland. Therefore to 'Hold the Line' along Ham Beach, there may be a need for construction of a raised defence at the back of Ham Beach in order to protect the road that runs behind it from overtopping and flooding. This would need to be considered in conjunction with plans developed in the short term regarding future transport links to Portland should Chesil Beach ever experience a breach. The policy in 6a03 is one of limited intervention only to restore the defence function of the beach should such an event occur – this would not prevent the beach rolling back eastwards over time and encroaching upon the existing transport route.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
5g21	**Small Mouth to Osprey Quay (Portland Harbour)**	Maintain existing defences towards Small Mouth and monitor beach levels along Ham Beach as part of a policy of **Hold the Line**.	Maintain and improve existing defences towards Small Mouth and monitor beach levels along Ham Beach as part of a policy of **Hold the Line**.	Maintain and improve existing defences towards Small Mouth, and construct a defence embankment along Ham Beach to reduce the risk of flooding to the only road access to Portland as part of a policy of **Hold the Line**.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
5g22	**Osprey Quay (Portland Harbour) to King's Pier**	Maintain existing defences in order to **Hold the Line** and provide continued protection to the developed area.	Maintain or improve existing defences in order to **Hold the Line** and provide continued protection to the developed area.	Maintain or improve existing defences in order to **Hold the Line** and provide continued protection to the developed area.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Small Mouth to King's Pier
Policy Unit reference:	5g21 and 5g22

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Maintenance and possible upgrade of the existing defences. Monitoring of Ham Beach.	Continued protection against flood risk to commercial and residential property.	Protection of the new Portland Gas storage facilities in the Upper Osprey Quay site. Continued protection of A354 and Osprey Quay from the western side of Chiswell and from Portland Harbour side from flooding.	Continued protection of Portland Castle SM and Sandsfoot Castle SM from flooding/erosion.	Little/ no change in landscape character of area.	Holding the line may adversely affect the geological interest features of Portland Harbour Shore and Isle of Portland Sites of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS).	Holding the line within these policy units should be implemented so as to not adversely impact on the water quality status of the coastal waters. The maintenance and upgrade of defences could lead to the loss of intertidal habitats due to coastal squeeze and thus failure to meet WFD objective 2.	No 'adverse effect' on the Isle of Portland to Studland Cliffs SAC. HTL in some policies of the SMP including 5g21 and 22 would affect up to only 3% of the overall site, with limited impact on the ecological functionality of the site. The impact of a HTL policy in 5g21 may result in coastal squeeze of intertidal habitats within the Chesil Beach and The Fleet SAC, and the impact of policy implementation is uncertain at this stage (thus potential for 'adverse effect'). No 'adverse effect' on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that this policy is affecting the reef habitat at present and therefore no adverse effects are foreseen. Potential loss of some intertidal habitat (e.g. at Portland Harbour Shore SSSI) due to coastal squeeze due to holding the line around Portland Harbour. Protection of some designated maritime grassland habitat within Portland Harbour Shore and coastal scrub within the Isle of Portland SSSIs (biological).
2025 – 2055	Continued maintenance of existing defences, and possible upgrade of some defences along this section. Monitoring of Ham Beach.	Continued protection against flood risk to commercial and residential property.	Protection of the new Portland Gas storage facilities in the Upper Osprey Quay site. Continued protection of A353, Furzy Cliff/Overcombe, Greenhill and Osprey Quay from the western side of Chiswell and from Portland Harbour side from flooding.	Continued protection of Portland Castle SM and Sandsfoot Castle SM from flooding/erosion.	Little/ no change in landscape character of area.	Holding the line may adversely affect the geological interest features of Portland Harbour Shore and Isle of Portland Sites of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS).	Holding the line within these policy units should be implemented so as to not adversely impact on the water quality status of the coastal waters. The maintenance and upgrade of defences could lead to the loss of intertidal habitats due to coastal squeeze and thus failure to meet WFD objective 2.	No 'adverse effect' on the Isle of Portland to Studland Cliffs SAC. HTL in some policies of the SMP including 5g21 and 22 would affect up to only 3% of the overall site, with limited impact on the ecological functionality of the site. The impact of a HTL policy in 5g21 may result in coastal squeeze of intertidal habitats within the Chesil Beach and

The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Small Mouth to King's Pier
Policy Unit reference:	5g21 and 5g22

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
								The Fleet SAC, and the impact of policy implementation is uncertain at this stage (thus potential for 'adverse effect'). No 'adverse effect' on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that this policy is affecting the reef habitat at present and therefore no adverse effects are foreseen. Potential loss of some intertidal habitat (e.g. at Portland Harbour Shore SSSI) due to coastal squeeze due to holding the line around Portland Harbour. Protection of some designated maritime grassland habitat within Portland Harbour Shore and coastal scrub within the Isle of Portland SSSIs (biological).
2055 – 2105	Continued maintenance of existing defences, and possible upgrade of some defences along this section. Construction of a raised revetment defence along the back of Ham Beach to reduce flood risk to the road.	Continued protection against flood risk to commercial and residential property.	Protection of the new Portland Gas storage facilities in the Upper Osprey Quay site. Continued protection of A353, Furzy Cliff/Overcombe, Greenhill and Osprey Quay from the western side of Chiswell and from Portland Harbour side from flooding.	Continued protection of Portland Castle SM and Sandsfoot Castle SM from flooding/erosion.	Potential change in landscape character of area from construction of embankment defence along back of Ham Beach.	Holding the line may adversely affect the geological interest features of Portland Harbour Shore and Isle of Portland Sites of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS).	Holding the line within these policy units should be implemented so as to not adversely impact on the water quality status of the coastal waters. The maintenance and upgrade of defences could lead to the loss of intertidal habitats due to coastal squeeze and thus failure to meet WFD objective 2.	No 'adverse effect' on the Isle of Portland to Studland Cliffs SAC. HTL in some policies of the SMP including 5g21 and 22 would affect up to only 3% of the overall site, with limited impact on the ecological functionality of the site. The impact of a HTL policy in 5g21 may result in coastal squeeze of intertidal habitats within the Chesil Beach and The Fleet SAC, and the impact of policy implementation is uncertain at this stage (thus potential for 'adverse effect'). No 'adverse effect' on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that this policy is affecting the reef habitat at present and therefore no adverse effects are foreseen.

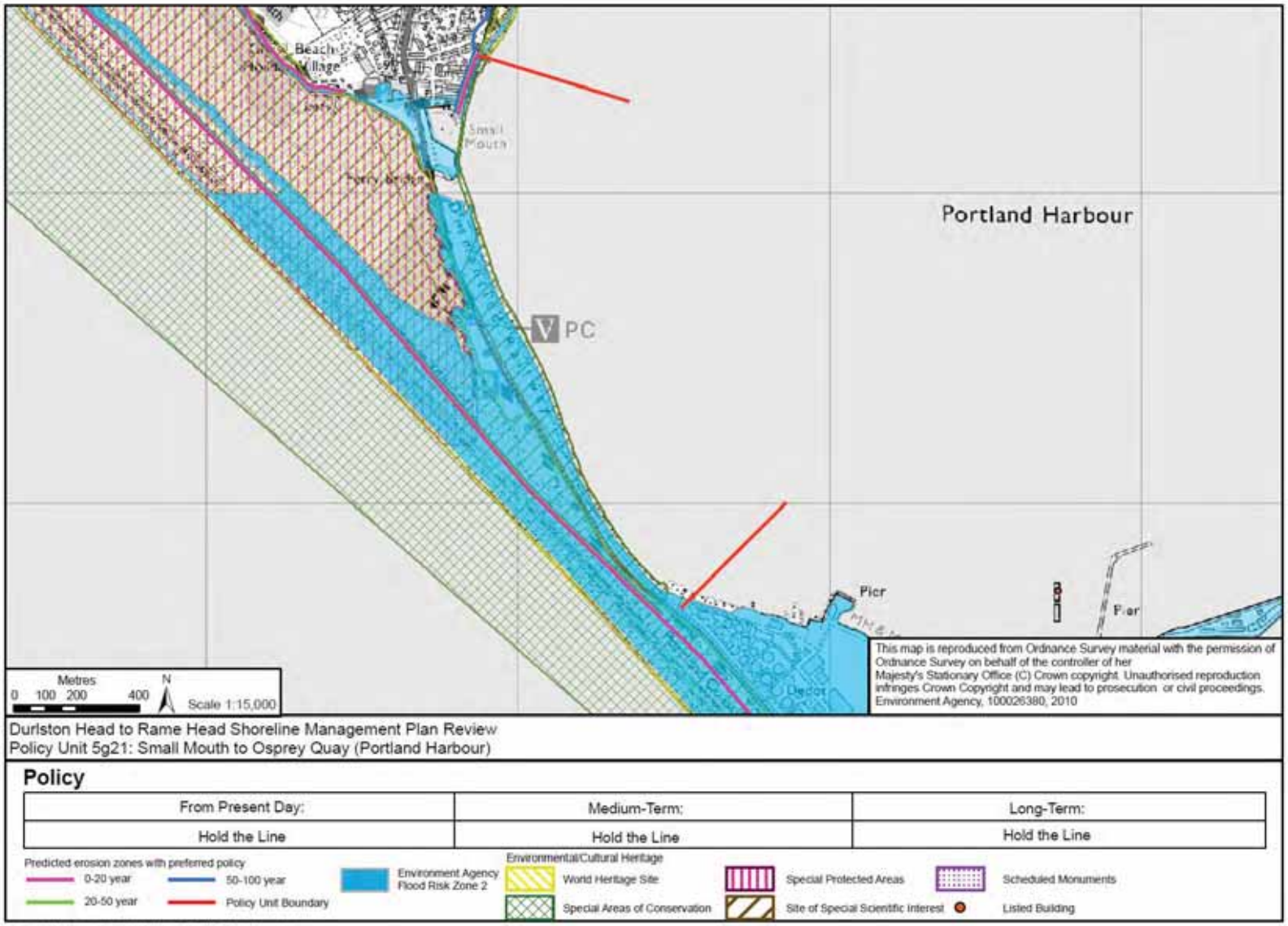
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Small Mouth to King's Pier
Policy Unit reference:	5g21 and 5g22

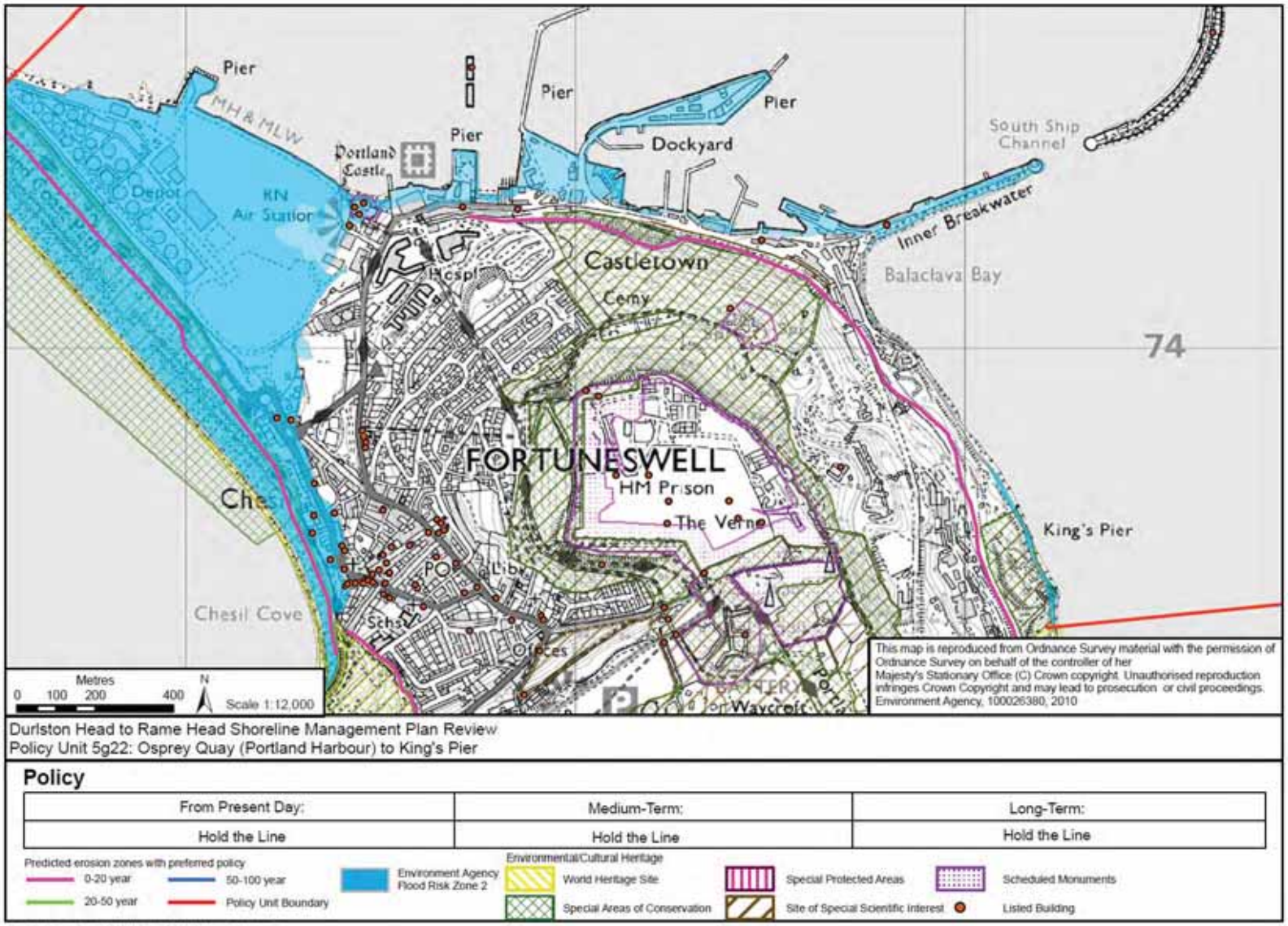
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
								Potential loss of some intertidal habitat (e.g. at Portland Harbour Shore SSSI) due to coastal squeeze due to holding the line around Portland Harbour. Protection of some designated maritime grassland habitat within Portland Harbour Shore and coastal scrub within the Isle of Portland SSSIs (biological).

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**King's Pier to Portland Bill**
Policy Unit reference:	**5g23**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term Plan is to allow natural processes to continue with no intervention along this section of undefended cliffs. The resistant nature of the limestone cliffs along this section means only negligible erosion is likely to occur over the next 100 years, with infrequent, small scale rock fall events a possibility in some locations. No significant loss of assets is therefore expected.

Preferred policies to implement Plan:

From present day (short term):	The short term policy of **No Active Intervention** will allow this section to continue to evolve naturally. Any sediment released through cliff erosion will be either retained very locally in the pocket beaches that indent the limestone cliffs (in the case of sand and shingle), or washed offshore (in the case of fines).
Medium term:	The medium term policy is to continue **No Active Intervention**. Sea level rise would result in the submergence of shore platforms that front this section, and a possible narrowing of the small pocket beaches.
Longer-term:	The long term policy is to continue **No Active Intervention**. Localised rock falls may occur although it is not possible, without further detailed investigations, to predict where. These are geologically controlled events and are unlikely to be affected by sea level rise. As a result of higher sea levels, small pocket beaches such as at Church Ope Cove, are expected to narrow further and in places may disappear as the rock platforms become submerged. This will result in increased exposure of the cliff toe to wave action.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
5g23	**King's Pier to Portland Bill**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

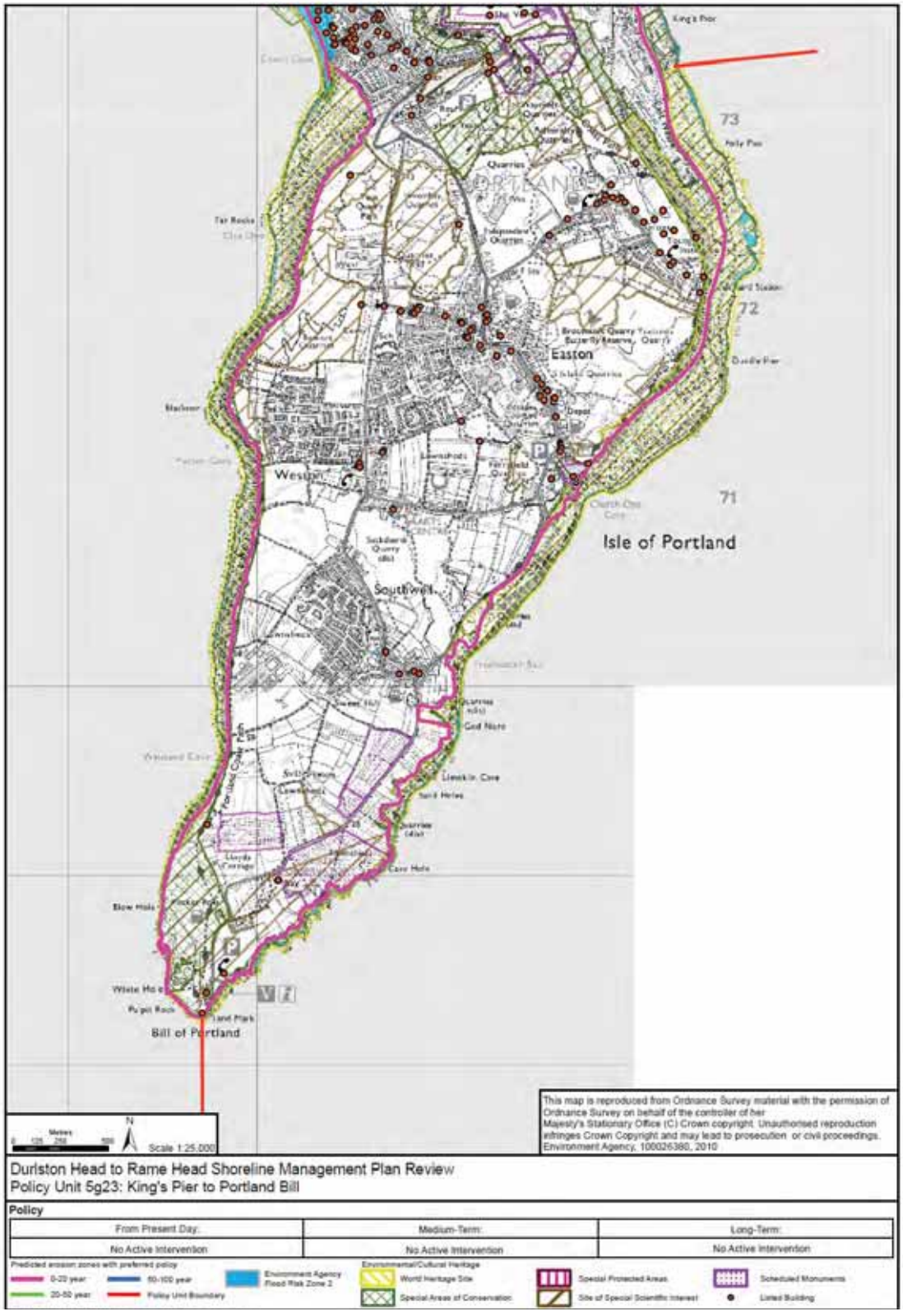
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	King's Pier to Portland Bill
Policy Unit reference:	5g23

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property and Population	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	No management activities. Continued cliff erosion would occur.	Loss of a few isolated properties along coastal stretch. Loss of South-West Coastal Path in some areas.	Loss of grades 3 and 4 agricultural land due to erosion and flooding in some areas.	Potential partial loss of up to one SM from erosion: a small area of Mesolithic Sites Near Culver Well SM.	Little/ no change in landscape character of area	Continuation of natural processes is key to the integrity of the geological interest features of the Isle of Portland Sites of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS), the preferred policy in this policy unit would continue to maintain the geological exposures of these features.	No known impacts on water quality.	No known impacts on strategic biodiversity features.
2025 – 2055	No management activities. Continued cliff erosion would occur.	Loss of a few isolated properties along coastal stretch. Loss of South-West Coastal Path in some areas.	Loss of grades 3 and 4 agricultural land due to erosion and flooding in some areas.	Potential partial loss of up to one SM from erosion: a small area of Mesolithic Sites Near Culver Well SM.	Little/ no change in landscape character of area	Continuation of natural processes is key to the integrity of the geological interest features of the Isle of Portland Sites of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS), the preferred policy in this policy unit would continue to maintain the geological exposures of these features.	No known impacts on water quality.	No known impacts on strategic biodiversity features.
2055 – 2105	No management activities. Continued cliff erosion would occur.	Loss of a few isolated properties along coastal stretch. Loss of South-West Coastal Path in some areas.	Loss of grades 3 and 4 agricultural land due to erosion and flooding in some areas.	Potential partial loss of up to one SM from erosion: a small area of Mesolithic Sites Near Culver Well SM.	Little/ no change in landscape character of area	Continuation of natural processes is key to the integrity of the geological interest features of the Isle of Portland Sites of Special Scientific Interest (SSSI) and Dorset and East Devon World Heritage Site (WHS), the preferred policy in this policy unit would continue to maintain the geological exposures of these features.	No known impacts on water quality.	No known impacts on strategic biodiversity features.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Portland Bill to West Weare**
Policy Unit reference:	**6a01**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section of coast on the western side of the Isle of Portland is presently undefended, and the long term vision of the Plan is for this to continue to evolve naturally.

There will be negligible cliffline retreat along much of this section due to the very resistant limestone cliffs. These experience only infrequent localised cliff failures that are confined to joint planes or as a result of wave undercutting. There could be slightly more retreat of the cliffline in the north-western part of this section around West Weare. Here the limestone forms a cap to softer clay cliffs which are more susceptible to cliff failure events, although these tend to be small-scale and infrequent.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is **No Active Intervention** along this undefended section of coastline which will experience negligible cliffline. Around West Weare the cliffs can experience localised landslide events with a frequency of about 100 years, although the underlying erosion in this area is predicted to be between 2 and 10m over this period. Any sediment released through cliff erosion will be either retained very locally in the pocket beaches that indent the limestone cliffs (in the case of sand and shingle), or washed offshore (in the case of fines).
Medium term:	The medium term policy is for continued **No Active Intervention** with negligible cliffline movement for most of this area. Erosion of the West Weare cliffs is predicted to be between 5 and 10m. This rate could increase as a result of sea level rise combined with an increase in rainfall, but the actual impact of this is unknown, due to uncertainty in future changes in precipitation. Sea level rise would also result in the submergence of shore platforms that front this section, with narrowing of the small pocket beaches.
Longer-term:	The long term policy is one of continued **No Active Intervention** along this undefended cliffed coastline, which would continue to evolve naturally. Very slow erosion of the resistant limestone cliffs would continue at the same rates as today, therefore negligible change in cliffline position is predicted. The West Weare cliffs could erode between 10 and 15m by 2105, although these cliffs are very sensitive to climate change and the rate of erosion could increase both due to sea level rise and an increase in rainfall. As a result of higher sea levels beaches are expected to narrow and in places may disappear as the rock platforms become submerged, resulting in increased exposure of the cliff toe to wave action.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6a01	**Portland Bill to West Weare**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

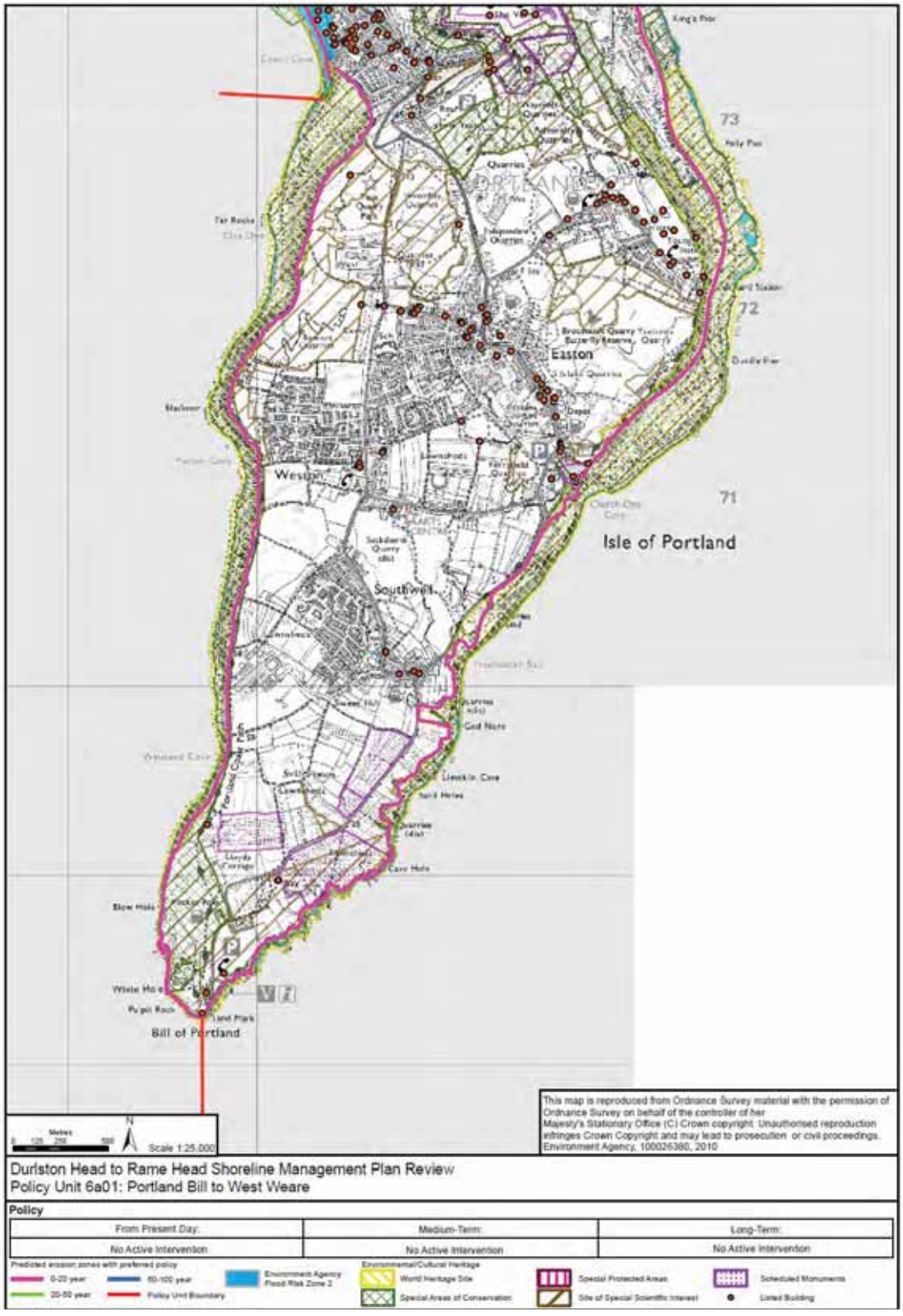
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Portland Bill to West Weare
Policy Unit reference:	6a01

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	No management activities. Continued cliff retreat would occur.	Potential permanent loss of some community, recreational and amenity facilities including parts of the South West Coastal Path.	Permanent loss of predominantly grade 3 agricultural land due to erosion. Risk of erosion to land use, infrastructure and material assets at West Weare.	No known impacts on the designated archaeological features.	Potential change in landscape character of the Dorset AONB due to increased erosion and flooding; but this is not considered detrimental as it is a continuation of natural processes.	Continuation of natural processes is key to the integrity of the geological interest features of the Isle of Portland SSSI, the Dorset and East Devon World Heritage Site (WHS) and the adjacent Chesil and The Fleet SSSI, the preferred policies in this coastal section would continue to maintain and potentially enhance the geological exposures of these features	No known impacts on water quality.	There will be no significant changes in conservation value of Chesil Beach and the Fleet SAC, SPA, Ramsar site and SSSI, as a result of SMP policy. Minimal loss of cliff top limestone grassland habitats associated with the continuation of natural processes along the cliffs.
2025 – 2055	No management activities. Continued cliff retreat would occur.	Potential permanent loss of some community, recreational and amenity facilities including parts of the South West Coastal Path.	Permanent loss of predominantly grade 3 agricultural land due to erosion. Risk of erosion to land use, infrastructure and material assets at West Weare.	No known impacts on the designated archaeological features.	Potential change in landscape character of the Dorset AONB due to increased erosion and flooding; but this is not considered detrimental as it is a continuation of natural processes..	Continuation of natural processes is key to the integrity of the geological interest features of the Isle of Portland SSSI, the Dorset and East Devon World Heritage Site (WHS) and the adjacent Chesil and The Fleet SSSI, the preferred policies in this coastal section would continue to maintain and potentially enhance the geological exposures of these features	No known impacts on water quality.	There will be no significant changes in conservation value of Chesil Beach and the Fleet SAC, SPA, Ramsar site and SSSI, as a result of SMP policy. Minimal loss of cliff top limestone grassland habitats associated with the continuation of natural processes along the cliffs.
2055 – 2105	No management activities. Continued cliff retreat would occur.	Potential permanent loss of some community, recreational and amenity facilities including parts of the South West Coastal Path.	Permanent loss of predominantly grade 3 agricultural land due to erosion. Risk of erosion to land use, infrastructure and material assets at West Weare.	No known impacts on the designated archaeological features.	Potential change in landscape character of the Dorset AONB due to increased erosion; but this is not considered detrimental as it is a continuation of natural processes.	Continuation of natural processes is key to the integrity of the geological interest features of the Isle of Portland SSSI, the Dorset and East Devon World Heritage Site (WHS) and the adjacent Chesil and The Fleet SSSI, the preferred policies in this coastal section would continue to maintain and potentially enhance the geological exposures of these features	No known impacts on water quality.	There will be no long term significant changes in conservation value of Chesil Beach and the Fleet SAC, SPA, Ramsar site and SSSI, as a result of SMP policy. Minimal loss of cliff top limestone grassland habitats associated with the continuation of natural processes along the cliffs.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Chiswell and Chesil Beach (to Wyke Narrows)**
Policy Unit reference:	**6a02 and 6a03**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term aim for this section of coast is to continue to reduce the risk of flooding and erosion to the large developed area of Chiswell and Osprey Quay, and the A354 access road located on low-lying land behind existing defences along this south-eastern most part of Chesil Beach

Maintaining the existing line of defences along this section is not expected to have a detrimental impact on the Chesil Beach system as a whole, although locally rollback will be inhibited at the Portland end with net loss of shingle possible. There could also be a risk of outflanking of the defences at the north-western end should the adjacent undefended section of Chesil Beach roll-back significantly during a large storm event. In this event, intervention to restore the defence function of the beach could be carried out, although the 'restored' beach may still be in a more landward position. However, other than this limited intervention, the beach would be allowed to behave largely naturally.

There are still likely to be implications for how transport links to Portland are provided and plans need to be put in place to consider how this transport link can be provided in the future in the event of Chesil Beach becoming a less effective as a natural defence (also see Policy Unit 5g21).

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** of the existing defences along this section of coast. This would involve the refurbishment of the seawall and revetment that protects the toe of the cliff at the eastern end of this section (fronting part of West Weare), and maintenance of the seawall along the rest of this section that together provide flood defence to the low-lying land located behind Chesil Beach. The crest of Chesil Beach is also protected for a short length by gabions, whilst behind the beach there is an interceptor drain that diverts water coming over and through Chesil Beach into Portland Harbour. These structures form part of the sea defence and so would also require maintenance during this period. This will also be supported by beach management activities to support the retention of the defence function of the beach in this area. The short section of undefended Chesil Beach that extends north-west towards Wyke Narrows is able to respond naturally to storm events, although beach management in this area would be undertaken as required to ensure the defence function of the beach continues to be provided. This would be carried out under a policy of **Managed Realignment** and only undertaken infrequently to minimise any impacts upon the natural functioning of the coast. However, any works in this regard will need to remain flexible and also need to consider how the transition from the defended to undefended beach is managed. It is predicted that the crest of the beach could migrate towards Portland Harbour by between 1 and 2m by 2025. There is also the probability, albeit low, of a significant storm/swell wave event occurring which could cause more extensive rollback of the beach. Should such an event occur then the beach roll-back could affect the defences and low-lying land behind, as well as cause the defended part of the beach at Chiswell to become more prominent and so increasingly exposed to wave action. Post-storm recovery would, however, be expected. The eastern side of Chesil Beach that borders Portland Harbour would remain stable due to the sheltering effect of the Portland Harbour breakwaters that, under this Plan, would remain and be maintained through to the long term.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Medium term:	The medium term policy is to continue to **Hold the Line** of the existing defences along this section to continue to reduce the risk of flooding and erosion to the low-lying land behind Chesil Beach. This is expected to require improvements to the existing flood defences to maintain adequate levels of protection, involving re-building larger defences, and possibly more robust where currently only gabions are present. Beach management activities would also take place in support of this policy. The crest of Chesil Beach is predicted to move towards Portland Harbour by 2 and 4m between 2025 and 2055. Where the shingle barrier fronts defences, particularly at the southern end, there could be beach steepening and narrowing during this time as a result. The probability of a significant storm/swell wave event occurring that could cause more extensive rollback of the beach would increase during this period as a result of climate change impacts. This could present a significant flood risk to the road and other assets that run behind the beach and cause outflanking of the defences along this section. It is likely that the beach would repair itself, possibly supported by beach management activities under an ongoing policy of **Managed Realignment** along the north-western part of this stretch, although this would be in a realigned position and could impact upon property and transport infrastructure behind the beach. Therefore measures need to be put in place to manage this potential risk and ensure that continuity of processes remain across the boundary between the defended and undefended parts of this frontage. The eastern side of Chesil Beach that borders Portland Harbour would remain stable due to the continued effect of the Portland Harbour breakwaters.
Longer-term:	The long term policy is to continue to **Hold the Line** of the existing defences along this section to continue to reduce the risk of flooding and erosion to the low-lying land behind Chesil Beach. This would require ongoing maintenance and possibly further improvements to the defences during this period to maintain adequate levels of protection in the face of rising sea levels and increased wave exposure. The crest of Chesil Beach is predicted to move towards Portland Harbour by between 3 and 6m between 2055 and 2105. Where the shingle barrier fronts defences, particularly at the southern end, beach steepening and narrowing could result. The probability of a significant storm/swell wave event occurring that could cause more extensive rollback of the beach would further increase during this period as a result of climate change impacts, with the associated consequences this presents. It remains likely that the beach would repair itself, possibly supported by beach management activities under an ongoing policy of **Managed Realignment** along the north-western part of this stretch. Measures should remain in place to manage this potential risk. The eastern side of Chesil Beach that borders Portland Harbour would remain relatively stable due to the continued effect of the Portland Harbour breakwaters that, under this Plan, would remain and be maintained during this period. This side of Chesil Beach would not, however, be bolstered during this period by the roll-back of Ham Beach onto the Chesil barrier in response to rising sea levels, as the policy for Ham Beach is to 'Hold the Line' (refer to

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Policy Unit 5g19).

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a02	Chiswell to Chesil Beach	Maintain existing defences in order to **Hold the Line** and provide continued protection to existing assets.	Maintain or improve existing defences in order to **Hold the Line** and provide continued protection to existing assets.	Maintain or improve existing defences in order to **Hold the Line** and provide continued protection to existing assets.
6a03	Chesil Beach (to Wyke Narrows)	Intervene to restore the defence function of the undefended beach only if required following storm events under a policy of **Managed Realignment**.	Intervene to restore the defence function of the undefended beach only if required following storm events under a policy of **Managed Realignment**.	Intervene to restore the defence function of the undefended beach only if required following storm events under a policy of **Managed Realignment**.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Chiswell and Chesil Beach (to Wyke Narrows)
Policy Unit reference:	6a02 and 6a03

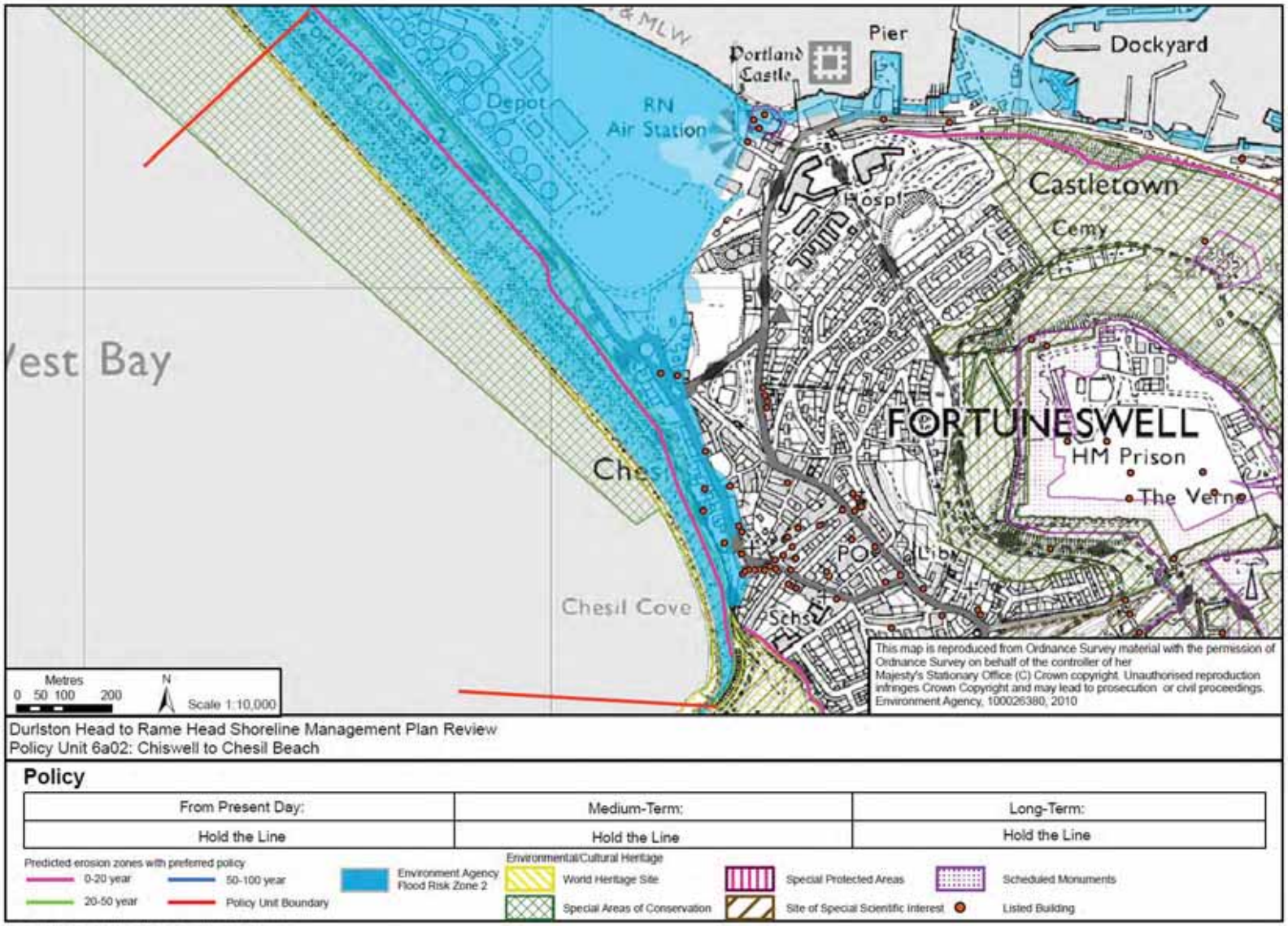
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Maintenance of flood defences. Refurbishment and maintenance of coast protection structure at the eastern end of this section.	Continued protection to reduce risk of flooding and erosion to people and property.	Continued protection of A354 access road and Chiswell from flooding on Isle of Portland. Osprey Quay protected from flooding.	No known impacts on designated archaeological features.	Potential minor change in landscape character of the Dorset AONB.	Holding the line in this policy unit has the potential to adversely affect the geological interest features of Chesil and The Fleet SAC/SPA and SSSI and Dorset and East Devon World Heritage Site (WHS). Natural roll-back of Chesil Beach may be inhibited by gabions.	No known impacts on water quality. Works to HTL in this policy unit in this coastal process unit should be implemented so as to not adversely impact on the water quality status of the coastal waters. Managed Realignment at 6a03 to allow natural evolution could potentially lead to a reduction in size or the loss of the Fleet Waterbody, as a result of a large/significant storm event. Although this is a natural process, it is regarded as a failure of WFD objective 3.	The potential for HTL in 6a02 to cause adverse effects on the integrity of habitats (excluding the lagoon) within Chesil and The Fleet SAC and SSSI is uncertain at this stage.
2025 – 2055	Maintenance of all defences. Construction of new flood defences as the existing structures reach the end of their design life.	Continued protection to reduce risk of flooding and erosion to people and property.	Continued protection of A354 access road and Chiswell from flooding on Isle of Portland. Osprey Quay protected from flooding.	No known impacts on designated archaeological features.	Potential minor change in landscape character of the Dorset AONB.	Holding the line in this policy unit has the potential to adversely affect the geological interest features of Chesil and The Fleet SAC/SPA and SSSI and Dorset and East Devon World Heritage Site (WHS). Likely natural roll-back of Chesil Beach may be inhibited by gabions.	No known impacts on water quality. Works to Hold the Line in this policy unit in this coastal process unit should be implemented so as to not adversely impact on the water quality status of the coastal waters. Managed Realignment at 6a03 to allow natural evolution could potentially lead to a reduction in size or the loss of the Fleet Waterbody, as a result of a large/significant storm event. Although this is a natural process, it is regarded as a failure of WFD objective 3.	The potential for HTL in 6a02 to cause adverse effects on the integrity of habitats (excluding the lagoon) within Chesil and The Fleet SAC and SSSI is uncertain at this stage.
2055 – 2105	Continued maintenance of all defences.	Continued protection to reduce risk of flooding and erosion to people and property.	Continued protection of A354 access road and Chiswell from flooding on Isle of Portland. Osprey Quay protected from flooding.	No known impacts on designated archaeological features.	Potential minor change in landscape character of the Dorset AONB.	Holding the line in this policy unit has the potential to adversely affect the geological interest features of Chesil and The Fleet SAC/SPA and SSSI and Dorset and East Devon World Heritage Site (WHS). Likely natural roll-back of Chesil Beach may be inhibited by gabions.	No known impacts on water quality. Works to Hold the Line in this policy unit in this coastal process unit should be implemented so as to not adversely impact on the water quality status of the coastal waters.	The potential for HTL in 6a02 to cause adverse effects on the integrity of habitats (excluding the lagoon) within Chesil and The Fleet SAC and SSSI is uncertain at this stage.

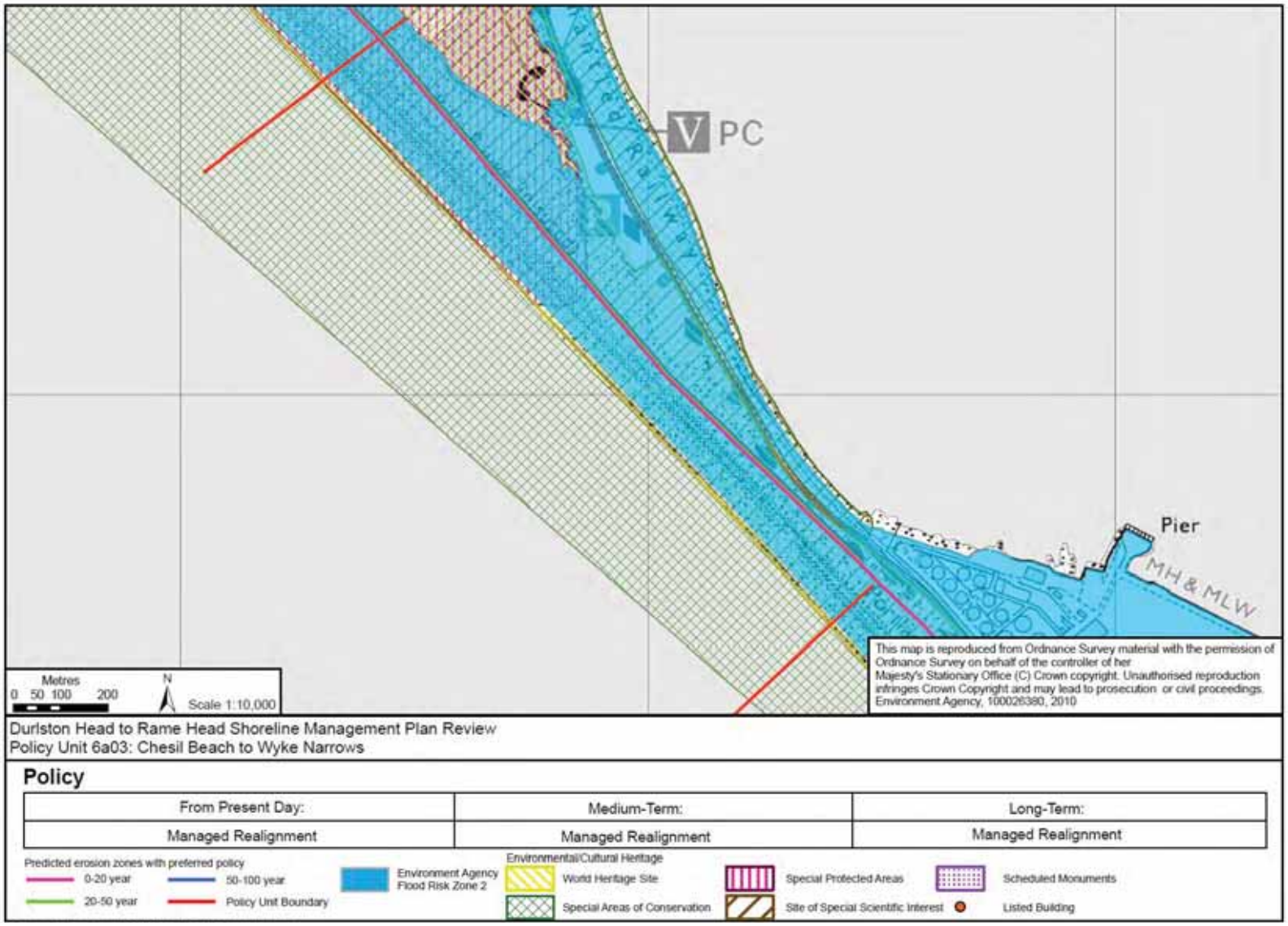
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Chiswell and Chesil Beach (to Wyke Narrows)							
Policy Unit reference:	6a02 and 6a03							
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION								
Time Period	**Management Activities**	**Property, Population and Human Health**	**Land Use, Infrastructure and Material Assets**	**Historic Environment**	**Landscape Character and Visual Amenity**	**Earth Heritage, Soils and Geology**	**Water**	**Biodiversity, Flora and Fauna**
							Managed Realignment at 6a03 to allow natural evolution could potentially lead to a reduction in size or the loss of the Fleet Waterbody, as a result of a large/significant storm event. Although this is a natural process, it is regarded as a failure of WFD objective 3.	

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Chesil Beach and The Fleet**
Policy Unit reference:	**6a04**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section covers both the open coast along Chesil Beach between Wyke Narrows and Abbotsbury, and the enclosed tidal lagoon of The Fleet which lies behind the beach along the majority of the length of this section. The shoreline of The Fleet is largely undefended with only a few lengths of defences locally present and is protected from the sea by Chesil Beach.

This entire stretch is internationally important for its habitats, geomorphology and landscape characteristics, and as such the long term Plan for this area is to continue to allow it to evolve with no intervention.

As sea level rises and Chesil Beach continues to migrate landwards, The Fleet will gradually become smaller and 'squeezed' as a result of natural processes. This natural evolution of the shoreline will in the longer-term also lead to increased risk of the Chesil Beach being overtopped or even breached during storm events on a more frequent basis. This will create an increased risk of flooding to the eastern shoreline of The Fleet which needs to be recognised when considering development along The Fleet shoreline.

As this process of natural roll-back occurs there will also be a significant flood risk to the various assets that lie along the Fleet shoreline due to overtopping and even breaching in the very long term.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is one of **No Active Intervention** along the entire shoreline in front of, and including, The Fleet, which would continue to evolve naturally as a result. However, there are short lengths of existing structures along the eastern shoreline of The Fleet that locally provide access for management and emergency purposes. These should be allowed to be maintained subject to alternative funds being available as maintenance of such structures is unlikely to attract public (flood and coastal defence budget) funding. Along this whole stretch, the probability of a significant storm/swell wave event occurring that could cause more extensive rollback of the beach is low. However, should such an event occur then the beach could roll-back further and encroach upon The Fleet, and possibly (although unlikely during this period) become attached to the mainland in the vicinity of Wyke Narrows. This would effectively cut off The Fleet to tidal influence from Portland Harbour. If such an event occurred at the eastern end of this unit it could also impact upon the A354 road link between Weymouth and Portland, making the existing alignment of the road unfeasible. An alternative alignment would need to be provided and studies are required to consider this.
Medium term:	The medium term policy will remain one of continued **No Active Intervention**, although localised structures along the eastern shore of The Fleet could be maintained for management and emergency subject to the availability of alternative funding. The probability of a significant storm/swell wave event occurring that could cause more extensive rollback of the beach would increase during this period as a result of climate change impacts. Should such an event occur then the risk of The Fleet being cut-off at Wyke Narrows increases slightly. Such an event could also present a significant flood risk to the road and other assets that run behind the beach towards Portland at the eastern end of this section.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Longer-term:	The long term policy is to continue with **No Active Intervention** along this undefended section of coast which would continue to evolve naturally as a result. However, localised structures along the eastern shore of The Fleet could be maintained for management and emergency subject to the availability of alternative funding. The probability of a significant storm/swell wave event occurring that could cause more extensive rollback of the beach would further increase during this period as a result of climate change impacts. The risk of The Fleet being cut-off at Wyke Narrows therefore also increases further. Such an event could also present a significant flood risk to the road and other assets that run behind the beach towards Portland at the eastern end of this section.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a04	Chesil Beach and The Fleet	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Chesil Beach and The Fleet
Policy Unit reference:	6a04

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Continued slow, gradual retreat of the Chesil Beach landwards, and infrequent, small scale slope failures along the shoreline of The Fleet.	Potential loss of some parts of the South West Coastal Path. Risk of flooding to Abbotsbury Swannery. A beach car park at Portland is potentially at risk, though there may be opportunities to relocate this facility. Flood risk to small area of East Fleet Caravan Site. No loss of properties lying behind The Fleet.	Predominantly grade 3 agricultural land at risk from erosion and flooding. Potential flood risk to A354 road between Weymouth and Portland as a result of overtopping of Chesil Beach.	Potential damage to or loss of St Peter's Abbey Scheduled Monument (SM) due to flooding.	Potential change in landscape character of the Dorset AONB due to increased erosion and flooding but not considered detrimental as these are natural processes.	Continuation of natural processes is key to the integrity of the geological interest features of Chesil and The Fleet SSSI, Burton Bradstock SSSI, West Cove SSSI and Dorset and East Devon World Heritage Site (WHS); the preferred policies in these policy units would continue to maintain and potentially enhance the geological exposures of these features	No known impacts on water quality. NAI to allow natural evolution could potentially lead to a reduction in size or the loss of the Fleet Waterbody, as a result of a large/significant storm event. Although this is a natural process, it is regarded as a failure of WFD objective 3. 6a04 is also considered to fail WFD objective 2.	Potential change in conservation value of Chesil Beach and the Fleet SAC, SPA, Ramsar site and SSSI. As Chesil Beach continues its natural trend of landward migration, the net area of the lagoon is likely to reduce (except between Chiswell to Chesil Beach). Natural flushing likely to occur and possibility of becoming an enclosed lagoon during a significant storm event. These impacts would not be a result of SMP policy and therefore there would be no significant impacts on the European site. Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI due to erosion through natural processes.
2025 – 2055	Continued slow, gradual retreat of the Chesil Beach landwards, and infrequent, small scale slope failures along the shoreline of The Fleet. Roll back of the beach could possibly occur.	Potential loss of some parts of the South West Coastal Path. Risk of flooding to Abbotsbury Swannery. A beach car park at Portland is potentially at risk, though there may be opportunities to relocate this facility. Flood risk to small area of East Fleet Caravan Site. No loss of properties lying behind The Fleet.	Predominantly grade 3 agricultural land at increasing risk from erosion and flooding. Potential flood risk to A354 road between Weymouth and Portland as a result of overtopping of Chesil Beach.	Potential damage to or loss of St Peter's Abbey Scheduled Monument (SM) due to flooding.	Potential change in landscape character of the Dorset AONB due to increased erosion and flooding, but not considered detrimental as these are natural processes.	Continuation of natural processes is key to the integrity of the geological interest features of Chesil and The Fleet SSSI, Burton Bradstock SSSI, West Cove SSSI and Dorset and East Devon World Heritage Site (WHS); the preferred policies in these policy units would continue to maintain and potentially enhance the geological exposures of these features.	No known impacts on water quality.	Potential change in conservation value of Chesil Beach and the Fleet SAC, SPA, Ramsar site and SSSI. As Chesil Beach continues its natural trend of landward migration, the net area of the lagoon is likely to reduce (except between Chiswell to Chesil Beach). Natural flushing likely to occur and possibility of becoming an enclosed lagoon during a significant storm event. These impacts would not be a result of SMP policy and therefore there would be no significant impacts on the European site. Likely natural roll-back of Chesil Beach may be inhibited by gabions in some areas and therefore works may be required to ensure that the natural roll-back is not restricted.

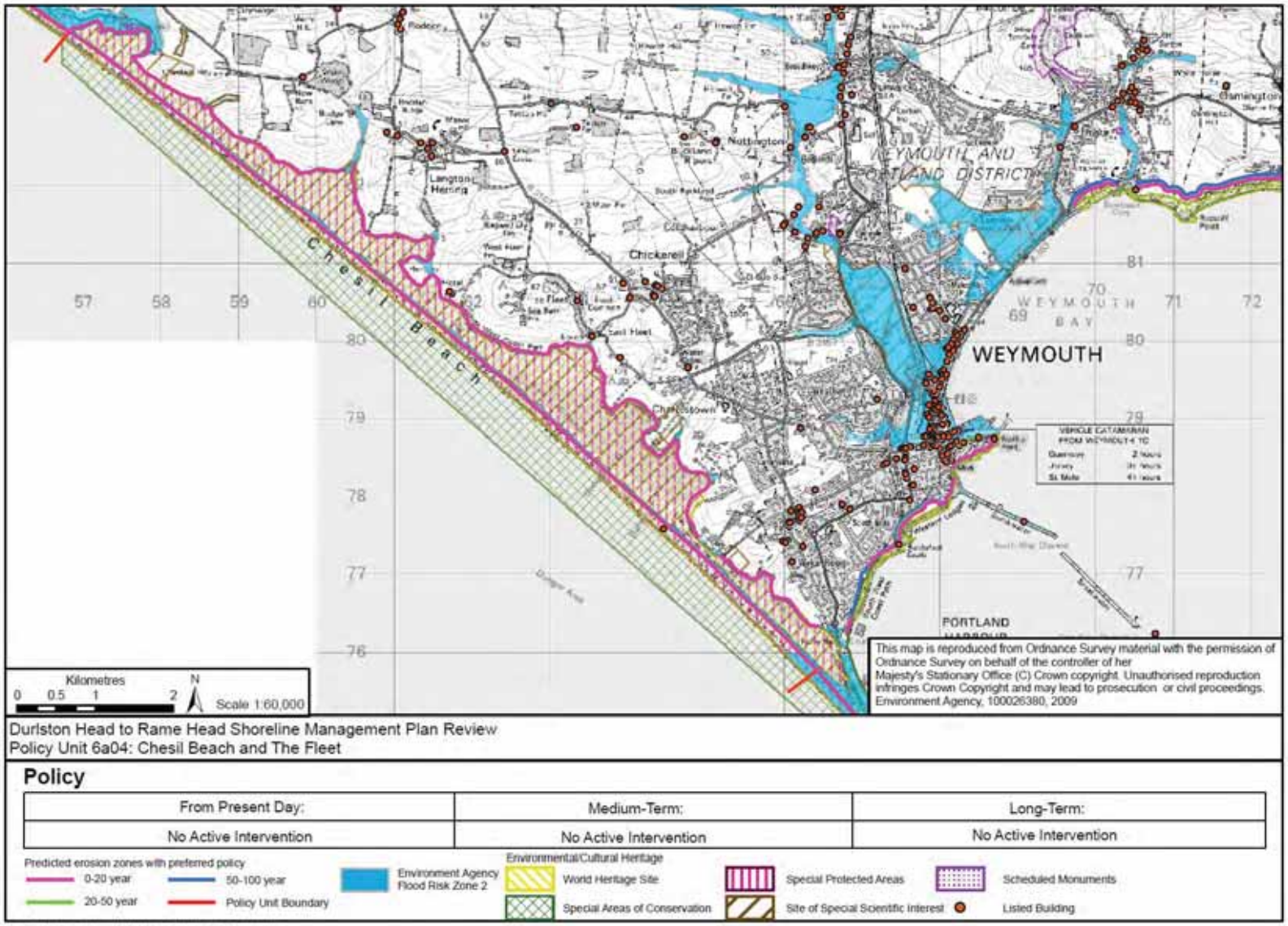
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Chesil Beach and The Fleet
Policy Unit reference:	6a04

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
								Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI due to erosion through natural processes.
2055 – 2105	Continued slow, gradual retreat of the Chesil Beach landwards, and infrequent, small scale slope failures along the shoreline of The Fleet. Roll back of the beach could possibly occur.	Potential loss of some parts of the South West Coastal Path. Risk of flooding to Abbotsbury Swannery. A beach car park at Portland is potentially at risk, though there may be opportunities to relocate these facilities. Flood risk to small area of East Fleet Caravan Site. No loss of properties lying behind The Fleet.	Predominantly grade 3 agricultural land at increasing risk from erosion and flooding. Potential flood risk to A354 road between Weymouth and Portland as a result of overtopping of Chesil Beach.	Potential damage to or loss of St Peter's Abbey Scheduled Monument (SM) due to flooding.	Potential change in landscape character of the Dorset AONB due to increased erosion and flooding, but not considered detrimental as these are natural processes.	Continuation of natural processes is key to the integrity of the geological interest features of Chesil and The Fleet SSSI, Burton Bradstock SSSI, West Cove SSSI and Dorset and East Devon World Heritage Site (WHS), therefore the preferred policies in these policy units would continue to maintain and potentially enhance the geological exposures of these features.	No known impacts on water quality.	Potential change in conservation value of Chesil Beach and the Fleet SAC, SPA, Ramsar site and SSSI. As Chesil Beach continues its natural trend of landward migration, the net area of the lagoon is likely to reduce (except between Chiswell to Chesil Beach). Natural flushing likely to occur and possibility of becoming an enclosed lagoon during a significant storm event. These impacts would not be a result of SMP policy and therefore there would be no significant impacts on the European site. Likely natural roll-back of Chesil Beach and potential for breaches/failure of gabions resulting in a change in land use in the hinterland of the ridge. Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI due to erosion through natural processes.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Chesil Beach (Abbotsbury to East Cliff (West Bay))**
Policy Unit reference:	**6a05 to 6a10**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section covers both the open coast stretching from the largely undefended Chesil Beach, at the western end of The Fleet, through to East Cliff, West Bay. Between Abbotsbury and Burton Bradstock, Chesil Beach is backed by coastal slopes that rise landwards away from the shoreline. To the west of Burton Bradstock it becomes backed by clay and sandstone cliffs interrupted by small embayments at Hive Beach and Freshwater Beach.

This entire stretch is internationally important for its habitats, geomorphology and landscape characteristics, and the long term Plan for this area is to continue to allow it to evolve naturally without intervention along the majority of the shoreline.

The only exception is at Freshwater Beach where limited intervention can minimise the risk of flooding to Burton Bradstock. Here, the plan is to actively manage the beach movement. This would also conserve material here that could be recycled to East Beach at West Bay as part of ongoing beach management in that area (refer to policy unit 6a11), although monitoring as far as Hive Beach to assess impacts of this could be required.

Although implementation of a No Active Intervention policy will have benefits in terms of the geology and environmental designations and sustainability of the natural shingle barrier; there will be local impacts. These include the car-park and properties behind the beach at West Bexington, the cliff top footpath, properties along the cliffs to the east and west of Hive Beach, beach access and associated car parks. However, current defences along this section are neither economically nor technically viable to continue in the long term. Therefore, plans will need to be developed to manage and mitigate against the potential impacts.

Preferred policies to implement Plan:

From present day (short term):

The short term policy is one of **No Active Intervention** along the majority of this largely undefended section of coast.

Between Abbotsbury and Burton Bradstock, the beach has remained largely unchanged over the past century, although short term fluctuations as a result of storms do occur. It is predicted that this will remain the case during this period with the extensive shingle barrier beach continuing to prevent erosion or flooding of the low cliffs, slopes and lowlands behind.

For much of the coast, implementation of this policy will result in little change from today, with cliff erosion continuing at similar rates to present. However, there are a few locations where there will be an impact.

At West Bexington, this policy could have implications for the car park, which protrudes onto the beach and beach access. Under this policy no new defences would be built and the impact of the car park on the natural longshore processes would have to be continually monitored.

At Hive Beach, No Active Intervention would mean that defences here would no longer be maintained and could fail during this period. The beach would be able to respond more naturally and there is not expected to be a significant flood risk due to rising topography behind the beach. Cliff erosion rates may increase, but the shingle beach will provide a defence role so less than 5m recession is expected. There will be an impact during this period on the car park and associated facilities which currently sit on a small promontory that has formed as a result of undefended cliffs on either side eroding. There will also be an increased risk to cliff top properties at the western end of the frontage, which are currently protected by a short length of gabions.

At Freshwater Beach the short term policy is to continue the current, regular beach re-cycling and re-profiling in this area under a policy of **Managed**

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	Realignment. This will allow the landwards rollback of the beach to be managed in line with the recession of the adjacent undefended cliffs such that its defence function is retained, continuing to reduce the risk of flooding to Burton Bradstock, This beach management would include unblocking of the river outlet, redistribution of sediment and beach reprofiling when required. The beach levels along this section fluctuate over time, although the very recent past has seen a trend of accretion. The effect of ongoing beach management activities will be to help to keep the beach relatively stable. The greatest area of risk is at the western end of Freshwater Beach where the caravan park has been built out. Here, any loss of the shingle beach could expose the ground upon which the caravan park has been built, resulting in more rapid erosion at this location. This policy for Freshwater Beach is not considered detrimental to the long term Plan for the remainder of this coastline as this area sits within a natural indentation along the shore and there would be continued sediment linkages to adjacent beaches as the periodic blocking and unblocking of the river continued. But it is recommended that monitoring of potential impacts is continued.
Medium term:	The medium term policy is for continued **No Active Intervention** along the majority of this coastline. As a result of accelerated sea level rise, the historical trend of stability could change to one of erosion. As the beaches are backed by relatively resistant cliffs or rising ground the beaches would be unable to retreat in response to the sea level rise and could steepening and narrowing. This could produce a slight increase the rate of cliff toe erosion, although ultimately the rate of erosion will be dictated by the natural resistance of the cliffs. Eroded material will contribute to the beach sediment budget, although drift rates tend to be low along this frontage. At Freshwater Beach, sustaining the defence function of the beach in its current position will become more difficult and could start to impact on longshore drift along this frontage. Therefore in the medium term the beach and cliff line will be allowed to retreat to a more sustainable position through continuation of the **Managed Realignment** policy. This would have implications for the caravan park and those in more seaward positions would need to be relocated to enable the beach to roll back. Ongoing beach management activities would be undertaken to manage this process and to ensure that flood risk to Burton Bradstock is reduced. During this period, additional flood embankments may be required inland to reduce the risk of flooding to Burton Bradstock as a consequence of rising sea levels. Along this whole stretch the probability of a significant storm/swell wave event occurring that could cause more extensive rollback of the beach would increase as a result of climate change impacts. Should such an event occur during this period then the beach would encroach upon the low-lying land, although the extent of roll-back would be restricted along much of this section by the gradual rising topography of the land located behind the beach.
Longer-term:	The long term policy is to continue **No Active Intervention** along the majority of this largely undefended section of coast, which would continue to evolve

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

naturally as a result.

With retreat of the beach as sea level rise increases, flooding of the lowland marshes and lagoons, such as Burton Mere would occur more frequently.

Rates of cliff retreat will vary along the coast, and will also be affected by sea level rise. The clay cliffs along this section would be expected to erode between 14 and 53m by 2105, whilst erosion of the more resistant sandstone cliffs at the western end of this stretch predicted to erode by between 14 and 35m.

Sediment would be fed to the beaches as a result of this erosion, but the accelerated rate of sea level rise is likely to mean that these could become much narrower, although sediment may accumulate within the small embayments, such as Hive Beach, thus providing a more robust natural defence against any flood risk.

At Freshwater Beach, the recommended long term policy is to continue **Managed Realignment** by continuing to undertake beach management activities that manage river outlet and beach levels whilst allowing the beach to roll back landwards. Erosion of the cliffs either side would provide sediment to the lower foreshore, but littoral drift could be reduced as beaches narrow at the toe of the cliffs. The set-back defence position established in the medium term would also be maintained during this period to further reduce the risk of flooding to Burton Bradstock.

Along this whole stretch, the probability of a significant storm/swell wave event occurring would further increase during this period as a result of climate change impacts. If this occurs then the beach could roll-back further onto the low-lying land, although the extent of this would be restricted along much of this shoreline by the gradual rising topography.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a05	**Abbotsbury to Cogden Beach**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.
6a06	**Cogden Beach to Hive Beach (Burton Bradstock)**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to occur through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.
6a07	**Hive Beach (Burton Bradstock)**	Allow natural coastal evolution to resume through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.
6a08	**Burton Cliff**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.
6a09	**Freshwater Beach**	**Manage the realignment** of the defence position in line with retreat of adjacent eroding cliffs through beach management in	Continue **Managed Realignment** of the beach position in line with adjacent eroding cliffs and construct a set-back	Continue **Managed Realignment** of the beach position in line with adjacent eroding cliffs and undertake maintenance of

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
		order to reduce the risk of inland flooding at Burton Bradstock.	defence to ensure flood risk inland continues to be minimised.	the set-back defence to continue to minimise flood risk to Burton Bradstock.
6a10	**East Cliff (West Bay)**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Chesil Beach (Abbotsbury to East Cliff (West Bay))
Policy Unit reference:	6a05 to 6a10

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Continued slow, gradual retreat of the Chesil Beach landwards. Cliff retreat would continue in the western part of this section. There would be no maintenance of defences at Hive Beach, which would deteriorate during this period. At Freshwater Beach, beach management activities would occur.	Potential permanent loss of some community, recreational and amenity facilities including parts of the South West Coastal Path and café at Hive Beach. A number of beach car parks are potentially at risk, though there may be opportunities to relocate these facilities. A couple of properties at erosion risk at Burton Bradstock and associated access road. Flood-risk to Freshwater (including Freshwater Beach Caravan Park) and associated areas due to blocked river outfall and back up flooding). Erosion and flood-risk to lower sections of caravan park. It is unlikely that link roads would be lost prior to loss of related properties. Low risk of property loss at West Bexington.	Permanent loss of predominantly grade 3 agricultural land due to erosion and flooding.	No known impacts on archaeological features.	Potential change in landscape character of the Dorset AONB due to increased erosion and flooding.	Continuation of natural processes is key to the integrity of the geological interest features of Chesil and The Fleet SSSI, Burton Bradstock SSSI, West Cove SSSI and Dorset and East Devon World Heritage Site (WHS), therefore the preferred policies in these policy units would continue to maintain and potentially enhance the geological exposures of these features	Works to realign should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	There will be no 'adverse effects' on Chesil Beach and the Fleet SAC, SPA, Ramsar site and SSSI, as a result of SMP policy. Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI to erosion through natural processes. Managed Realignment in 6a09 should promote natural processes and be beneficial to the reef habitat within the Poole Bay to Lyme Bay Reefs pSAC.
2025 – 2055	Continued slow, gradual retreat of the Chesil Beach landwards. Cliff retreat would continue in the western part of this section. Defences at Hive Beach would fail during this period. At Freshwater Beach, beach management activities would occur, along with construction of a realigned defence position in land.	Potential permanent loss of some community, recreational and amenity facilities including parts of the South West Coastal Path and café at Hive Beach. A number of beach car parks are potentially at risk, though there may be opportunities to relocate these facilities. A couple of properties at erosion risk at Burton Bradstock and associated access road. Flood-risk to Freshwater (including Freshwater Beach Caravan Park) and associated areas due to blocked river	Permanent loss of predominantly grade 3 agricultural land due to erosion and flooding.	No known impacts on archaeological features.	Potential change in landscape character of the Dorset AONB due to increased erosion and flooding.	Continuation of natural processes is key to the integrity of the geological interest features of Chesil and The Fleet SSSI, Burton Bradstock SSSI, West Cove SSSI and Dorset and East Devon World Heritage Site (WHS), therefore the preferred policies in these policy units would continue to maintain and potentially enhance the geological exposures of these features	Works to realign should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	There will be no 'adverse effects' on Chesil Beach and the Fleet SAC, SPA, Ramsar site and SSSI, as a result of SMP policy Likely natural roll-back of Chesil Beach may be inhibited by backing cliffs and coastal slopes in some areas. Managed Realignment in 6a09 should promote natural processes and be beneficial to the reef habitat within the Poole Bay to Lyme Bay Reefs pSAC. Minimal loss of cliff top limestone grassland habitats associated with the West

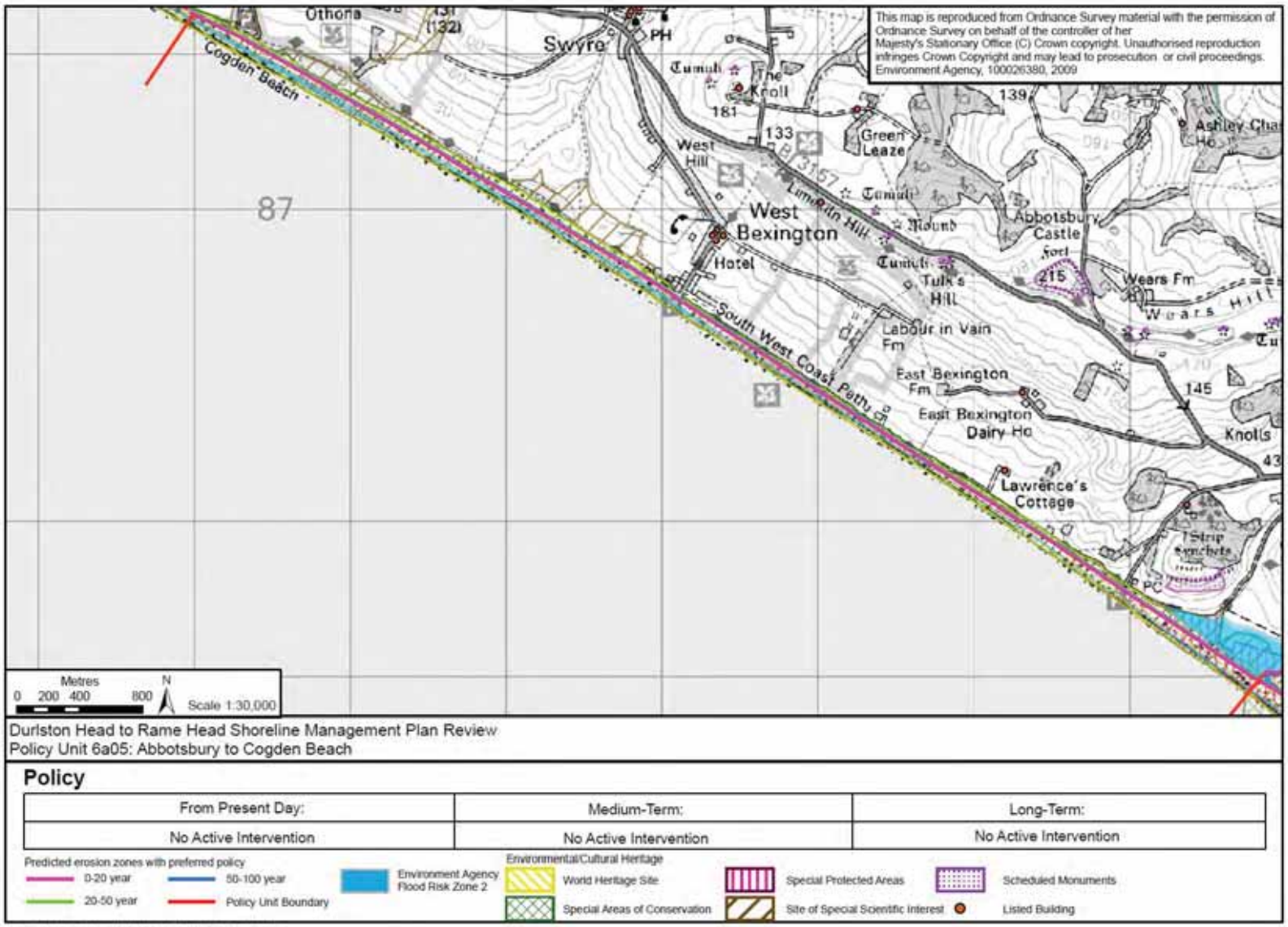
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Chesil Beach (Abbotsbury to East Cliff (West Bay))
Policy Unit reference:	6a05 to 6a10

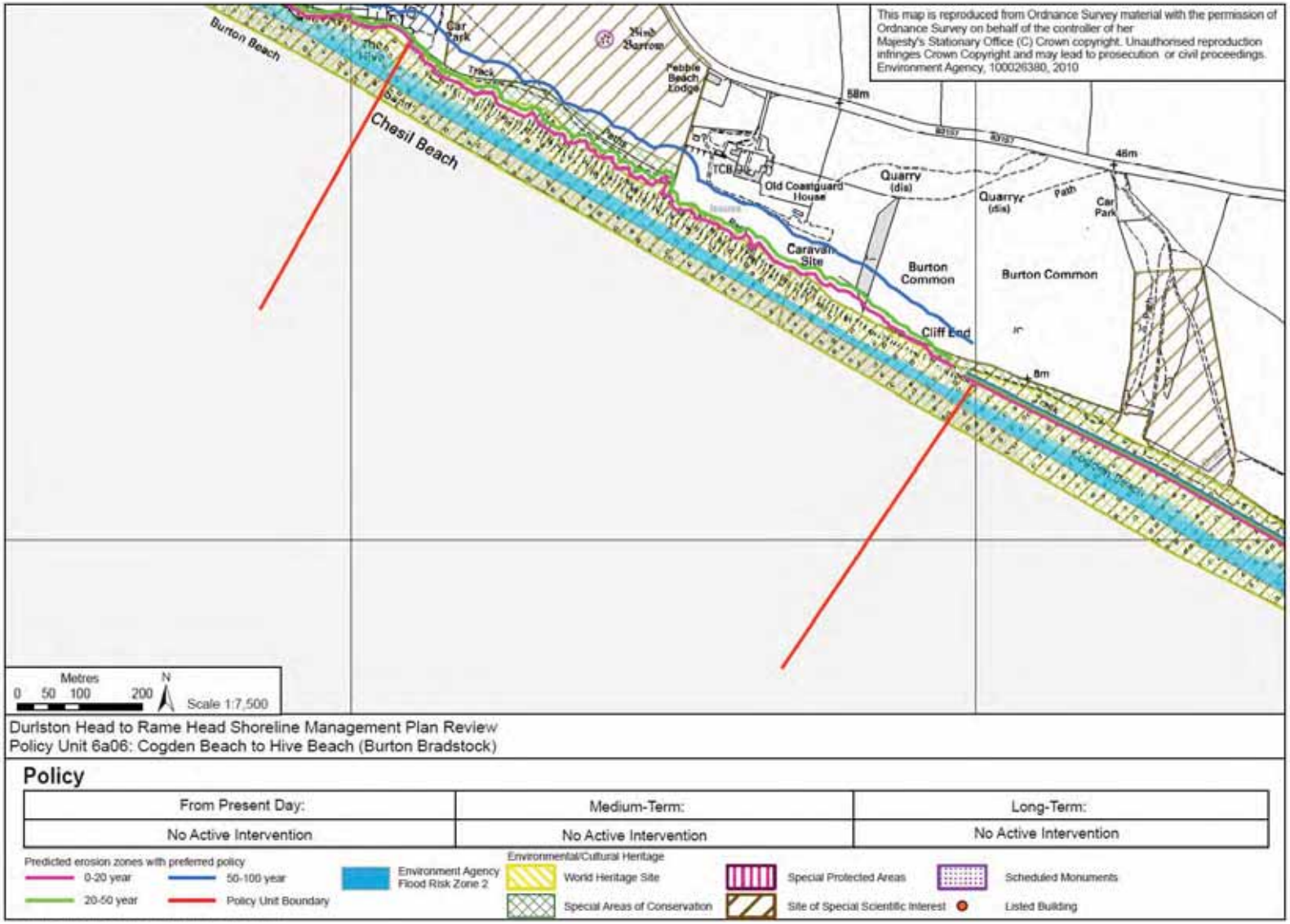
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
		outfall and back up flooding) would be minimised. Erosion and flood-risk to lower sections of caravan park. It is unlikely that link roads would be lost prior to loss of related properties. Low risk of property loss at West Bexington.						Dorset Coast SSSI to erosion through natural processes.
2055 – 2105	Continued slow, gradual retreat of the Chesil Beach landwards. Cliff retreat would continue in the western part of this section. At Freshwater Beach, maintenance of the realigned defence as well as beach recycling activities to control the roll back of the beach would occur.	Potential permanent loss of some community, recreational and amenity facilities including parts of the South West Coastal Path and café at Hive Beach. A number of beach car parks are potentially at risk, though there may be opportunities to relocate these facilities. A couple of properties at erosion risk at Burton Bradstock and associated access road. Fluvial flood-risk at Freshwater (including Freshwater Beach Caravan Park) and associated areas due to blocked river outfall and back up flooding) would be minimised. It is unlikely that link roads would be lost prior to properties. Increased risk of property loss at West Bexington.	Permanent loss of predominantly grade 3 agricultural land due to erosion and flooding.	No known impacts on archaeological features.	Potential change in landscape character of the Dorset AONB due to increased erosion and flooding. Potential for deteriorating structures to become unsightly in the long term.	Continuation of natural processes is key to the integrity of the geological interest features of Chesil and The Fleet SSSI, Burton Bradstock SSSI, West Cove SSSI and Dorset and East Devon World Heritage Site (WHS), therefore the preferred policies in these policy units would continue to maintain and potentially enhance the geological exposures of these features	Works to realign should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	There will be no 'adverse effects' on Chesil Beach and the Fleet SAC, SPA, Ramsar site and SSSI, as a result of SMP policy Likely natural roll-back of Chesil Beach may be inhibited by backing cliffs and coastal slopes in some areas. Potential beach loss and associated increased flood-risk. Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI to erosion through natural processes. Managed Realignment in 6a09 should promote natural processes and be beneficial to the reef habitat within the Poole Bay to Lyme Bay Reefs pSAC.

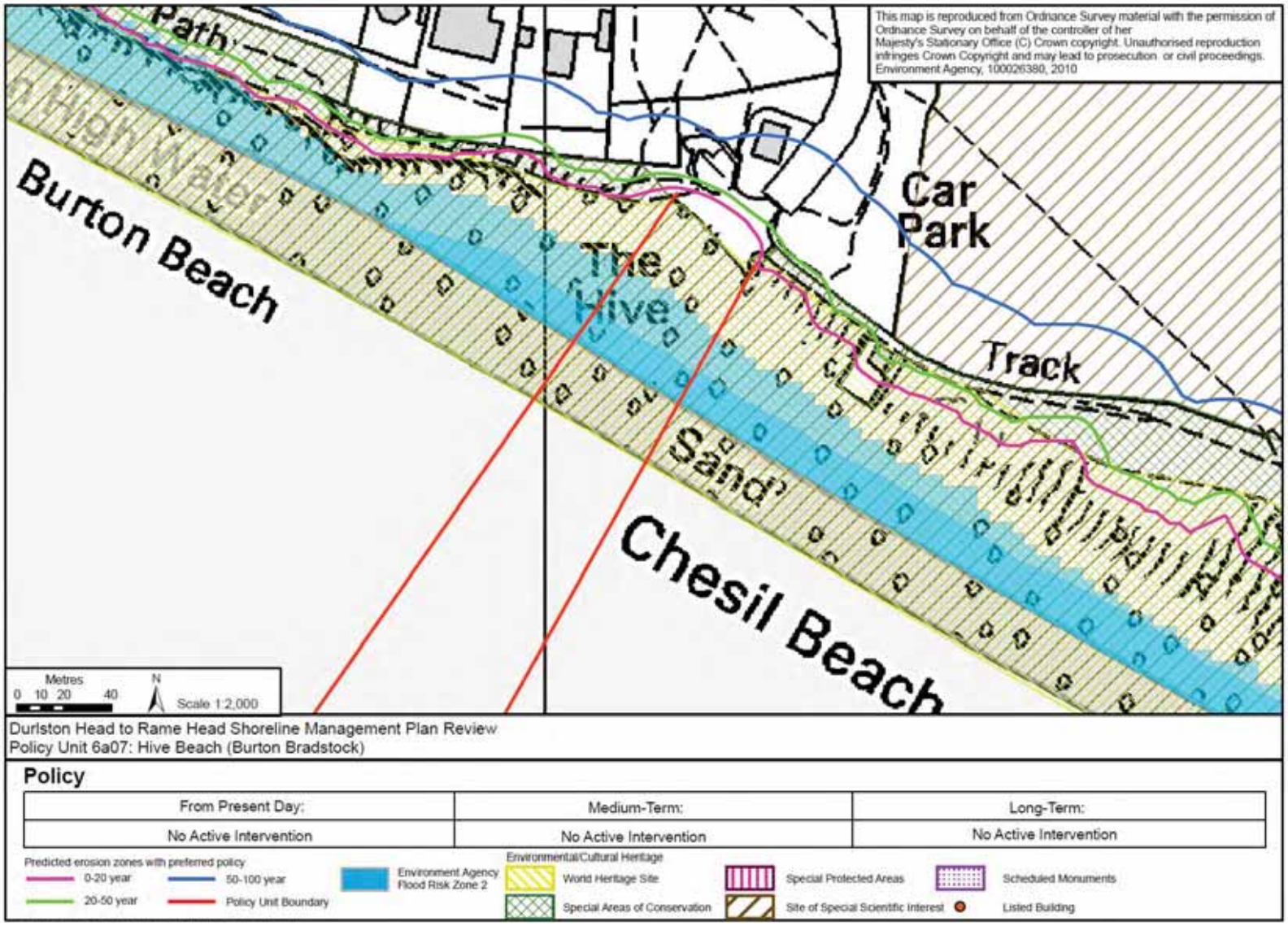
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



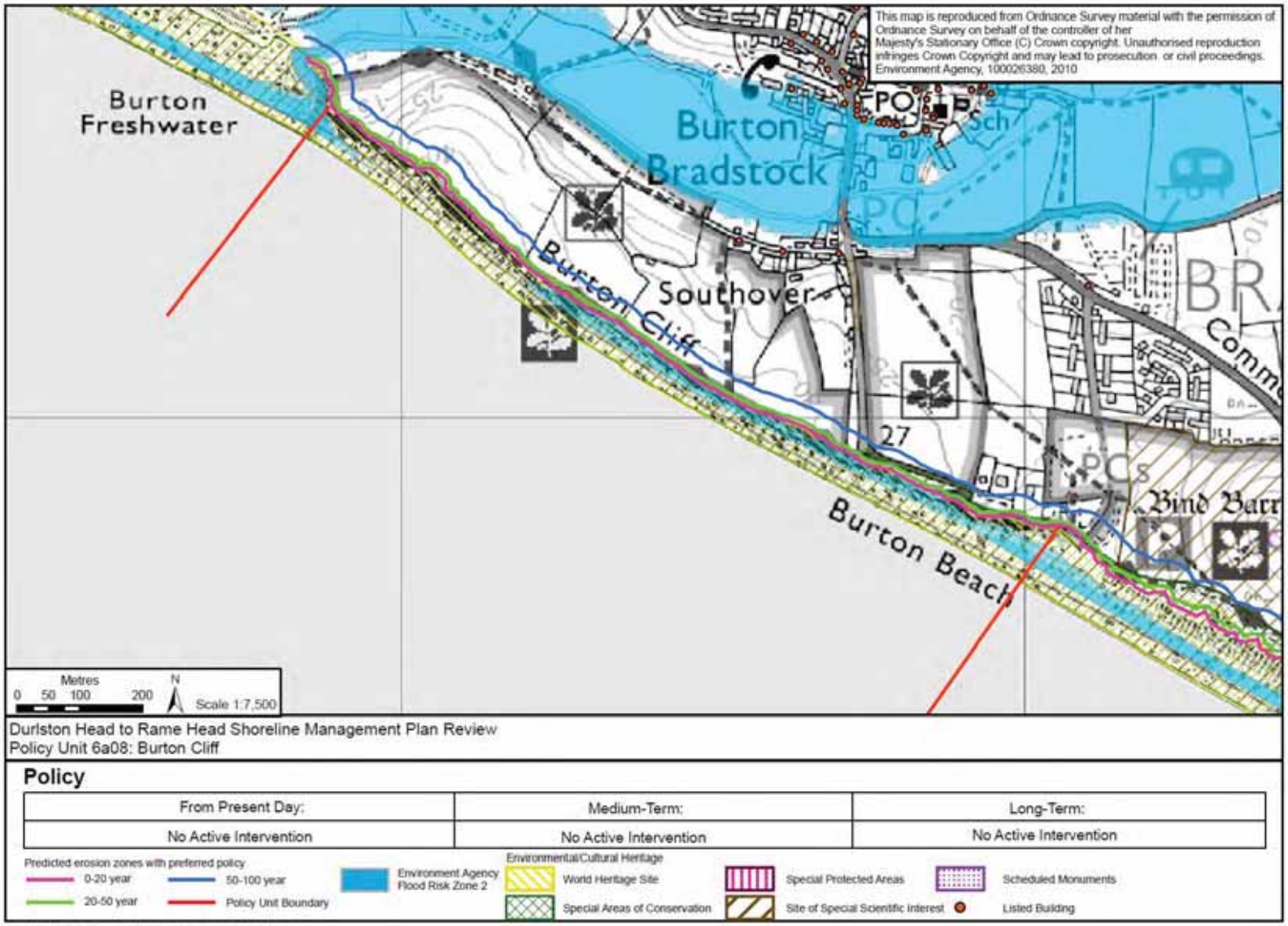
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



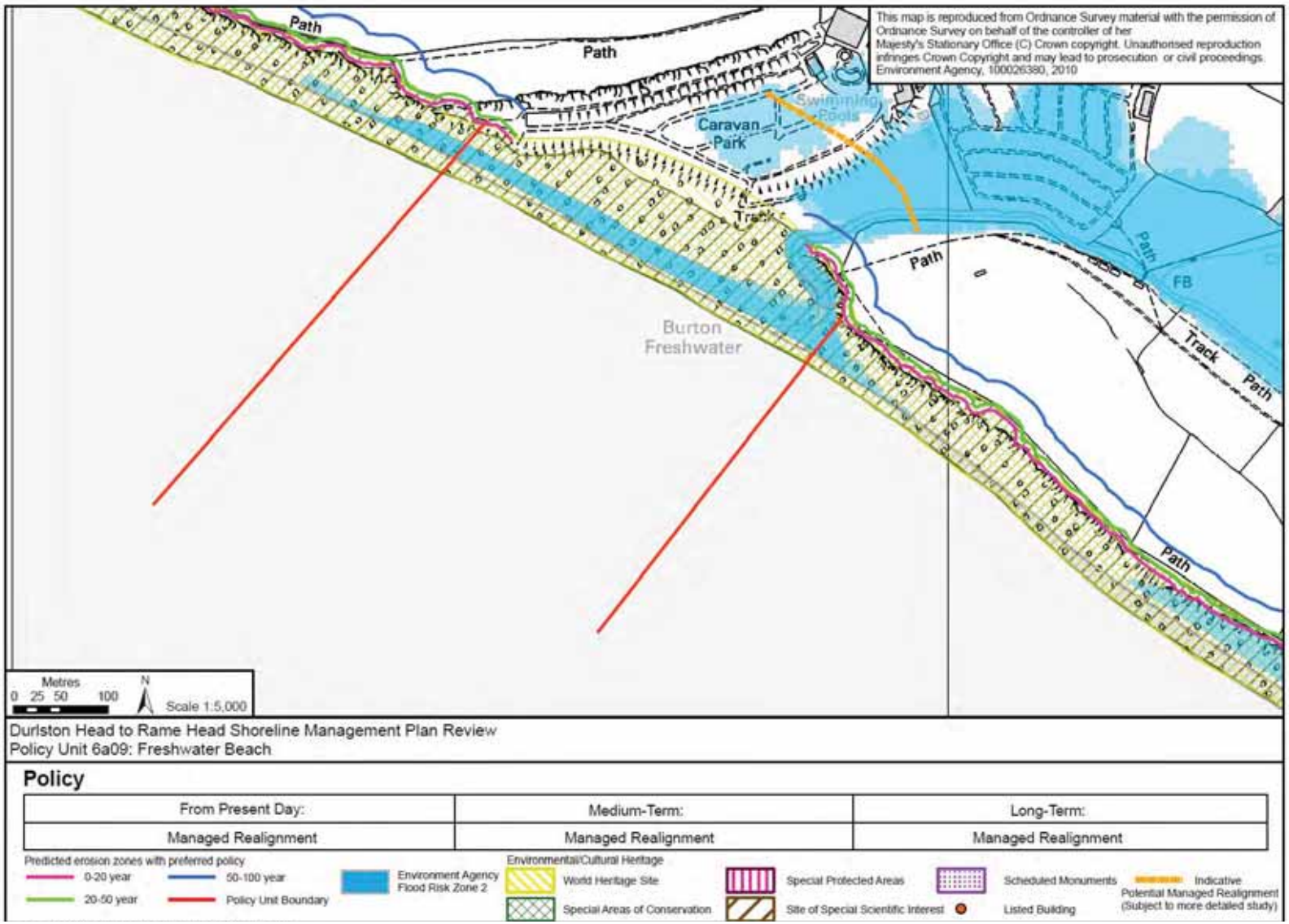
The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



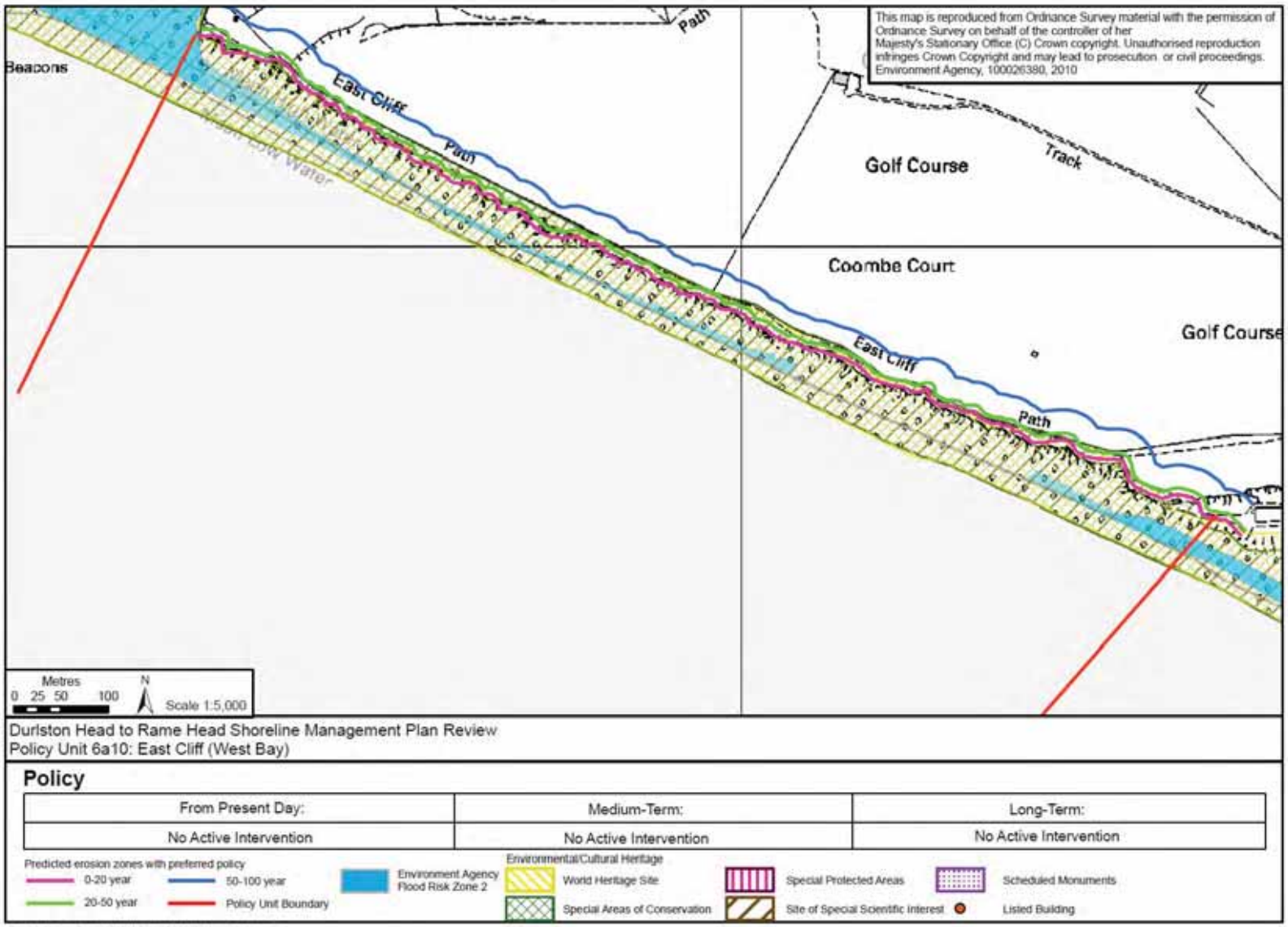
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**West Bay**
Policy Unit reference:	**6a11 and 6a12**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term Plan for West Bay is to protect assets within the town to minimise the risk of flooding and erosion.

This will be provided through continuing to defend the present shoreline position through the short and medium term, although recognising that some realignment along the eastern side of the harbour arm at East Beach may be needed in the longer-term. This would still provide flood protection to the rest of West Bay but in a more sustainable way by allowing a beach to be retained and roll back in this area. This would have implications for a number of beach front facilities which would be lost, unless relocated; therefore measures will need to be in place to manage this process.

At the western end adjacent to the undefended cliffs, there is a risk of erosion occurring that could cause some outflanking and possible loss of cliff top properties in the longer-term, and this may have implications for how defence in this transition area is implemented.

Under this policy, flood walls around West Bay Harbour could also need to be raised in height in the longer term as sea levels rise.

Preferred policies to implement Plan:

From present day (short term):	Existing defences would be maintained, through a **Hold the Line** policy, to reduce the risk of flooding and erosion to the extensively developed area of West Bay. At East Beach, this would involve maintaining the West Bay harbour arms to stabilise the western end of the beach along this section, in conjunction with beach management including beach re-cycling and re-profiling. The current result of this practice has been very little net change in beach position, although the beach can fluctuate significantly between management activities being undertaken. Therefore beach replenishment might also be carried out; options for which are currently being investigated by an ongoing study that is also considering recycling of beach material from Freshwater Beach (policy unit 6a09) to East Beach. The probability of a significant storm/swell wave event occurring that could cause either rollback of the beach on to the low-lying land that lies behind the beach, or draw-down and loss of material to the offshore, is low during this period. Within West Bay Harbour and along West Beach, implementation would involve maintenance of the range of defences in this area, which include seawalls, rock groynes and sluices, which control the discharge of the River Brit through West Bay Harbour itself. The cliff toe at the western part of this section is protected against erosion from wave action by a seawall and promenade. Implementation of this policy would involve maintenance of these existing structures and possibly beach recharge during this period. The beach fronting the seawall along this section has eroded significantly during the past century, and experiences scour during storm events due to the effect of the seawall. The piers at the entrance to West Bay Harbour have a significant local influence upon littoral processes, as do the rock groynes to the west of the harbour, preventing the influx of new material to West Beach from either east or west.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Medium term:	The medium term policy is to continue to **Hold the Line** of the existing defences along this section to reduce the risk of flooding and erosion to the extensively developed area of West Bay, conducting similar activities to those in the short term. At East Beach erosion of the adjacent cliff to the east over this period may lead to some increased exposure of the defended beach to wave action, as it becomes slightly more prominent along the shoreline. This could make beach management increasingly difficult. The probability of a significant storm/swell wave event that could affect the beach would also increase. Therefore measures to implement Managed Realignment in the long term at East Beach would need to be investigated in preparation for this. If it becomes unsustainable to continue to hold the beach line during this period, measures to realign may need to take place sooner. Along the West Beach frontage, improvements to the seawall and promenade, including raising the defence height, may be necessary early on. Further beach recharge may also be required as sea level rise results in a narrowing of the beach and a resultant increase in flood risk along this section. It is also unlikely that there will be any increased feed of sediment onto the beaches during this period. At the western end of this section, there is also a risk of outflanking due to retreat of adjacent undefended cliffs. Action may be required to address this risk, potentially through improving defences at the westernmost end as they become more exposed to wave action by the retreating cliff position. Cliff top assets will become at risk, therefore measures may need to be put in place to manage this risk and mitigate the potential displacement of people and loss of property and assets. It is possible that the harbour piers may also need to be upgraded towards the end of this period.
Longer-term:	Rising sea levels and increased exposure will eventually lead to a situation where it becomes impossible to retain a beach in its current location at East Beach and provide an adequate standard of defence by beach management alone. The long term policy is therefore to undertake **Managed Realignment** of the defence position. This would see the defence line moved with construction of a secondary flood defence landward of the existing beach line, allowing the beach to roll back to this new defence line as sea levels rise. This policy would enable greater retention of beach material along the frontage, thereby providing a more robust natural defence. Beach management activities would also continue, although recharge needs may be reduced. The long term policy for West Bay Harbour and West Beach is to continue to **Hold the Line** of the existing defences in these areas. This could require improvements to all of the defences during this period, potentially re-building larger and higher defences to maintain adequate levels of protection. It is likely that further beach recharge and the possible construction of additional shoreline control structures, will also be necessary. These would be required because of the higher sea levels which could cause the beach fronting the defences to narrow and in places possibly disappear. If beach recharge is not sustainable then this frontage will need to be completely armoured with larger seawalls fronted by rock revetment. At the western end of this section, action may be required to address the risk

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

of defences being outflanked due to retreat of the adjacent undefended cliffs. For example, if this risk arises, and it depends on where future cliff recession occurs, it might be necessary to improve defences at the westernmost end. If cliff top assets become at risk, measures may need to be put in place to manage this risk and mitigate the potential displacement of people and loss of property and assets. The need for such measures would be guided by ongoing monitoring of cliff recession in this area.

If not undertaken in the medium term, the harbour arms at West Bay, which continue to influence the beach along this section, may need to be upgraded, possibly re-built, during this period.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a11	West Bay (East Beach to eastern pier)	Continue to maintain existing defence position to protect West Bay, through a **Hold the Line** policy.	Maintain the existing defences for as long as technically possible, through a **Hold the Line** policy.	Build new defences in a more sustainable position, through implementing a **Managed Realignment** policy.
6a12	West Bay (West Beach from eastern pier) to West Cliff (East) (includes West Bay Harbour)	Continue to maintain existing defence position to protect West Bay, through a **Hold the Line** policy.	Continue to maintain existing defence position to protect West Bay, through a **Hold the Line** policy.	Continue to maintain existing defence position to protect West Bay, through a **Hold the Line** policy.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	West Bay
Policy Unit reference:	6a11 and 6a12

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Beach management activities to continue, along with maintenance of the existing defences and harbour arms. Beach recharge may be an option along the open coast.	The facilities at West Bay (both East Beach and West Beach) would be protected from flooding and erosion and the existing defences would to be maintained to protect the properties.	Potential damage to B3157 at West Bay and minor link road, which runs along the back of West Bay Harbour due to flooding, though risk would be minimised by continued defence.	No known impacts on archaeological assets.	Potential minor change in landscape character of the Dorset AONB.	Holding the line has the potential to have a localised impact on the geological interest features of Chesil and The Fleet SSSI, West Cove SSSI and Dorset and East Devon World Heritage Site (WHS).	Works to Hold the Line in these coastal process units should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	A policy of HTL has the potential to adversely affect the integrity of cliff habitats within Sidmouth to West Bay SAC but will depend upon the implementation of the policy – *uncertain impact.* A policy of HTL has the potential to result in intertidal habitat loss due to coastal squeeze within the Chesil Beach and The Fleet SAC (the lagoon would not be affected); the impact is considered uncertain. There will be no adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that HTL is affecting the site at present and therefore no adverse effects are foreseen.
2025 – 2055	Beach management activities to continue, along with maintenance of the harbour arms. Maintenance and improvements to the open coast defences, potentially including beach recharge.	The facilities at West Bay (both East Beach and West Beach) would continue to be protected from flooding and erosion and the existing defences would be maintained to protect the properties.	Potential damage to B3157 at West Bay and minor link road, which runs along the back of West Bay Harbour due to flooding, though risk would be minimised by continued defence.	No known impacts on archaeological assets.	Potential minor change in landscape character of the Dorset AONB.	Holding the line has the potential to have a localised impact on the geological interest features of Chesil and The Fleet SSSI, West Cove SSSI and Dorset and East Devon World Heritage Site (WHS).	Works to Hold the Line in these coastal process units should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	A policy of HTL has the potential to result in habitat loss due to coastal squeeze within the Chesil Beach and The Fleet SAC (the lagoon would not be affected).; the impact is considered uncertain. A policy of HTL has the potential to adversely affect the integrity of cliff habitats within Sidmouth to West Bay SAC but will depend upon the implementation of the policy – *uncertain impact.* There will be no adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that HTL is affecting the feature at present and therefore no adverse effects are foreseen.
2055 – 2105	Cliff erosion would continue to occur as part of a naturally functioning coast, providing some coarse	The facilities at West Bay (both East Beach and West Beach) would be protected from flooding and erosion and the existing defences would be	Potential damage to B3157 at West Bay and minor link road, which runs along the back of West Bay Harbour due to flooding though risk would be	No known impacts on archaeological assets.	Potential change in landscape character of the Dorset AONB. Higher defences may compromise some of the AONB management	Holding the line has the potential to have a localised impact on the geological interest features of Chesil and The Fleet SSSI, West Cove	Works to Hold the Line in these coastal process units should be implemented so as to not adversely impact on the water quality status of the	A policy of HTL has the potential to result in habitat loss due to coastal squeeze within the Chesil Beach and The Fleet SAC (the lagoon

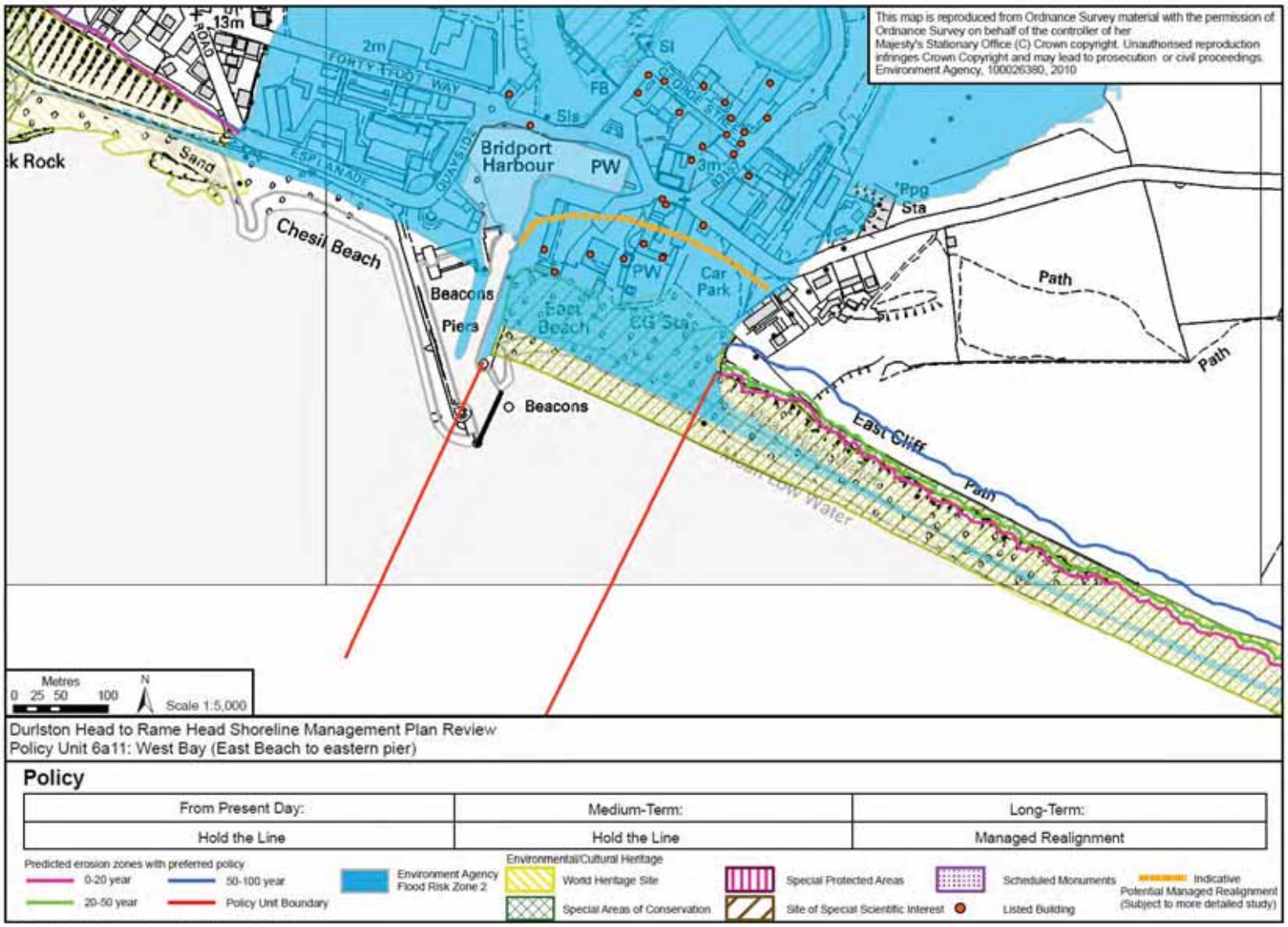
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	West Bay
Policy Unit reference:	6a11 and 6a12

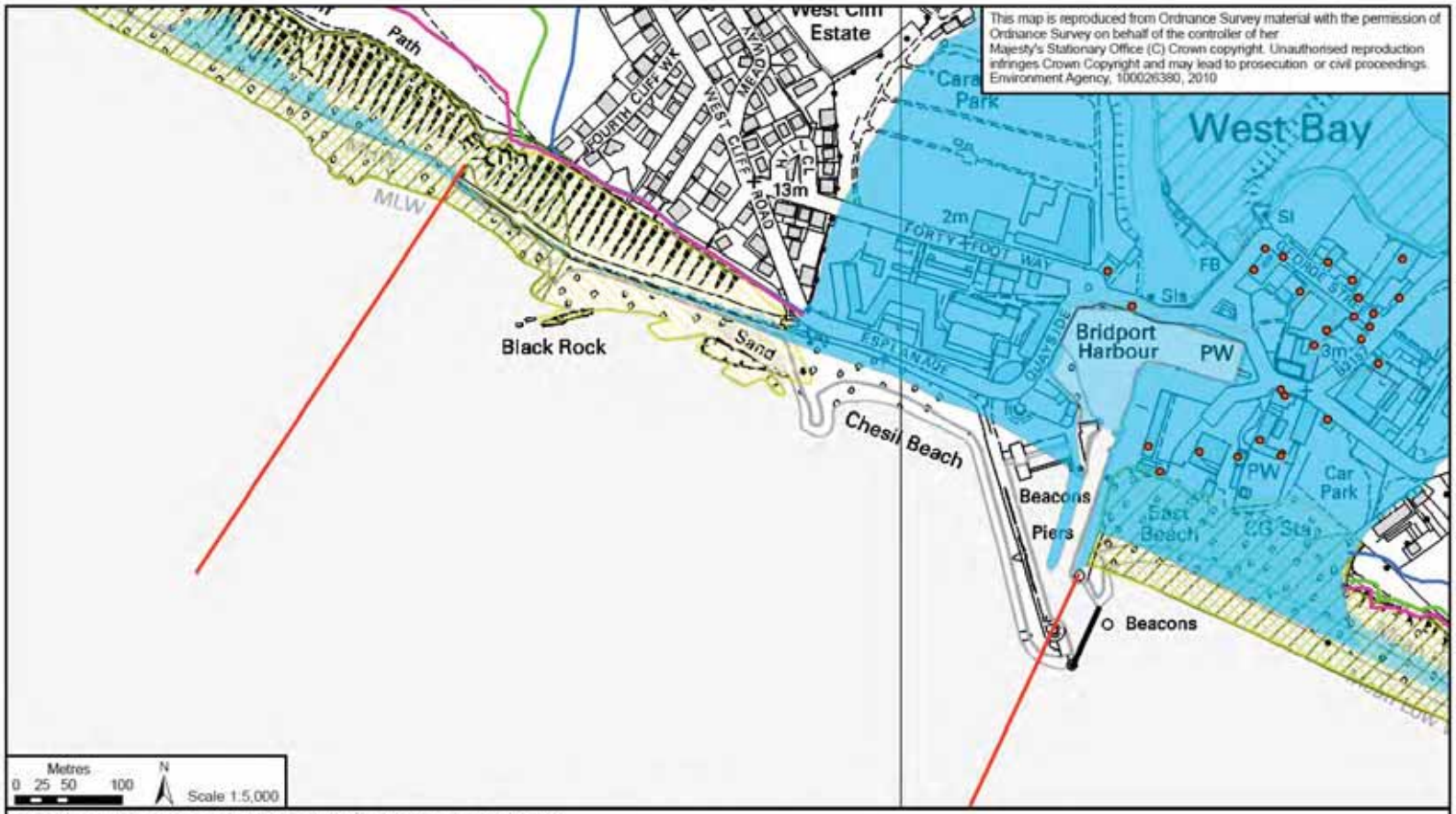
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
	sediment to local beaches. Maintenance and improvements to the open coast defences, potentially including beach recharge. Larger defences and a greater number of defences may be required to provide an appropriate standard of protection to assets at West Bay. A set-back defence embankment may be constructed as part of a long term Managed Realignment policy at East Beach.	maintained to protect the properties. A new set-back embankment be built at East Beach would allow the beach to roll back naturally but may result in the potential loss of beachfront facilities, car park and properties in the East Beach area.	minimised by continued defence.		objectives.	SSSI and Dorset and East Devon World Heritage Site (WHS).	coastal waters or compromise the achievement of WFD water quality targets.	would not be affected); the impact is considered uncertain. A policy of HTL has the potential to adversely affect the integrity of cliff habitats within Sidmouth to West Bay SAC but will depend upon the implementation of the policy – *uncertain impact.* No adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that HTL is affecting the site at present and therefore no adverse effects are foreseen. Managed Realignment in 6a11 should promote natural processes and be beneficial to the reef habitat within the Poole Bay to Lyme Bay Reefs pSAC.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6a12: West Bay (West Beach from eastern pier) to West Cliff (East) (includes West Bay Harbour)

Policy

From Present Day:	Medium-Term:	Long-Term:
Hold the Line	Hold the Line	Hold the Line

Predicted erosion zones with preferred policy
0-20 year
20-50 year
50-100 year
Policy Unit Boundary
Environment Agency Flood Risk Zone 2

Environmental/Cultural Heritage
World Heritage Site
Special Areas of Conservation
Special Protected Areas
Site of Special Scientific Interest
Scheduled Monuments
Listed Building

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**West Cliff (East) to Thorncombe Beacon**
Policy Unit reference:	**6a13**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This clay-rich cliffed coastline is internationally important for its geomorphology and landscape characteristics. It is fronted by a narrow shingle beach fed by erosion of coarse sediment from the cliffs, but is effectively 'cut-off' from sediment sources further west by the presence of the headland at Thorncombe Beacon that hinders transport of sediment from that direction. The long term vision here is to allow natural processes of cliff erosion and shoreline retreat to continue without intervention.

Cliffline retreat could cause loss of properties in the cliff top areas of West Bay at the eastern end of this section (refer to Policy Unit 6a11) as well as the loss of properties and tourist facilities at Eype (including the caravan park), and measures may need to be put in place to manage any risk and mitigate the displacement of people and the loss of property and assets. The nature of cliff failures in terms of both type and timing mean that the actual extent of recession in any single epoch is however difficult to accurately predict.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is one of **No Active Intervention**. West Cliff is undefended along this section and is predicted to erode by between 5 and 50m by 2025. Cliff failures along West Cliff occur about every 10 years and cause the loss of between 10 and 50m of cliff top in a single event. The clay-rich cliffs towards the west of this section experience failure events at a similar frequency as West Cliff, although with a lesser magnitude. The underlying rate of erosion of these gives rise to total erosion of between 5 and 20m predicted along this section by 2025.
Medium term:	The policy of **No Active Intervention** will be continued in the medium term. West Cliff is predicted to erode as historically during the period 2025 and 2055 by between 15 and 125m, whilst the cliffs to the western end of this section are predicted to erode between 10 and 50m over the same period. The clay rich cliffs are very sensitive to climate change and the rate of erosion could increase both due to sea level rise and an increase in rainfall. Due to the uncertainty in predicting future changes in precipitation, no account has been taken of this in the erosion predictions. There would be a feed of coarse sediment from erosion of local cliffs which should help retain a small beach at Eype although this supply of fresh material would be limited by the headland at Thorncombe Beacon.
Longer-term:	The long term policy is to continue **No Active Intervention** and maintain natural processes along this length of coast. Erosion at West Cliff of between 35 and 250m is predicted by 2105, whilst the cliffs to the western end of this section are predicted to erode between 25 and 100m over the same period. No allowance has been made in these predictions for any future changes in precipitation. Material fed to beaches and constraints upon that would be as in the medium term.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a13	West Cliff (East) to Thorncombe Beacon	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

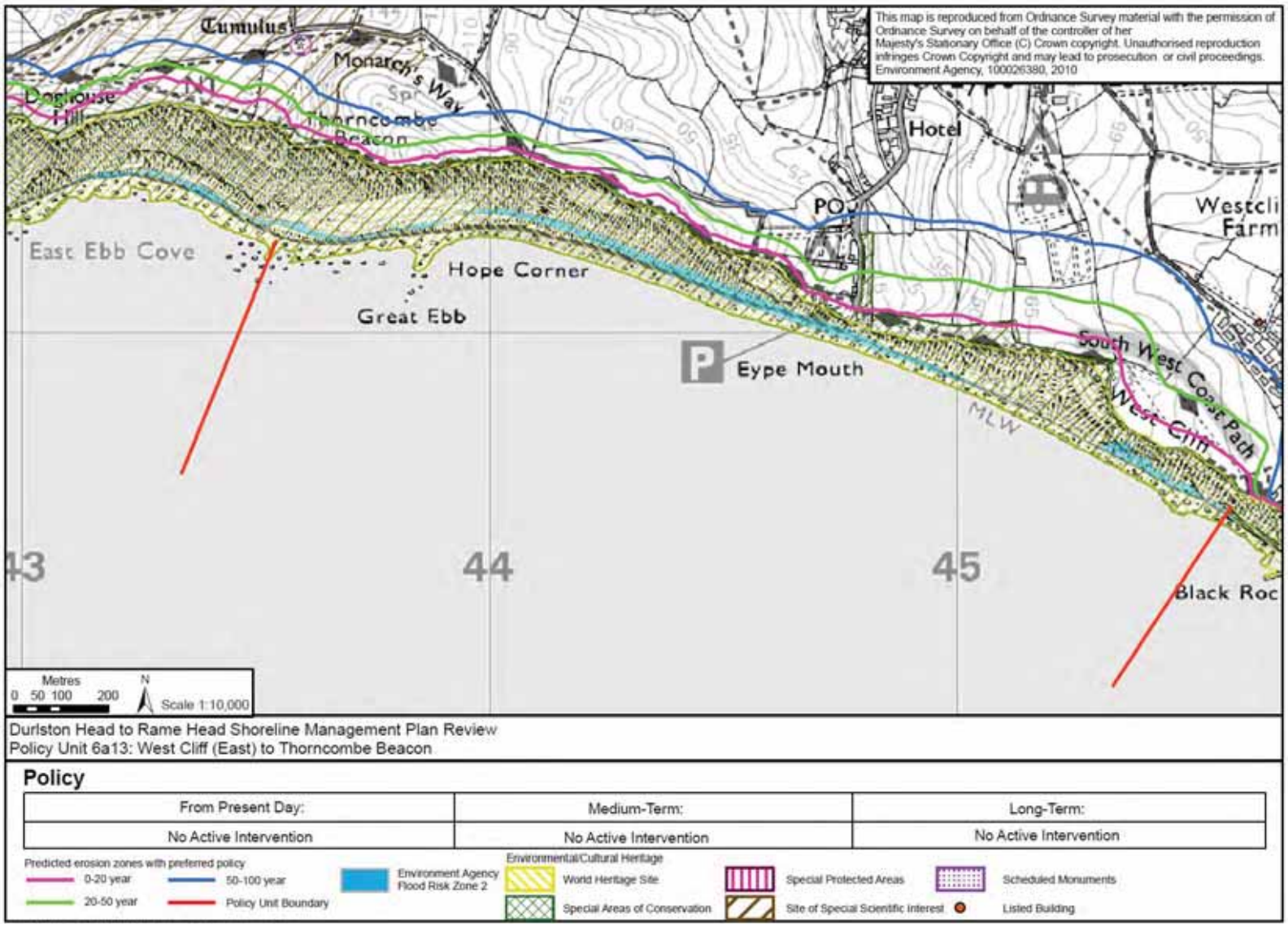
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	West Cliff (East) to Thorncombe Beacon
Policy Unit reference:	6a13

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	No management activities. Continued cliffline retreat would occur.	Potential permanent loss of car park and associated facilities at Eype as well as parts of the South West Coastal Path. It is unlikely that link roads would be lost prior to properties at Eype.	Permanent loss of predominantly grade 3 agricultural land due to erosion with a higher loss of land between West Bay and Thorncombe.	No known impacts on archaeological assets.	Potential change in landscape character of the Dorset AONB due to increased erosion and flooding but not considered detrimental as these are natural processes.	Continuation of natural processes is key to the integrity of the geological interest features of West Dorset Coast and Dorset and East Devon World Heritage Site (WHS); the preferred policies in this coastal policy unit would continue to maintain and potentially enhance the geological exposures of these features.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and would continue to occur as at present. The cliffs are likely to erode at a greater rate than sea level rise and therefore there is no likely loss of driftline vegetation. NAI would enhance this SAC.
2025 – 2055	No management activities. Continued cliffline retreat would occur.	Potential permanent loss of some community, recreational and amenity facilities at Eype including parts of the South West Coastal Path. It is unlikely that link roads would be lost prior to properties at Eype.	Permanent loss of predominantly grade 3 agricultural land due to erosion and flooding with a higher loss of land between West Bay and Thorncombe.	No known impacts on archaeological assets.	Potential change in landscape character of the Dorset AONB due to increased erosion and flooding but not considered detrimental as these are natural processes.	Continuation of natural processes is key to the integrity of the geological interest features of West Dorset Coast and Dorset and East Devon World Heritage Site (WHS); the preferred policies in this coastal policy unit would continue to maintain and potentially enhance the geological exposures of these features.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and would continue to occur as at present. The cliffs are likely to erode at a greater rate than sea level rise and therefore there is no likely loss of driftline vegetation. NAI would enhance this SAC.
2055 – 2105	No management activities. Continued cliffline retreat would occur.	Potential permanent loss of some community, recreational and amenity facilities including parts of the South West Coastal Path. It is unlikely that link roads would be lost prior to properties at Eype.	Permanent loss of predominantly grade 3 agricultural land due to erosion and flooding with a higher loss of land between West Bay and Thorncombe.	No known impacts on archaeological assets.	Potential change in landscape character of the Dorset AONB due to increased erosion and flooding but not considered detrimental as these are natural processes.	Continuation of natural processes is key to the integrity of the geological interest features of West Dorset Coast and Dorset and East Devon World Heritage Site (WHS): the preferred policies in this coastal policy unit would continue to maintain and potentially enhance the geological exposures of these features.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and would continue to occur as at present. The cliffs are likely to erode at a greater rate than sea level rise and therefore there is no likely loss of driftline vegetation. NAI would enhance this SAC.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Thorncombe Beacon to Seatown (East)**
Policy Unit reference:	**6a14**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This area is dominated by cliffs that are internationally designated for their geological and landscape characteristics These are subject to large-scale complex landsliding events that are difficult to predict with any certainty, making management of this shoreline difficult.

The erosion of these cliffs is integral to their designation and landscape value and, for this reason, the long term vision is to allow them to evolve naturally over the next 100 years.

There are no defences present along this section, although there is a car park at Seatown, which provides a point of access to the coast for tourism and recreation on the eastern side of the River Winniford. This plan would result in the potential loss of the car park along this section unless relocated. The South West Coast Path would also require realignment as the existing pathway becomes eroded.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention**. Episodic erosion events occur about every 10 years on a small scale, although the underlying erosion is predicted to be as observed historically with a recession of between 10 and 20m by 2025. This could cause some loss of the car park at Seatown as a result and the possibility of relocating this landwards might be considered in the short term.
Medium term:	The medium term policy is to continue **No Active Intervention**. With sea level rise, the rate of cliff erosion is likely to increase to between 30 and 50m between 2025 and 2055, although the effects of sea level rise could be outweighed by large landslide events that could also occur during this period. The clay-rich cliffs are also sensitive to any increase in rainfall which may also increase with climate change. However, there is significant uncertainty regarding possible future changes in precipitation so no account has been taken of this in the recession predictions.
Longer-term:	The long term policy for this section is to continue **No Active Intervention**, allowing it to continue to evolve naturally into the future. With sea level rise, the rate of cliff erosion is likely to increase, with total erosion of this section between 2055 and 2105 predicted to be between 70 and 100m from its present position. The potential for large landslide events would continue and the cliffs would remain sensitive to any future changes in precipitation. Thorncombe Beacon would remain a barrier to drift to the east, limiting any beach building sediment released from cliff erosion from reaching the beach at Eype.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6a14	**Thorncombe Beacon to Seatown (East)**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

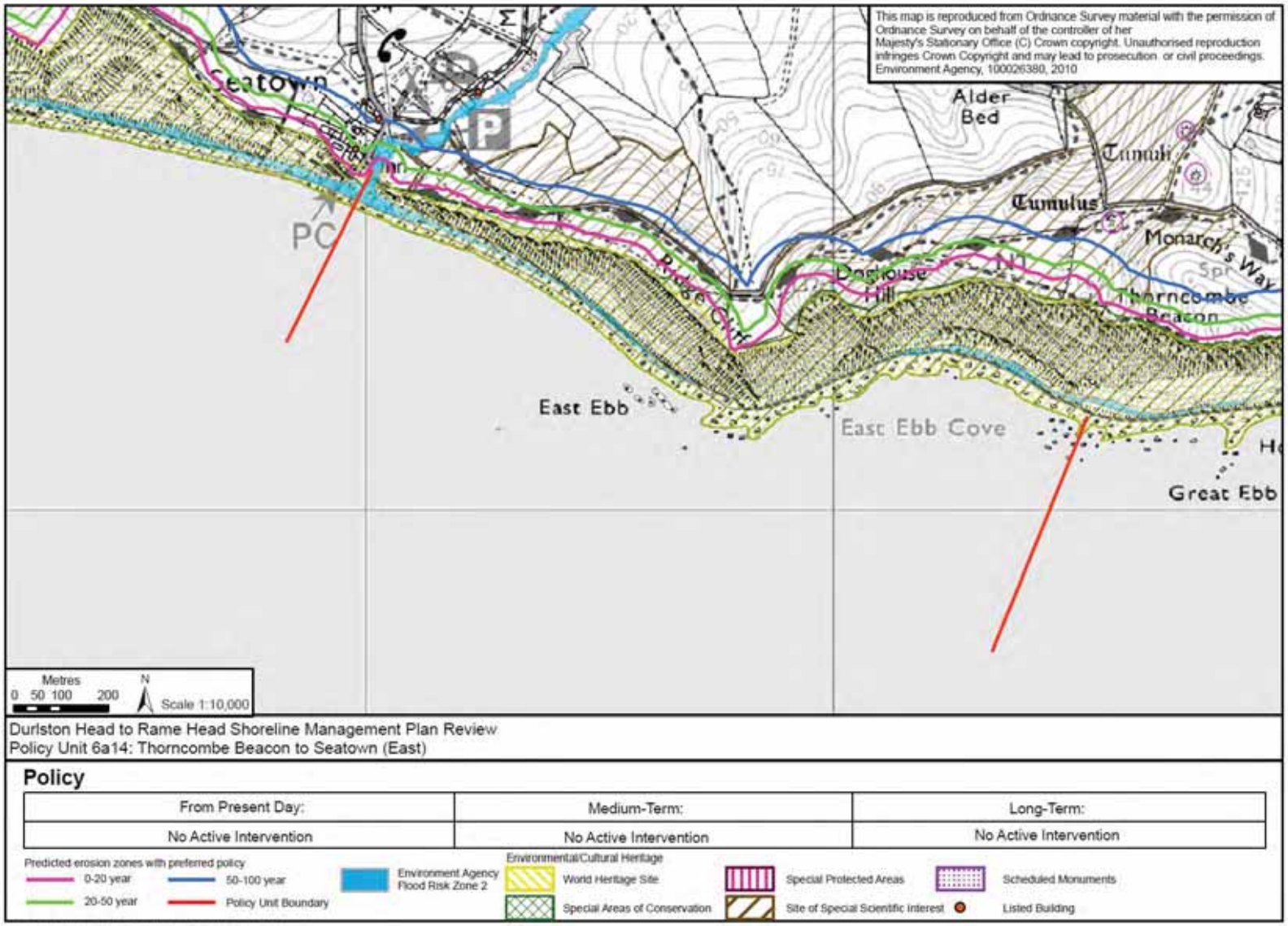
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Thorncombe Beacon to Seatown (East)
Policy Unit reference:	6a14

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	No management activities. Continued cliffline retreat would occur.	Loss of some areas of the South West Coastal Path due to erosion. Potential loss of some tourist facilities and part of the car park in Seatown due to erosion and flood-risk with associated impacts on the local community.	Permanent loss of grades 3 and 4 agricultural land due to erosion and flooding.	No known Scheduled Monument (SM) affected by erosion.	Minor change in landscape character of Dorset AONB due to increased erosion and flooding but not considered detrimental as these are natural processes.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and the West Dorset Coast SSSI. The preferred policies in this coastal policy unit would continue to maintain the geological exposures of these features.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) due to natural erosion processes The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI in most areas would therefore enhance this SAC
2025 – 2055	No management activities. Continued cliffline retreat would occur.	Loss of some areas of the South West Coastal Path due to erosion. Potential loss of some tourist facilities and the car park in Seatown due to erosion and flood-risk with associated impacts on the local community.	Permanent loss of grades 3 and 4 agricultural land due to erosion and flooding.	No known Scheduled Monument (SM) affected by erosion.	Minor change in landscape character of Dorset AONB due to increased erosion and flooding but not considered detrimental as these are natural processes.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and the West Dorset Coast SSSI. The preferred policies in this coastal policy unit would continue to maintain the geological exposures of these features.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) due to natural erosion processes The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI in most areas would therefore enhance this SAC
2055 – 2105	No management activities. Continued cliffline retreat would occur.	Loss of some areas of the South West Coastal Path due to erosion. Potential loss of some tourist facilities and the car park in Seatown due to erosion and flood-risk with associated impacts on the local community.	Permanent loss of grades 3 and 4 agricultural land due to erosion and flooding.	No known Scheduled Monument (SM) affected by erosion.	Minor change in landscape character of Dorset AONB due to increased erosion and flooding but not considered detrimental as these are natural processes.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and the West Dorset Coast SSSI. The preferred policies in this coastal policy unit would continue to maintain the geological exposures of these features.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) due to natural erosion processes The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI in most areas would therefore enhance this SAC

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Seatown**
Policy Unit reference:	**6a15**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

Despite the presence of defences along the toe of the cliff at Seatown, which protect the ends of a cliff drainage scheme constructed here in the mid-1990's, episodic erosion still occurs as a result of groundwater conditions. Consequently, the village is already vulnerable to erosion, despite previous efforts to resist this. In the long term defence of Seatown will increasingly become more difficult and expensive due to the seaward prominence of this defended section as the adjacent, undefended cliffs continue to erode.

The long term Plan recognises that this problem cannot be deferred indefinitely and the need to move to a more naturally functioning coast. This will allow the shoreline to achieve a more sustainable position commensurate with the adjacent eroding cliffs. This policy is also more likely to help retain a beach in this area as it rolls landward into the mouth of the River Winniford.

This would, in the longer term, add to the geological and landscape value for which this overall area of coast is internationally designated. However, this policy would result in the potential loss of properties and tourism facilities at Seatown; therefore mitigation measures will need to be in place to manage the transition from the existing policy to one of No Active Intervention. The South West Coast Path would also require realignment in this area as a result of the loss of defences in the medium to long term. Therefore in the short term the existing defences will be maintained in order for such measures to be implemented.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** of the existing rock revetment that extends along the toe of the cliffs along the western part of Seatown. This revetment reduces wave action at the toe and therefore minimises marine erosion of the cliffs. Maintenance of this defence (along with infrastructure that also affords some defence) would continue until the end of the defence life. This includes maintenance of some limited westwards extension of rock armour constructed recently, which will allow time for approaches to manage and mitigate losses to be developed. Due to the long term aim for this area it is not planned that the revetment would be rebuilt should it fail, which could be within the next 20 years. Therefore measures to address the future consequences of a No Active Intervention policy need to be developed in the immediate term. Cliff erosion would continue as at present whilst defences continue to reduce erosion rates locally, with total erosion of between 5 and 20m predicted by 2025. By the end of this period, the greater erosion of the adjacent cliffs could lead to the Seatown frontage becoming slightly more prominent along the shoreline; beaches will continue to become narrower and defences more exposed to wave action. Due to the rapid response of this shoreline to erode and resume a natural position once defences are no longer in place, this short term policy is not considered to be detrimental to the long term Plan.
Medium term:	This will be a transition period, whereby once defences reach the end of their effective life the coast should be allowed to retreat. The recommended medium term policy for this section is therefore to move to one of **No Active Intervention** as existing defences reach the end of their effective life and

The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

	become more difficult to sustain and economically justify. Implementation of this would require measures to be in place to manage this transition, including any relocation of assets if possible. Under this policy monitoring of recession should be undertaken to continually appraise the risk zone. The withdrawal of defence maintenance during this period will lead to cliff recession by the end occurring at a similar rate to the adjacent cliffs. Cliff erosion would occur at a faster rate than historically, with total erosion of up to 50m predicted by 2055, although the effects of sea level rise would be outweighed by any large landslide events that could occur during this period. The beaches will receive some sediment from the cliff erosion, although any fines will be lost offshore. It is anticipated that additional sediment input will enter Seatown beach from the west as the lobe of sediment at Golden Cap is gradually removed by wave action, and this may serve to episodically reduce wave exposure at the cliff toe and slow the rate of recession by countering the effect of sea level rise. Under accelerated sea level rise the beach would be expected to retreat landwards into the embayment within which Seatown sits. The beach will therefore narrow at the western and eastern extremities.
Longer-term:	The long term recommendation is to continue the policy of **No Active Intervention** established in the medium term. Withdrawal of defence maintenance during the medium term will mean that by this period no defences will be present and a naturally functioning cliff and shoreline would exist. Monitoring of recession rates would however be required to ensure that the area of risk is appropriately managed. Cliff erosion would continue to occur at higher rates than historically, with total erosion of up to 100m predicted by 2105, although the effects of sea level rise would be outweighed by any large landslide events that could occur during this period. Sediment supply to the beach at Seatown would continue from the west, but despite these inputs, the net trend under sea level rise would be for beaches to migrate landwards. Seatown sits within a slight indent within the embayment, therefore a beach would be retained here. There is a risk that Golden Cap could experience a large landslide event which could result in the formation of a new sediment lobe extending across the foreshore, thereby interrupting the sediment supply from the west. If this occurs then the beach could narrow relatively rapidly, exacerbated by sea level rise, resulting in increased cliff recession.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a15	Seatown	**Hold the Line** through maintenance of the existing defences as long as possible, within existing economic justification.	Maintenance of defences would end during this period and allow natural coastal evolution to resume through a move towards **No Active Intervention**.	Allow natural coastal evolution to occur through **No Active Intervention**.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Seatown
Policy Unit reference:	6a15

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Maintenance and possible small extension westwards of the existing defences.	Continued protection of properties and tourist facilities in Seatown from erosion. Continued protection of the South West Coastal Path from erosion.	Potential loss of small areas of grades 3 and 4 agricultural land due to erosion.	No known impacts on archaeological features.	Minimal change in landscape character of area.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and West Dorset Coast SSSIs and therefore holding the line at Seatown has the potential to adversely affect the condition of these features. However, this will only be a short term measure.	No known impacts on water quality. Any works to Hold the Line should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	A policy of HTL in the short term has the potential to adversely affect the integrity of vegetated cliff habitats within Sidmouth to West Bay SAC. However, as the medium and long term policies involve No Active Intervention, any short term losses are likely to be offset by habitat creation in this policy unit in the long term. Consequently, no adverse impacts on the European site are envisaged. No adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that HTL is affecting the site at present and therefore no adverse effects are foreseen.
2025 – 2055	Maintenance of defences during this period would be withdrawn once they reach end of effective life, after which defences would be allowed to deteriorate and fail.	Potential loss of some properties and tourist facilities in Seatown due to erosion. Loss of some areas of the South West Coastal Path due to erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion. Loss of parts of Sea Hill Lane, but not before the properties it serves.	Erosion and minor flood risk to Grade 1 and Grade 2 listed buildings	Minor change in landscape character of Dorset AONB due to increased erosion and flooding. Potential for deteriorating structures to become unsightly.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and West Dorset Coast SSSI. The preferred policy for this policy unit would continue to maintain the geological exposures of these sites.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI would therefore enhance this SAC NAI will be beneficial for the reef habitat within the Poole Bay to Lyme Bay Reefs pSAC.
2055 – 2105	No defences present, with a natural coast occurring with cliffline retreat. No management activities.	Potential loss of some properties and tourist facilities in Seatown due to erosion. Loss of some areas of the South West Coastal Path due to erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion. Loss of parts of Sea Hill Lane, but not before the properties it serves.	Erosion and minor flood risk to Grade 1 and Grade 2 listed buildings	Minor change in landscape character of Dorset AONB due to increased erosion and flooding. Potential for deteriorating structures to become unsightly, although they would be in the process of breaking down and gradually being moved alongshore.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and West Dorset Coast SSSI. The preferred policy for this policy unit would continue to maintain the geological exposures of these sites	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI would therefore enhance this SAC

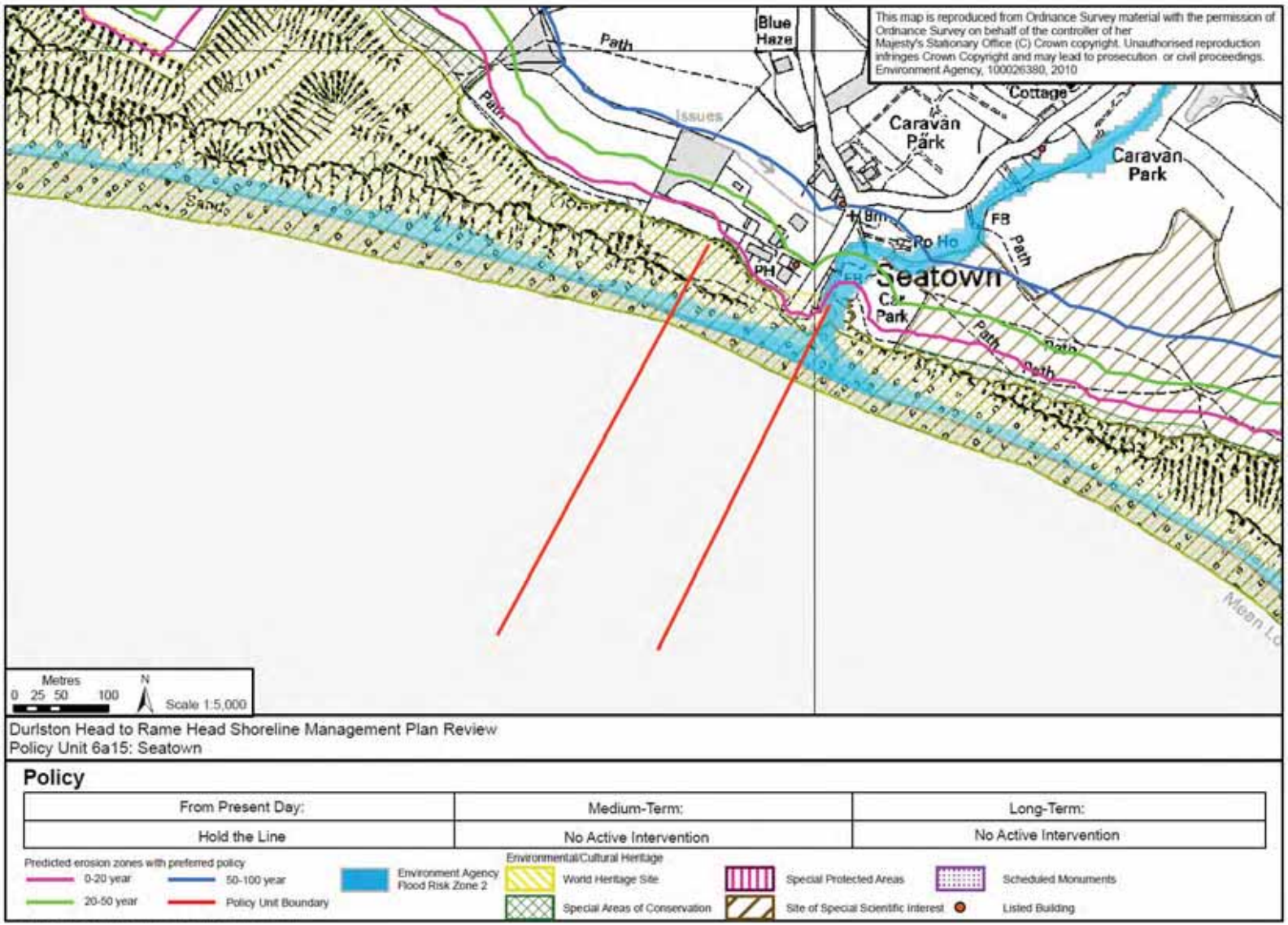
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Seatown
Policy Unit reference:	6a15

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
								NAI will be beneficial for the reef habitat within the Poole Bay to Lyme Bay Reefs pSAC.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Seatown (West) to Charmouth (East)**
Policy Unit reference:	**6a16 and 6a17**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This frontage is made up of cliffs that are internationally designated for their geological and landscape characteristics, and which are subject to large-scale complex landsliding. Such events are difficult to predict with any certainty, making management of this shoreline difficult.

The natural erosion of these cliffs is integral to their designations and landscape value, and the long term vision for this section is to allow the continuation of these natural processes.

This would result in the potential loss of parts of the South West Coast Path, therefore its realignment should be considered in the short term.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention**. The clay-rich cliffs along this section experience complex landslide behaviour with cyclic backscar retreats as a result of short (episodic) events causing rapid retreat by rotational landsliding. The frequency and magnitude of these events varies depending upon specific local geology that comprises each individual cliff, although large events occur about every 100 years or so. Throughout this section, erosion would continue as historically, with variable erosion occurring along the shoreline at rates ranging from 0.1 to 1.0m/yr. At Golden Cap, total erosion of between 3 and 50m is predicted by 2025, whilst at Stonebarrow erosion of 7 to 50m is predicted. Up to 17 to 50m of erosion is predicted at Broom Hill over the same period. This erosion would provide some material to maintain beaches at the toe of the cliffs, although finer material would be lost offshore. A previous landslide event has resulted in a lobe of debris cutting off longshore sediment transport feeding beaches to the east. It is anticipated that this will gradually erode and be largely removed as a barrier to sediment transport by the end of this period.
Medium term:	The medium term policy is to continue **No Active Intervention**. Cliff erosion is likely to occur at a rate faster than that historically due to sea level rise, but this gradual erosion would be outweighed by any large landslide events that could occur during this period. Such events could result in a lobe of sediment interrupting the sediment drift, which could impact on adjacent beaches.
Longer-term:	The long term policy is to continue **No Active Intervention** along this undefended section of cliffs, allowing them to continue to erode naturally. These clay-rich cliffs are very sensitive to climate change, cliff erosion is therefore likely to occur at a rate which is faster than that historically, although the effects of sea level rise would be outweighed by large landslide events that could occur during this period. Total erosion along this section by 2105 is predicted to be between 70 and 100m between Seatown and Golden Cap; between 17 and 50m at Golden Cap; 40 to 50m at Stonebarrow, and 50

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

to 100m at Broom Hill. The cliffs are also sensitive to increases in rainfall; however, due to uncertainty in the possible future changes in precipitation, no direct account has been taken of this in the prediction of recession rates.

These varying rates of erosion would lead to Golden Cap developing into a more defined headland, with the cliffs to the west becoming increasingly set-back forming a deepening embayment. This is not likely to affect adjacent beaches, as Golden Cap is already a barrier to littoral transport.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a16	Seatown (West) to Golden Cap	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.
6a17	Golden Cap to Charmouth (East)	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

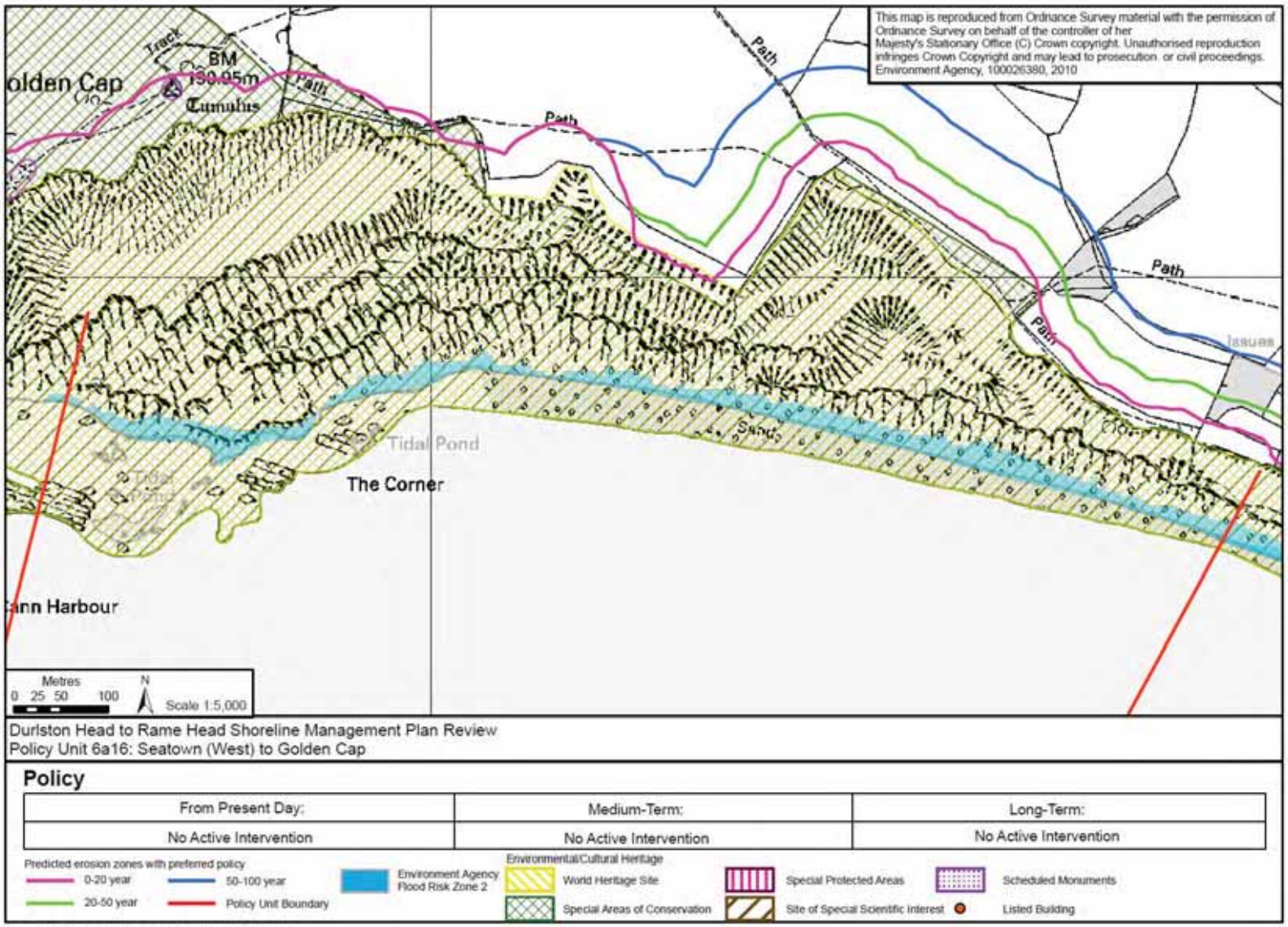
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Seatown (West) to Charmouth (East)
Policy Unit reference:	6a16 and 6a17

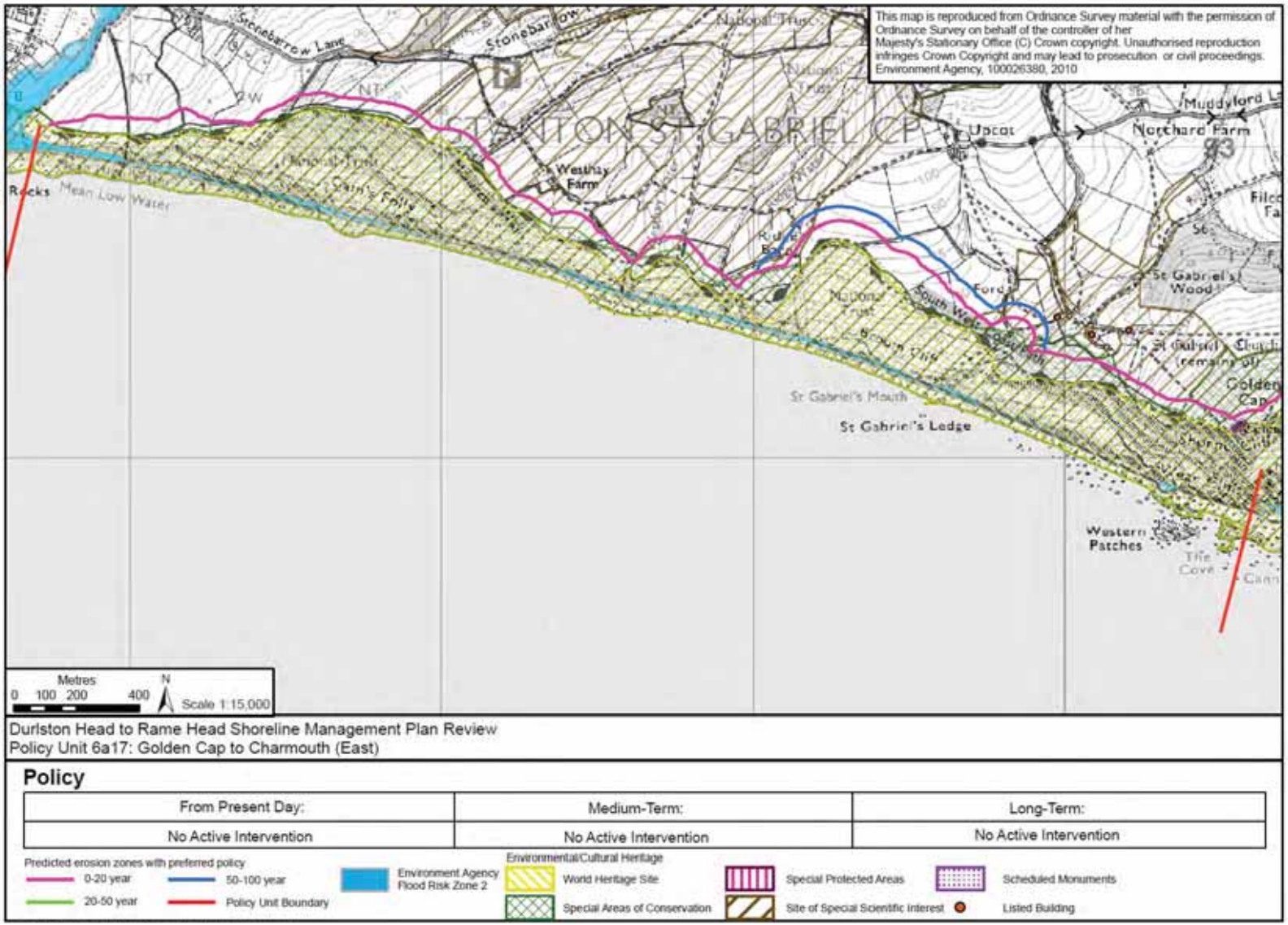
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Continued cliffline retreat would occur. No management activities.	Loss of some areas of the South West Coastal Path due to erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion and flooding.	No known impacts on scheduled monuments in these policy units. Erosion risk to Grade 1 and Grade 2 listed buildings.	Minor change in landscape character of Dorset AONB due to increased erosion and flooding.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and the West Dorset Coast SSSI. The preferred policy in these policy units would continue to maintain the geological exposures of these features.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and no adverse effects on the European site are anticipated.
2025 – 2055	Continued cliffline retreat would occur. No management activities.	Loss of some areas of the South West Coastal Path due to erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion and flooding.	No known impacts on scheduled monuments in these policy units. Erosion risk to Grade 1 and Grade 2 listed buildings.	Minor change in landscape character of Dorset AONB due to increased erosion and flooding. Potential for deteriorating structures to become unsightly.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and the West Dorset Coast SSSI. The preferred policy in these policy units would continue to maintain the geological exposures of these features.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and no adverse effects on the European site are anticipated.
2055 – 2105	Continued cliffline retreat would occur.	Loss of some areas of the South West Coastal Path due to erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion and flooding.	No known impacts on scheduled monuments in these policy units. Erosion risk to Grade 1 and Grade 2 listed buildings.	Minor change in landscape character of Dorset AONB due to increased erosion and flooding. Potential for deteriorating structures to become unsightly.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and the West Dorset Coast SSSI. The preferred policy in these policy units would continue to maintain the geological exposures of these features.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and no adverse effects on the European site are anticipated.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Charmouth**
Policy Unit reference:	**6a18**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The developed area of Charmouth is an important tourist location that provides access and facilities at the coast. It is largely situated on high ground located at the eastern end of the Black Ven landslide complex, which is internationally designated for its geological and landscape value which results from continued large-scale complex landsliding events. These are difficult to predict with any certainty and that uncertainty makes management of this adjacent stretch of shoreline difficult. The landward part of Charmouth, and in particular highways infrastructure that provides access to the town, are also at risk of flooding.

The long term Plan is to continue to protect the majority of Charmouth from the risk of flooding by managing the realignment of the coast into the mouth of the River Char over the next 100 years.

However, it is unlikely to be feasible or sustainable to reduce the risk of erosion to the cliffed coastline that forms the western part of the town as the adjacent cliffs continue to erode and expose this area. The long term plan is therefore to move towards No Active Intervention. This would result in the potential loss of cliff top properties and infrastructure; therefore mitigation measures will need to be in place to manage this transition from existing policy.

This change in policy would also require the tourist facilities at Charmouth, such as the heritage centre, to be relocated landwards.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** of the existing defences along the open coast at Charmouth, where a short length of seawall and promenade provides flood protection. Implementation of this Policy would involve maintenance of these to maintain protection whilst assessments are conducted and measures are put in place to enable the longer term transition to a policy of Managed Realignment. There is a small beach present in front of the defences. This would continue to narrow during this period and this trend could become increasingly significant with very little new sediment input to the beach from cliff erosion to the west. This could result in undermining of the rock revetment and accelerate failure of the seawall at the car park and increase the risk of overtopping. Towards the end of this epoch the defences may begin to be outflanked by the continued erosion of the undefended cliffs to the west. If defences fail during this period the move to the medium term policy of Managed Realignment could be brought forward.
Medium term:	This will be a transition period, whereby once defences along the open coast reach the end of their effective life the coast would be allowed to retreat. As existing defences reach the end of their effective life they will become more difficult to sustain due to beach narrowing and outflanking, increasing the potential for undermining and failure of these structures. As this occurs the policy for this section will become **No Active Intervention**. Although the existing defences at Charmouth would continue to provide some resistance to erosion, this will be to a much lesser extent than present. As these fail the rates of cliff erosion would increase. Erosion of the cliffs would also be susceptible to any increase in both sea level and rainfall and there would be an increased risk of a large scale failure occurring. With no further intervention the risk of erosion to people, property and

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	infrastructure along the western part of Charmouth would continue and increase. Adaptation measures will be required to enable any relocation of assets away from risk areas on the western part of Charmouth, although this would require more detailed investigation and depend upon the longevity of any impact of the existing defences. Sea level rise will continue to create coastal squeeze in front of the seawall at Charmouth, with narrowing of the beach and an increase in flood. A change of policy to **Managed Realignment** within the River Char would enable the beach to roll-back and adapt naturally into the river channel in response to rising sea levels, allowing a beach to be maintained within the embayment that would form. Therefore measures to manage the risk of flooding in the River Char would be implemented, e.g. unblocking of the river outlet or provision of defences further upstream to protect against flooding inland. This change in policy would have a local impact, although it is unlikely to significantly affect the coastal evolution of the adjacent frontages.
Longer-term:	Along the open coast fronting the western part of Charmouth, the long term policy is for **No Active Intervention**. This will result in an increasing risk of erosion affecting people, property and infrastructure and therefore adaptation measures will be required to enable any relocation of assets away from risk areas. Within the River Char, the long term policy is to continue with the **Managed Realignment**, with further realignment of the flood defences if required to accommodate the rate of natural roll back of the beach into the river.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a18	**Charmouth**	Maintain existing defences through a **Hold the Line** policy to continue to provide protection to Charmouth.	There would be a move towards **No Active Intervention** along the cliffed western part of Charmouth. **Managed Realignment** within the River Char, through providing set-back flood defences as it becomes increasingly technically difficult to maintain defences in the existing position.	Continue the policy of **No Active Intervention** along the cliffed western part of Charmouth and **Managed Realignment** within the River Char.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Charmouth
Policy Unit reference:	6a18

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Maintenance of existing defences would occur.	Short term protection of properties adjacent to Lower/Higher Sea Lane/Old Lyme Road (Charmouth), tourist facilities and the car park in Charmouth from erosion and flood-risk. Protection of the South West Coastal Path due to erosion.	Continued protection to local roads.	No known impacts on archaeological features.	Minimal change in landscape character in short term.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and West Dorset Coast SSSI and therefore holding the line in this policy unit has the potential to affect the condition of these geological features. Historic landfill sites in Charmouth protected from flooding in short term.	No known impacts on water quality.	A policy of HTL has the potential to adversely affect the integrity of cliff habitats within Sidmouth to West Bay SAC but will depend upon the implementation of the policy – *uncertain impact.* No adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that HTL is affecting the reef habitat at present and therefore no adverse effects are foreseen.
2025 – 2055	Construct and maintain a set-back flood defence. No management activities once open coast defences have reached the end of their effective life.	Potential loss of some properties adjacent to Lower/Higher Sea Lane/Old Lyme Road (Charmouth) and tourist facilities in Charmouth due to coastal erosion to the west of the River Char. Potential flood and erosion risk to car park on Lower Sea Lane and beach access dependent on location of Managed Realignment. Coastal erosion may affect properties in and around Lower Sea Lane, Higher Sea Lane and Old Lyme Round. Loss of some areas of the South West Coastal Path due to erosion.	Potential loss of local roads that provide access to properties, though roads likely to be lost at similar time to properties they serve.	Erosion risk to Grade 1 and Grade 2 listed buildings, though flood risk would be minimised (depending upon location of Managed Realignment).	Minor change in landscape character of Dorset AONB due to erosion and flooding.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and West Dorset Coast SSSI. The preferred policy in this policy unit would continue to maintain the geological exposures of these features. Historic landfill sites in Charmouth may be subject to flooding. Further consideration of the current state of the landfill sites would be required at project level.	Potential impacts on water quality due to flooding of landfill sites, though this risk is likely to be minimised (depending upon location of Managed Realignment).	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI and would therefore enhance this SAC. No adverse effects are anticipated on the European site in the medium term. Natural processes will be beneficial for the reef habitat within the Poole Bay to Lyme Bay Reefs pSAC.
2055 – 2105	Maintain the set-back flood defence. No management activities along the open coast.	Potential loss of some properties adjacent to Lower/Higher Sea Lane/Old Lyme Road (Charmouth) and tourist facilities in Charmouth due coastal erosion to the west of the River Char. Potential flood and erosion risk to car park on Lower Sea Lane and beach access dependent on location of Managed Realignment. Coastal erosion may affect	Potential loss of local roads that provide access to properties, though roads likely to be lost at similar time to properties they serve.	Erosion risk to Grade 1 and Grade 2 listed buildings, though flood risk would be minimised (depending upon location of Managed Realignment).	Minor change in landscape character of Dorset AONB due to erosion and flooding.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and West Dorset Coast SSSI. The preferred policy in this policy unit would continue to maintain the geological exposures of these features. Historic landfill sites in Charmouth may be subject to flooding. Further consideration of the current state of the	Potential impacts on water quality due to flooding of landfill sites, though this risk is likely to be minimised (depending upon location of Managed Realignment).	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI and would therefore enhance this SAC. No adverse effects are anticipated on the European site in the long term.

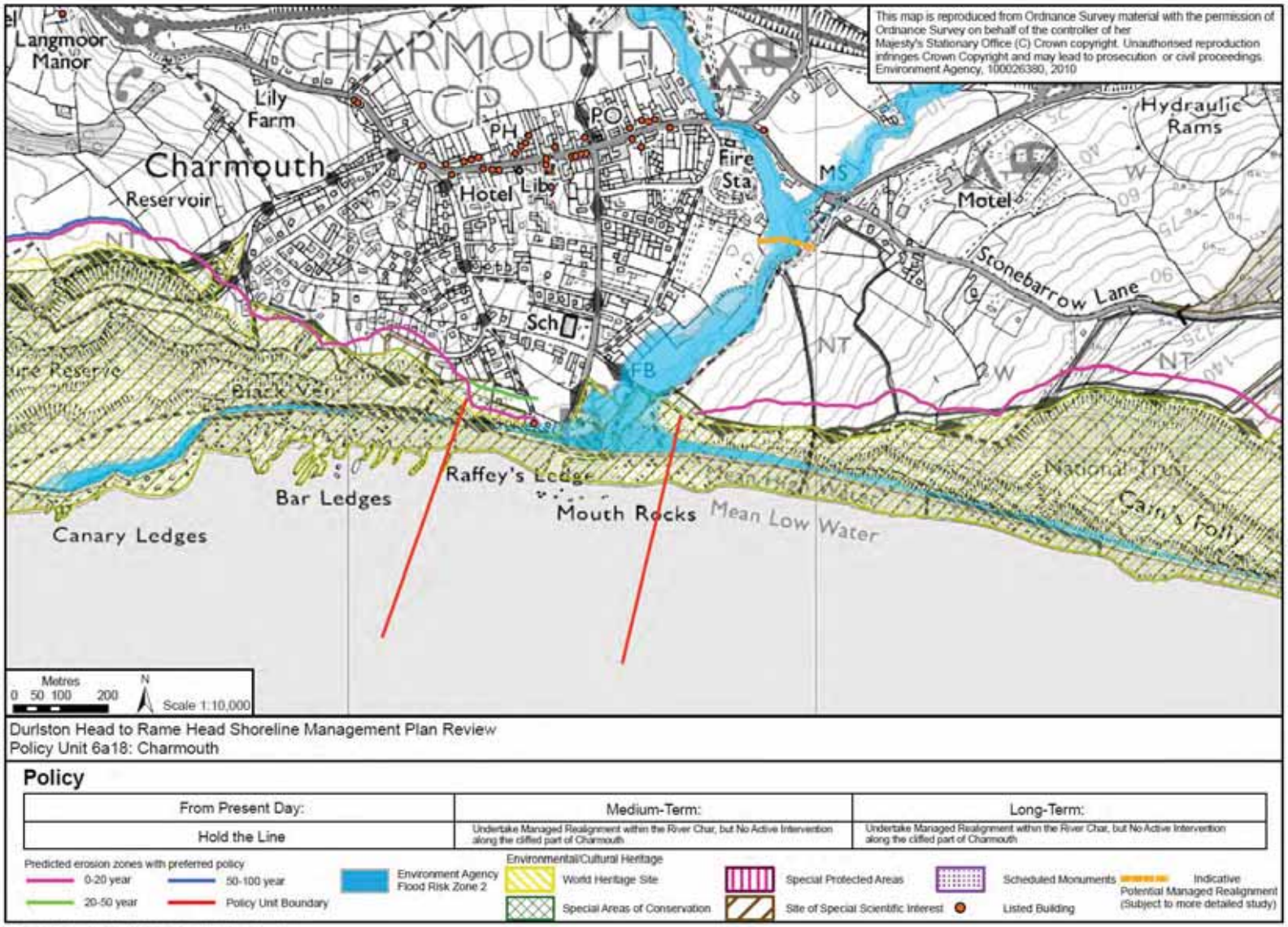
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Charmouth
Policy Unit reference:	6a18

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
		properties in and around Lower Sea Lane, Higher Sea Lane and Old Lyme Round. Loss of some areas of the South West Coastal Path due to erosion.				landfill sites would be required at project level.		Natural processes will be beneficial for the reef habitat within the Poole Bay to Lyme Bay Reefs pSAC.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Charmouth (West) to East Cliff (Lyme Regis)**
Policy Unit reference:	**6a19**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section of coast consists of dramatic, geologically important, clay-rich cliffs that experience complex landslide behaviour. This includes cyclic backscar retreat as a result of short (episodic) events which cause rapid retreat by rotational landsliding. The frequency and magnitude of these events varies alongshore and is difficult to predict with any certainty, depending upon specific local geology that comprises each individual cliff.

The natural erosion of these cliffs is integral to their designations and landscape value and the long term plan is the continuation of natural coastline evolution of this stretch with no intervention.

This will mean that there will be continued retreat of the cliffline over the next century, and over this period, it is likely that the western part of Charmouth (refer to Policy Unit 6a17) and the eastern part of Lyme Regis (refer to Policy Unit 6a19) would continue to be at risk from this erosion. As such, there will be a need to continually monitor this section such that information about the risk to the adjacent developed sections of coast are kept up-to-date.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is **No Active Intervention** along this undefended section of actively eroding cliffs, allowing them to continue to evolve naturally. Variable erosion would continue, as historically, with rates ranging from 0.2 to 3.3m/yr, with rates varying depending upon the time and form of landslide events. By 2025, the east and central parts of Black Ven are predicted to erode between 7 and 50m. Over this same period, Black Ven West is predicted to erode by 10 to 50m and The Spittles by about 10m. It is possible that individual landslide events cause greater amounts of recession although it is not possible to predict these with any certainty. Continued beach narrowing as a result of sea level rise could become increasingly significant as there is very little new sediment input to the beach. The large scale landslides also act as a barrier to any sediment transport along this section. Locally there could be beach building sediment released from the cliffs, in particular Black Ven West cliffs.
Medium term:	The medium term policy is to continue with **No Active Intervention**. With rising sea levels gradually submerging the fronting beaches and shore platforms (ledges), cliff erosion is likely to increase from rates observed historically. The east and central parts of Black Ven are predicted to experience total erosion of between 20 and 50m over this period, whilst Black Ven West is predicted to erode by 30 to 50m and The Spittles by 25 to 50m. A larger amount of recession could occur during this period as a result of the large landslide events that have a frequency of every 100 years or so causing recession of more than 50m per event. However, without detailed investigation, it is uncertain as to exactly where and when such a large scale event would occur. The cliffs are also sensitive to any changes in groundwater conditions due to increases in precipitation, but uncertainty in the possible future changes in this means that no direct allowance has been made for this in the recession predictions.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Longer-term:	The long term plan is to continue the policy of **No Active Intervention**. Differences in cliff composition means that erosion would occur at variable rates. The east and central parts of Black Ven are predicted to have eroded between 40 and 50m over this period, whilst Black Ven West is predicted to have eroded by 50 to 60m, and The Spittles by about 50m. If not already occurred, a single large landslide event could result in more than 50m recession. Future changes in precipitation could also increase the amount of recession above these predictions. The significant erosion along this section, particularly at Black Ven West, would release suitable beach building material from the Upper Greensands that would be transported to beaches to the east. Any large scale landslide events could though result in that sediment drift being interrupted.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a19	**Charmouth (West) to East Cliff (Lyme Regis)**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

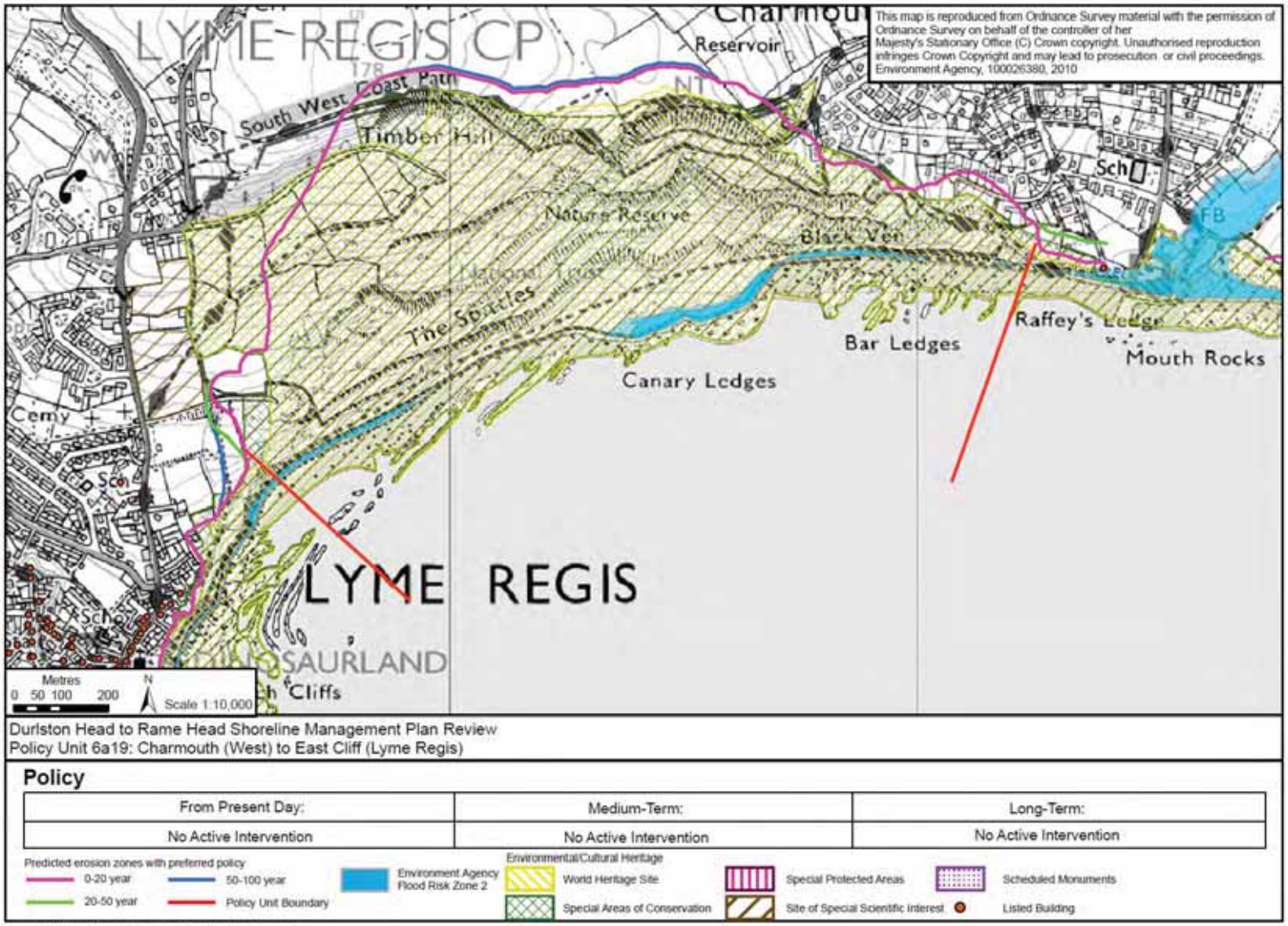
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Charmouth (West) to East Cliff (Lyme Regis)
Policy Unit reference:	6a19

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Continued cliffline retreat would occur. No active management, but monitoring recommended of the landslide complex to ensure the adjacent developed areas at risk of erosion are kept informed.	Loss of some areas of the South West Coastal Path due to erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion. Coastal erosion risk to parts of the A3052 and other local roads e.g. Charmouth Road.	No known impacts on scheduled monuments in these policy units Potential erosion risk to archaeological features.	Minor change in landscape character of Dorset AONB due to erosion, but this is a natural process.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site, and West Dorset Coast SSSI. The preferred policy in this policy unit would therefore continue to maintain the geological exposures of these features. Refuse tip east of Spittles Lane at risk of erosion.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) due to natural to erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI would therefore enhance this SAC.
2025 – 2055	Continued cliffline retreat would occur. No active management, but monitoring recommended of the landslide complex to ensure the adjacent developed areas at risk of erosion are kept informed.	Loss of some areas of the South West Coastal Path due to erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion. Coastal erosion risk to parts of the A3052 and other local roads e.g. Charmouth Road.	No known impacts on scheduled monuments in these policy units Potential erosion risk to archaeological features.	Minor change in landscape character of Dorset AONB due to increased erosion but this is a natural process.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site, and West Dorset Coast SSSI. The preferred policy in this policy unit would therefore continue to maintain the geological exposures of these features. Refuse tip east of Spittles Lane at risk of erosion.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) due to natural to erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI would therefore enhance this SAC.
2055 – 2105	Continued cliffline retreat would occur. No active management, but monitoring recommended of the landslide complex to ensure the adjacent developed areas at risk of erosion are kept informed.	Loss of some areas of the South West Coastal Path due to erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion and flooding. Coastal erosion risk to parts of the A3052 and other local roads e.g. Charmouth Road.	No known impacts on scheduled monuments in these policy units Potential erosion risk to archaeological features.	Minor change in landscape character of Dorset AONB due to increased erosion, but this is a natural process.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site, and West Dorset Coast SSSI. The preferred policy in this policy unit would therefore continue to maintain the geological exposures of these features. Refuse tip east of Spittles Lane at risk of erosion.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) due to natural to erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI would therefore enhance this SAC.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Lyme Regis**
Policy Unit reference:	**6a20 to 6a22**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The town of Lyme Regis is an important tourist town and a key service centre for the region, providing a range of facilities that support surrounding communities.

Given the extent of development and its economic importance to the area, the long term plan for Lyme Regis is to continue to provide protection against flooding and erosion risk as far as is practicable to do so over the next 100 years.

Along the extensively developed central parts of the town of Lyme Regis, this will be through holding the present defence line. However, long term protection to all of the eastern side of the town will be technically difficult to achieve due its proximity to the western end of Black Ven, which is at risk from complex landsliding events that could undermine parts of the town in this area. Here, it may not be possible to sustain defences along the full length of the currently defended area, as the cliffs to the east will continue to retreat. Therefore measures need to be put in place to manage this risk.

At the western end of the frontage, there are currently no formal defences. The plan is to continue to provide long term protection to this area, but through considering construction of set back, more sustainable defences.

Preferred policies to implement Plan:

From present day (short term):

The short term policy is to **Hold the Line** of the existing defences present along the entire length of the Lyme Regis frontage. This would involve maintenance of these existing defences, as well as ongoing beach management activities including beach recharge along the central and western parts.

Along East Cliff and Church Cliff, it is probable that construction of new defences would be required during this period in order to retain adequate levels of protection; plans are already well developed as part of the Lyme Regis Environmental Improvements Phase IV scheme. This scheme would need to include monitoring of the adjacent eroding cliffs to the east during this period to determine when people, property and infrastructure in this area are likely to become exposed to the erosion risk, so that measures such as exit strategies can be developed in time.

The seawall along the eastern side of Lyme Regis prevents erosion of the cliff toe and since its construction has prevented any significant landslide activity; this is assumed to continue to be the case during this period as a result of the Phase IV scheme being implemented in the early part of this period. However, continued foreshore narrowing as a result of sea level rise could become increasingly significant as there is very little new sediment input to the beach.

The defences along the central section of Lyme Regis prevent cliff erosion and reduce flood risk to low-lying parts of the town along the sea front. Their presence would result in no change in cliff position by 2025 and a continued reduction in flood risk. The various control structures along this section, along with ongoing beach management activities also serve to maintain a stable beach. Again, coastal squeeze as a result of sea level rise could necessitate additional beach recharge towards the end of this period.

The structures along the western side of Lyme Regis also provide a limited defence function that prevents erosion of the cliff toe along this section. There has been no significant cliff recession in this area, although Monmouth Beach that fronts the defences has over the past 100 to 150 years experienced a long term trend of erosion and steepening, except at the very eastern end where some limited accretion occurs against The Cobb. These trends are likely to

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	continue during this period.
Medium term:	The medium term policy is to **Hold the Line** along the central and eastern Lyme Regis frontages through continued maintenance of defences. Along the central section of Lyme Regis, this could require improvements to the defences to maintain adequate levels of protection, which would be likely to include further beach recharge and raising of defence heights. Despite these defences, a potential risk of erosion along parts of the eastern section of the town will remain, due to any large scale failure of the adjacent, undefended cliffs. Therefore measures need to be in place to manage this risk; including monitoring of the adjacent eroding cliffs to the east during this period to determine when assets are likely to become at risk from erosion. At Monmouth Beach holding the position of the existing structures will become technically unsustainable. The fronting beach will narrow and steepen as sea levels rise, resulting in increased exposure of the structures to wave action. Therefore **Managed Realignment**, through construction of new defences in a retreated, but more sustainable, position, would be implemented. The realigned position needs to be sufficiently retreated to enable the beach to behave as naturally as possible. This is not expected to have a significant impact on natural coastal processes in the long term, but should create a more sustainable defence at this location through allowing more material to be retained, and thereby provide a more robust natural form of defence for the rest of Lyme Regis. This policy depends upon the continued maintenance of The Cobb breakwater, which has an important influence on the beaches to both the east and west.
Longer-term:	Along the main commercial central and western sections of Lyme Regis, the long term policy is to provide continued protection to the town through **Hold the Line**. This could require further improvements to the defences along the central section in order to maintain adequate levels of protection. This would be likely to include further beach recharge and ongoing beach management activities, as well as re-building larger defences. A potential risk along the western section is that defences become outflanked due to continued erosion of the undefended adjacent cliffs. Monitoring would need to be undertaken to assess this risk. Integral to the implementation of this policy, is the continued maintenance of The Cobb breakwater. Along the eastern part of Lyme Regis, the long term policy is to continue to **Hold the Line** as long as it is sustainable to do so. However, along the northern parts of this section in particular, it is very uncertain as to how sustainable continued intervention will be in terms of technical, environmental and economic feasibility. It may therefore be necessary to move towards a policy of **Managed Realignment** during this period. Any such move would be based on continued observation and monitoring of cliff erosion to assess the extent that the defences are at risk of being outflanked by the continued erosion of the undefended cliffs to the east throughout this period. To enable such a change in policy during this period, it will be necessary to develop and implement adaptation measures to manage the risk to people, property and infrastructure, including key access routes, that are to be protected in the short and medium term by the planned Phase IV scheme. To aid this transition short term measures could be implemented along the

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

emerging flank to the east of the existing sea wall, to temporarily reduce the rate of erosion behind the seawall. These measures could be at beach level or higher up the slope. However, there would remain a risk of erosion due to any large scale failure of the adjacent, undefended cliffs. Therefore measures need to be in place to manage this risk; including monitoring of the adjacent eroding cliffs to the east during this period to determine when assets are likely to become at risk from erosion, which would provide additional time to allow assets to be relocated away from risk areas, as appropriate.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a20	East Cliff (Lyme Regis) to Broad Ledge (Lyme Regis)	Maintain and improve defences through a **Hold the Line** policy.	Maintain the existing defences for as long as it is technically and economically possible to do so, through a **Hold the Line** policy.	As outflanking occurs due to erosion and landsliding, continue to **Hold the Line** by maintaining and extending defences along the ever retreating cliff line. These defences could be at beach level or higher up the slope. It may, however, be necessary to move towards a policy of **Managed Realignment** during this period if it becomes unsustainable to continue to defend any parts of this length.
6a21	Broad Ledge (Lyme Regis) to The Cobb (Lyme Regis)	Maintain existing defences through a **Hold the Line** policy to provide continued protection to Lyme Regis.	Continue to maintain or improve existing defences through a **Hold the Line** policy to provide continued protection to Lyme Regis.	Continue to maintain or improve existing defences through a **Hold the Line** policy to provide continued protection to Lyme Regis.
6a22	Monmouth Beach	Continue to **Hold the Line** and protect all built assets within the town; this requires little intervention along much of this frontage, but will involve monitoring of the beach.	Construct a more formal defence as part of **Managed Realignment** and implement beach management to support this.	Maintain the realigned defence position through a **Hold the Line** policy.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Lyme Regis
Policy Unit reference:	6a20 to 6a22

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Maintenance and improvements to the existing defences.	Continued protection of tourist facilities along the seafront, marine parade and properties along the seafront and at East Cliff/Church Street in Lyme Regis from flooding and erosion. Some properties towards Black Ven and The Spittles on the east side of Lyme Regis may be at risk of loss due to coastal erosion outflanking defences, depending if a landslide event occurs in this area. Holding the line has the potential to adversely impact on the tourism industry associated with fossil hunting by restricting erosional processes, exposure of the cliff face and potentially restricting access to the cliff face.	Coastal erosion risk to parts of the A3052 and other local roads would remain as a result of potential erosion to the east at Black Ven and The Spittles.	Protection of Scheduled Monument in Lyme Regis.	Minor changes in landscape character of Dorset AONB.	Holding the line in these policy units has the potential to adversely impact upon the geological interest features of Dorset and East Devon World Heritage Site, and the West Dorset Coast SSSI. Gas holder site in Lyme Regis protected from erosion.	No known impacts on water quality. Works in areas selected for holding the line should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) would be protected from natural erosion processes. A policy of HTL has the potential to adversely affect the integrity of cliff habitats within Sidmouth to West Bay SAC but will depend upon the implementation of the policy – *uncertain impact.* No adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that HTL is affecting the reef habitat at present and therefore no adverse effects are foreseen.
2025 – 2055	Maintenance and possible improvements to the defences, including beach recharge. Construction of a set-back defence line and beach management activities on the western side of Lyme Regis.	Continued protection of tourist facilities along the seafront, marine parade and properties along the seafront and at East Cliff/Church Street in Lyme Regis from flooding and erosion. Some properties towards Black Ven and The Spittles on the east side of Lyme Regis could be at risk of loss due to coastal erosion outflanking defences. Holding the line has the potential to adversely impact on the tourism industry associated with fossil hunting by restricting erosional processes, exposure of the cliff face and potentially restricting access to the cliff face.	Coastal erosion risk to parts of the A3052 and other local roads as a result of erosion to the east at Black Ven and The Spittles.	Protection of Scheduled Monument in Lyme Regis.	Minor changes in landscape character of Dorset AONB.	Holding the line in these policy units has the potential to adversely impact upon the geological interest features of Dorset and East Devon World Heritage Site, and the West Dorset Coast SSSI. Gas holder site in Lyme Regis protected from erosion.	No known impacts on water quality. Works in areas selected for holding the line should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) would be protected natural erosion processes. A policy of HTL has the potential to adversely affect the integrity of cliff habitats within Sidmouth to West Bay SAC but will depend upon the implementation of the policy – *uncertain impact.* No adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that it is affecting the reef habitat at present and therefore no adverse effects are foreseen.
2055 – 2105	Maintenance of the existing defences, and possible implementation of short term cliff stabilisation measures along the eastern side	Protection of tourist facilities along the seafront, marine parade and properties along the seafront and at East Cliff/Church Street in Lyme Regis from flooding and erosion. Some properties	Coastal erosion risk to parts of the A3052 and other local roads as a result of erosion to the east at Black Ven and The Spittles.	Protection of Scheduled Monument in Lyme Regis.	Minor changes in landscape character of Dorset AONB.	Holding the line in these policy units has the potential to adversely impact upon the geological interest features of Dorset and East Devon World Heritage Site, and the West Dorset Coast SSSI (except	No known impacts on water quality. Works in areas selected for holding the line should be implemented so as to not adversely impact on the water	Cliff top limestone grassland habitats associated with the West Dorset Coast SSSI (biological) would be protected from natural erosion processes.

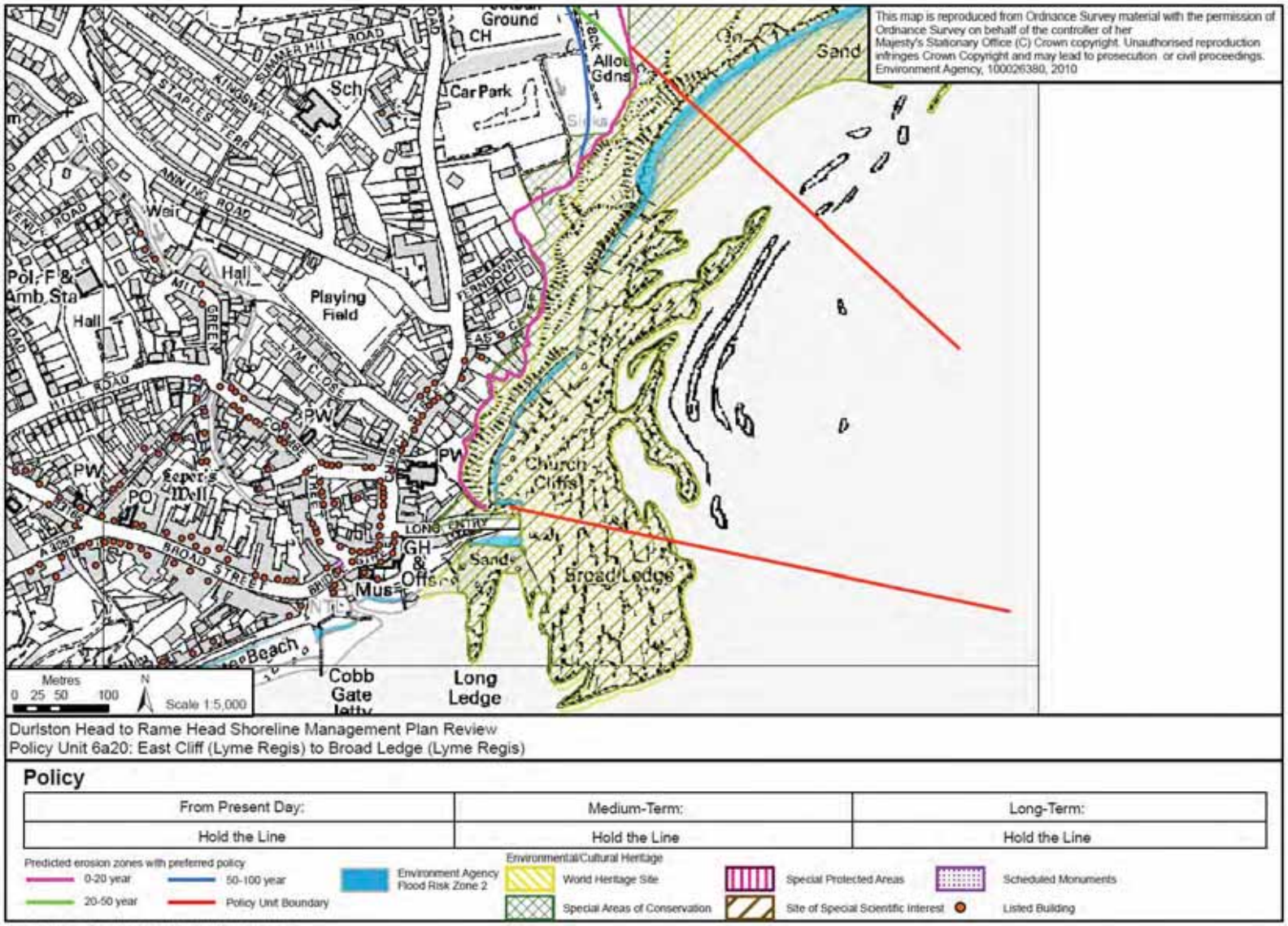
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Lyme Regis
Policy Unit reference:	6a20 to 6a22

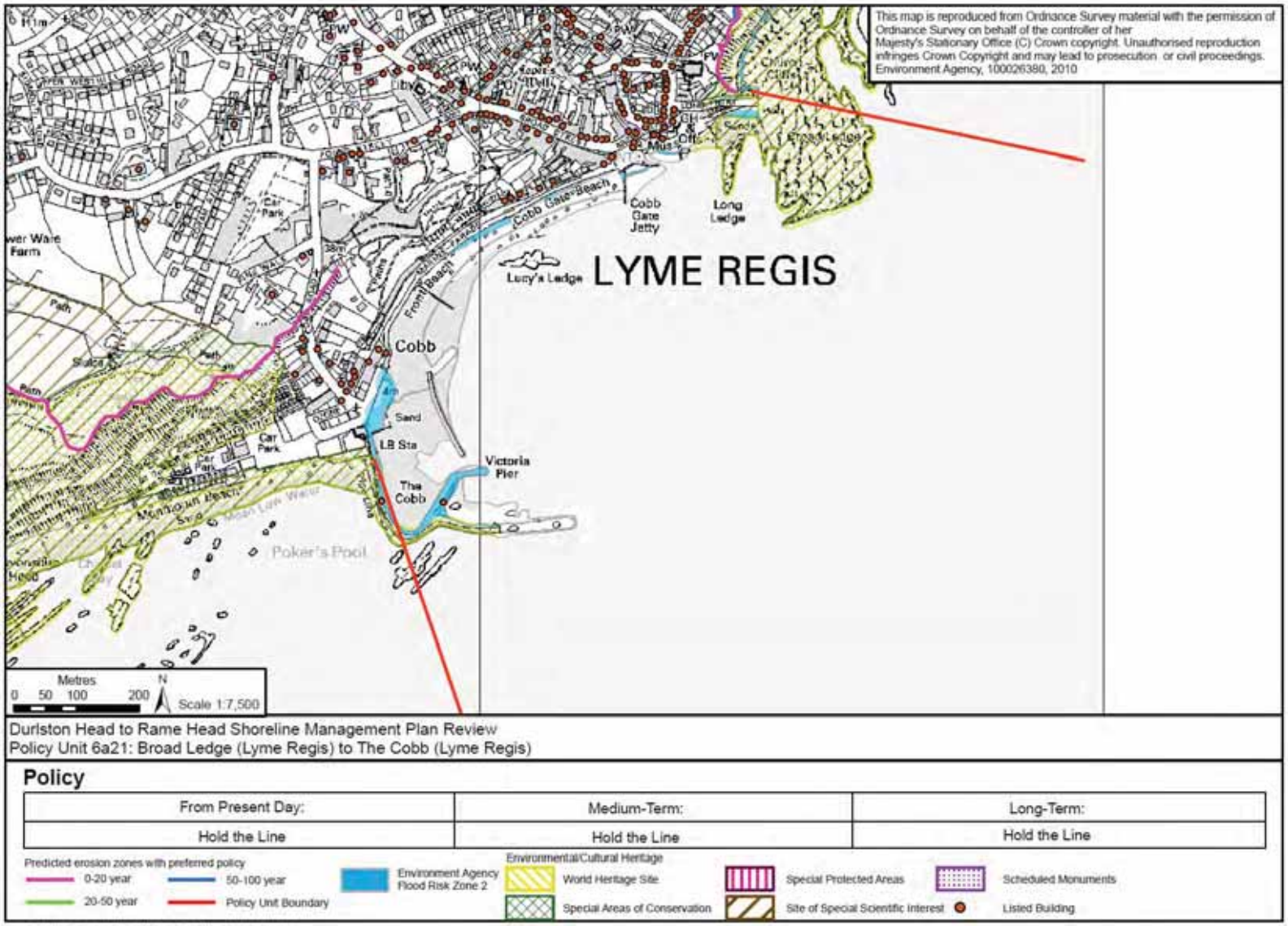
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
	of Lyme Regis. Maintenance and possible improvements to the defences, including beach recharge and beach management activities, along the rest of the Lyme Regis frontage.	towards Black Ven and The Spittles on the east side of Lyme Regis would be at risk of loss due to coastal erosion outflanking defences. Holding the line has the potential to adversely impact on the tourism industry associated with fossil hunting by restricting erosional processes, exposure of the cliff face and potentially restricting access to the cliff face.				between East Cliff and Broad Ledge) Gas holder site in Lyme Regis protected from erosion.	quality status of the coastal waters or compromise the achievement of WFD water quality targets.	A policy of HTL has the potential to adversely affect the integrity of cliff habitats within Sidmouth to West Bay SAC but will depend upon the implementation of the policy – *uncertain impact.* No adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that it is affecting the reef habitat at present and therefore no adverse effects are foreseen.

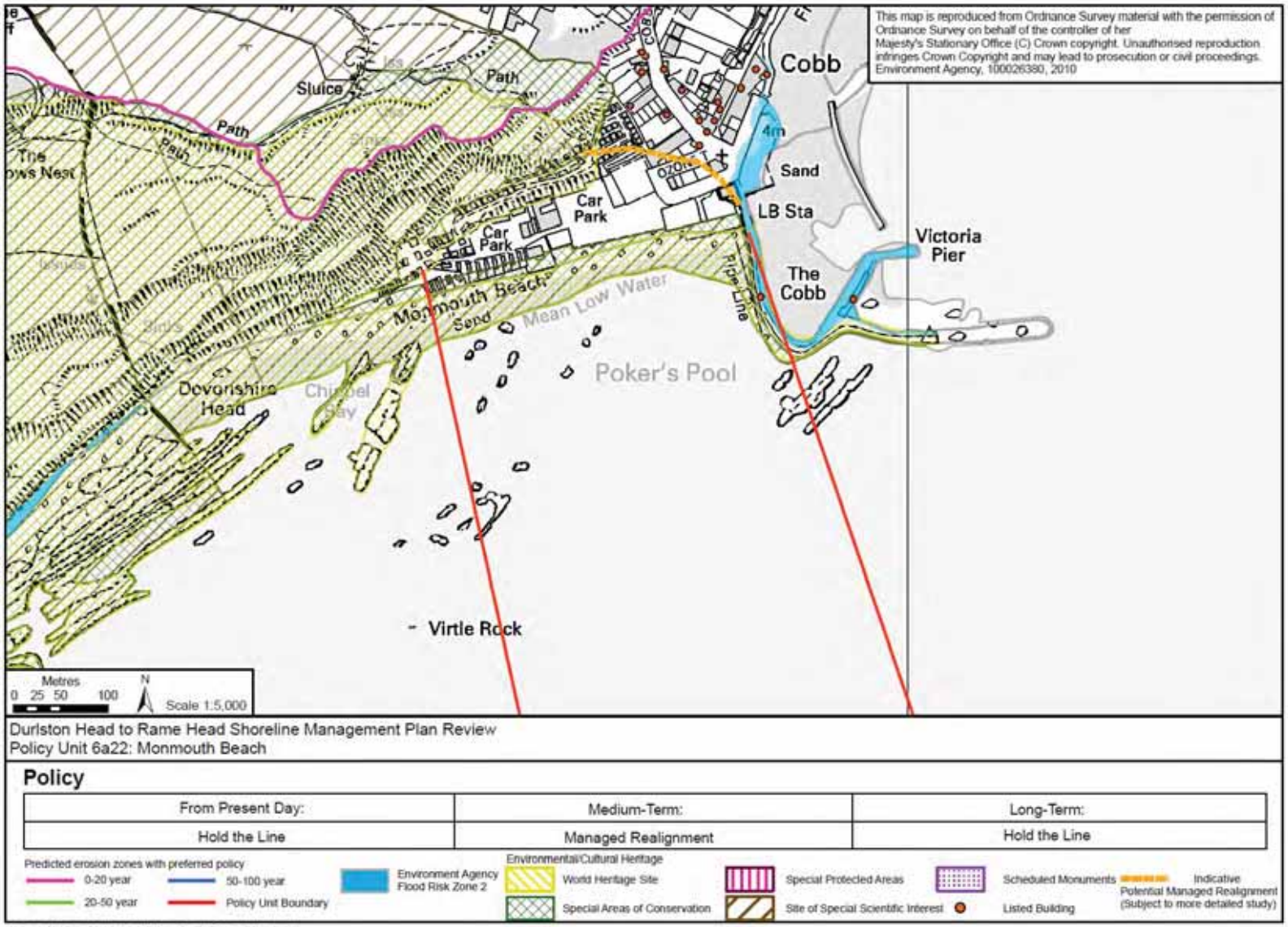
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Monmouth Beach to Haven Cliff (West)**
Policy Unit reference:	**6a23 and 6a24**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section of undefended coast is characterised by dramatic, geologically important cliffs which are subject to large-scale complex landsliding. The natural erosion of these cliffs is integral to their designations and landscape value; therefore the long term vision for this stretch is to continue to allow the natural evolution and functioning of the coast.

The clay-rich cliffs along the western parts of this stretch experience complex landslide behaviour with cyclic backscar retreat as a result of short (episodic) events, which cause rapid retreat by rotational landsliding. The frequency and magnitude of these events varies along this section due to changes in geology. Along the eastern stretch there is a risk of large scale landslide events occurring, but the frequency of these is low; every 250 years or more. Along the western part of this frontage, smaller, more frequent, landslides are characteristic

The preferred plan for this length of coastline could result in the loss or damage to some or all of Rousden Registered Park and Garden.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention**. The cliffs along the eastern part of this stretch of coast are unprotected and so erosion of the cliff base here is expected to continue at a rate of about 0.2m/yr, although no cliff top recession is predicted by 2025. On average, between 3 and 10m of erosion is expected to occur by 2025 towards the western end of this section, supplying sediment to local beach stocks. Despite this, beach narrowing is expected to continue as a result of sea level rise. Due to natural barriers to littoral drift it is unlikely that this stretch of shoreline would be affected by management changes in adjacent sections.
Medium term:	The medium term policy is to continue **No Active Intervention**. Taking account of rising sea levels alone, the rate of cliff erosion would be expected to be higher than experienced historically, although it is likely to be outweighed by the occurrence of landslide events, with about 10m of cliff top recession predicted by 2055 towards the western end. The cliff top towards the eastern end is unlikely to change in position. The cliffs are also sensitive to any increase in precipitation; however, due to uncertainty in future precipitation scenarios, no allowance has been made in these predictions of recession. Both in front of the cliffs and in front of the defences and infrastructure at Monmouth Beach to the east, sea level rise would continue to cause beach narrowing.
Longer-term:	The long term policy is to continue **No Active Intervention** along this undefended cliffed coastline, allowing it to continue to evolve naturally. The cliff base along the eastern part of this section would erode at faster rates than historically due to sea level rise increasing their exposure. However, it is unlikely that recession of the cliff top would occur by 2105. Taking account of rising sea levels alone, the rate of cliff erosion towards the

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

western end of this stretch would be expected to be higher than experienced historically. This though is likely to be outweighed by the occurrence of landslide events, with between 10 and 20m of cliff top recession predicted by 2105.

This recession could be much greater in some areas should a large landslide event occur during this period, the probability of which would increase as the last such event occurred in 1839. Should such an event occur, then it would form a lobe of debris that could inhibit littoral transport processes and have potential downdrift impacts.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a23	Monmouth Beach to Seven Rock Point	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.
6a24	Seven Rock Point to Haven Cliff (West)	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

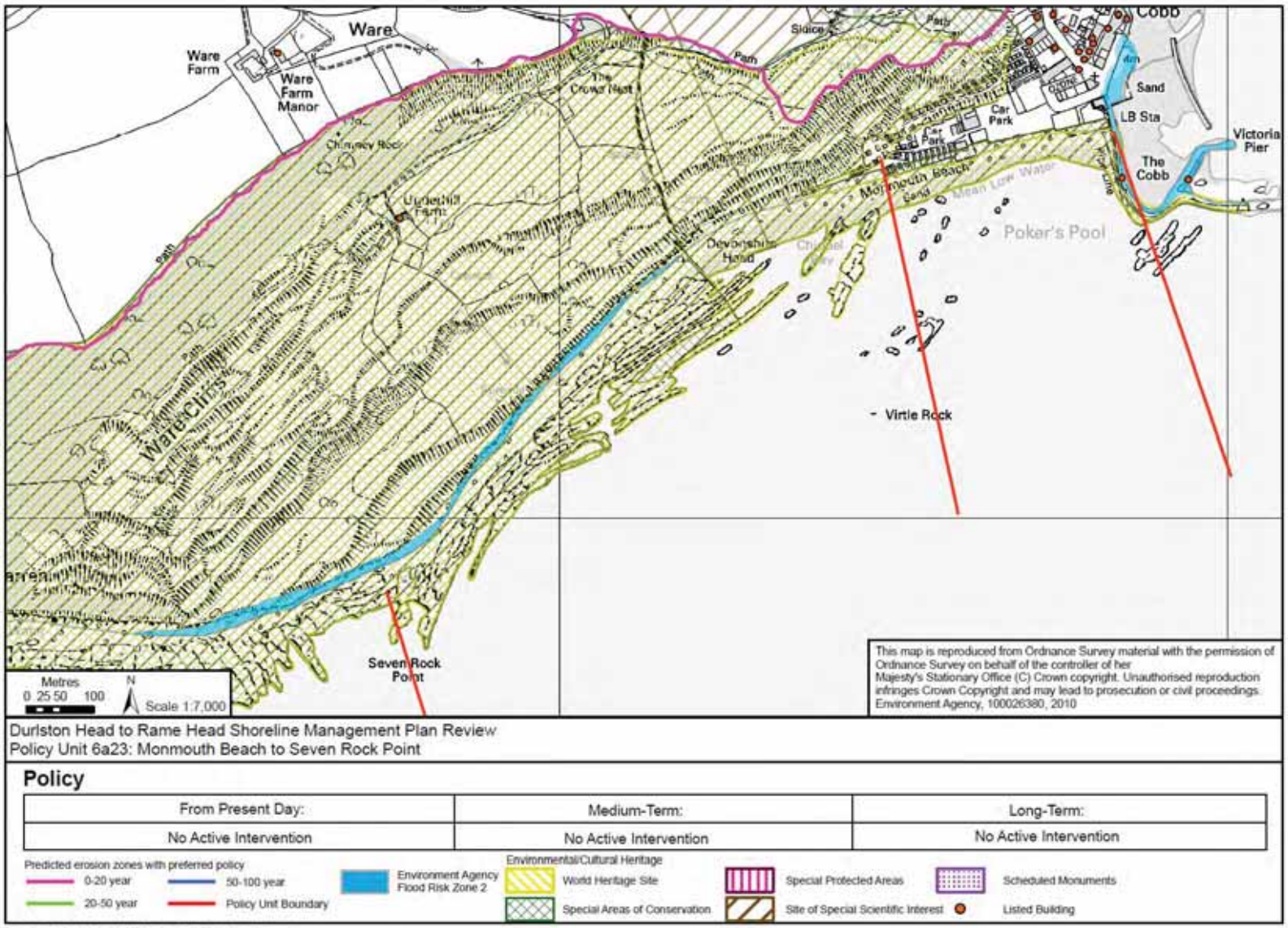
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Monmouth Beach to Haven Cliff (West)
Policy Unit reference:	6a23 and 6a24

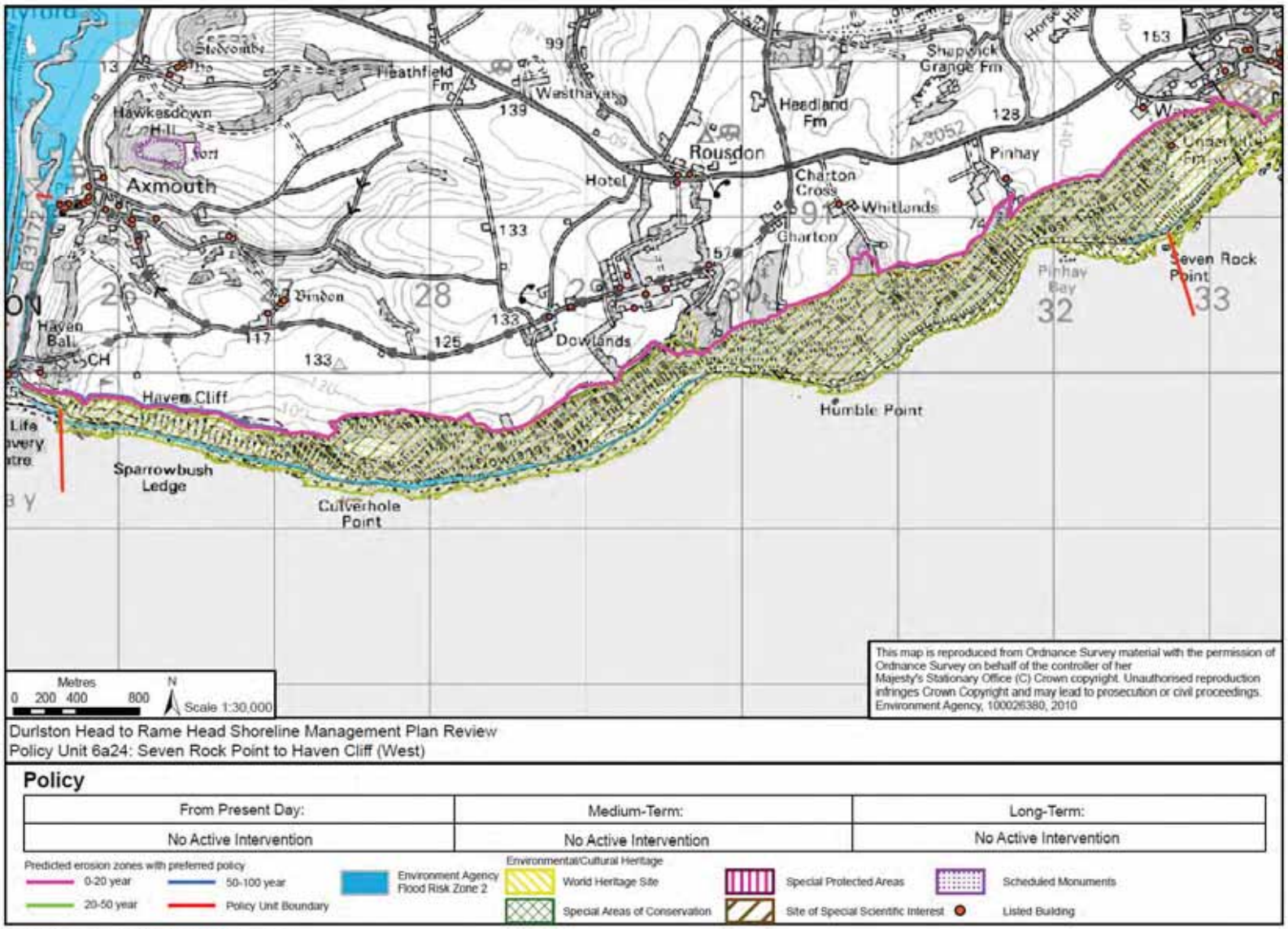
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Cliffline retreat would continue to occur. No management activities.	Loss of some areas of the South West Coastal Path due to erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion.	Erosion risk to Grade 1 and Grade 2 listed buildings Up to approximately 0.5km length of frontage of Rousdon Registered Park and Garden at potential risk from erosion.	Minor change in landscape character of Dorset AONB due to erosion; but not considered detrimental, as it is a natural process.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site, West Dorset Coast and Axmouth to Lyme Regis Undercliffs SSSIs. The preferred policies in these coastal policy units would continue to maintain the geological exposures of these features.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast and Axmouth to Lyme Regis Undercliffs SSSIs (biological) and Axmouth to Lyme Regis Undercliffs NNR due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI would therefore enhance this SAC.
2025 – 2055	Cliffline retreat would continue to occur. No management activities.	Loss of some areas of the South West Coastal Path due to erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion.	Erosion risk to Grade 1 and Grade 2 listed buildings Up to approximately 0.5km length of frontage of Rousdon Registered Park and Garden at potential risk from erosion.	Minor change in landscape character of Dorset AONB due to increased erosion but not considered detrimental, as it is a natural process..	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site, West Dorset Coast and Axmouth to Lyme Regis Undercliffs SSSIs. The preferred policies in these coastal policy units would continue to maintain the geological exposures of these features.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast and Axmouth to Lyme Regis Undercliffs SSSIs (biological) and Axmouth to Lyme Regis Undercliffs NNR due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI would therefore enhance this SAC.
2055 – 2105	Cliffline retreat would continue to occur. No management activities.	Loss of some areas of the South West Coastal Path due to erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion.	Erosion risk to Grade 1 and Grade 2 listed buildings – *potential adverse impacts.* Up to approximately 0.5km length of frontage of Rousdon Registered Park and Garden at potential risk from erosion.	Minor change in landscape character of Dorset AONB due to increased erosion; but not considered detrimental, as it is a natural process..	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site, West Dorset Coast and Axmouth to Lyme Regis Undercliffs SSSIs. The preferred policies in these coastal policy units would continue to maintain the geological exposures of these features.	No known impacts on water quality.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast and Axmouth to Lyme Regis Undercliffs SSSIs (biological) and Axmouth to Lyme Regis Undercliffs NNR due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI would therefore enhance this SAC.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Axe Estuary**
Policy Unit reference:	**6a25 to 6a28**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term vision for the Axe Estuary is to continue to minimise the risk of flooding to areas of property and infrastructure, whilst elsewhere realigning existing defences to provide a reduction in water levels and thus flood risks whilst also providing opportunity for habitat creation.

This approach would include retaining defences in the outer parts of the estuary, to protect the towns, the highway and the sewage works. The Seaton Marshes flood defence scheme would help to reduce the risk of flooding from more frequent events in this area, although there would still be a risk from more extreme events.

Set back of defences, or regulated tidal exchange, would be considered in the upstream area of the Axe Estuary that extends from the north of Axmouth on the east bank, up to the A3052 bridge at Colyford, and down to the northern edge of Seaton on the west bank. Depending upon the locations this policy would result in the loss of some Grade 4 agricultural land. The potential impacts on the Seaton Tramway route would also need to be examined, although Managed Realignment options should seek to maintain this important tourism asset within the design of any scheme.

The spit that extends across the mouth of the Axe Estuary from the west is supplied with sediment as a result of the longshore transport of material from the slow erosion of the cliffs further west (between Seaton Hole and Beer Head). This is expected to continue as a result of the preferred policies in these areas. The spit provides protection against flooding and direct wave action within the estuary and the long term Plan is to allow it to continue to behave naturally over the next 100 years, although monitoring of this feature will be required to ensure its defence function is adequately maintained. The breakwater located at the mouth of the Axe would continue to be maintained to help to keep a navigable channel open for the marine facilities within the estuary.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** of the existing defences within the outer parts of the Axe Estuary, including continued maintenance of the breakwater arm at the mouth estuary. Continuing to retain these will help to keep the mouth open and continue to afford protection to the Axmouth road bridge whilst allowing the discharge to the sea to continue. It will also ensure that subsequent backing up of water and upstream flood risk is reduced. Retention of the existing defences along the eastern estuary shoreline will not significantly affect the evolution of the estuary as defences are primarily backed by steeply rising ground that would, in itself, hinder any rollover process. The ongoing presence of the breakwater at the mouth may reduce the transport of sediment to the east of Seaton, although this does not appear to be an impact at the current time and is expected to be of little significance in the future. To protect the Seaton frontage from the risk of combined tidal and fluvial flooding, improvements to the existing defences could be required, either raising the defence height or, if necessary, reconstructing defences such that they will be better able to provide adequate levels of protection in the longer-term. Continued provision of flood protection in this area would reduce the risk of flooding from more frequent events, although there would still be a risk from more extreme events. Within the upper parts of the Axe Estuary, the recommended short term policy is one of **Managed Realignment** at strategic locations where there are few assets within the flood plain. This would need to be subject to detailed investigations to identify specific locations and the appropriate means by which

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	to implement this. Specific flood risk management actions under this Policy will not increase flood risk to the Seaton regeneration area located at the southern end of Seaton Marshes (refer to Policy Unit 6a26). In implementing this policy more detailed consideration will need to be given to the effect on tidal prism and tidal flow through the estuary mouth, as a reduction in this could result in the mouth being closed by sediment infill which would have impacts upon the whole estuary. There may be potential to reduce flood risk in the Seaton East unit by raising the level of defence along the open coast as well (refer to Policy Unit 6a28). Along the Axe Estuary spit, which extends across the mouth from west to east, the short term policy is for **No Active Intervention**. Sediment transport to the spit from the west would continue to maintain the spit and here beaches would remain generally stable and could continue to accrete.
Medium term:	The medium term policy is to continue to **Hold the Line**. This would need to include continued maintenance of the breakwater arm at the mouth of the Axe estuary and the defences along the eastern estuary shoreline up to Axmouth, as well as maintenance of the defences along Seaton estuary frontage in order to maintain the existing level of protection against flooding to the town of Seaton. Within the upper Axe Estuary, there would be continued **Managed Realignment** or **Hold** current realignments that were implemented in the short term. The continued policy of Managed Realignment will allow the estuary to adapt largely naturally to the pressures of climate change, whilst affording the option for ongoing maintenance of any previously constructed set-back defences, or even implementation of further realignment measures as appropriate. There would continue to be **No Active Intervention** along the Axe Estuary spit. The spit would continue to receive some sediment moved alongshore from further west and should remain stable; however it is possible that this supply would ,not keep pace with the impacts of sea level rise. There could be elongation with re-curving of the spit into the harbour and beach steepening could occur along the length of the spit as material is pushed onshore by overwashing storm waves.
Longer-term:	The long term policy is to continue to **Hold the Line** of the existing defences in the outer parts of the estuary. This would include continued maintenance of the breakwater arm at the mouth of the Axe estuary and the defences along the estuary shoreline up to Axmouth. Increases in future flood risk will be mainly driven by climate change, both by increasing flows and rising sea levels. Continued defence of this section would involve higher, more robust, defences to counter rising sea levels. However, continued provision of flood protection in this area would reduce the risk of flooding from frequent events, although there would still be a risk from more extreme events. Retention of the existing defences along the eastern estuary shoreline will not significantly affect the evolution of the estuary as defences are primarily backed by steeply rising ground that would, in itself, hinder any rollover process. Within the upper estuary, there would be continued **Managed Realignment** or

Hold the Line along current realignments.

There would continue to be **No Active Intervention** along the Axe Estuary spit that extends across the mouth of the estuary, which would be allowed to continue to evolve naturally. The amount of sediment moved alongshore to the spit is unlikely to be sufficient to maintain the spit In its current state, under a scenario of sea level rise; the tendency of the spit will be to migrate inland in response to sea level rise. This would result in an increased risk of overtopping and breaching as the coast becomes more exposed where the spit attaches to the land.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a25	**Axe Estuary (Mouth Breakwater to Axmouth North)**	Continue to maintain defences through a **Hold the Line policy**.	Continue to maintain defences through a **Hold the Line policy**.	Continue to maintain defences through a **Hold the Line policy**.
6a26	**Axe Estuary (Axmouth North to Seaton North)**	Investigate and implement **Managed Realignment** in order to reduce flood risk in other parts of the estuary and provide habitat opportunities.	Continue the policy of **Managed Realignment**.	Continue the policy of **Managed Realignment**.
6a27	**Axe Estuary (Seaton East)**	Continue to maintain defences through a **Hold the Line policy**.	Continue to maintain defences through a **Hold the Line policy**.	Continue to maintain defences through a **Hold the Line policy**.
6a28	**Axe Estuary (Spit)**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Axe Estuary
Policy Unit reference:	6a25 to 6a28

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

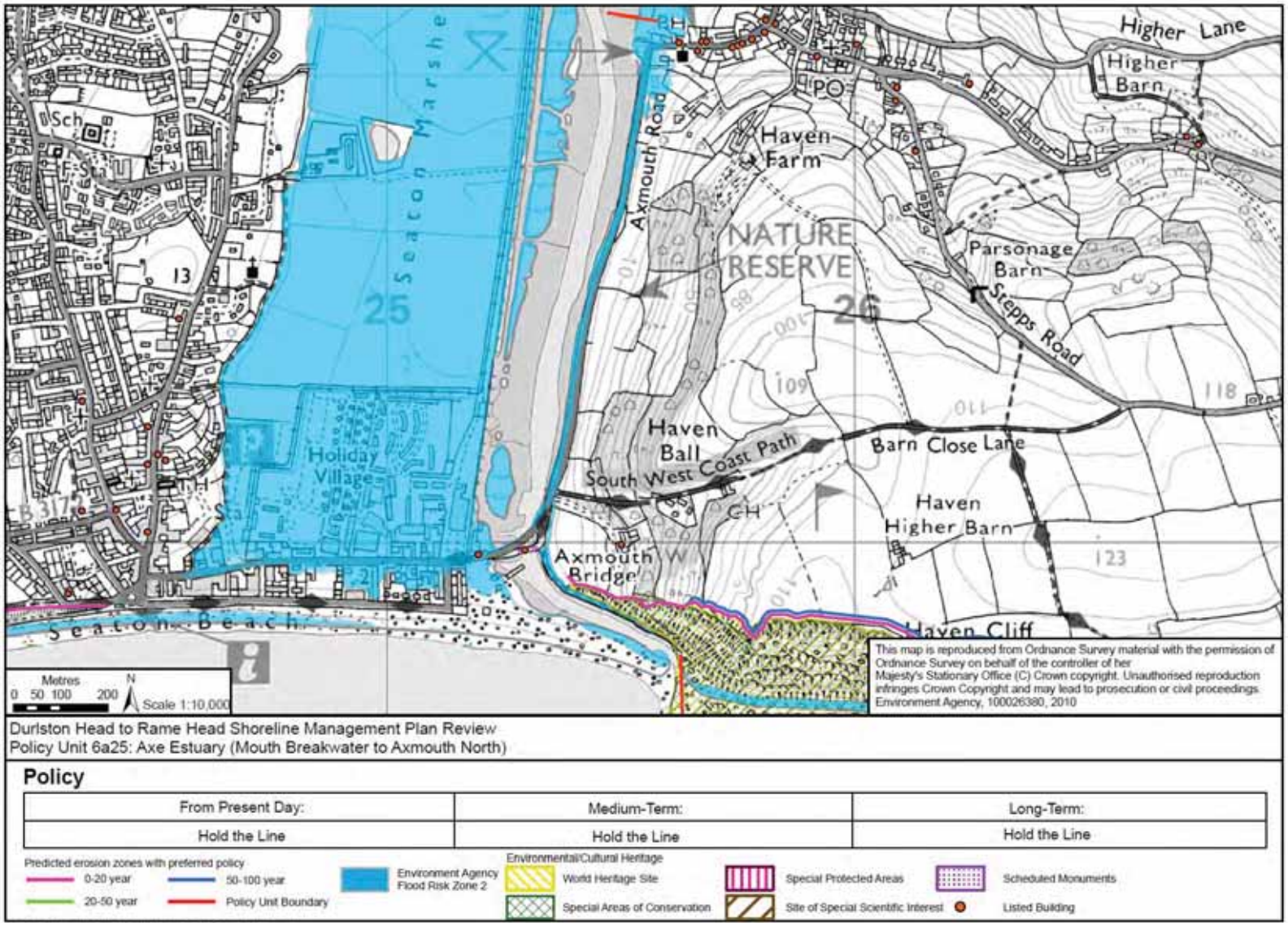
Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Maintenance and possible improvements of the existing defences and breakwater. Investigation and implementation of Managed Realignment at strategic locations. No management activity along the spit.	Continued protection of properties in Seaton from flood-risk Loss of some areas of the South West Coastal Path due to flooding and erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion and flooding. Flood risk to the B3172 linking Axmouth and Seaton, the A3052 at Colyford, and the Seaton Tramway. Where the tramway may be affected by a Managed Realignment policy, measures will be incorporated into the policy (e.g. raising tramway or improving embankment) to maintain it's economic value.	Potential partial loss of up to 1 Scheduled Monument (SM) due to erosion Flood risk to Grade 1 and Grade 2 listed buildings. Possible impact on Roman harbour, wrecks and palaeo-environmental deposits in the Axe Estuary through Managed Realignment – *potential adverse impact*	Minor to moderate change in landscape character of Dorset AONB.	No known impacts on geology or soils.	Works in areas selected for Managed Realignment should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Potential for Managed Realignment to enhance habitat within parts of the Axe Estuary. A policy of HTL in 6a25 has the potential to adversely affect the integrity of cliff habitats within Sidmouth to West Bay SAC but will depend upon the implementation of the policy – *uncertain impact.* No adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that HTL is affecting the reef habitat at present and therefore no adverse effects are foreseen.
2025 – 2055	Maintenance and possible improvements to the existing defences and breakwater would occur. Maintenance of realigned defences and possible implementation of further realignments. No management activity along the spit.	Continued protection of properties in Seaton from flood-risk Loss of some areas of the South West Coastal Path due to flooding and erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion and flooding Flood risk to the B3172 linking Axmouth and Seaton, the A3052 at Colyford, and the Seaton Tramway. Where the tramway may be affected by a Managed Realignment policy, measures will be incorporated into the policy (e.g. raising tramway or improving embankment) to maintain it's economic value.	Potential partial loss of up to 1 Scheduled Monument (SM) due to erosion Flood risk to Grade 1 and Grade 2 listed buildings. Possible impact on Roman harbour, wrecks and palaeo-environmental deposits in the Axe Estuary through Managed Realignment – *potential adverse impact*	Minor to moderate change in landscape character of Dorset AONB.	No known impacts on geology or soils.	Works in areas selected for Managed Realignment should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Potential for Managed Realignment to enhance habitat within parts of the Axe Estuary A policy of HTL in 6a25 has the potential to adversely affect the integrity of cliff habitats within Sidmouth to West Bay SAC but will depend upon the implementation of the policy – *uncertain impact.* No adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that HTL is affecting the reef habitat at present and therefore no adverse effects are foreseen.
2055 – 2105	Maintenance and possible improvements to the existing defences and breakwater would occur. Maintenance of realigned defences and possible implementation of further realignments. No management activity along the spit.	Continued protection of properties in Seaton from flood-risk Loss of some areas of the South West Coastal Path due to flooding and erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion and flooding Flood risk to the B3172 linking Axmouth and Seaton, the A3052 at Colyford, and the Seaton Tramway. Where the tramway may be affected by a Managed Realignment policy, measures will be incorporated into the policy (e.g. raising	Potential partial loss of up to 1 Scheduled Monument (SM) due to erosion Flood risk to Grade 1 and Grade 2 listed buildings. Possible impact on Roman harbour, wrecks and palaeo-environmental deposits in the Axe Estuary through Managed Realignment – *potential*	Minor to moderate change in landscape character of Dorset AONB.	No known impacts on geology or soils.	Works in areas selected for Managed Realignment should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Potential for Managed Realignment to enhance habitat within parts of the Axe Estuary A policy of HTL in 6a25 has the potential to adversely affect the integrity of cliff habitats within Sidmouth to West Bay SAC but will depend upon the implementation of

The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

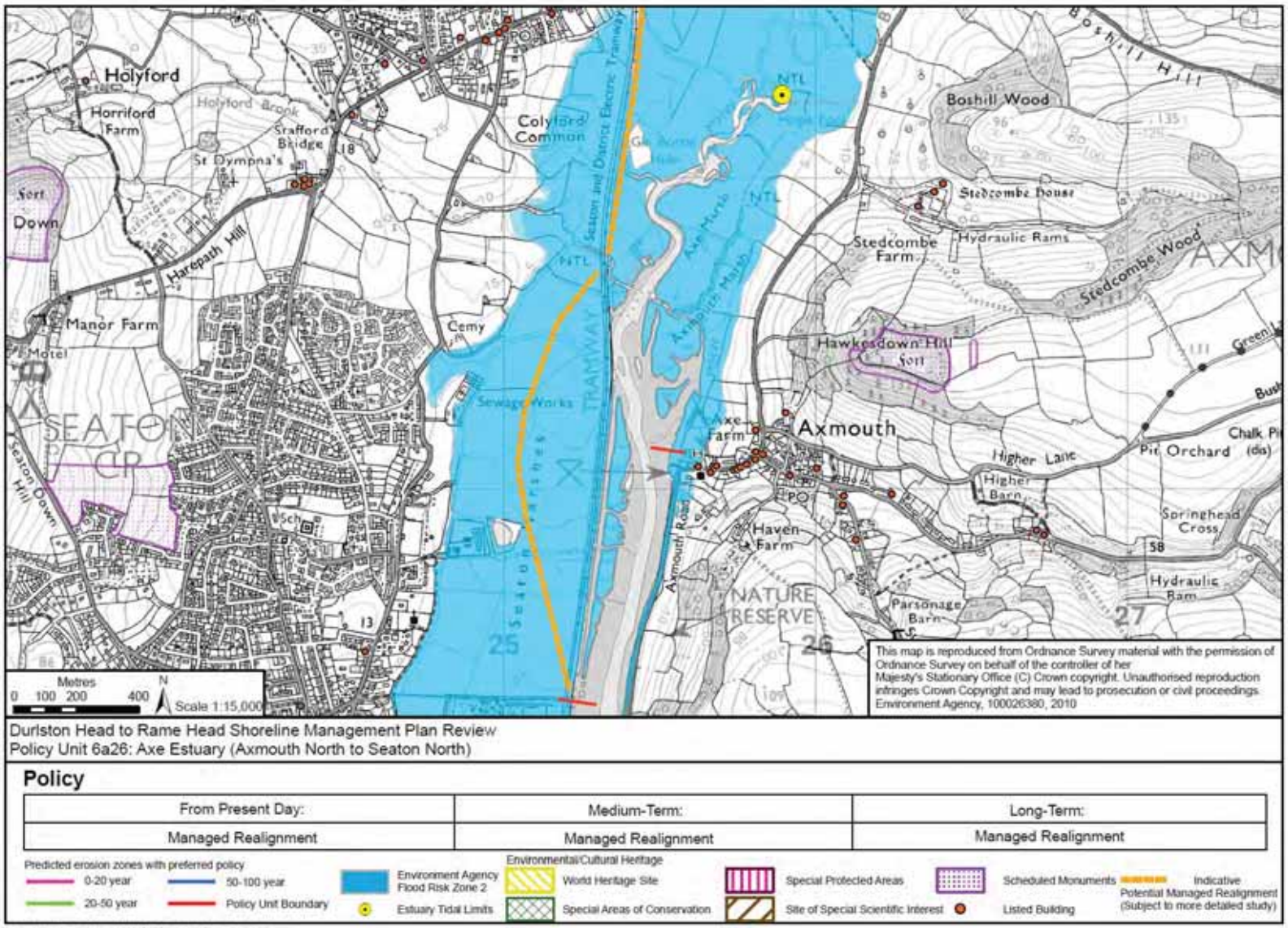
Location reference:	Axe Estuary
Policy Unit reference:	6a25 to 6a28

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION								
Time Period	**Management Activities**	**Property, Population and Human Health**	**Land Use, Infrastructure and Material Assets**	**Historic Environment**	**Landscape Character and Visual Amenity**	**Earth Heritage, Soils and Geology**	**Water**	**Biodiversity, Flora and Fauna**
			tramway or improving embankment) to maintain it's economic value.	*adverse impact*				the policy – *uncertain impact.* No adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that HTL is affecting the reef habitat at present and therefore no adverse effects are foreseen.

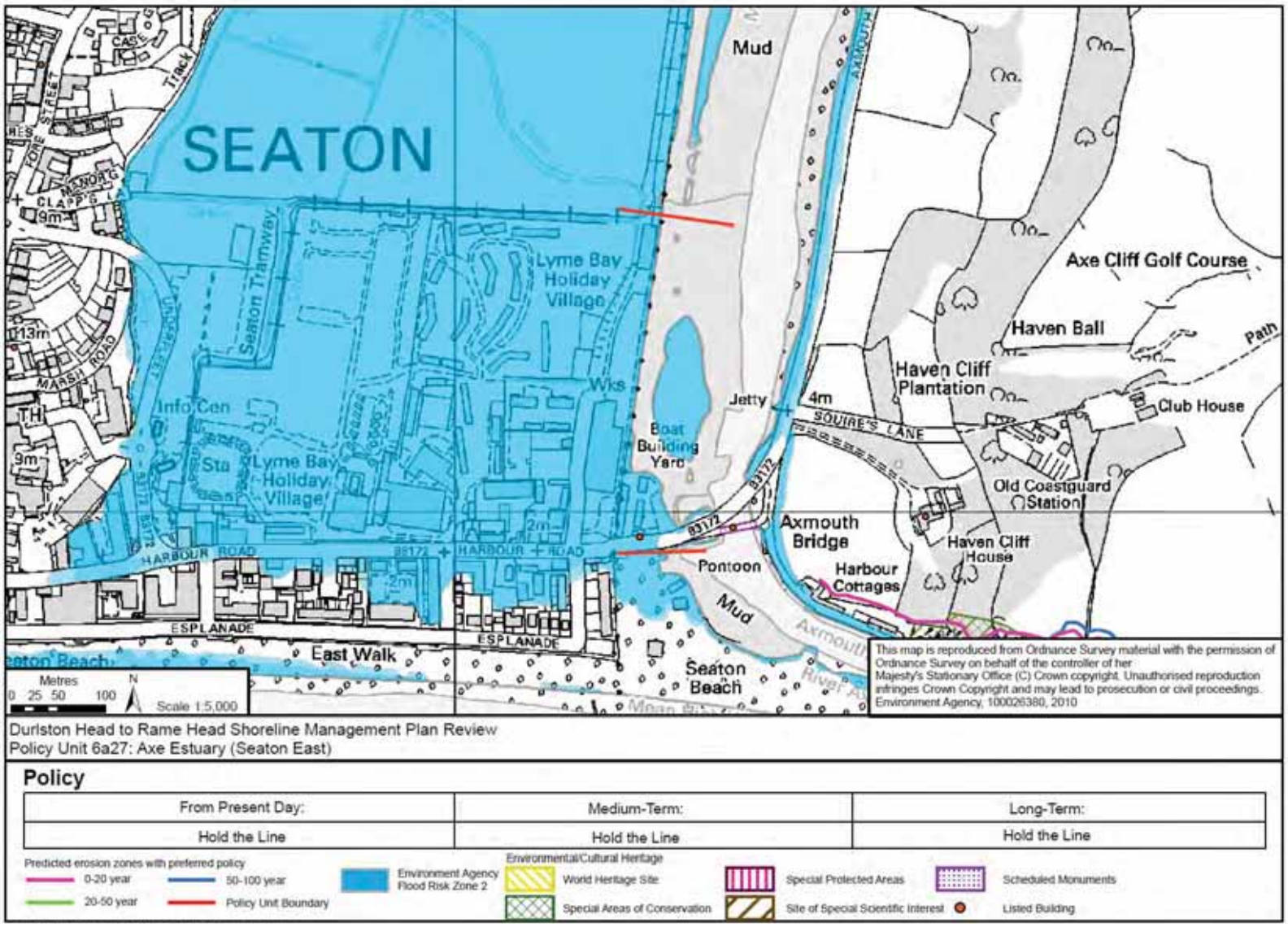
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



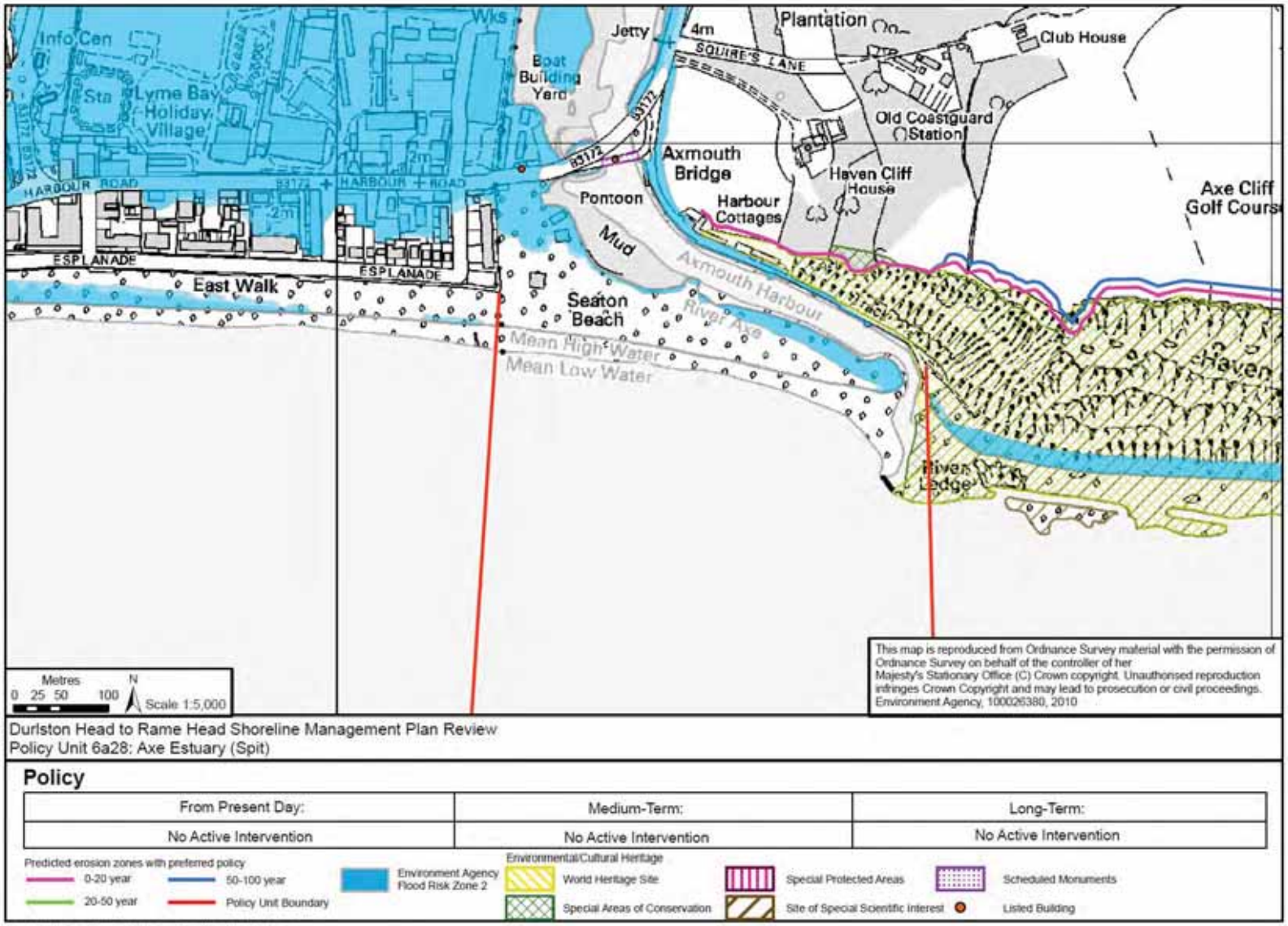
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Seaton to Seaton Hole**
Policy Unit reference:	**6a29 and 6a30**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The large number of properties and assets at risk in the Seaton area justifies a long term Plan to continue to reduce the risk of flooding and erosion along this section by continuing to defend over the next 100 years. This will require more substantial defences than presently exist, but could be aided by the retention of a beach along this section that would receive continued small amounts of sediment supply as a result of the slow erosion of the cliffs to the west (between Seaton Hole and Beer Head).

It is recognised however, that it may not be economically justified, nor environmentally acceptable, to totally prevent cliff recession to the west of the main commercial centre, in the long term. Here, despite the presence of a rock revetment, cliff recession still occurs. Therefore here, the plan is to continue to reduce cliff erosion, whilst accepting that there remains a risk to cliff top properties and infrastructure. As part of this Plan, measures therefore need to be developed in order to manage this long term risk.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to continue to **Hold the Line** to protect the commercial assets of Seaton by maintaining existing seawalls that protect low-lying areas from sea flooding along the eastern part of this stretch, and defences which protect cliff top assets towards the west. Between Seaton and Seaton Hole, this will involve maintaining the rock revetment that extends along the cliff toe for the length of this section to reduce the risk of coastal erosion. Whilst maintenance of the defence would continue to reduce the rate of recession, there would be a need for measures to be put in place to manage the ongoing risk of cliff erosion, including monitoring of recession rates to ensure that the area of risk from erosion is continually informed. The defences along the toe of the cliff have reduced the rate of cliff erosion and this has also been aided by natural beach accumulation in the very recent past. It is expected that this lower rate of recession will continue until 2025, with total erosion of 3 to 5m predicted over this period. As these cliffs are mudstones, this erosion will not significantly contribute to the beaches. During this period, there would be a continued supply of sediment to the spit that extends across the mouth of the Axe estuary.
Medium term:	Along the extensively developed area of Seaton, the recommended medium term policy is to continue to **Hold the Line** of the existing defences. This is likely to require re-building defences to be much larger in order to maintain adequate levels of protection in the longer term as sea levels rise. Beach narrowing along this stretch may also necessitate the need for control structures and/or beach recharge to be constructed along the Seaton frontage. However, any works would need to considered the longshore linkages to adjacent stretches of coast and in particular to the spit that extends across the mouth of the Axe Estuary. Between the western end of Seaton and Seaton Hole there would be continued maintenance of the rock revetment. However, continued retreat of the adjacent cliffs may mean that the rock revetment could stand several metres seaward of the cliff toe and would therefore no longer be effective at slowing erosion. At this point reconstruction of the revetment at the toe of the cliff should be considered. Under this policy of **Managed Realignment** some

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	limited cliff erosion would still be allowed to occur, thus maintaining their environmental status. There would be a potential erosion risk to the cliff top assets and plans would need to be put in place, such as exit strategies, for managing this future risk. Ongoing monitoring of recession rates would be needed to ensure that the area of risk from erosion is continually informed.
Longer-term:	The long term policy is to continue to protect the main commercial centre of Seaton through a **Hold the Line** policy. If not undertaken in the medium term, this may require larger defences to built to maintain adequate levels of protection. Under sea level rise, beaches along this section could become very narrow during this period, especially as sediment eroded from the mudstone cliffs along this section would be unlikely to contribute sediment to the fronting beaches. This could start to inhibit sediment transported along the frontage, which is an important source of sediment for the spit at the mouth of the Axe Estuary. To the west, between Seaton and Seaton Hole, the long term policy is to continue **Managed Realignment**. This would mean continued maintenance of the rock revetment along this section, and potential re-building of the revetment in a realigned position, should the cliff have retreated enough to render the existing structure ineffective. With this policy, some limited cliff erosion would still be allowed to occur, thereby maintaining the environmental status of the cliffs. As a result there would still be a potential risk of erosion to the cliff top assets and plans would need to be put in place, such as exit strategies, for managing this. Ongoing monitoring of recession rates would be needed to ensure that this risk is continually informed.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a29	**Axe Estuary (Spit) to Seaton (West)**	Continue to maintain existing defences under a **Hold the Line** policy to maintain protection to Seaton.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.
6a30	**Seaton (West) to Seaton Hole**	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing rock revetment, until it becomes ineffective; at this time consider moving the revetment back to the base of the retreating cliff toe under a **Managed Realignment** policy.	Continue to maintain existing rock revetment, until it becomes ineffective; at this time consider moving the revetment back to the base of the retreating cliff toe under a **Managed Realignment** policy.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Seaton to Seaton Hole
Policy Unit reference:	6a29 and 6a30

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Maintenance of the existing defences.	Continued protection of properties and tourism facilities at Seaton from erosion and flood-risk. Loss of some areas of the South West Coastal Path due to erosion.	Flood and coastal erosion risk of B3172 and local roads in the short to long term.	No known impacts on archaeological features.	Minor change in landscape character of Dorset AONB due to erosion and flooding between Seaton West and Seaton Hole.	No likely impacts on geology or soils though maintaining the existing defences in this policy unit has the potential to affect the adjacent Sidmouth to Beer Coast SSSI.	Any works should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	A policy of HTL in 6a30 has the potential to adversely affect the integrity of vegetated cliff habitats within Sidmouth to West Bay SAC. However, the medium and long term policies in this unit of MR are likely to offset any short term habitat losses. Consequently, there are unlikely to be adverse effects on the European site. No adverse effects on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that HTL is affecting the site at present and therefore no adverse effects are foreseen. Managed Realignment will be beneficial for the reef habitat.
2025 – 2055	Maintenance and improvements to the existing defences along the Seaton frontage. Maintenance of the rock revetment between Seaton and Seaton Hole, until it becomes ineffective; at this time consider moving the revetment back to the base of the retreating cliff toe.	Continued protection of properties and tourism facilities at Seaton from erosion and flood-risk, although erosion risk to some cliff top properties between Seaton and Seaton Hole. Loss of some areas of the South West Coastal Path due to erosion.	Flood and coastal erosion risk of B3172 and local roads in the short to long term.	No known impacts on archaeological features.	Minor change in landscape character of Dorset AONB due to increased erosion and flooding between Seaton West and Seaton Hole.	No likely impacts on geology or soils though maintaining the existing defences in this policy unit has the potential to affect the adjacent Sidmouth to Beer Coast SSSI.	Any works should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Managed Realignment in 6a30 is likely to be favourable to the cliff habitats within Sidmouth to West Bay SAC and thus no adverse effects are anticipated in the medium term. No adverse effects on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that HTL is affecting the site at present and therefore no adverse effects are foreseen. NAI will be beneficial for the reef habitat.
2055 – 2105	Maintenance and improvements to the existing defences along the Seaton frontage. Maintenance of the rock revetment between Seaton and Seaton Hole, until it becomes ineffective; at this time consider moving the revetment back to the base of the retreating cliff toe.	Continued protection of properties and tourism facilities at Seaton from erosion and flood-risk, although erosion risk to some cliff top properties between Seaton and Seaton Hole. Loss of some areas of the South West Coastal Path due to erosion.	Flood and coastal erosion risk of B3172 and local roads in the short to long term.	No known impacts on archaeological features.	Minor change in landscape character of Dorset AONB due to increased erosion and flooding between Seaton West and Seaton Hole.	No likely impacts on geology or soils though maintaining the existing defences in this policy unit has the potential to affect the adjacent Sidmouth to Beer Coast SSSI.	Any works should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Managed Realignment in 6a30 is likely to be favourable to the cliff habitats within Sidmouth to West Bay SAC and thus no adverse effects are anticipated in the long term. No adverse effects on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that HTL is affecting the site at present and therefore no adverse effects

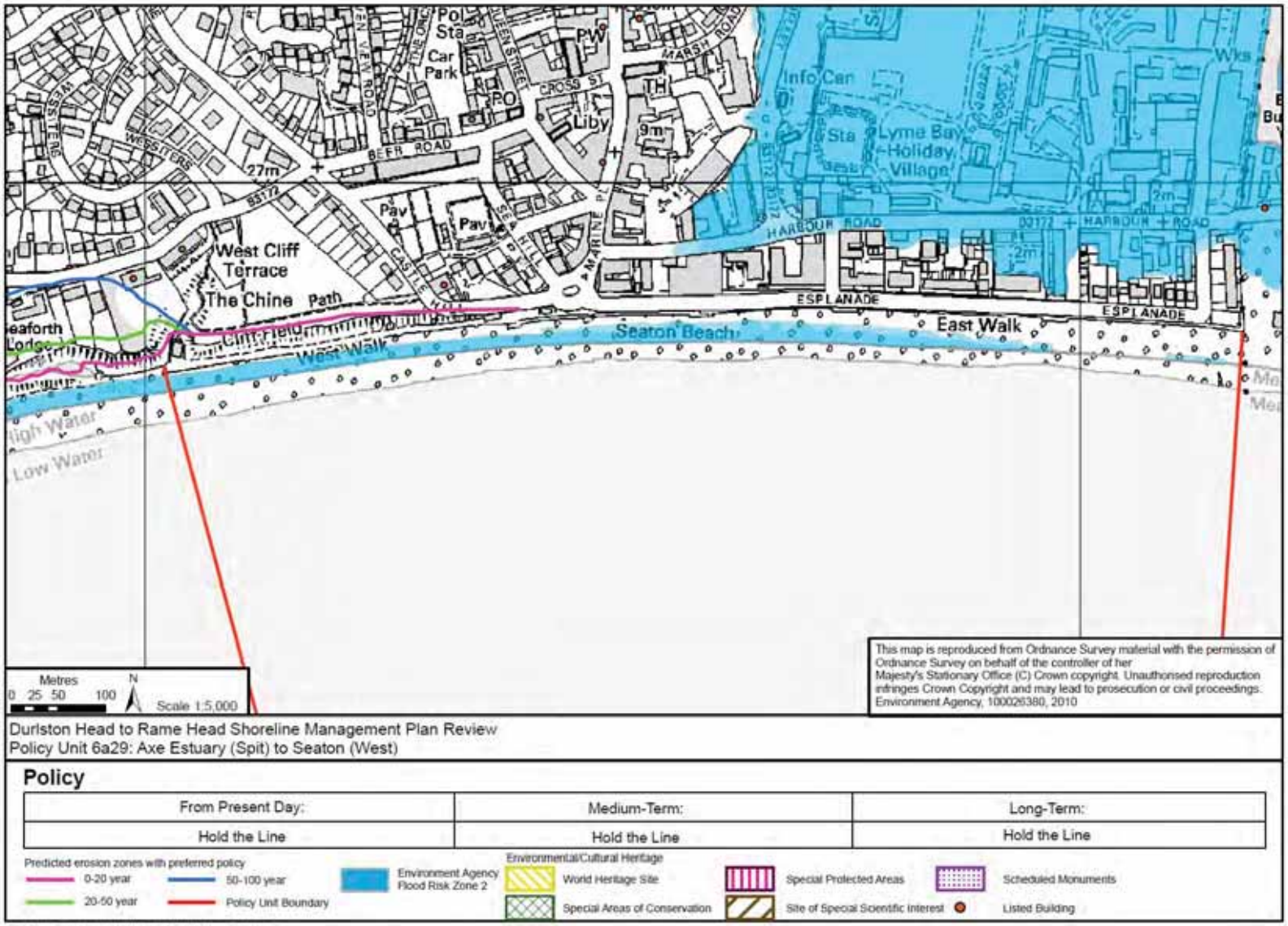
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Seaton to Seaton Hole
Policy Unit reference:	6a29 and 6a30

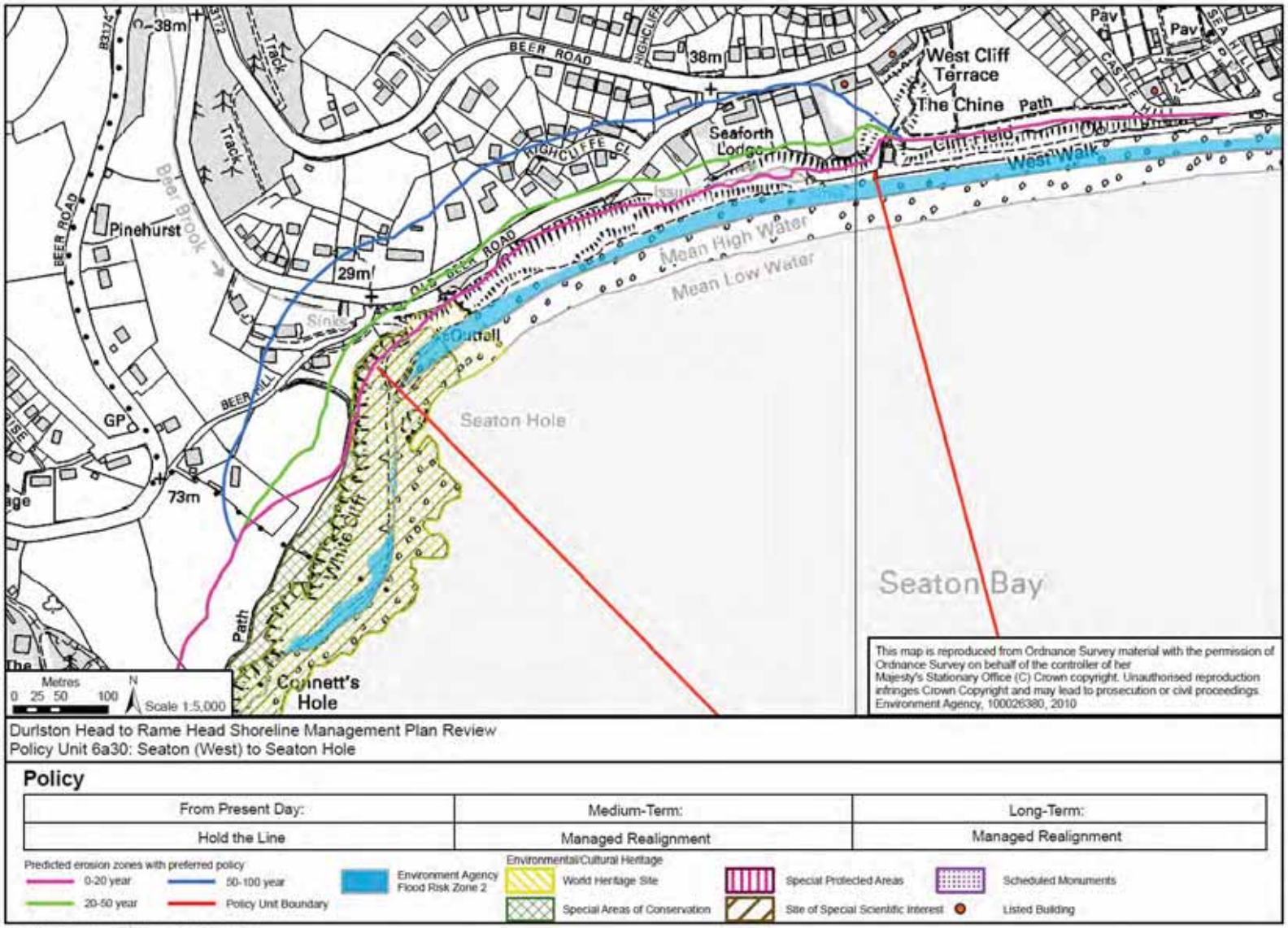
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
								are foreseen. NAI will be beneficial for the reef habitat.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Seaton Hole to Beer Head**
Policy Unit reference:	**6a31 to 6a33**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term Plan for this section of predominantly undefended cliffed coastline is to allow it to continue to evolve naturally, whilst ensuring that the risk of flooding and erosion to the town of Beer continues to be managed.

At Beer, the small pocket beach, as well as being an important asset in terms of tourism and fishing, also serves an important defence role. The plan for Beer is to continue to reduce flood and erosion risk by maintaining the beach in this area.

The chalk cliffs that dominate this section are largely resistant to erosion and there has been negligible erosion of this section in the past, with only very localised small to medium sized rock falls occurring every 10 to 100 years. However, where cliff recession does occur, this could result in the loss of a few cliff top properties in the longer term.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention** along the undefended cliffs that dominate this stretch. The current pattern of recession is expected to continue over this period to 2025, with total erosion of the chalk cliffs along this stretch predicted to be between 0 and 50m possible, depending on whether or not a cliff failure event occurs. At Beer, the short term policy is to **Hold the Line** of the existing defences where they occur, including the short length of concrete groyne which is important for retaining the beach. These defences would need to be improved during this period in order to implement this policy. This would involve reconstruction of the concrete groyne and raising the height of defences overall at the back of the beach to continue to protect assets and maintain access to the beach. Maintenance of the short length of existing defence at Beer is unlikely to have a significant impact upon coastal evolution as the area is backed by hard, resistant cliffs and also Beer is an isolated pocket beach that has little or no connectivity with adjacent sections of coast. The groyne is believed to help stabilise the beach and reduce volatility, therefore reducing exposure of the cliff toe to wave action. The low rate of cliff erosion means that there is only a small amount of contemporary sediment input to the beaches along this stretch, as well as to the beaches further east fronting Seaton. During this period the beach should remain quite stable.
Medium term:	The medium term policy is to continue with **No Active Intervention** along the majority of this undefended section of cliffed coast. The resistant nature of the chalk cliffs will continue to result in negligible cliff recession, except for very infrequent localised rock falls. It is not, however, possible to predict the exact locations of these. Total erosion of between 0 and 50m is possible by 2055, depending on whether or not a cliff failure event occurs. These events will continue to provide small amounts of contemporary sediment inputs to the coastal system, which will feed local pocket beaches as well as be transported eastwards to supply beaches at Seaton. Beach narrowing will however continue as this supply will not keep pace with sea

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	level rise. At Beer, the medium term policy is to continue to **Hold the Line**. This would involve maintenance of the short lengths of defences to ensure adequate levels of protection are provided with the main aim of retaining beach material to reduce wave exposure at the toe of the cliff.
Longer-term:	The long term policy of **No Active Intervention** will continue along the predominantly undefended cliffed coastline, allowing this coastline to evolve naturally. Cliff recession will remain negligible, except for very infrequent localised rock falls, with localised erosion of up to 50m possible by 2105. These events will continue to provide small amounts of contemporary sediment inputs to feed local pocket beaches as well as be transported eastwards to supply beaches at Seaton, but unlikely to counter beach narrowing caused by rising sea levels. A number of pocket beaches along this stretch may be lost completely as a result of higher sea levels. At Beer, the long term policy is to **Hold the Line**. This would involve the maintenance and likely construction of larger defences at Beer in order to ensure adequate levels of flood protection and access to the shoreline are provided. The pocket beach would continue to experience narrowing and steepening due to accelerated sea level rise, although the groyne here may help to retain some beach material. If insufficient beach feed occurs or retention becomes impossible, longer term implementation of this policy could mean the coast at Beer being armoured with no beach present. Under those circumstances further study would be warranted to determine if a more sustainable option would be to realign cliff top roads.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a31	**Seaton Hole to Beer**	Allow natural coastal evolution to occur through **No Active Intervention**.	Allow natural coastal evolution to occur through **No Active Intervention**.	Allow natural coastal evolution to occur through **No Active Intervention**.
6a32	**Beer**	Continue to maintain defences under **Hold the Line** policy to provide continued protection to Beer.	Continue to maintain defences under **Hold the Line** policy.	Continue to maintain defences under **Hold the Line** policy.
6a33	**Beer to Beer Head**	Allow natural coastal evolution to occur through **No Active Intervention**.	Allow natural coastal evolution to occur through **No Active Intervention**.	Allow natural coastal evolution to occur through **No Active Intervention**.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Seaton Hole to Beer Head
Policy Unit reference:	6a31 to 6a33

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Continued cliffline retreat will occur along undefended lengths. Improvements to the defences would be undertaken at Beer.	Loss of some areas of the South West Coastal Path due to erosion. Flooding of Fore Street and Sea Hill in Beer and flood/erosion-risk to community facilities and properties including the World Heritage Centre in Beer.	Permanent loss of grades 3 and 4 agricultural land due to erosion. Flood risk and coastal erosion of local roads in the short to long term.	No known impacts on archaeological features Flood risk to Grade 1 and Grade 2 listed buildings.	Minor change in landscape character of Dorset AONB due to increased erosion and flooding; but not considered detrimental as this is a natural process. .	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and Sidmouth to Beer Coast SSSI. The preferred policy in this coastal unit would continue to maintain the geological exposures of these features. Holding the line at Beer has the potential to adversely affect the geological interest features of Dorset and East Devon World Heritage and Sidmouth to Beer Coast SSSI.	No known impacts on water quality. Works to Hold the Line at Beer should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast and Sidmouth to Beer Coast SSSIs (biological) due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI in most areas would therefore enhance this SAC. However, a policy of HTL at Beer has the potential to adversely affect the integrity of cliff habitats within Sidmouth to West Bay SAC but will depend upon the implementation of the policy – *uncertain impact.* Protection of cliff top limestone grassland habitats associated with the Sidmouth to Beer Coast SSSIs (biological). No adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that HTL is affecting the site at present and therefore no adverse effects are foreseen.
2025 – 2055	Continued cliffline retreat will occur. Maintenance of the defences at Beer.	Loss of some areas of the South West Coastal Path due to erosion. Flooding of Fore Street and Sea Hill in Beer and flood/erosion-risk to community and properties including the World Heritage Centre in Beer.	Permanent loss of grades 3 and 4 agricultural land due to erosion and flooding. Flood risk and coastal erosion of local roads in the short to long term.	No known impacts on archaeological features Flood risk to Grade 1 and Grade 2 listed buildings.	Minor change in landscape character of Dorset AONB due to increased erosion and flooding; but not considered detrimental as this is a natural process.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and Sidmouth to Beer Coast SSSIs. The preferred policy in this coastal unit would continue to maintain the geological exposures of these features. Holding the line at Beer has the potential to adversely affect the geological interest features of Dorset and East	No known impacts on water quality. Works to Hold the Line at Beer should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast and Sidmouth to Beer Coast SSSIs (biological) due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI in most areas would therefore enhance this SAC. However, a policy of HTL at Beer has the potential to

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Seaton Hole to Beer Head
Policy Unit reference:	6a31 to 6a33

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

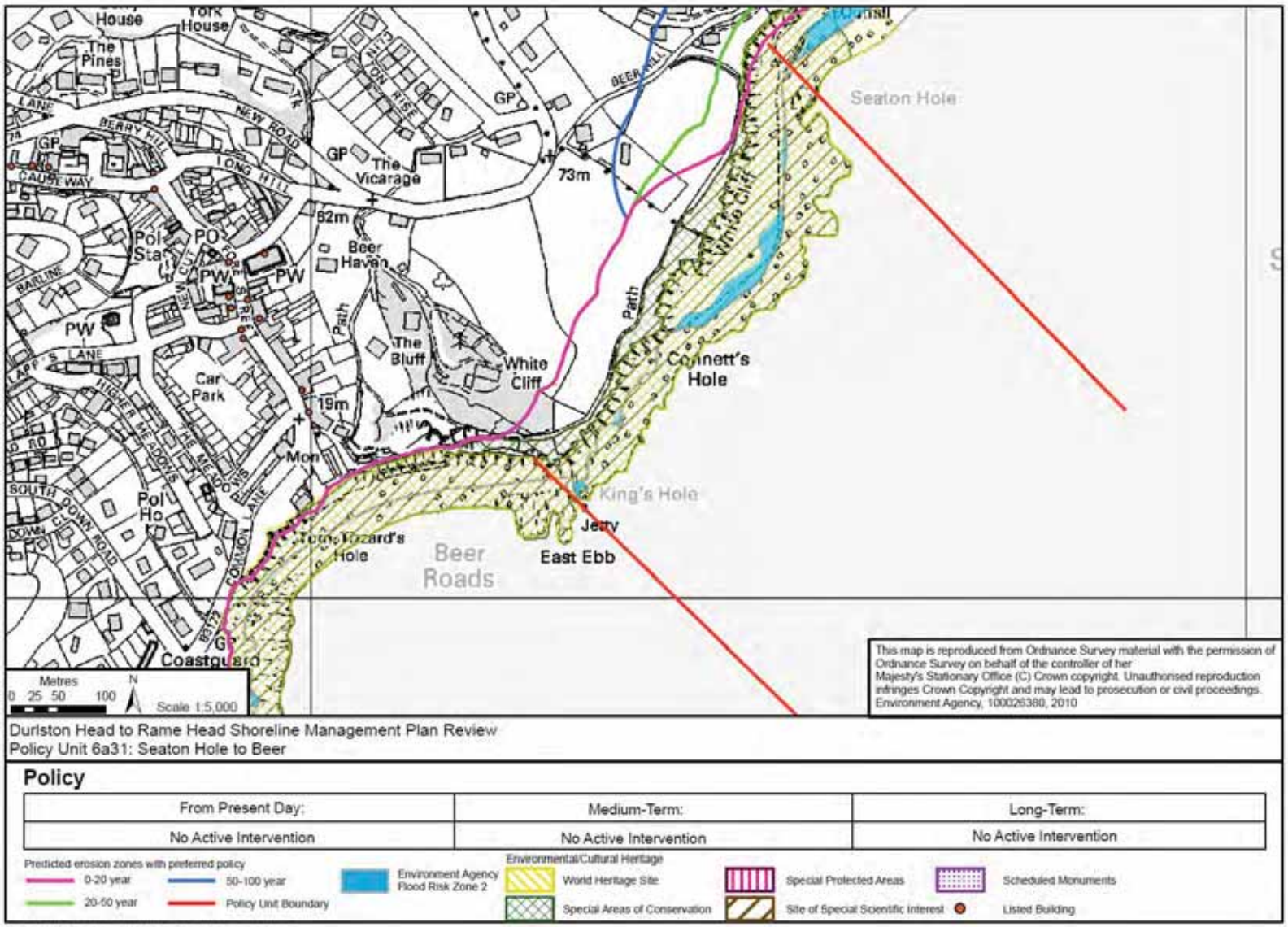
Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
						Devon World Heritage and Sidmouth to Beer Coast SSSI.		adversely affect the integrity of cliff habitats within Sidmouth to West Bay SAC but will depend upon the implementation of the policy – *uncertain impact.* Protection of cliff top limestone grassland habitats associated with the Sidmouth to Beer Coast SSSIs (biological). No adverse effect on Poole Bay to Lyme Bay Reefs pSAC. There is no evidence to suggest that HTL is affecting the site at present and therefore no adverse effects are foreseen.
2055 – 2105	Continued cliffline retreat will occur. Maintenance and possible improvements to the defences at Beer.	Loss of some areas of the South West Coastal Path due to erosion. Flooding of Fore Street and Sea Hill in Beer and flood/erosion-risk to community facilities and properties including the World Heritage Centre in Beer.	Permanent loss of grades 3 and 4 agricultural land due to erosion and flooding. Flood risk and coastal erosion of local roads in the short to long term.	No known impacts on archaeological features Flood risk to Grade 1 and Grade 2 listed buildings.	Minor change in landscape character of Dorset AONB due to increased erosion and flooding; but not considered detrimental as this is a natural process.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and Sidmouth to Beer Coast SSSIs. The preferred policy in this coastal unit would continue to maintain the geological exposures of these features. Holding the line at Beer has the potential to adversely affect the geological interest features of Dorset and East Devon World Heritage and Sidmouth to Beer Coast SSSI.	No known impacts on water quality. Works to Hold the Line at Beer should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Minimal loss of cliff top limestone grassland habitats associated with the West Dorset Coast and Sidmouth to Beer Coast SSSIs (biological) due to natural erosion processes. The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC and NAI in most areas would therefore enhance this SAC. However, a policy of HTL at Beer has the potential to adversely affect the integrity of cliff habitats within Sidmouth to West Bay SAC but will depend upon the implementation of the policy – *uncertain impact.* Protection of cliff top limestone grassland habitats associated with the Sidmouth to Beer Coast SSSIs (biological). No adverse effect on Poole Bay to Lyme Bay Reefs pSAC.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

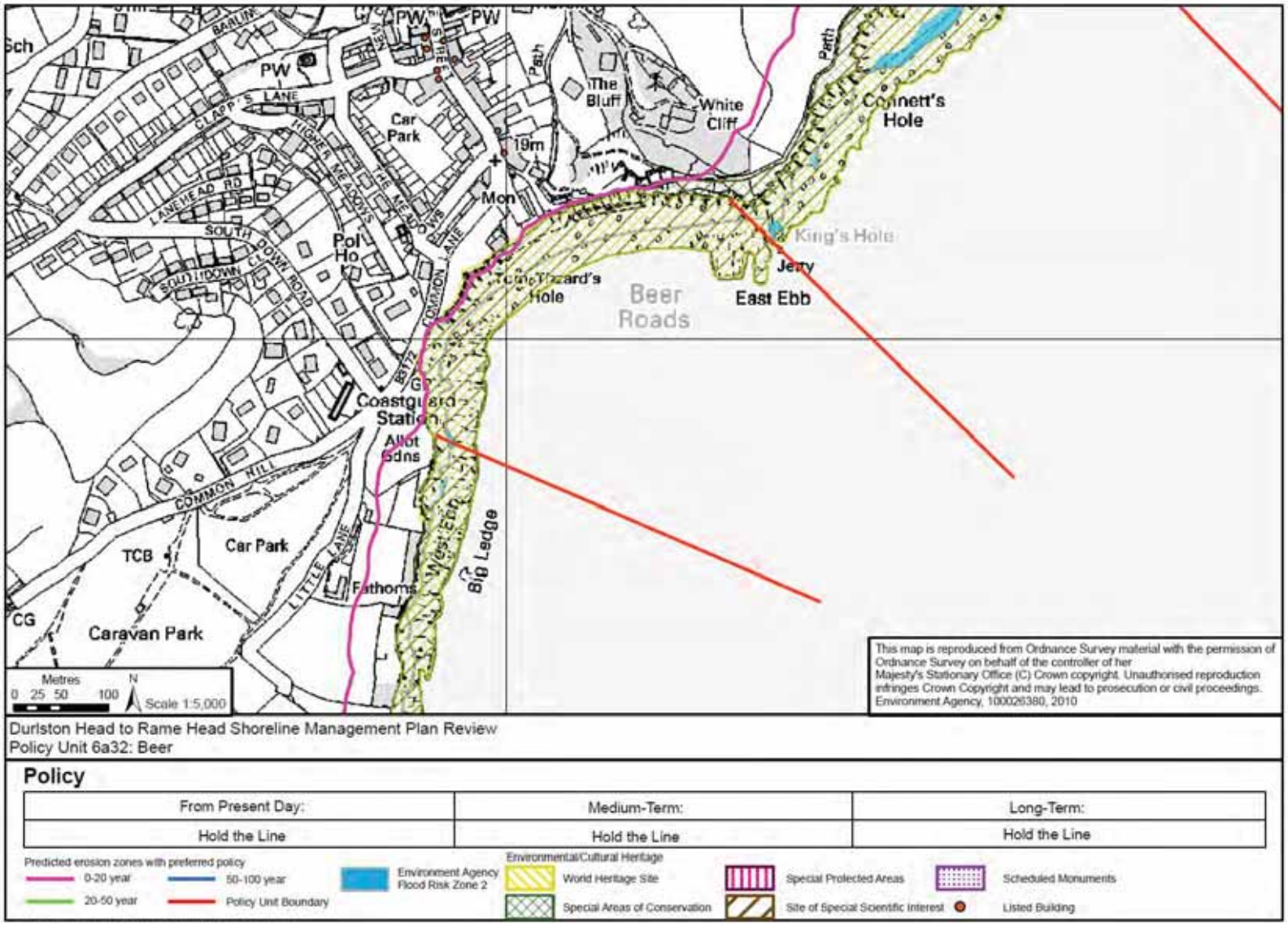
Location reference:	Seaton Hole to Beer Head
Policy Unit reference:	6a31 to 6a33

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION								
Time Period	**Management Activities**	**Property, Population and Human Health**	**Land Use, Infrastructure and Material Assets**	**Historic Environment**	**Landscape Character and Visual Amenity**	**Earth Heritage, Soils and Geology**	**Water**	**Biodiversity, Flora and Fauna**
								There is no evidence to suggest that HTL is affecting the site at present and therefore no adverse effects are foreseen.

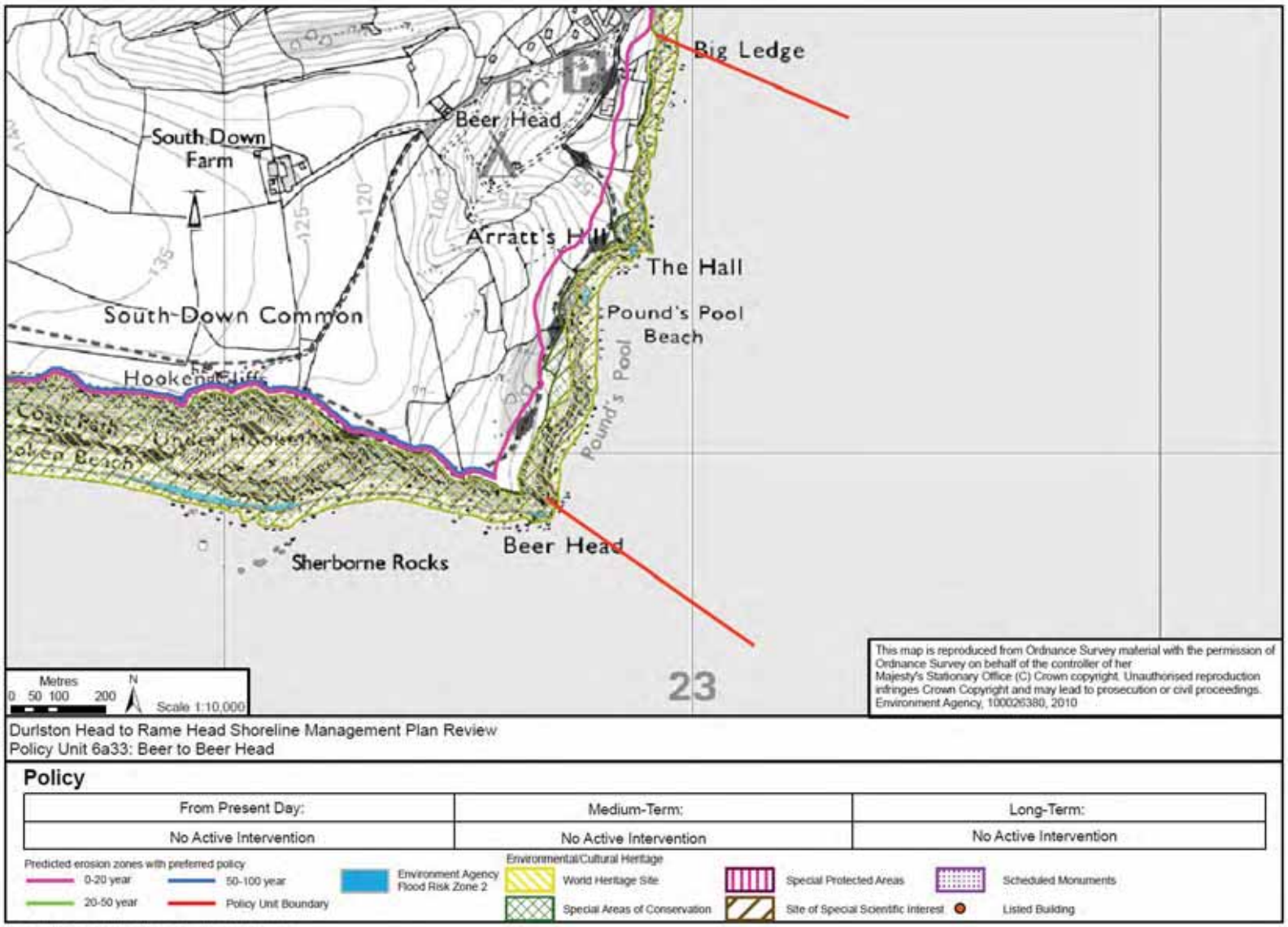
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Beer Head to Salcombe Hill**
Policy Unit reference:	**6a34**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This is a predominately undeveloped stretch of cliffed coastline, with the exception of the lower part of the village of Branscombe. The cliffs along this section are internationally important and their natural evolution is integral to their designated status. The long term aim of the Plan is therefore to continue to allow this natural evolution to occur over the next 100 years.

This may result in the loss of some recreational facilities at Branscombe Beach and the loss of some Grade 3 agricultural land in the medium to long term as the cliffs along this stretch continue to erode.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active**. Under this policy, there would be no further maintenance to the very localised rock structure at Branscombe. The long term trend in stability of the beaches that front the cliffs along this section has been one of slight accretion towards Beer Head and erosion towards Salcombe Hill, with the intervening beach having been relatively stable, due to the west to eastward drift of sediment. This situation is predicted to continue in to the future. The beach erosion at the western end of this section is related to the presence of control structures in front of Sidmouth that prevent littoral drift of sediment into this area (refer to Policy Unit 6a36). The recommended Policy of 'Hold the Line' at Sidmouth would involve the continued maintenance of these structures during this period, therefore the beach in this unit may continue to erode unless measures to introduce a higher, sustainable beach level to the east of Sidmouth (Policy Unit 6a35) are implemented in order to reduce cliff toe erosion and so the immediate risk of cliff recession to property and infrastructure. The management of the transitional zone between these two units will need to be examined during this period to determine a long-term, sustainable beach management solution. Towards Beer Head, total cliff erosion by 2025 is predicted to be between 3 and 10m, whilst towards Salcombe Hill, total erosion over the same period is predicted to be 5 to 6m with possible cliff fall events towards Beer Head resulting in localised increases in recession.
Medium term:	The medium term policy is to continue **No Active Intervention**. The rock revetment at Branscombe would be expected to reach the end of its effective life in the early part of this period, due to the lack of maintenance. This would only have a localised impact and would ultimately lead to reactivation of erosion of the cliffs behind and retreat of the beach at Branscombe into a small embayment, which in turn would be likely to stabilise the beach. This may result in a slight increase in erosion risk along the formerly protected frontage, but would also mean the entire stretch would continue to evolve naturally in the long term. Cliff recession of the chalk cliffs at Beer would continue as has occurred historically. The softer cliffs composed of sandstone and marl, which characterise the remainder of this stretch are more sensitive to climate change and therefore, taking account of sea level rise, are expected to erode between 14 and 18m during this period. These cliffs are prone to small but frequent mudslides, but whilst these would remain as lobes on the beach for a while,

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	they do not contribute to the shingle beach although any sands may remain on the foreshore. East of Branscombe the cliffs are vulnerable to complex, large scale landslides, where the chalk sits on top of the marl. These events could cause several metres of erosion, but would be very localised. There would be continued feed of sediment alongshore due to the west to east littoral drift, helping to maintain beaches along this stretch. Any larger scale landslide event could interrupt this and impact on downdrift beaches such as Branscombe, but the location of future failures is difficult to predict. At the western end of this stretch the littoral input would be reduced by defences at Sidmouth further west, and here beaches could narrow, potentially increasing cliff erosion. However, if beaches are recharged at Sidmouth, there could be some additional influx from there, but in the main local beach supply will continue to be from cliff erosion.
Longer-term:	The long term policy is to continue **No Active Intervention** along this stretch, which will be undefended during this period and so continue to evolve naturally. Cliff recession of the chalk cliffs at Beer would continue as historically, with infrequent small scale cliff fall events, resulting in potential erosion of between 10 and 20m towards Beer Head by 2105. The softer clay-rich cliffs to the west are more sensitive to climate change and therefore, taking account of sea level rise, these are expected to erode between 30 and 50m during this period. Superimposed on these rates is the possibility of large scale failures, which would be localised but which could cause several metres of erosion in one event. There would be continued alongshore transport from west to east, but beaches would be expected to narrow and steepen due to higher sea levels, particularly in the western part of this section, as a result of a lack of shingle input to this area. A beach is expected to remain at Branscombe, but is likely to be narrower and occupy a more landward position, due to sea level rise.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6a34	**Beer Head to Salcombe Hill**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

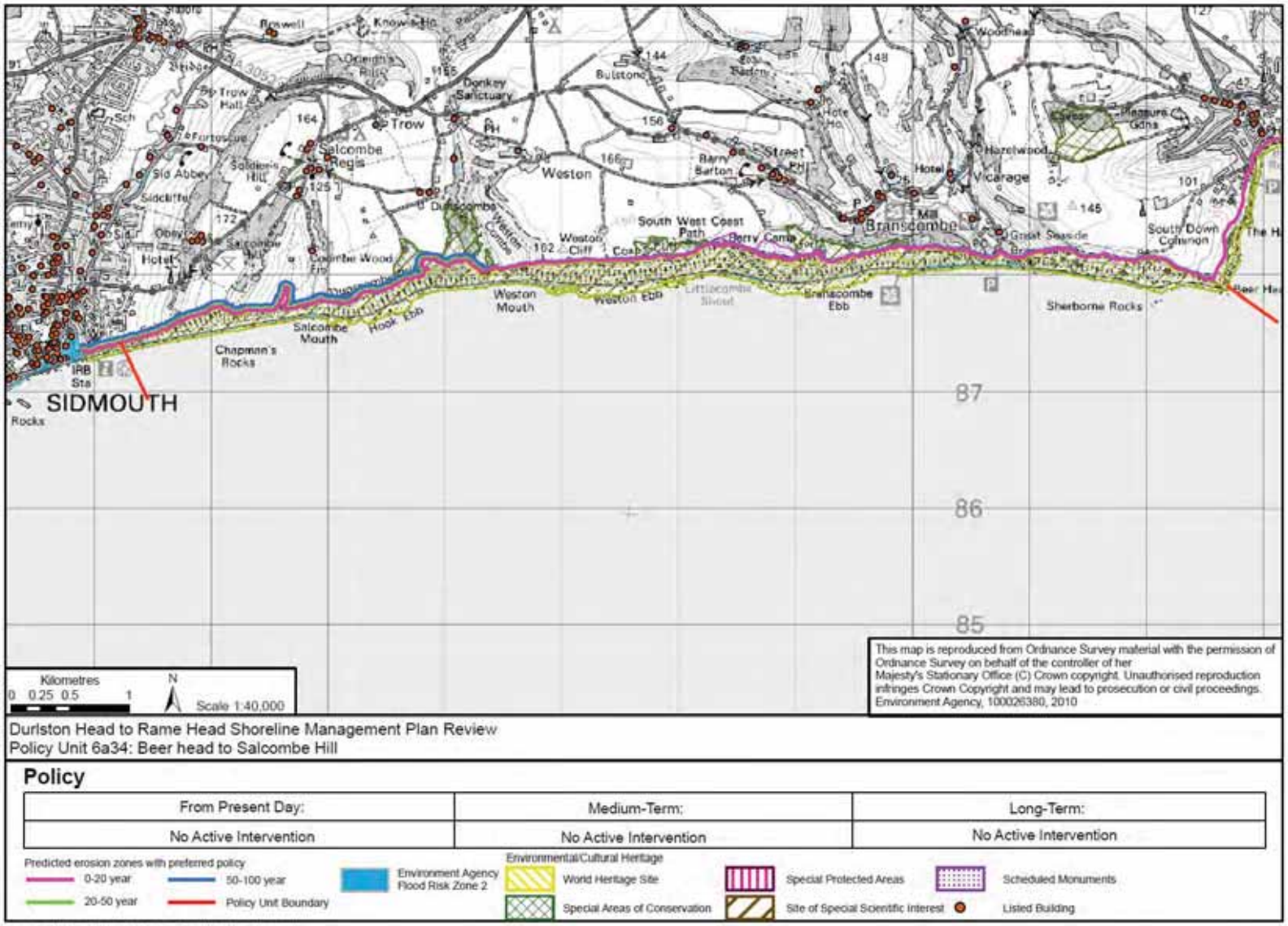
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Beer Head to Salcombe Hill
Policy Unit reference:	6a34

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Continued cliffline retreat would occur. No maintenance of the rock revetment at Beer would be undertaken.	Potential for the loss of some isolated cliff top properties at Branscombe due to coastal erosion and flooding. Potential for the loss of the caravan park, tourist car park and beach access at Branscombe Beach due to flooding.	Permanent loss of grades 3 and 4 agricultural land due to erosion and flooding.	Potential partial loss of 2 Scheduled Monuments (SM): Barry Cliff Camp SM, Prehistoric Field System SM.	Minor change in landscape character of East Devon AONB due to increased erosion and flooding; but not considered detrimental as this is a natural process.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and Sidmouth to Beer Coast SSSI: this policy will adhere to this.	No known impacts on water quality.	The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC. There is potential for the loss of a portion of the Sidmouth to Beer Coast SSSI due to erosion, however natural processes may be beneficial to this feature.
2025 – 2055	Continued cliffline retreat would occur. No management activities.	Potential for the loss of some isolated cliff top properties at Branscombe due to coastal erosion and flooding. Potential for the loss of the caravan park, tourist car park and beach access at Branscombe Beach due to flooding.	Permanent loss of grades 3 and 4 agricultural land due to erosion and flooding.	Potential partial loss of 2 Scheduled Monuments (SM): Barry Cliff Camp SM, Prehistoric Field System SM.	Minor change in landscape character of East Devon AONB due to increased erosion and flooding; but not considered detrimental as this is a natural process.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and Sidmouth to Beer Coast SSSI this policy will adhere to this.	No known impacts on water quality.	The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC. There is potential for the loss of a portion of the Sidmouth to Beer Coast SSSI due to erosion, however natural processes may be beneficial to this feature.
2055 – 2105	Continued cliffline retreat would occur. No management activities.	Potential for the loss of some isolated cliff top properties at Branscombe due to coastal erosion and flooding Potential for the loss of further parts the caravan park at Branscombe Beach due to flooding.	Permanent loss of grades 3 and 4 agricultural land due to erosion and flooding.	Potential partial loss of 2 Scheduled Monuments (SM): Barry Cliff Camp SM, Prehistoric Field System SM.	Minor change in landscape character of East Devon AONB due to increased erosion and flooding; but not considered detrimental as this is a natural process.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site and Sidmouth to Beer Coast SSSI this policy will adhere to this.	No known impacts on water quality.	The continuation of natural landslip and sediment processes is important to Sidmouth to West Bay SAC. There is potential for the loss of a portion of the Sidmouth to Beer Coast SSSI due to erosion, however natural processes may be beneficial to this feature.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Sidmouth**
Policy Unit reference:	**6a35 and 6a36**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This unit covers the developed area of Sidmouth, an important tourism centre for the economy of the area, and extends across the mouth of the River Sid from Salcombe Hill to the east and the coastal frontage of the town of Sidmouth a little west of Chit Rocks. Due to the regional importance of the town of Sidmouth, the long term Plan is to continue to provide protection such that the risk of flooding and erosion to the town is minimised.

The town is currently defended by a range of defence measures including seawalls, rock groynes and offshore rock breakwaters, supported by ongoing beach management activities. The seawall along this section protects low-lying land from flooding, whilst the shoreline structures, offshore breakwaters and beach management serve to retain beach material in front of the seawall. Defences along the River Sid also provide flood protection to the town of Sidmouth.

There are no defences along the coastal frontage of this stretch across the mouth of the River Sid and the easternmost part of Sidmouth. The defences along the Sidmouth frontage have, in part at least, contributed to low beach levels along this section and part of the adjacent coast to the east. This has led to an accelerated rate of cliff recession locally such that there is an increasing risk that the fluvial defences along the River Sid could become exposed to attack from the sea, which they are not currently designed to withstand, and so increase the risk of flooding to Sidmouth.

The long term Plan for the section across the mouth of the River Sid is therefore to intervene to the extent that protection to the fluvial defences is provided, whilst providing a transitional zone between the area of 'Hold the Line' to the west and 'No Active Intervention' to the east.

This would allow the cliffs to continue to erode, but at a slower rate. As this would not prevent cliff erosion but merely reduce the rate at which is occurs, cliff top properties to the immediate east of the River Sid would be protected for a period of time (expected to be most of the 100 year life of the Plan), but these assets would ultimately be at risk and measures will need to be put in place to manage this. In the very long term (beyond the 100 year life of the Plan), it is expected that more significant intervention to prevent further cliff recession will be required (and be economically justified) to achieve the long term vision to continue to protect the town of Sidmouth. However, if cliff erosion occurs at a faster rate than presently predicted there may be a need for this to be brought forward.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** to the extensively developed area of Sidmouth. This will be through maintenance of the rock groynes and offshore rock breakwaters, as well as seawalls and beach management activities. The continued presence of the defences along this section and beach management activities should keep the beach relatively stable in the immediate term, with no change in shoreline position. However, coastal squeeze as a result of sea level rise could become increasingly significant towards the end of this period. Fluvial defence along the River Sid is outside of the area covered by the SMP. However, it is necessary that flood protection to the town of Sidmouth continues to be provided through maintenance, and if necessary upgrading, of existing defences along the river to fulfil the SMP policy. Along the currently undefended length at the mouth of the River Sid and a short length of developed cliff top area, a policy of **Managed Realignment** will be adopted. Although there are no defences along the coastal frontage of this section, the western boundary of this section is the terminal rock groyne that forms the eastern extent of the Sidmouth coastal defences. The beach erosion

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	along this section is related to the presence of the control structures in front of Sidmouth which prevent littoral drift of sediment to the beaches in this area. The low beach levels are already leading to increased erosion of parts of the cliff to the east of this section, and increasing the risk of flooding of Sidmouth to the west. Implementation of Managed Realignment could involve extending the beach management activities at Sidmouth to also cover this section of coast, including the periodic beach recharging that occurs along the adjacent frontage. Providing a healthier beach to help protect the cliff toe is the intention here but uncertainty remains over exactly how this policy could be implemented in a sustainable way, addressing technical, environmental and economic concerns. Further detailed investigation is needed during this period to determine the most appropriate means of implementing this policy to achieve the aim of the Plan.
Medium term:	The medium term policy is to continue to **Hold the Line** of the existing defences along the majority of this stretch. Beach management activities would also continue, to maintain the shoreline position. However beach narrowing would be an issue due to the limited input of shingle from the west and the impact of rising sea levels. This would increase flood risk and a larger seawall is likely to be required to take account of future sea level. Other new defences and/or beach recharge could also be required during this period to maintain current levels of protection. These defences would also become increasingly prominent, i.e. seaward, of the adjacent retreating sections of coast. This could exacerbate the problems of beach drawdown and offshore transport of beach material already experienced during storm events. Continued defence along this section would have an impact on beaches and cliffs to the east, and it may be necessary to extend the defences eastward by a few tens of metres to prevent them being outflanked. The policy of **Managed Realignment** will continue from the mouth of the River Sid and the cliff fronting the easternmost part of Sidmouth. Beach management activities would continue along this length, such as beach re-cycling, re-profiling and periodic beach recharge if and when it is undertaken along the rest of the Sidmouth frontage. The rate of cliff erosion along this section would be reduced by ensuring a sizeable beach continues to be retained along the cliff toe through beach management activity. Cliff recession will still occur however, therefore there is a need for measures to be in place to manage this process, including monitoring to identify when assets will become at risk, and possible mitigation for future losses.
Longer-term:	The long term policy is to continue to **Hold the Line** of the existing defences that protect the extensively developed area of Sidmouth. This may involve further improvements to the defences during this period in order to maintain adequate levels of protection. As a result of higher sea levels the beach fronting the defences is expected to narrow further and in places may disappear (unless beach recharge and further beach control stabilisation works were undertaken). Any works along this stretch would need to be substantial if any form of beach is to be retained, and could have a significant impact upon the coast to the east. Therefore any intervention would need to consider these longshore linkages and work to

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

minimise or mitigate against the impacts.

To manage the transition from the defended frontage of Sidmouth and the area of No Active Intervention to the east, and to continue to provide some protection to river defences, the long term policy across the mouth of the River Sid is to continue **Managed Realignment**. This policy is expected to involve the continuation of beach management activities during this period to ensure a healthy beach is retained as the cliffs retreat.

Cliff erosion along this section would continue, albeit at a reduced rate as long as a sizeable beach is retained along the cliff toe. Monitoring should be used to identify when assets will become at risk of erosion during this period, to inform if and when they may need to be relocated. However, if beach levels can not be adequately sustained and erosion rates increase during this period to the extent that a significant amount of property and infrastructure is at risk of erosion, it may become economically viable to introduce more substantial defences.

At some point however cliff recession will reach a point where provision of a beach in this area along will not be sufficient to maintain adequate levels of protection along the River Sid fluvial defences. At that point defences along the River Sid channel will need to be increased in size to ensure adequate levels of protection are provided.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a35	**River Sid and Sidmouth (East)**	Undertake **Managed Realignment** through beach management.	Undertake **Managed Realignment** through beach management.	Undertake **Managed Realignment** through beach management.
6a36	**Sidmouth**	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Sidmouth
Policy Unit reference:	6a35 and 6a36

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Maintenance of existing defences, including beach management activities and beach recharge.	Continued protection of Sidmouth including road linkages (The Esplanade) that runs along Sidmouth's sea frontage east to west.	Continued protection of infrastructure in Sidmouth.	Continued protection against flood and erosion risk to Grade 2 and 3 listed buildings. Continued protection of Connaught Registered Park and Garden from flooding and erosion.	Minor change in landscape character of East Devon AONB.	Holding the line at Sidmouth has the potential to affect the geological interest features of Sidmouth to Beer Coast SSSI.	No known impacts on water quality.	Managed Realignment at River Sid and East Sidmouth is likely to be beneficial to the cliff habitats within Sidmouth to West Bay SAC and therefore no adverse impacts are anticipated. HTL at Sidmouth has the potential to adversely affect the vegetated sea cliffs and slopes Sidmouth to West Bay SAC in adjacent policy units. There is potential for the loss of a portion of the Sidmouth to Beer Coast SSSI due to erosion, however natural processes may be beneficial to this feature. Opportunities may exist to improve the favourable condition of the designated terrestrial habitats through changes in their grazing/scrub management etc in areas where holding the line (Sidmouth) or in the River Sid policy unit.
2025 – 2055	Maintenance and improvements to the existing defences, including further beach recharge and possibly additional control structures. Beach management activities would also be undertaken.	Continued protection of Sidmouth including road linkages (The Esplanade) that runs along Sidmouth's sea frontage east to west.	Continued protection of infrastructure in Sidmouth.	Continued protection against flood and erosion risk to Grade 2 and 3 listed buildings. Continued protection of Connaught Registered Park and Garden from flooding and erosion.	Minor change in landscape character of East Devon AONB.	Holding the line at Sidmouth has the potential to affect the geological interest features of Sidmouth to Beer Coast SSSI.	No known impacts on water quality.	Managed Realignment at River Sid and East Sidmouth is likely to be beneficial to the cliff habitats within Sidmouth to West Bay SAC and therefore no adverse impacts are anticipated. HTL at Sidmouth has the potential to adversely affect the vegetated sea cliffs and slopes Sidmouth to West Bay SAC in adjacent policy units. There is potential for the loss of a portion of the Sidmouth to Beer Coast SSSI due to erosion, however natural processes may be beneficial to this feature. Opportunities may exist to

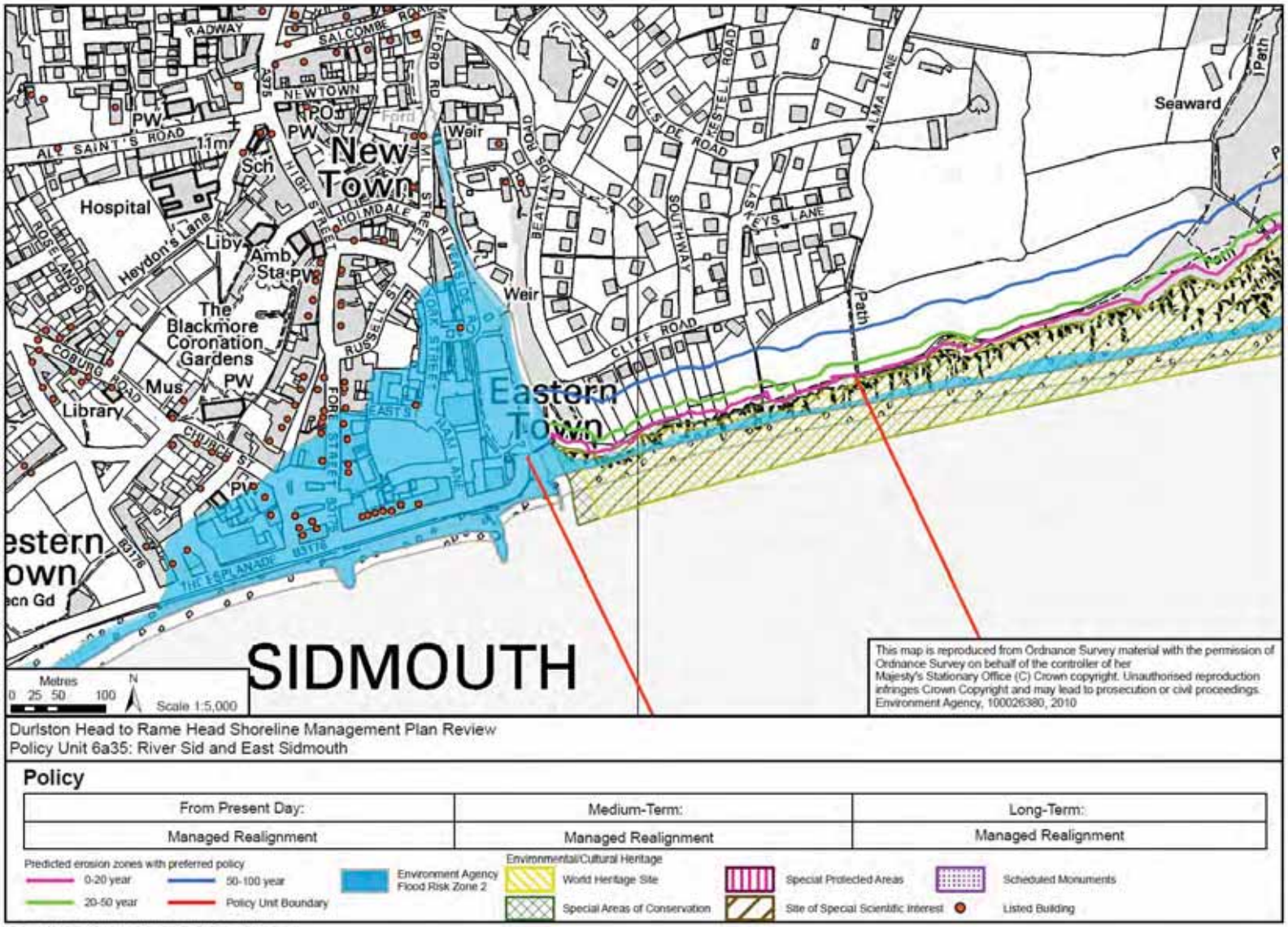
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Sidmouth
Policy Unit reference:	6a35 and 6a36

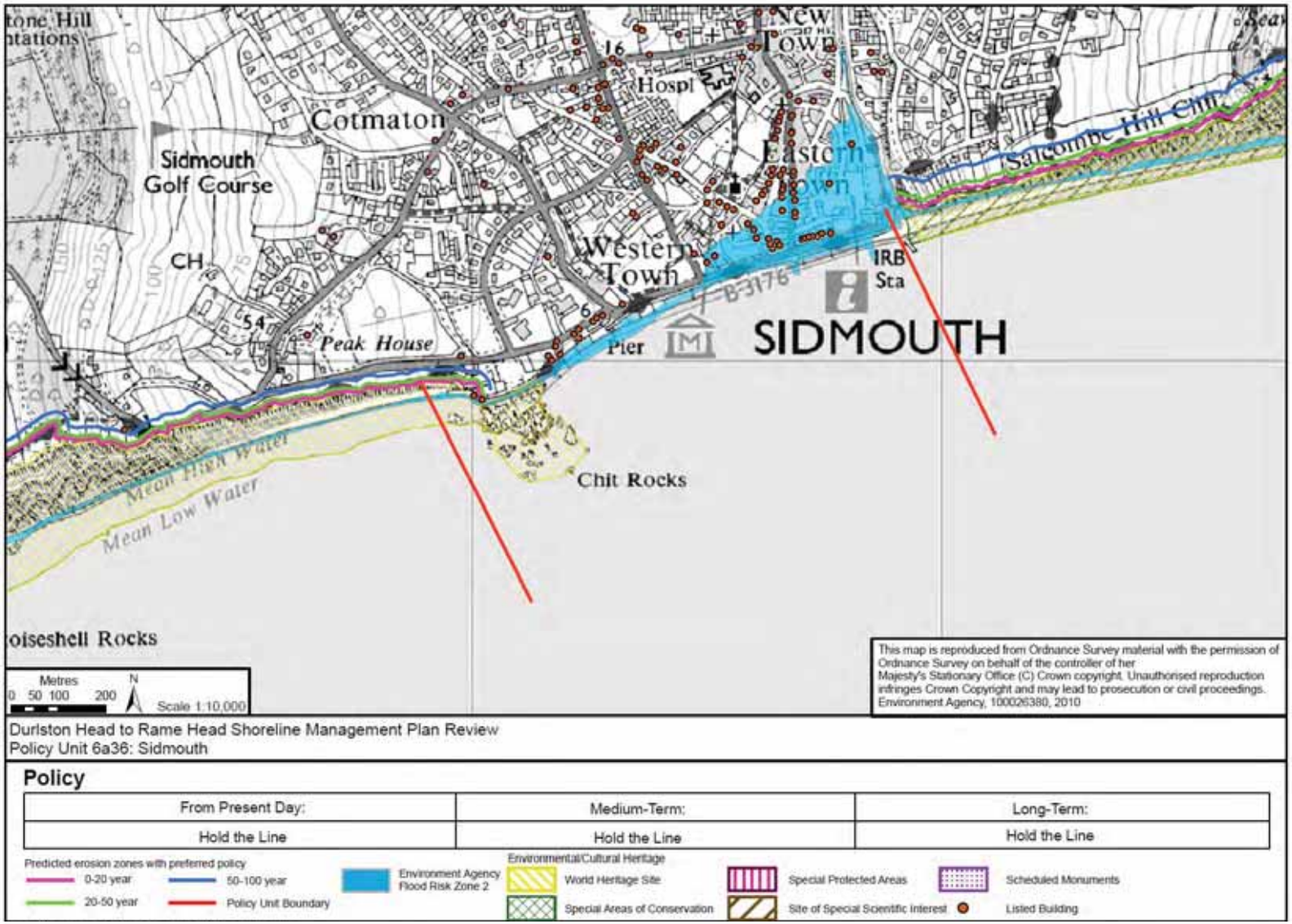
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
								improve the favourable condition of the designated terrestrial habitats through changes in their grazing/scrub management etc in areas where holding the line (Sidmouth) or in the River Sid policy unit.
2055 – 2105	Maintenance and improvements to the existing defences, including further beach recharge and possibly additional control structures. Beach management activities would also be undertaken.	Continued protection of Sidmouth including road linkages (The Esplanade) that runs along Sidmouth's sea frontage east to west. Potential for the loss of some cliff top properties to the east of the River Sid due to coastal erosion.	Continued protection of infrastructure in Sidmouth.	Continued protection against flood and erosion risk to Grade 2 and 3 listed buildings. Continued protection of Connaught Registered Park and Garden from flooding and erosion.	Minor change in landscape character of East Devon AONB.	Holding the line at Sidmouth has the potential to affect the geological interest features of Sidmouth to Beer Coast SSSI.	No known impacts on water quality.	Managed Realignment at River Sid and East Sidmouth is likely to be beneficial to the cliff habitats within Sidmouth to West Bay SAC and therefore no adverse impacts are anticipated. HTL at Sidmouth has the potential to adversely affect the vegetated sea cliffs and slopes Sidmouth to West Bay SAC in adjacent policy units. There is potential for the loss of a portion of the Sidmouth to Beer Coast SSSI due to erosion, however natural processes may be beneficial to this feature. Opportunities may exist to improve the favourable condition of the designated terrestrial habitats through changes in their grazing/scrub management etc in areas where holding the line (Sidmouth) or in the River Sid policy unit.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Chit Rocks to Otterton Ledge**
Policy Unit reference:	**6a37 and 6a38**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This stretch of largely undeveloped cliffed coastline is designated as internationally important for its geological and landscape value. The long term Plan is to allow this to continue to evolve naturally.

These relatively resistant sandstone cliffs have historically experienced very slow erosion, although cliffline retreat would continue as a result of infrequent, small scale cliff falls resulting from wave undercutting at the base of the cliff. These events tend to affect very localised areas, but it is not possible to predict where the next events will occur.

Depending upon the location of future cliff falls, a number of cliff top assets could be affected in the long term, including: a number of cliff top properties, partial loss of Connaught Registered Park and Garden at Sidmouth, damage to or loss of up to three Scheduled Monuments and several listed buildings, as well as a highway and parts of the South West Coast Path.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention**. Cliff recession is predicted to be 3 to 5m by 2025. Cliff erosion does not contribute any shingle to the beach, but sands may remain on the lower foreshore, which would help to maintain the upper shingle beach between Chit Rocks and Big Picket Rock. Any sediment released from the cliffs between Big Picket Rock and Otterton Ledge will tend to remain locally within the pocket beaches.
Medium term:	The medium term policy is to continue **No Active Intervention**. Sea level rise could result in the rate of cliff erosion increasing. Material from cliff erosion would not contribute to the shingle beaches, therefore local pocket beaches between Big Picket Rock and Otterton Ledge may narrow. A narrow shingle beach with sandy foreshore would remain between Chit Rocks and Big Picket Rock and move back at the same rate as the cliffs. There could be some erosion of the shingle beach due to increased exposure as sea level rises and greater drawdown rates.
Longer-term:	The long term policy is to continue **No Active Intervention**, which would enable the shoreline to continue to evolve naturally as a result. Sea level rise is likely to result in the rate of cliff erosion increasing during this period, with total erosion by 2105 of 20 to 30m predicted between Chit Rocks and Big Picket Rock, rising to up to 40m towards Otterton Ledge. As a result of higher sea levels, the beach between here is expected to narrow, and the rock platforms would become submerged. This would increase exposure of the cliff toe to wave action, although it would be unlikely to significantly increase the rate of cliff recession as this is predominantly controlled by local geological factors. Shingle beaches would increasingly become confined to little pockets that may develop as the cliffs erode, due to differential erosion and occasional lobes developing. Local pocket beaches, such as Ladram Bay, would steepen and narrow due to sea level rise. The more exposed ones could disappear.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6a37	**Chit Rocks to Big Picket Rock**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.
6a38	**Big Picket Rock to Otterton Ledge**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

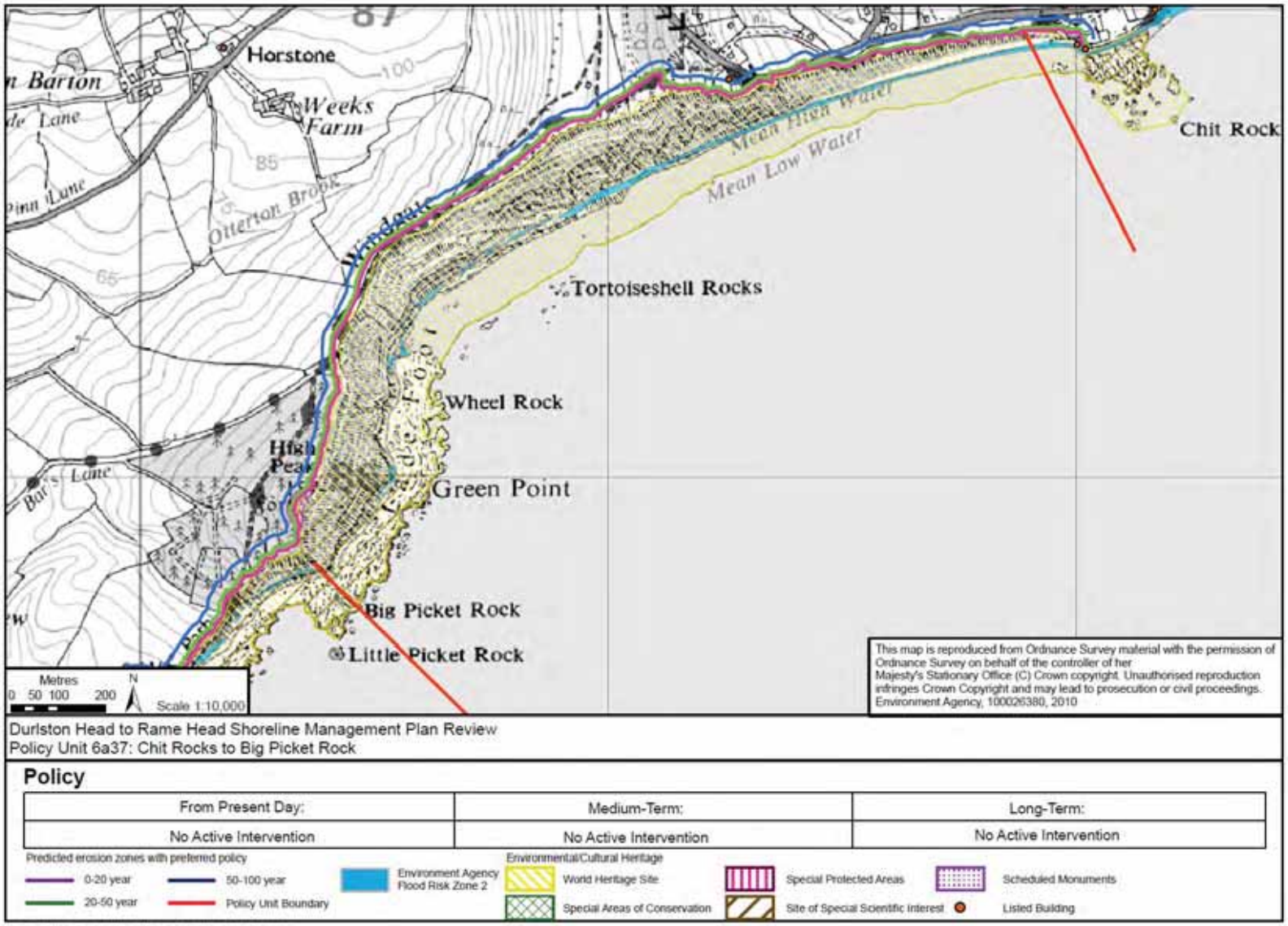
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Chit Rocks to Otterton Ledge
Policy Unit reference:	6a37 and 6a38

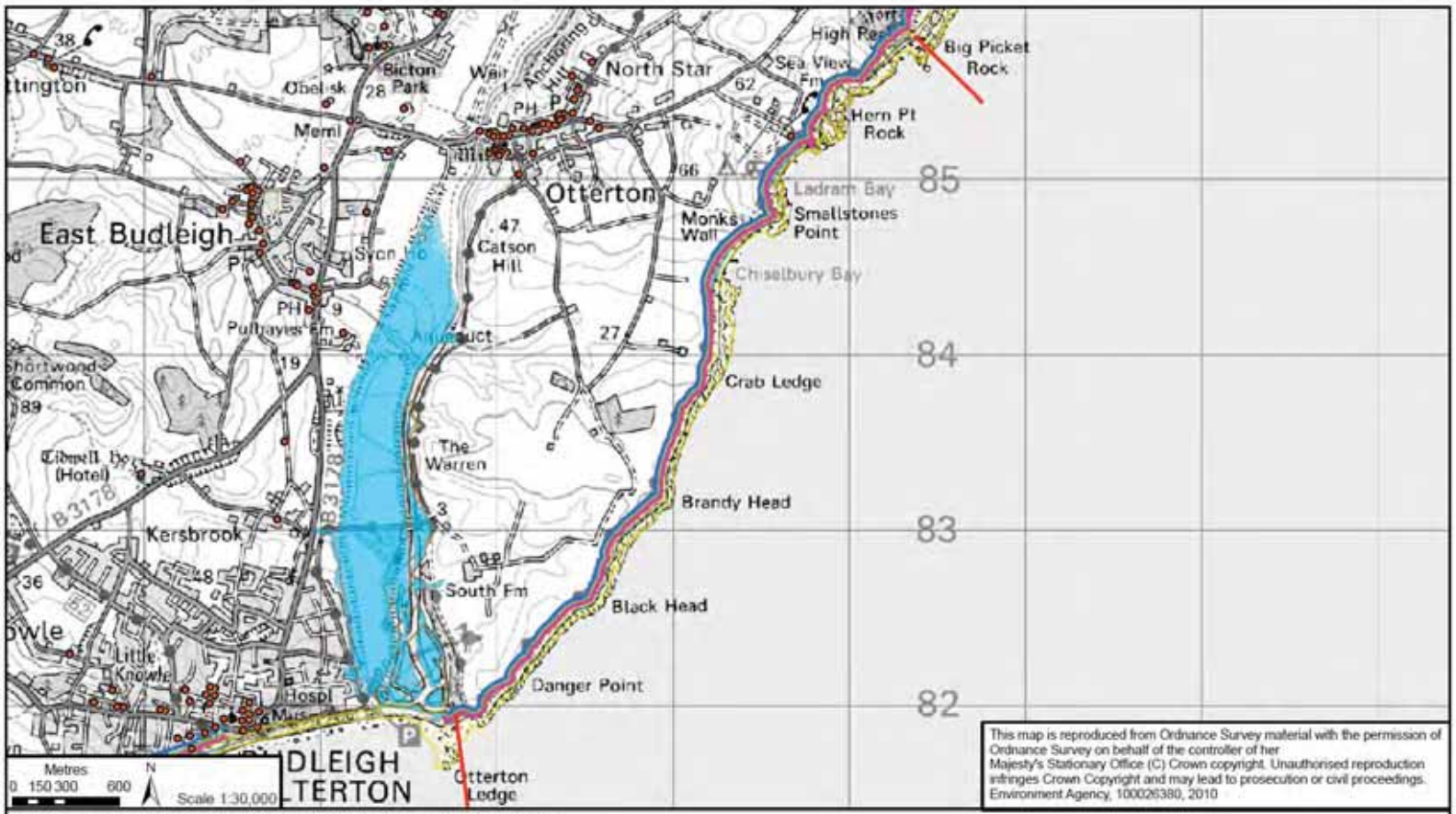
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Continued cliffline retreat would occur. No management activities.	Potential for the loss of some isolated cliff top properties to the west of Chit Rocks near Sidmouth due to coastal erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion. Potential loss of local cliff top roads.	Erosion risk to Grade 2 and 3 listed buildings. Potential partial loss of up to 1 Scheduled Monument (SM): High Peak Camp SM in Sidmouth. Potential partial loss of Connaught Registered Park and Garden due to erosion.	Minor change in landscape character of East Devon AONB due to increased erosion and flooding.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site (excludes Sidmouth), Ladram Bay to Sidmouth and Beer Quarry and Caves SSSIs. Continuation of natural erosive processes is important for maintaining Ladram Bay SSSI. NAI would allow natural processes to continue unhindered.	No known impacts on water quality.	See 'Earth Heritage' for Ladram Bay to Sidmouth SSSI.
2025 – 2055	Continued cliffline retreat would occur. No management activities.	Potential for the loss of some isolated cliff top properties to the west of Chit Rocks near Sidmouth due to coastal erosion. Potential for the loss of properties at Ladram Bay Caravan park due to flooding and erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion. Potential loss of local cliff top roads.	Erosion risk to Grade 2 and 3 listed buildings. Potential partial loss of up to 1 Scheduled Monument (SM): High Peak Camp SM in Sidmouth. Potential partial loss of Connaught Registered Park and Garden due to erosion..	Minor change in landscape character of East Devon AONB due to increased erosion and flooding.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site (excludes Sidmouth) and Sidmouth to Beer Coast, Ladram Bay to Sidmouth and Beer Quarry and Caves SSSIs. Continuation of natural erosive processes is important for maintaining Ladram Bay SSSI. NAI would allow natural processes to continue unhindered.	No known impacts on water quality.	See 'Earth Heritage' for Ladram Bay to Sidmouth SSSI.
2055 – 2105	Continued cliffline retreat would occur. No management activities.	Potential for the loss of some isolated cliff top properties to the west of Chit Rocks near Sidmouth due to coastal erosion. Potential for the loss of properties at Ladram Bay Caravan park due to flooding and erosion.	Permanent loss of grades 3 and 4 agricultural land due to erosion. Potential loss of local cliff top roads.	Erosion risk to Grade 2 and 3 listed buildings. Potential partial loss of up to 1 Scheduled Monuments (SM): High Peak Camp SM in Sidmouth. Potential partial loss of Connaught Registered Park and Garden due to erosion.	Minor change in landscape character of East Devon AONB due to increased erosion and flooding.	Continuation of natural processes is key to the integrity of the geological interest features of Dorset and East Devon World Heritage Site (excludes Sidmouth) and Sidmouth to Beer Coast, Ladram Bay to Sidmouth and Beer Quarry and Caves SSSIs. Continuation of natural erosive processes is important for maintaining Ladram Bay SSSI. NAI would allow natural processes to continue unhindered.	No known impacts on water quality.	See 'Earth Heritage' for Ladram Bay to Sidmouth SSSI.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Otter Estuary**
Policy Unit reference:	**6a39 and 6a40**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The area of the Otter Estuary covered by the SMP extends upstream from the shingle beach on the coast for two kilometres, to the tidal limit at the confluence with Budleigh Brook, and includes the spit that extends across the mouth of the estuary from the west. There are few defences present along this section, and very few properties. An earth embankment does run along the western bank, although it protects only one property (Budleigh Cricket Club).

The long term vision for the Otter Estuary is to encourage natural development of the estuary whilst maintaining reduced flood risk to any developed areas. This would be achieved through Managed Realignment in strategic locations. This policy would also provide opportunities for habitat creation, but at the expense of some areas of agricultural land.

It is not intended to increase the risk of flooding to developed areas, and so consideration of this would be an important element in further detailed studies for implementation. Maintenance of existing defences, such as at the embankment at Budleigh Cricket Club, would also be permitted if alternative funds are available to achieve this as it is unlikely that public funding would be available for continued protection of that.

The beach that makes up the spit which extends across the mouth of the Otter Estuary from the west, has been stable over the long term as a result of continued sediment supply from cliff erosion to the west. It is undefended although its presence does provide protection to the inner estuary from wave action. The long term Plan is to not intervene and to continue to allow the spit to evolve naturally. This requires complimentary policies which allow erosion of cliffs to the west and a continued throughput of sediment to this area.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **Managed Realignment** at strategic locations within the Otter Estuary. Undertaking site-specific Managed Realignment will reconnect the estuary with the floodplain whilst also reducing flood risk in other parts of the estuary and creating new areas of habitat. Implementation would though need to consider the effect on tidal prism and tidal flow through the estuary mouth, as a reduction in this could result in the mouth being closed by sediment infill as the eastern end of the spit extends across the mouth, which would have impacts upon the whole estuary. Therefore more detailed studies are required to determine the most suitable locations for Managed Realignment and the means of implementation, but would likely involve construction of set back defences or regulated tidal exchange. To continue to manage the risk to people and property, maintenance and improvement of existing flood defences would be permitted to locally **Hold the Line** if funds are available. However, new defences would not be allowed to be built along currently undefended sections. Along the spit that extends across the mouth of the estuary, the policy is **No Active Intervention**. This feature has been stable over the long term as a result of continued sediment supply from cliff erosion to the west. This stable trend is expected to continue during this period although there may be fluctuations in beach level; however, there is a risk of a temporary breach, as has occurred historically (at a frequency of every 20-30 years).
Medium term:	The medium term policy is to continue with **Managed Realignment** at strategic locations within the Otter Estuary, with localised **Hold the Line,** where defences already exist through maintenance and improvement should funds be

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	available. Along the spit a policy of **No Active Intervention** would continue, allowing it to continue to behave naturally. The spit has historically been relatively stable, but this could begin to move due to the accelerated sea level rise. The probability of a high river flow event causing a temporary breach of the spit across the mouth of the Otter Estuary would increase during this period, particularly with the loss of the gabions that previously served to prevent this. However, the continued supply of sediment to this feature from the west would mean it would remain relatively resilient, with any breach likely to repair naturally.
Longer-term:	The policy for the long term is to continue with **Managed Realignment** at strategic locations within the Otter Estuary to provide a reduction in flood risk to other parts of the estuary. Maintenance and improvement of existing defences, where they already exist, could be undertaken if funds are available, but it is not planned that any new defences would be constructed along currently undefended sections. Continued **No Active Intervention** at the mouth of the estuary, will allow the spit to evolve naturally; continued transport of sediment toward the spit from further west is expected to result in elongation and recurve into the estuary. As sea levels rise, the tendency would be for landward migration of the spit feature. There is a risk that the spit may breach, as has occurred historically every 20 to 30 years, but with continued sediment inputs, any such breach is expected to repair naturally.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a39	**Otter Estuary (Otterton Ledge to Budleigh Salterton East)**	Investigate and implement **Managed Realignment** within strategic locations within the estuary.	Continue the policy of **Managed Realignment**.	Continue the policy of **Managed Realignment**.
6a40	**Otter Estuary (Spit)**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

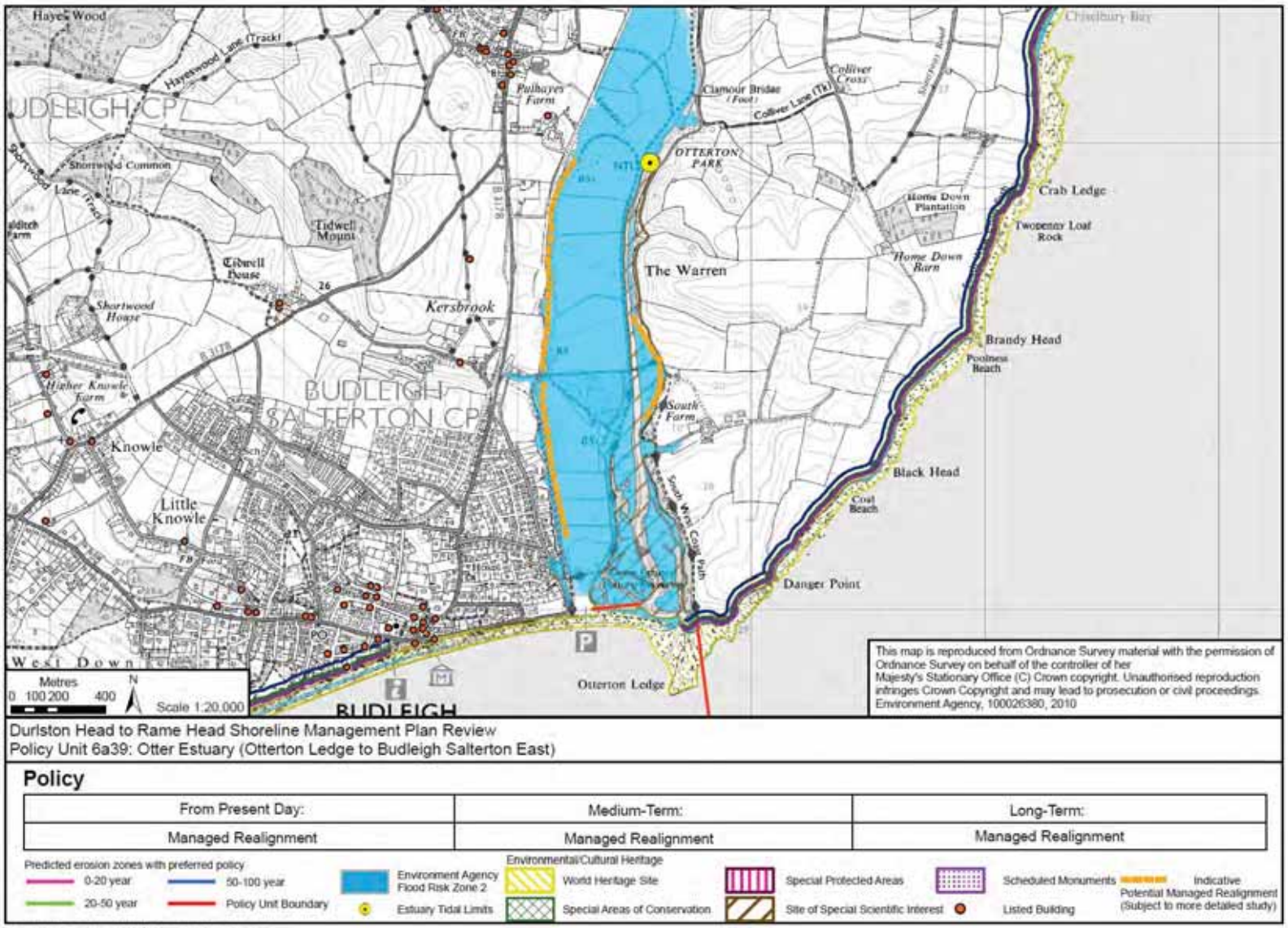
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Otter Estuary
Policy Unit reference:	6a39 and 6a40

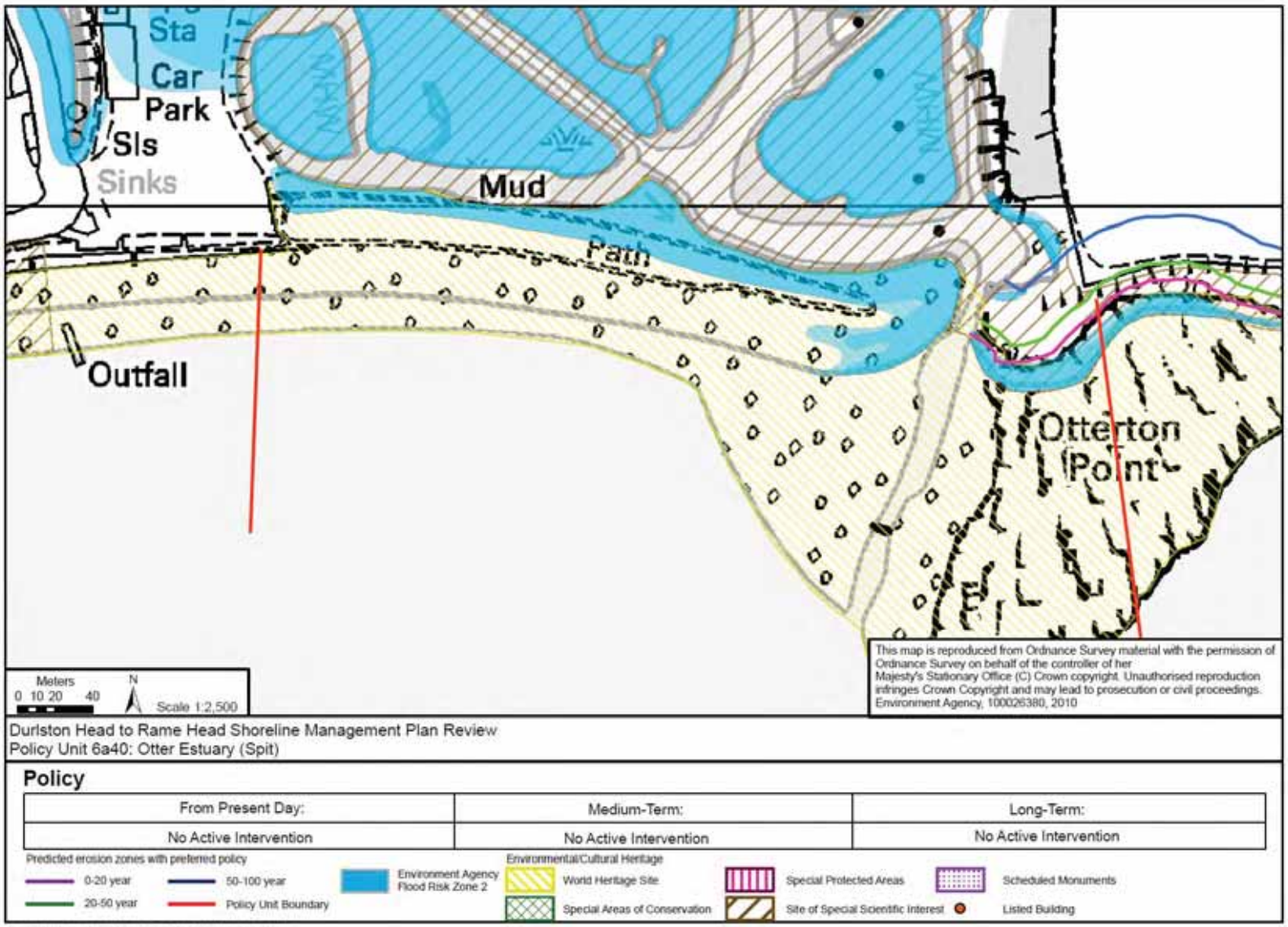
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Investigation and subsequent implementation of Managed Realignment at specific sites within the Otter Estuary. Localised maintenance of existing defences, should funds be available. Gabions along the spit would be allowed to fail, once exposed. The spit would remain stable.	Continued protection of properties and road linkages in Budleigh Salterton from flooding via the Otter Estuary.	Loss of a small portion of grade 3 and 4 agricultural land depending upon where Managed Realignment occurs. Flood risk to local roads would remain.	No known impacts on scheduled monuments. Possible damage to or loss of palaeo-environmental deposits in the Otter Estuary through Managed Realignment or through changes resulting in movement of the spit at Budleigh Salterton in a north-easterly direction (which could impact earlier harbour structures and palaeo-environmental evidence, if present) – *potential adverse impacts.*	Minor changes in landscape character of East Devon AONB.	One historic landfill site at risk of flooding in the Otter Estuary in the short, medium and long term. Further consideration of the current state of the landfill site would be required at project level. Realignment in Otter Estuary has the potential to affect the geological interests of Budleigh Salterton Cliffs SSSI and would require further consideration at project level.	Potential impacts on water quality due to potential short, medium and long term flooding of landfill site – see soils and geology. Works in areas of the Otter Estuary selected for Managed Realignment should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Potential change in intertidal habitat at the mouth of Otter Estuary SSSI with a likely increase in intertidal habitat resulting from Managed Realignment and/or NAI policies but potential loss of intertidal habitat due to erosion and scouring from changes in coastal processes; but likely overall beneficial impact.
2025 – 2055	Maintenance of Managed Realignment, and possible further realignments. Localised maintenance of existing defences, should funds be available. No management activities along the spit, which would remain stable during this period.	Continued protection of properties and road linkages in Budleigh Salterton from flooding via the Otter Estuary.	Loss of a small portion of grade 3 and 4 agricultural land depending upon where Managed Realignment occurs. Flood risk to local roads would remain.	No known impacts on scheduled monuments. Possible damage to or loss of palaeo-environmental deposits in the Otter Estuary through Managed Realignment or through changes resulting in movement of the spit at Budleigh Salterton in a north-easterly direction (which could impact earlier harbour structures and palaeo-environmental evidence, if present) – *potential adverse impacts.*	Minor changes in landscape character of East Devon AONB.	One historic landfill site at risk of flooding in the Otter Estuary in the short, medium and long term. Further consideration of the current state of the landfill site would be required at project level. Realignment in Otter Estuary has the potential to affect the geological interests of Budleigh Salterton Cliffs SSSI and would require further consideration at project level.	Potential impacts on water quality due to potential short, medium and long term flooding of landfill site – see soils and geology. Works in areas of the Otter Estuary selected for Managed Realignment should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Potential change in intertidal habitat at the mouth of Otter Estuary SSSI with a likely increase in intertidal habitat resulting from Managed Realignment and/or NAI policies but potential loss of intertidal habitat due to erosion and scouring from changes in coastal processes; but likely overall beneficial impact.
2055 – 2105	Maintenance of Managed Realignment, and possible further realignments. Localised maintenance of existing defences, should funds be available. No management activities along the spit.	Continued protection of properties and road linkages in Budleigh Salterton from flooding via the Otter Estuary.	Loss of a small portion of grade 3 and 4 agricultural land depending upon where Managed Realignment occurs. Flood risk to local roads would remain.	No known impacts on scheduled monuments. Possible damage to or loss of palaeo-environmental deposits in the Otter Estuary through Managed Realignment or through changes resulting in movement of the spit at Budleigh Salterton in a north-easterly direction (which could impact earlier harbour structures and palaeo-environmental evidence, if present) – *potential adverse impacts.*	Minor changes in landscape character of East Devon AONB.	One historic landfill site at risk of flooding in the Otter Estuary in the short, medium and long term. Further consideration of the current state of the landfill site would be required at project level. Realignment in Otter Estuary has the potential to affect the geological interests of Budleigh Salterton Cliffs SSSI and would require further consideration at project level.	Potential impacts on water quality due to potential short, medium and long term flooding of landfill site – see soils and geology. Works in areas of the Otter Estuary selected for Managed Realignment should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	Potential change in intertidal habitat at the mouth of Otter Estuary SSSI with a likely increase in intertidal habitat resulting from Managed Realignment and/or NAI policies but potential loss of intertidal habitat due to erosion and scouring from changes in coastal processes; but likely overall beneficial impact.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Budleigh Salterton**
Policy Unit reference:	**6a41**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The town of Budleigh Salterton is a key tourist and service centre for the region. Due to the extent of the developed area, and the importance of the town for the economy of the area, the long term Plan is to continue to provide protection to reduce the risk of flooding and erosion.

This section is bounded by naturally functioning coasts, where policies of No Active Intervention are proposed. As such, the future management of this frontage needs to consider impacts on the adjacent shorelines to minimise impacts on the natural environment, which could include potential adverse impacts to the World Heritage Site and Budleigh Salterton Cliffs SSSI.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** through maintaining the existing seawall and gabions. These structures extend along the cliff toe along the western part of this section, up to the landward end of the spit across the mouth of the Otter Estuary. These defences may need to be improved towards the end of this period to maintain adequate levels of protection. This could involve raising the height of the seawall or increasing the size of the defence so that it is better able to provide the require level of protection in the longer term as sea levels rise. Consideration should be given at this time to how defences may need to be modified to ensure they continue to provide defence even if the spit across the mouth of the estuary moves upstream in the future as sea levels rise. The beach fronting this section should remain stable as a result of continued sediment supply from cliff erosion further to the west.
Medium term:	The medium term policy is to continue to **Hold the Line** of existing defences along this frontage. It is anticipated that there will be a need to increase the size of the seawall along this section during this period to take account of future sea level, if not undertaken in the short term. Sediment will continue to be supplied from further west, but due to sea level rise beach steepening and narrowing could occur in front of the seawall. Other new defences, possibly including beach recharge and/or control structures, may also be required during this period. Beach control structures such as groynes could, however, have an impact on the spit. Implementation would therefore need to consider an integrated beach management strategy which covers both this frontage and that of the adjacent spit, such that it ensures retention of a beach at Budleigh whilst maintaining a throughput of shingle to the Otter Estuary spit complex. The potential for these to impact upon the World Heritage Site characteristics would also require evaluation. The continued presence of defences along the toe of the cliff would result in negligible cliff recession in this area. This will restrict some inputs of sediment into the system, but the cliffs here are low and therefore not a significant source of sediment.
Longer-term:	The long term policy is to continue to **Hold the Line** of the existing defences.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

This would involve maintenance of the defences during this period in order to maintain adequate levels of protection.

As sea levels rise, beach narrowing would continue even though sediment should continue to be supplied from the west (up to Straight Point). Any control structures implemented in the medium term could require replacement in order to maintain current levels of protection although any replacement structures would again need to consider the continuity of sediment processes across the entire frontage as well as implications on the World Heritage Site characteristics.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a41	Budleigh Salterton	Continue to maintain existing defences under a **Hold the Line** policy to continue protection of Budleigh Salterton.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.

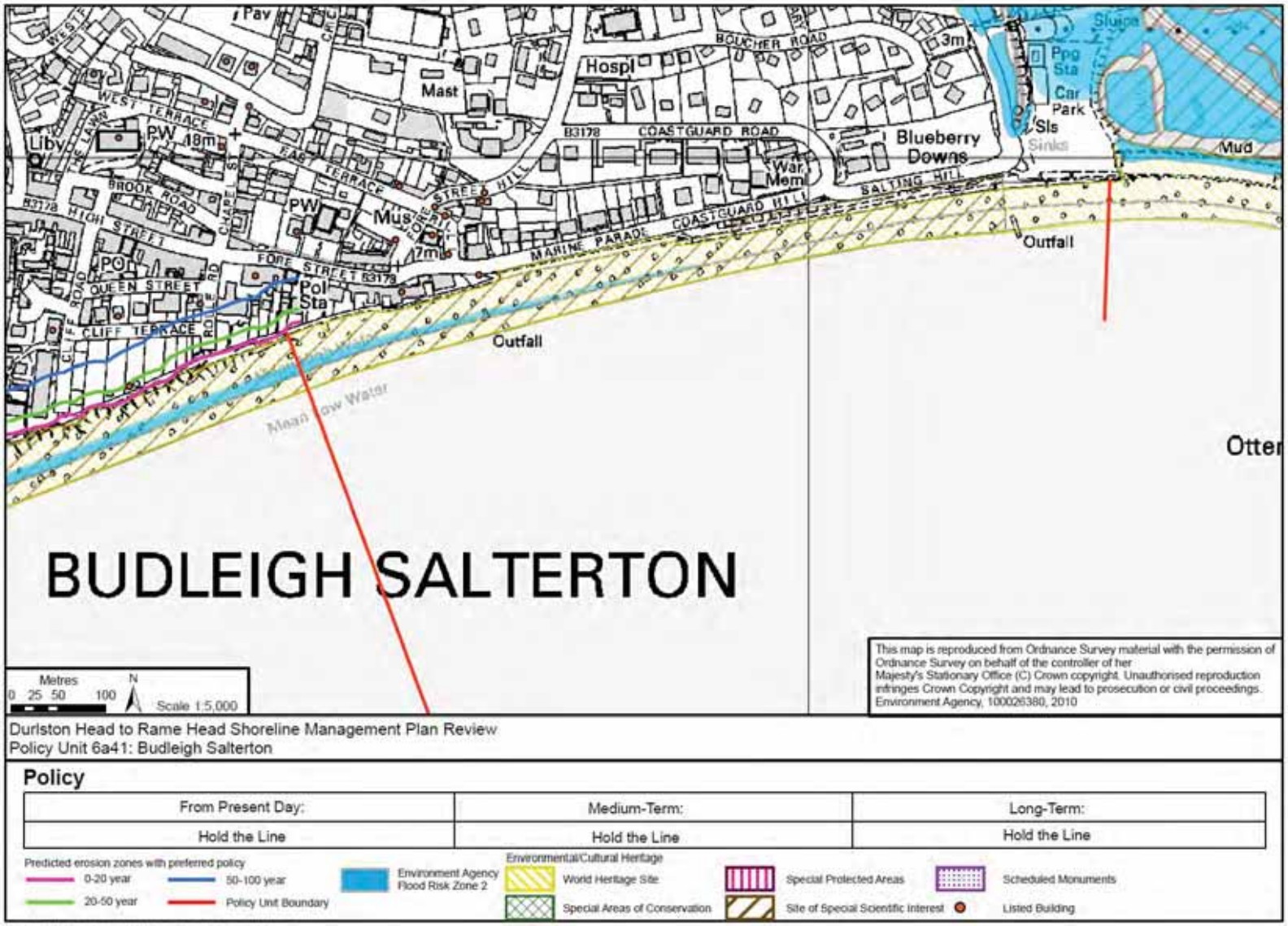
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Budleigh Salterton
Policy Unit reference:	6a41

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Maintenance and possible improvements to the existing defences.	Protection of properties in Budleigh Salterton from erosion and flooding, including those surrounding the seafront.	Protection of road linkages in Budleigh Salterton from erosion and flooding, including those surrounding the seafront.	Protection against Flood risk to some Grade 2 Listed buildings.	Minor changes in landscape character of East Devon AONB.	A policy to Hold the Line at Budleigh Salterton has the potential to adversely impact on the geological features of the World Heritage Site and Budleigh Salterton Cliffs SSSI.	No known impacts on water quality.	No known impacts on designated biodiversity, flora or fauna interests.
2025 – 2055	Maintenance and possible improvements to the existing defences.	Protection of properties in Budleigh Salterton from erosion and flooding, including those surrounding the seafront.	Protection of road linkages in Budleigh Salterton from erosion and flooding, including those surrounding the seafront.	Protection against Flood risk to some Grade 2 Listed buildings.	Minor changes in landscape character of East Devon AONB.	A policy to Hold the Line at Budleigh Salterton has the potential to adversely impact on the geological features of the World Heritage Site and Budleigh Salterton Cliffs SSSI.	No known impacts on water quality.	No known impacts on designated biodiversity, flora or fauna interests.
2055 – 2105	Maintenance and possible improvements to the existing defences.	Protection of properties in Budleigh Salterton from erosion and flooding, including those surrounding the seafront.	Protection of road linkages in Budleigh Salterton from erosion and flooding, including those surrounding the seafront.	Protection against Flood risk to some Grade 2 Listed buildings	Minor changes in landscape character of East Devon AONB.	A policy to Hold the Line at Budleigh Salterton has the potential to adversely impact on the geological features of the World Heritage Site and Budleigh Salterton Cliffs SSSI.	No known impacts on water quality.	No known impacts on designated biodiversity, flora or fauna interests.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Budleigh Salterton (West) to Straight Point**
Policy Unit reference:	**6a42**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The undefended, slowly eroding cliffs along this section are internationally important for their geological and landscape character, as well as being a critical source of beach sediment here and to the shorelines further east at Budleigh Salterton and the Otter Estuary. The long term Plan is therefore to allow the continued natural erosion and evolution of the shoreline to continue.

As a result of this policy there will be an increased risk of erosion to some cliff top properties, roads, tourism infrastructure and the South West Coast Path in the medium to long term.

The cliffs along the western part of this section experience very infrequent complex landslide failures every 100 to 250 years. Elsewhere, small scale failures occur more frequently with events less than every 10 years as a result of geological factors and undercutting by wave action at the cliff toe. The continued erosion of mudstones, sandstones and pebbles beds provides material to the local beach stock that is then transported eastwards along the shoreline by littoral processes to supply the beach at Budleigh Salterton and the spit across the mouth of the Otter estuary.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention** along this undefended section of cliffed coast. The underlying rate of recession along this section is predicted to result in the erosion of less than 10m of cliff by 2025. Towards Straight Point, the nature of cliffs changes and recession is only as a result of infrequent small scale cliff falls, and so in this area up to 10m of localised recession is predicted by 2025.
Medium term:	The medium term policy is to continue **No Active Intervention**, thereby allowing natural coastal evolution to continue. Cliff erosion is expected to continue as historically, although sea level rise could lead to this rate increasing. Total erosion by 2055 of about 20m is predicted along much of this section, but with less than 10m erosion expected along the coastline toward Straight Point, where the geology of the cliffs differs. Sea level rise could lead to the narrowing of the beach, which in turn would result in increased wave exposure of the cliff toe and therefore in a slightly increased rate of erosion. However, as the cliffs erode they will release sediment to the beaches so will, episodically, reduce the toe exposure.
Longer-term:	The long term policy is to continue **No Active Intervention** along this undefended section of cliffed coast, allowing it to continue to evolve naturally. Erosion of the cliffs would continue, although sea level rise is likely to lead to this rate increasing during this period, with total erosion of 40 to 55m predicted by 2105. Towards Straight Point, where recession is only as a result of infrequent small scale cliff falls, less than 10m of recession is predicted by 2105. These cliffs could, however, be more sensitive to sea level rise and any increase in precipitation, potentially leading to an increase in the frequency of cliff failure events. There is, also, a slight risk that relict landslides could be reactivated. Therefore monitoring is recommended to monitor this potential risk.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	Beaches are likely to be maintained by the input of new sediment though cliff erosion, although some narrowing would be expected unless erosion keeps pace with accelerated sea level rise.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a42	Budleigh Salterton (West) to Straight Point	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

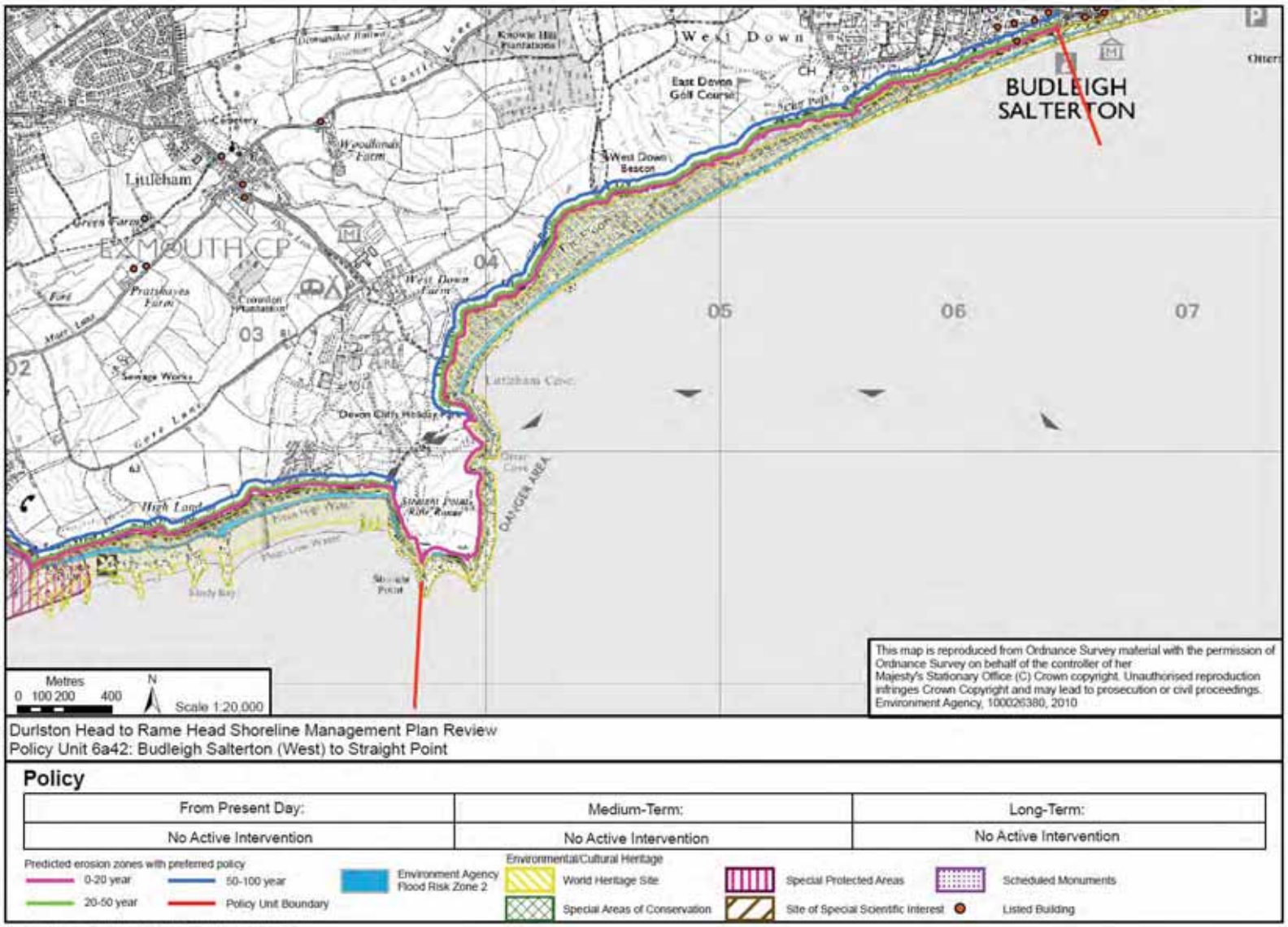
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Budleigh Salterton (West) to Straight Point
Policy Unit reference:	6a42

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Continued slow cliffline retreat would occur. No management activities.	Potential for the loss of tourist facilities particularly Devon Cliffs Holiday park, a small area of East Devon Golf Course and parts of the South-West Coastal Path.	Potential loss of some local cliff top roads in the western part of Budleigh Salterton from erosion. Loss of a small portion of grade 3 and 4 agricultural land. Small area of Straight Point MoD ranges potentially lost due to erosion.	Flood and erosion risk to some Grade 2 Listed buildings.	Minor changes in landscape character of East Devon AONB.	Continuation of natural processes is key to the integrity of the geological interest features; the preferred policy would allow natural erosion to continue, thus maintaining and enhancing the World Heritage Site and its geological SSSIs.	No known impacts on water quality.	No known impacts on designated biodiversity, flora or fauna interests.
2025 – 2055	Continued slow cliffline retreat would occur. No management activities.	Potential loss of some cliff top properties in the western part of Budleigh Salterton from erosion. Potential for the loss of tourist facilities particularly Devon Cliffs Holiday park, a small area of East Devon Golf Course and parts of the South-West Coastal Path	Potential loss of some local cliff top roads in the western part of Budleigh Salterton from erosion. Loss of land between Budleigh and Straight point, potentially of recreational value. Loss of a small portion of grade 3 and 4 agricultural land. Small area of Straight Point MoD ranges potentially lost due to erosion.	Flood and erosion risk to some Grade 2 Listed buildings.	Minor changes in landscape character of East Devon AONB.	Continuation of natural processes is key to the integrity of the geological interest features; the preferred policy would allow natural erosion to continue, thus maintaining and enhancing the World Heritage Site and its geological SSSIs.	No known impacts on water quality.	No known impacts on designated biodiversity, flora or fauna interests.
2055 – 2105	Continued slow cliffline retreat would occur. No management activities.	Potential loss of some cliff top properties in the western part of Budleigh Salterton from erosion. Potential for the loss of tourist facilities particularly Devon Cliffs Holiday park, a small area of East Devon Golf Course and parts of the South-West Coastal Path.	Potential loss of some local cliff top roads in the western part of Budleigh Salterton from erosion. Loss of land between Budleigh and Straight point, potentially of recreational value. Loss of a small portion of grade 3 and 4 agricultural land. Small area of Straight Point MoD ranges potentially lost due to erosion	Flood and erosion risk to some Grade 2 Listed buildings.	Minor changes in landscape character of East Devon AONB	Continuation of natural processes is key to the integrity of the geological interest features and therefore in most areas along this frontage, the preferred policy would allow natural erosion to continue, thus maintaining and enhancing the World Heritage Site and its geological SSSIs	No known impacts on water quality.	No known impacts on designated biodiversity, flora or fauna interests.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Straight Point to Orcombe Rocks**
Policy Unit reference:	**6a43**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The cliffs along this section experience slow erosion as a result of small scale cliff failure events about every 10 years. The long term Plan for this length is to allow it to retreat, enabling a naturally-functioning coastal system, with minimal human interference; this will maintain environmental and landscape interests.

The immediate cliff top area is mainly undeveloped and the slow erosion rates of the cliffs means there will be little, if any, impact on infrastructure or permanent developed areas located along the cliff top over the next 100 years, although parts of the South West Coast Path could be at risk in the short term, whilst parts of the Devon Cliffs Holiday Park may become at risk in the medium to longer term.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention**. Erosion of the cliffs is predicted to not exceed 5m over this period. These would continue to supply limited sediment to maintain the local sandy beaches.
Medium term:	The medium term policy is to continue **No Active Intervention**. Sea level rise could result in the rate of cliff erosion increasing during this period, with total recession of the cliffs at the back of most of Sandy Bay predicted to be between 10 and 15m by 2055. Towards Orcombe Rocks, total erosion of up to 15m is predicted over the same period. The erosion of the cliffs would continue to supply sediment to the local beach; therefore a narrow beach is likely to remain, despite rising sea levels.
Longer-term:	The long term policy is to continue **No Active Intervention** along this undefended cliffed coastline, allowing it to continue to evolve naturally. Cliff recession is predicted to be between 20 and 50m by 2105. The erosion of the cliffs would continue to supply sand to the local beach stock, helping to maintain a narrow beach at the toe of the cliffs.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6a43	**Straight Point to Orcombe Rocks**	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.

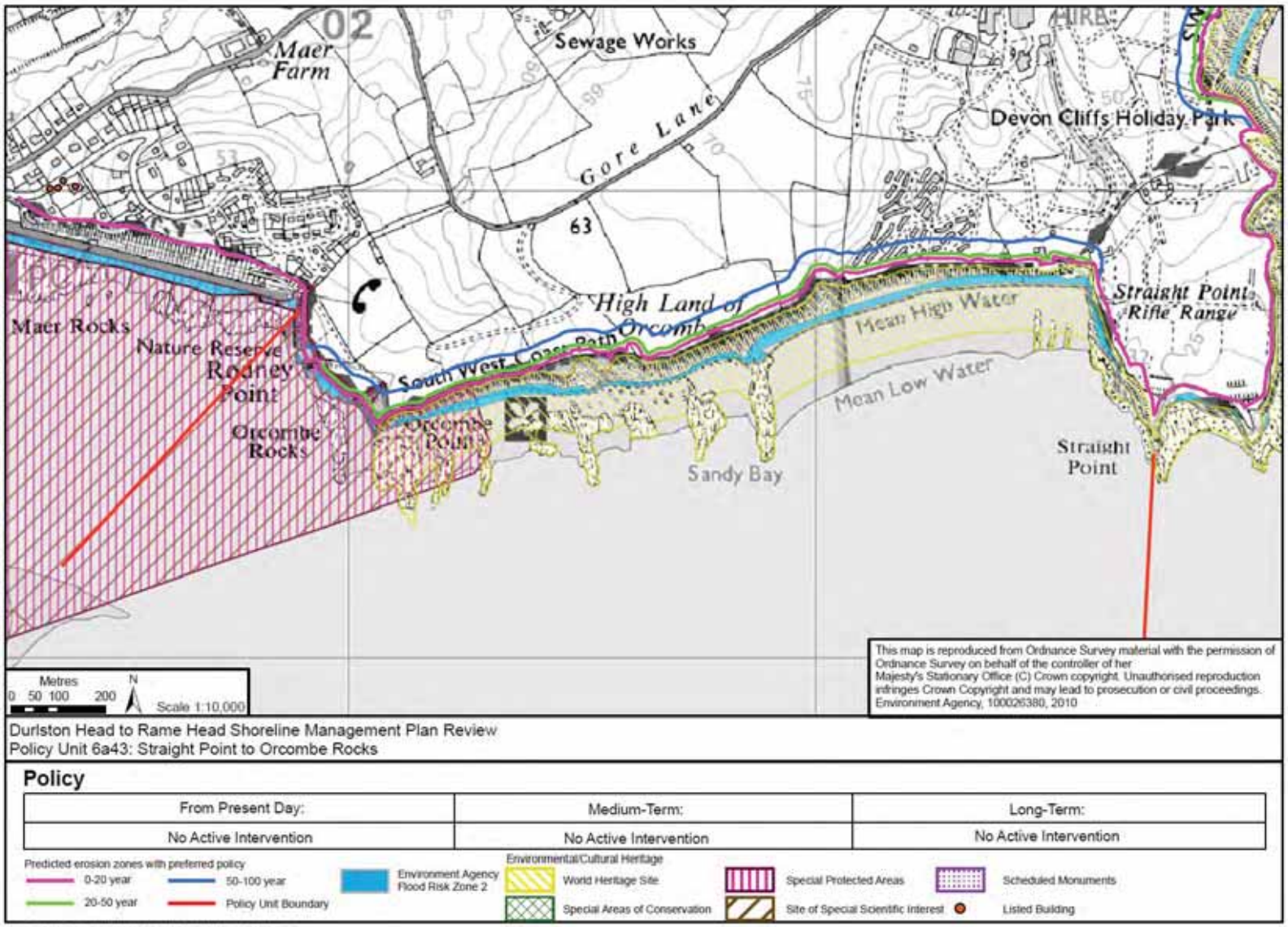
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Straight Point to Orcombe Rocks**
Policy Unit reference:	**6a43**

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Continued slow cliffline retreat would occur. No management activities.	Potential loss of parts of South West Coastal Path due to erosion	Small area of Straight Point MoD ranges lost due to erosion.	No known impacts on archaeological features.	Minor changes in landscape character of East Devon AONB.	No Active Intervention will conserve and enhance the adjacent SSSI and Orcombe Point.	No known impacts on water quality.	Potential for creation of intertidal habitat within the Exe Estuary SPA, Ramsar site, SSSI and RSPB Reserve that can be used by feeding and roosting birds from the estuary.
2025 – 2055	Continued slow cliffline retreat would occur. No management activities.	Potential loss of parts of South West Coastal Path due to erosion People, properties and facilities at risk from erosion at the Devon Cliffs Holiday Park	Small area of Straight Point MoD ranges lost due to erosion.	No known impacts on archaeological features.	Minor changes in landscape character of East Devon AONB.	No Active Intervention will conserve and enhance the adjacent SSSI and Orcombe Point.	No known impacts on water quality.	Potential for creation of intertidal habitat within the Exe Estuary SPA, Ramsar site, SSSI and RSPB Reserve that can be used by feeding and roosting birds from the estuary.
2055 – 2105	Continued slow cliffline retreat would occur. No management activities.	Potential loss of parts of South West Coastal Path due to erosion People, properties and facilities at risk from erosion at the Devon Cliffs Holiday Park	Small area of Straight Point MoD ranges lost due to erosion..	No known impacts on archaeological features.	Minor changes in landscape character of East Devon AONB.	No Active Intervention will conserve and enhance the adjacent SSSI and Orcombe Point.	No known impacts on water quality.	Potential for creation of intertidal habitat within the Exe Estuary SPA, Ramsar site, SSSI and RSPB Reserve that can be used by feeding and roosting birds from the estuary.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Orcombe Rocks to Exmouth Spit**
Policy Unit reference:	**6a44 to 6a47**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term Plan for this length of coast is to continue to minimise the risk of flooding and erosion to property and infrastructure, whilst looking for opportunity to reinstate more natural processes where possible to reduce the long term commitment to defence structures in those places.

Along the developed frontage of the town of Exmouth, the long term plan is to continue to hold the existing defence line to provide protection to properties in the direct hinterland.

Along the eastern part of this stretch, The Maer is an area of low-lying land containing a relict former dune system which has been cut off from the shoreline by hard defence structures. As sea levels rise, the beach fronting the existing defences will be increasingly difficult to sustain and require an increasing amount of beach material and larger, more robust structures. The more sustainable, long term option here therefore is to manage realignment along The Maer frontage, with a set-back defence line being constructed further inland to minimise flood risk to the wider developed parts of Exmouth. Prior to any implementation, such realignment will be subject to more detailed study, starting with the Exe Estuary Strategy Study that is due to report in 2011. If detailed studies do lead to implementation of realignment along The Maer, the result would be to allow the relict dune system to be reconnected with the coast, which in turn would be expected to become re-established in the longer term and so provide an additional, more natural and sustainable defence fronting the set-back defence line. If detailed studies find realignment not to be viable, then the continued defence along existing alignments would lead to loss of beach along The Maer frontage.

Whilst there are clear environmental and social benefits in allowing Managed Realignment in this area, due to political and social sensitivities further investigation is required into its viability. If it is determined from these studies not to be appropriate to implement Managed Realignment in this area, then the existing defences along this section would be maintained under a Hold the Line policy along with the rest of this stretch.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** of the existing seawalls and esplanade to provide both erosion and flood protection to the cliffed frontage and the extensively developed low-lying area Exmouth. The beaches fronting the seawalls at Exmouth have historically fluctuated, but in the last ten years, they have experienced a trend of net erosion. This trend is expected to continue and therefore it is likely that continued defence of this area will involve some form of beach management. This beach management could be phased-in through a combination of recycling/recharge, groynes and new hard defences. Towards the mouth of the Exe Estuary, seawalls protect areas of extensively developed low-lying hinterland (formerly a dynamic spit) from flooding. These would need to be raised locally to continue to provide current levels of protection. Where defences do not currently exist (at The Gut), new hard defences are likely to be required. Investigations should be undertaken to establish whether these can be universally raised or if new hard defences are required in the long term. Along The Maer frontage, the existing seawalls, esplanade and two very small dune systems that protect the area of low-lying land behind this section would be maintained during this period whilst detailed investigations take to identify and develop the most appropriate measures to implement the medium and long term policy.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Medium term:	In the medium term the policy will be to continue to **Hold the Line** of the existing defences along the majority of this stretch. This may require the provision of a new groyne field to support ongoing beach management activities during this period to retain the current levels of protection, and possibly construction of new defences towards the mouth of the Exe Estuary. There would continue to be a lack of fresh beach sediment input from cliff erosion at Exmouth and littoral transport from the east. Without some form of beach management, such as recharge, coastal squeeze would occur due to the lack of sediment input and increasing sea levels. New defences possibly including control structures and/or beach recharge could therefore be required during this period in order to maintain current levels of protection. Along The Maer frontage, and subject to detailed studies in the short-term, the medium term recommendation is to move to a policy of **Managed Realignment** in order to establish a more sustainable defence line in the future as sea levels rise. If detailed study does result in implementation of a realignment scheme, this would involve the construction of a new secondary line of defences landward of the existing defences, and then a managed breach and subsequent removal of existing structures would take place. Ultimately this should allow the beach and small dune system along this section to adapt more naturally to climate change whilst allowing the relict dune system to become re-activated. There is a risk that such a realignment could lead to development of an embayment in the long term that could restrict sediment supply towards the Exe Estuary mouth from this area and so reducing the amount of material along the coast to the west of The Maer. Therefore any such scheme would need to consider the potential impact on the longshore linkages and would have to be complementary with the recommended policies on the adjacent sections of coast, potentially considering some form of beach management. It is therefore recommended that this frontage be managed as a whole. If detailed study in the short term finds it not to be viable to implement realignment along The Maer frontage, then the existing frontage would be maintained under a hold the line policy.
Longer-term:	The long term policy is to continue to **Hold the Line** along the developed frontage of Exmouth. This is likely to require further improvements to be made to the seawalls and any existing groyne field along this section in order to maintain current levels of protection if not already undertaken in the medium term. This would involve construction of larger seawalls than presently occur along the Exmouth frontage. Rising sea levels, combined with a lack of sediment input, would be expected to cause narrowing and steepening of the beach fronting this part of the Exmouth frontage. This could make beach management activities less sustainable and increasingly expensive; therefore defence of Exmouth in the longer term may well involve hard structures only with little or no beach present in front of these structures. Along The Maer frontage, depending on the management approach taken forward following detailed studies in the short and medium term, either the realigned or existing defence position, would be maintained. If realignment is implemented in the medium term, then a more naturally functioning coastline in this area should be more able to adapt to ongoing sea level rise and so coastal squeeze impacts are likely to be negligible. This would also help conserve a beach in this area when it may not be possible to provide beach along other parts of the Exmouth frontage. If the existing defence line is

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

maintained, there is likely to be loss of beach due to coastal squeeze and requirement for large, hard defence structures along The Maer frontage, as per the rest of the Exmouth frontage.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6a44	**Orcombe Rocks to Maer Rocks**	Maintain existing defences under a **Hold the Line** policy to provide continued protection to Exmouth.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.
6a45	**The Maer**	Continue to maintain existing defences under a **Hold the Line** policy to provide continued protection to Exmouth. Investigate possibility of realignment.	Implement **Managed Realignment** through constructing a set-back defence if detailed study finds it is appropriate to do so. Continue to maintain and improve defences under a **Hold the Line** policy if realignment is not found to be appropriate.	**Hold the Line** of defence, either along existing or realigned extents.
6a46	**Harbour View to Exmouth Pier**	Continue to maintain existing defences under a **Hold the Line** policy to provide continued protection to Exmouth.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.
6a47	**Exmouth Spit**	Continue to maintain existing defences under a **Hold the Line** policy to provide continued protection to Exmouth.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Orcombe Rocks to Exmouth Spit
Policy Unit reference:	6a44 to 6a47

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Maintenance and possible improvement of the existing defences would occur during this period, possibly including beach management activities.	Continued protection of property, commercial and economic assets and recreational facilities in Exmouth (e.g. around The Point, a marina, Queens Drive & the esplanade along the seafront.	Continued protection of infrastructure within Exmouth from flooding.	Continued protection of Grade 2 listed buildings from flooding in Exmouth.	Minor changes in landscape character of East Devon AONB.	Holding the line along much of this coastal section) has the potential to affect geological SSSIs.	No known impacts on water quality. Works in areas of medium/long term Managed Realignment should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	A HTL policy is likely to result in the progressive loss of intertidal habitat due to coastal squeeze, resulting in the physical modification or loss of habitat used by feeding and roosting birds within the Exe Estuary SPA and Ramsar site Consequently, an adverse impact is anticipated on this European site. Potential loss of some terrestrial habitats but potential extension of intertidal/geological features at The Maer LNR. Potential for wetland habitat creation at The Maer. Holding the line at Exmouth LNR has the potential to result in the loss of intertidal habitat due to coastal squeeze.
2025 – 2055	Beach management activities as well as maintenance and possibly further improvement of existing defences would occur. Construction of shoreline control structures is also likely to occur. Along The Maer, implementation of Managed Realignment would occur.	Continued protection of property, commercial and economic assets and recreational facilities in Exmouth (e.g. around The Point, a marina, Queens Drive & the esplanade along the seafront).	Continued protection of infrastructure within Exmouth from flooding	Continued protection of Grade 2 listed buildings from flooding in Exmouth.	Minor changes in landscape character of East Devon AONB.	Holding the line along much of this coastal section) has the potential to affect geological SSSIs.	No known impacts on water quality. Works in areas of medium/long term Managed Realignment should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	A HTL policy is likely to result in the progressive loss of intertidal habitat due to coastal squeeze, resulting in the physical modification or loss of habitat used by feeding and roosting birds within the Exe Estuary SPA and Ramsar site Consequently, an adverse impact is anticipated on this European site. Potential loss of some terrestrial habitats but potential extension of intertidal/geological features at The Maer LNR. Potential for wetland habitat creation at The Maer. Holding the line at Exmouth LNR will result in the potential loss of intertidal habitat due to coastal squeeze.
2055 – 2105	Maintenance of existing and realigned defences, and possibly further improvements to the	Continued protection of property, commercial and economic assets and recreational facilities in	Continued protection of infrastructure within Exmouth from flooding	Continued protection of Grade 2 listed buildings from flooding in Exmouth.	Minor changes in landscape character of East Devon AONB.	Holding the line along much of this coastal section) has the potential to affect geological SSSIs.	No known impacts on water quality. Works in areas of	A HTL policy is likely to result in the progressive loss of intertidal habitat due to coastal squeeze, resulting in the

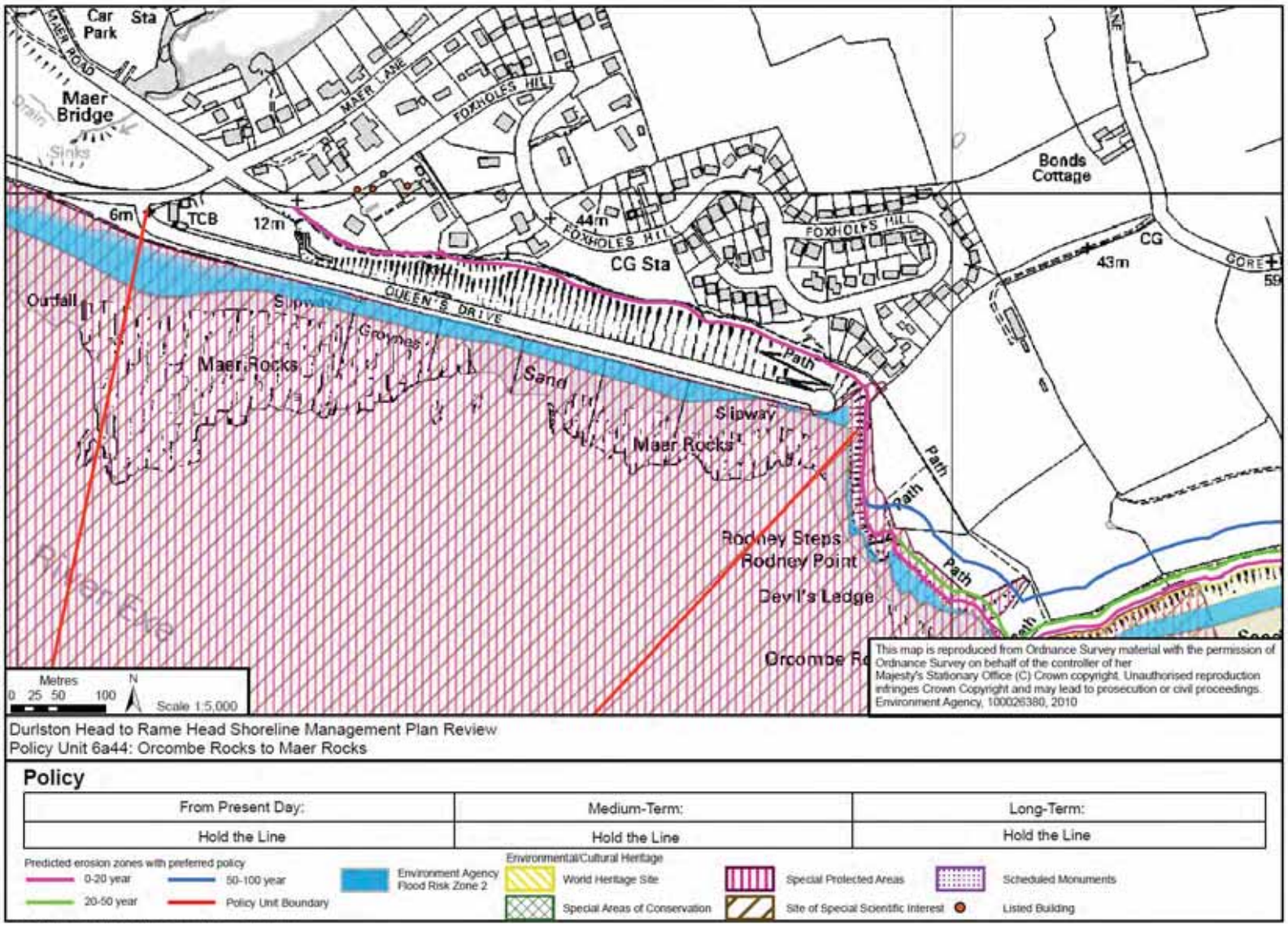
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Orcombe Rocks to Exmouth Spit
Policy Unit reference:	6a44 to 6a47

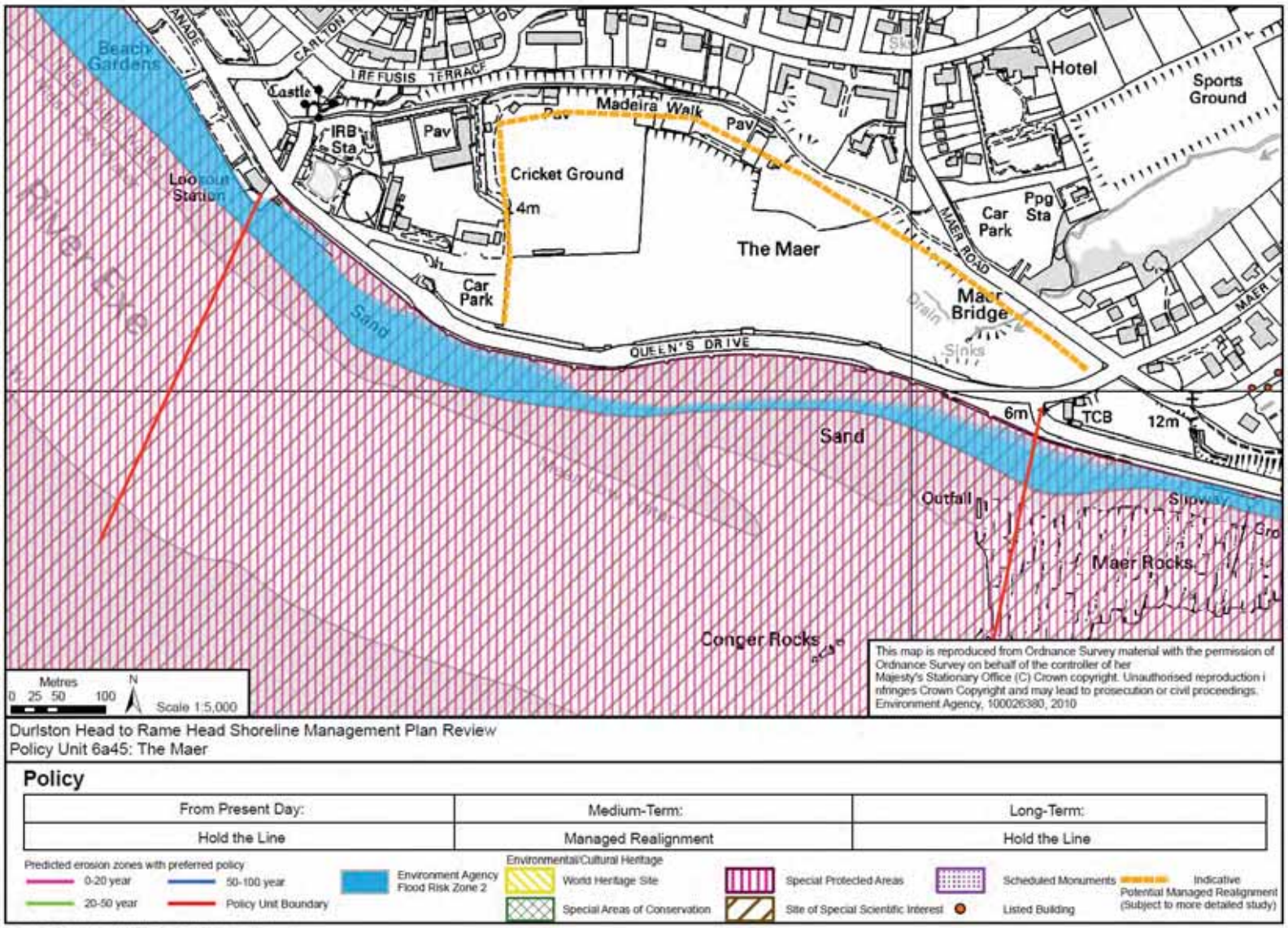
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
	defences would occur, along with continued beach management activities.	Exmouth (e.g. around The Point, a marina, Queens Drive & the esplanade along the seafront)..					medium/long term Managed Realignment should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	physical modification or loss of habitat used by feeding and roosting birds within the Exe Estuary SPA and Ramsar site Consequently, an adverse impact is anticipated on this European site. Potential loss of some terrestrial habitats but potential extension of intertidal/geological features at The Maer LNR. Potential for wetland habitat creation at The Maer. Holding the line at Exmouth LNR will result in the potential loss of intertidal habitat due to coastal squeeze

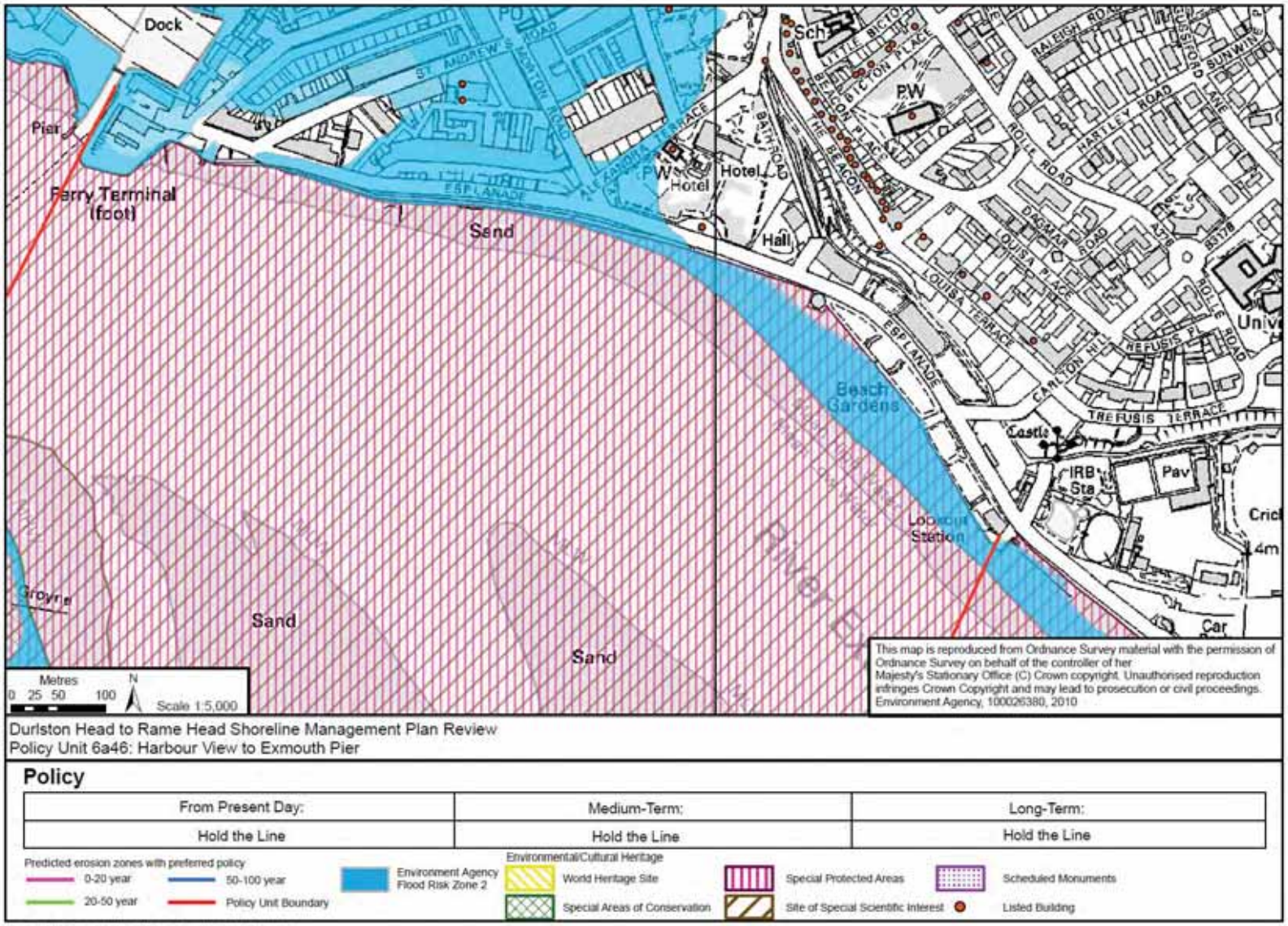
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



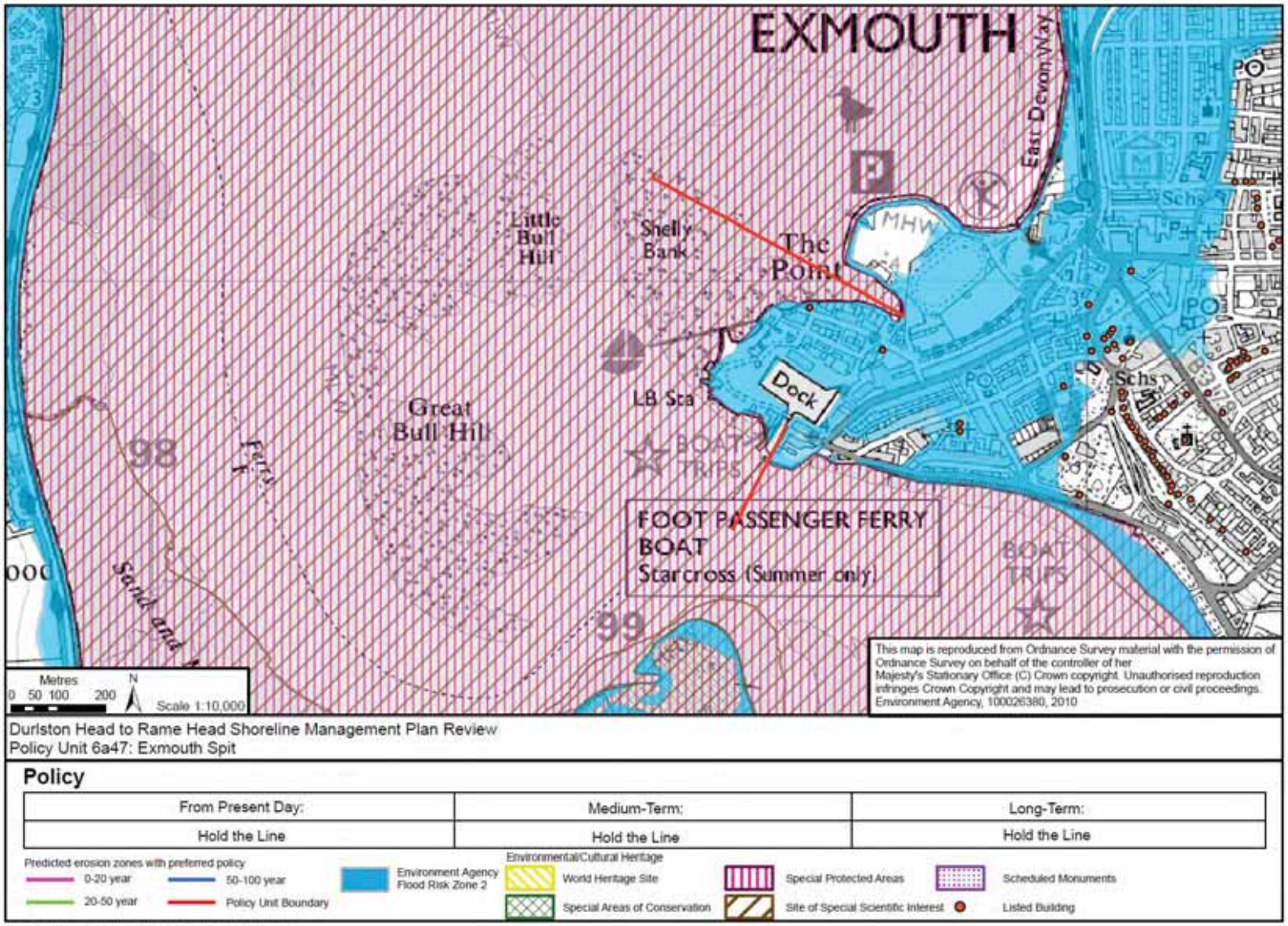
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Exe Estuary (East bank – Exmouth to River Clyst)**
Policy Unit reference:	**6b01 to 6b07**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The outer eastern side of the Exe Estuary is largely defended, protecting regionally important infrastructure links and residential centres. Due to the importance of these, the long term Plan is to continue to minimise the risk of erosion and flooding along this frontage over the next 100 years.

Retention of the defence line, however, has the potential to result in loss of some areas of inter-tidal habitat within the Exe Estuary as sea levels rise and the inter-tidal area is prevented from migrating landwards by the presence of the defences. This impact may be mitigated to some extent if Managed Realignment occurs in other parts of the estuary system.

The Exe Estuary as a whole is dependent upon the future evolution and management of Dawlish Warren, and so the management of this section would be greatly impacted upon if the coastal defence function of Dawlish Warren spit were to be reduced as a result of natural evolution and change. However, the recommended policy for Dawlish Warren should ensure the spit is maintained during this period (refer to Policy Units 6b19 to 6b22).

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** of the existing defences along this outer eastern side of the Exe Estuary. Defences are to be maintained along existing alignments by pro-active management. This may include the need to either raise the height of existing defences, or, if necessary, re-build with larger defences to maintain adequate levels of protection.
Medium term:	The medium term policy is to continue to **Hold the Line** of the existing defences along this outer eastern side of the Exe Estuary. Defences are to be maintained along existing alignments by pro-active management. The existing standards of protection within the inner estuary are liable to be compromised in the medium to long term necessitating the provision of new defence structures. This may include the need to construct larger defences maintain adequate levels of protection in the longer term as sea levels rise.
Longer-term:	The long term policy is to continue to **Hold the Line** of the existing defences along this outer eastern side of the Exe Estuary. Defences would continue to be maintained along existing alignments by pro-active management. This is likely to include the need to construct new hard defences if not undertaken in the preceding epochs to maintain adequate levels of protection. This could, however, have an impact on the Exe Estuary by restricting its ability to adapt to rising sea levels and changes in hydrology resulting from future climate change, and result in the loss of intertidal areas if sedimentation is unable to keep pace with rising sea levels.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6b01	**Exe Estuary - Exmouth (west)**	Continue to maintain existing defences under a **Hold the Line** policy to	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
		provide continued protection to Exmouth.		
6b02	**Exe Estuary - Exmouth (west) to Lympstone**	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.
6b03	**Exe Estuary - Lympstone**	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.
6b04	**Exe Estuary - Nutwell Park**	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.
6b05	**Exe Estuary - Lympstone Commando**	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.
6b06	**Exe Estuary - Exton**	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.
6b07	**Exe Estuary - Exton to Lower Clyst**	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Exe Estuary (East bank – Exmouth to River Clyst)
Policy Unit reference:	6b01 to 6b07

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

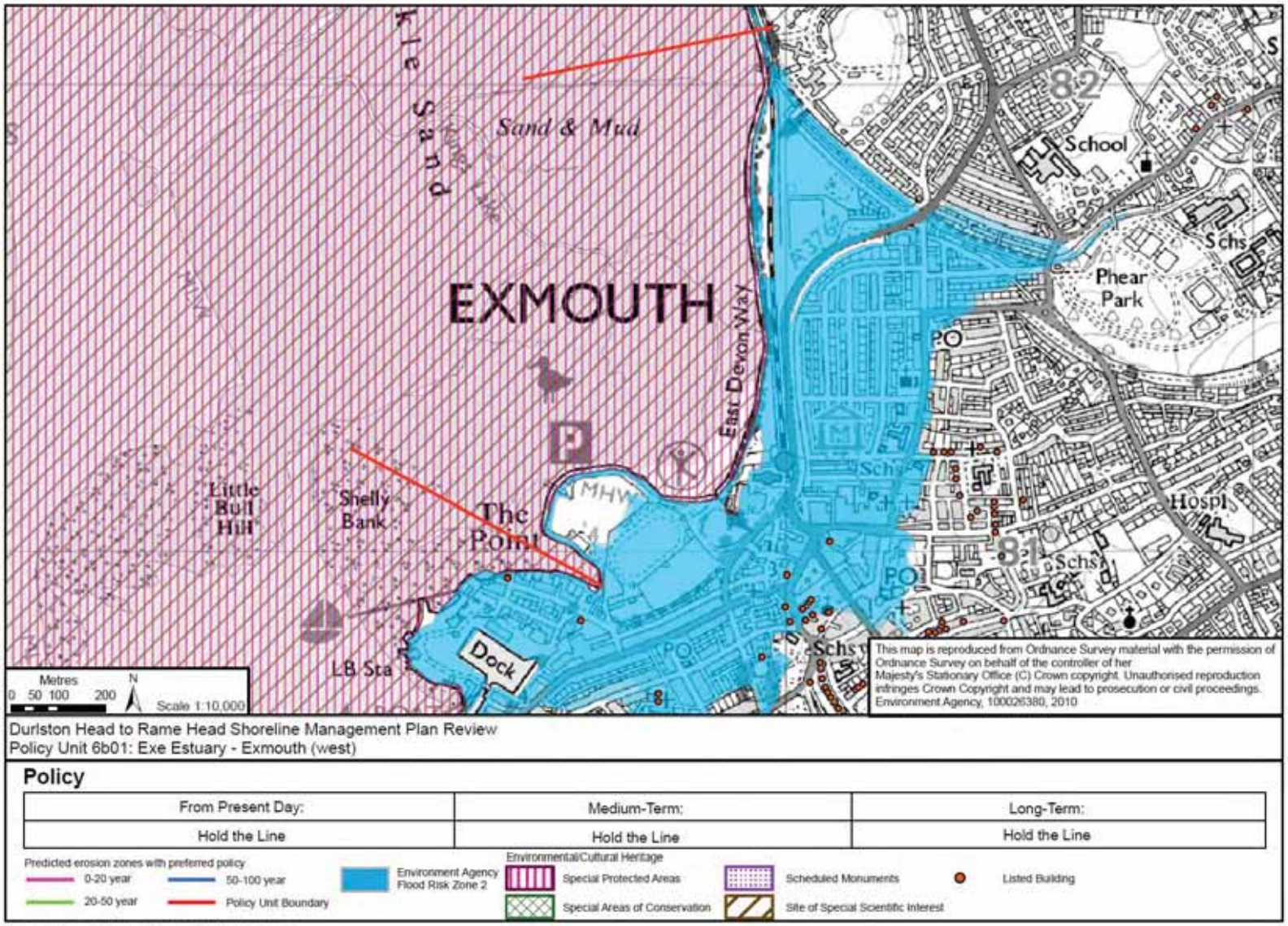
Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Maintenance of, and improvements to, defences.	Continued protection of property, commercial and economic assets and recreational facilities in Exmouth, Lympstone and Exton.	Continued protection of the railway connections from flooding. Continued protection of the Commando Training Centre from flooding Continued protection of the A376 at Exton from flooding Continued protection of infrastructure from flooding Continued protection of the majority of grade 2 and 3 agricultural land with small losses in some. Majority of area is urban or non-agricultural.	Continued protection of Grade 2 listed buildings from flooding or erosion predominantly in Exmouth and, Lympstone.	No known impacts on landscape character.	Continued protection of historic Imperial Recreation Ground landfill site on the Exe Estuary from flooding	HTL to protect heavily populated areas could increase the frequency of tide-locking and subsequent water depth in the adjacent river waterbodies in response to climate change/sea level rise, thus potentially failing WFD objective 3.	A HTL policy is likely to result in the progressive loss of intertidal habitat due to coastal squeeze, resulting in the physical modification or loss of habitat used by feeding and roosting birds within the Exe Estuary SPA, Ramsar site and SSSI. Consequently, an adverse impact is anticipated on this European site.
2025 – 2055	Maintenance of, and improvements to, defences.	Continued protection of property, commercial and economic assets and recreational facilities in Exmouth, Lympstone and Exton.	Continued protection of the railway connections from flooding. Continued protection of the Commando Training Centre from flooding Continued protection of the A376 at Exton from flooding Continued protection of infrastructure from flooding Continued protection of the majority of grade 2 and 3 agricultural land with small losses in some. Majority of area is urban or non-agricultural.	Continued protection of Grade 2 listed buildings from flooding or erosion predominantly in Exmouth and, Lympstone.	No known impacts on landscape character.	Continued protection of historic Imperial Recreation Ground landfill site on the Exe Estuary from flooding	HTL to protect heavily populated areas could increase the frequency of tide-locking and subsequent water depth in the adjacent river waterbodies in response to climate change/sea level rise, thus potentially failing WFD objective 3.	A HTL policy is likely to result in the progressive loss of intertidal habitat due to coastal squeeze, resulting in the physical modification or loss of habitat used by feeding and roosting birds within the Exe Estuary SPA, Ramsar site and SSSI. Consequently, an adverse impact is anticipated on this European site.
2055 – 2105	Maintenance of, and improvements to, defences.	Continued protection of property, commercial and economic assets and recreational facilities in Exmouth, Lympstone and Exton.	Continued protection of the railway connections from flooding. Continued protection of the Commando Training Centre from flooding Continued protection of the A376 at Exton from flooding	Continued protection of Grade 2 listed buildings from flooding or erosion predominantly in Exmouth and, Lympstone.	No known impacts on landscape character.	Continued protection of historic Imperial Recreation Ground landfill site on the Exe Estuary from flooding	HTL to protect heavily populated areas could increase the frequency of tide-locking and subsequent water depth in the adjacent river waterbodies in response to climate change/sea level rise, thus potentially failing WFD objective 3.	A HTL policy is likely to result in the progressive loss of intertidal habitat due to coastal squeeze, resulting in the physical modification or loss of habitat used by feeding and roosting birds within the Exe Estuary SPA, Ramsar site and SSSI. Consequently, an adverse impact is anticipated on this

Location reference:	Exe Estuary (East bank – Exmouth to River Clyst)
Policy Unit reference:	6b01 to 6b07

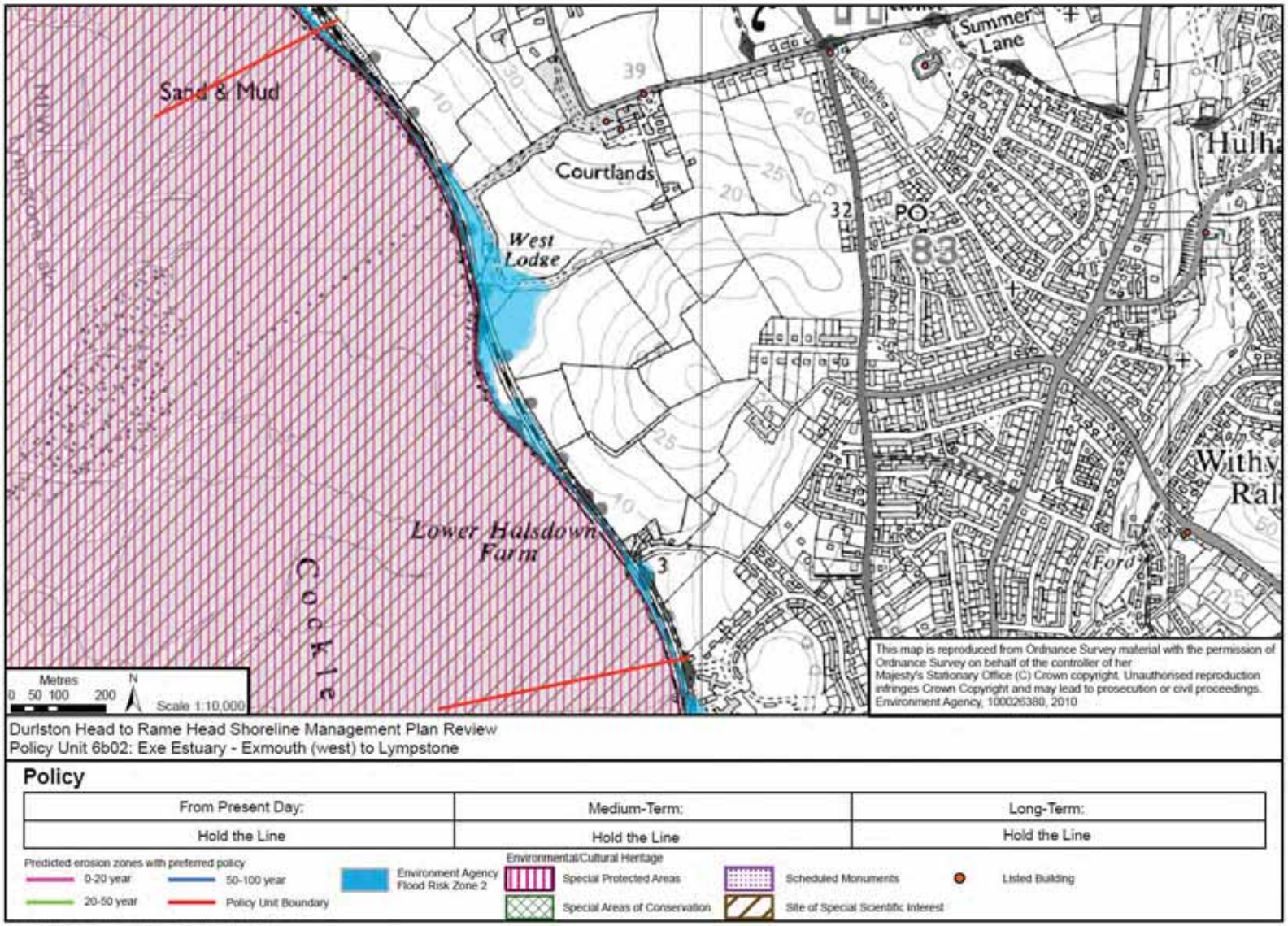
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
			Continued protection of infrastructure from flooding Continued protection of the majority of grade 2 and 3 agricultural land with small losses in some. Majority of area is urban or non-agricultural.					European site.

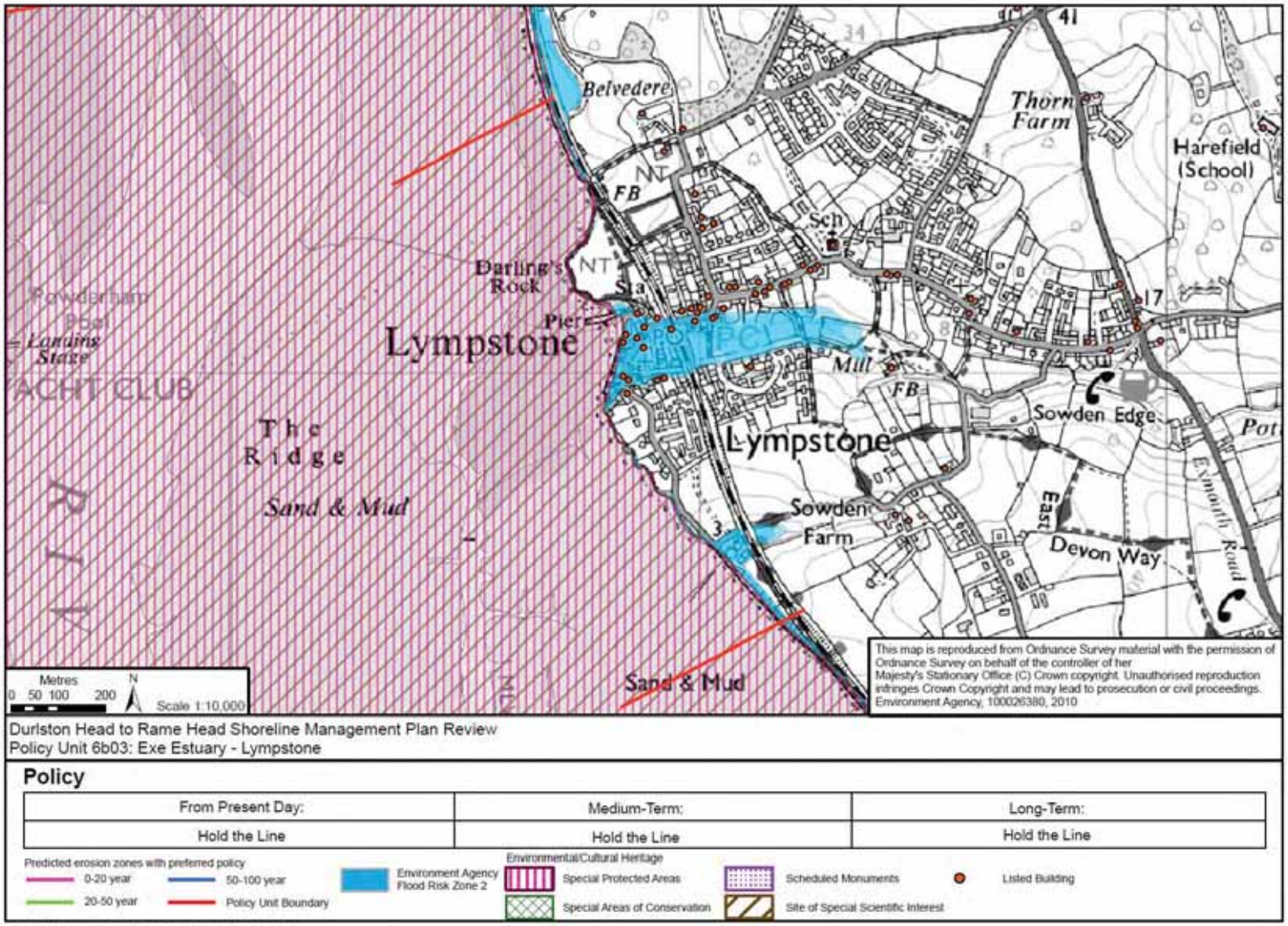
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



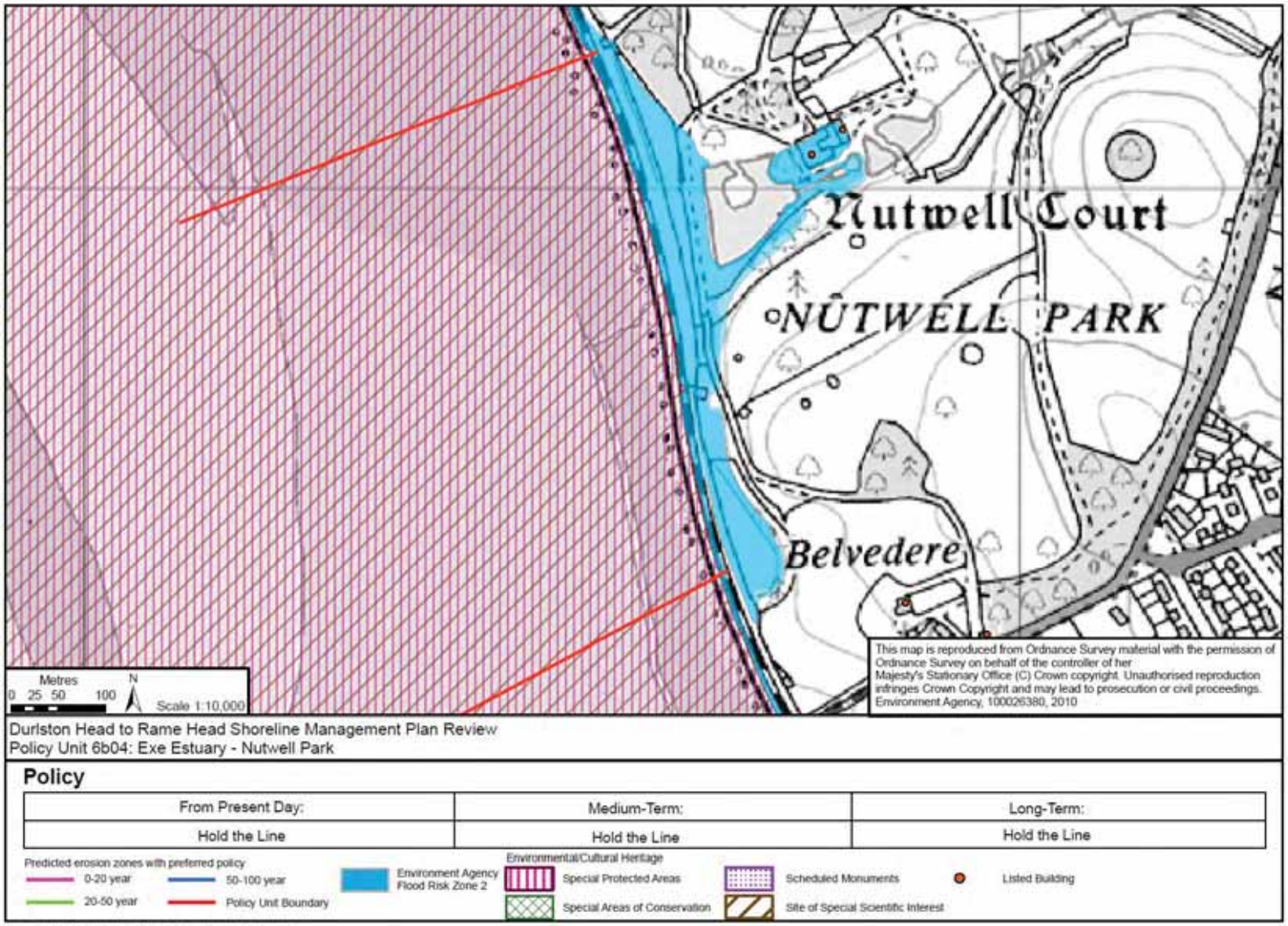
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



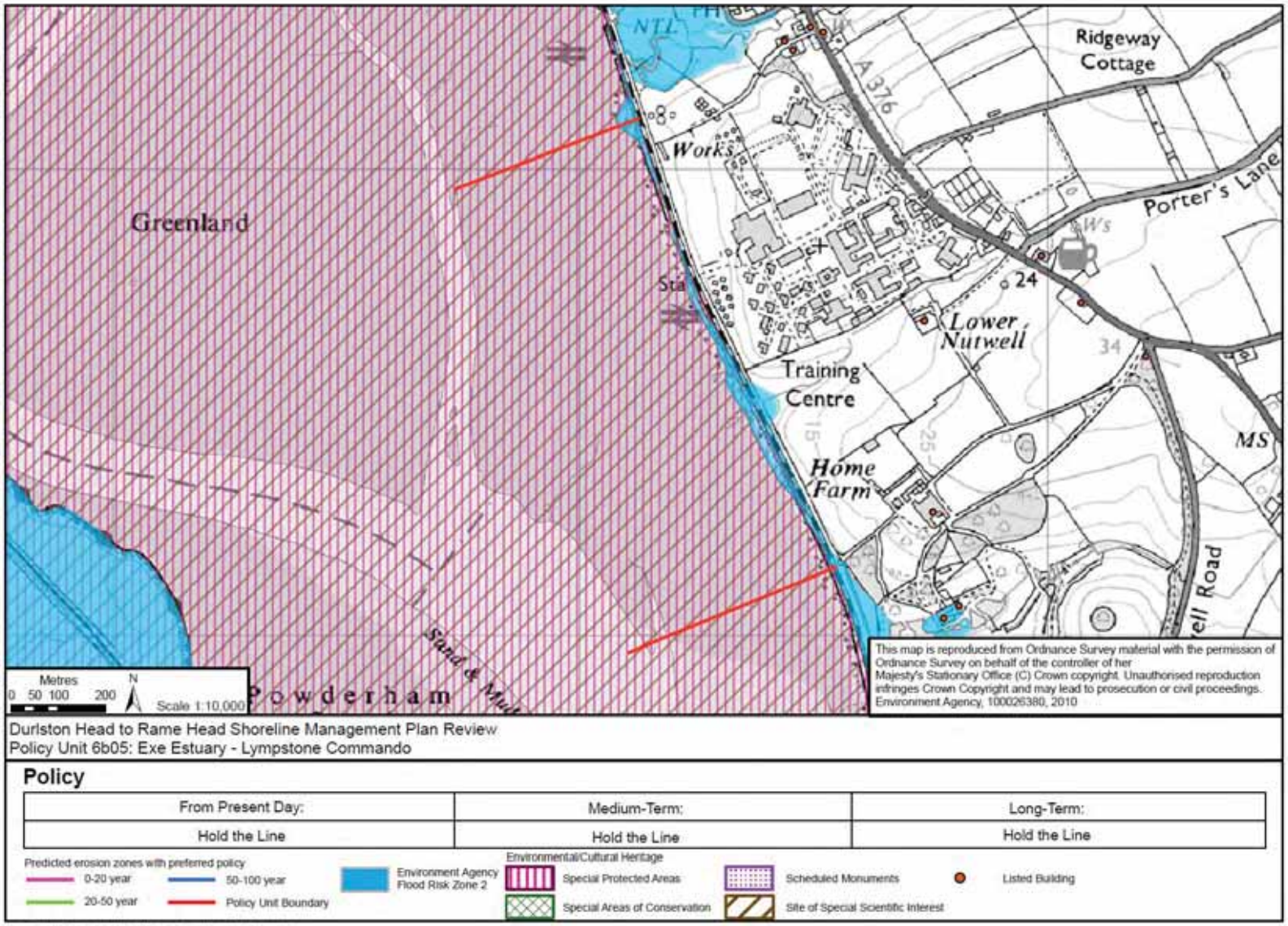
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



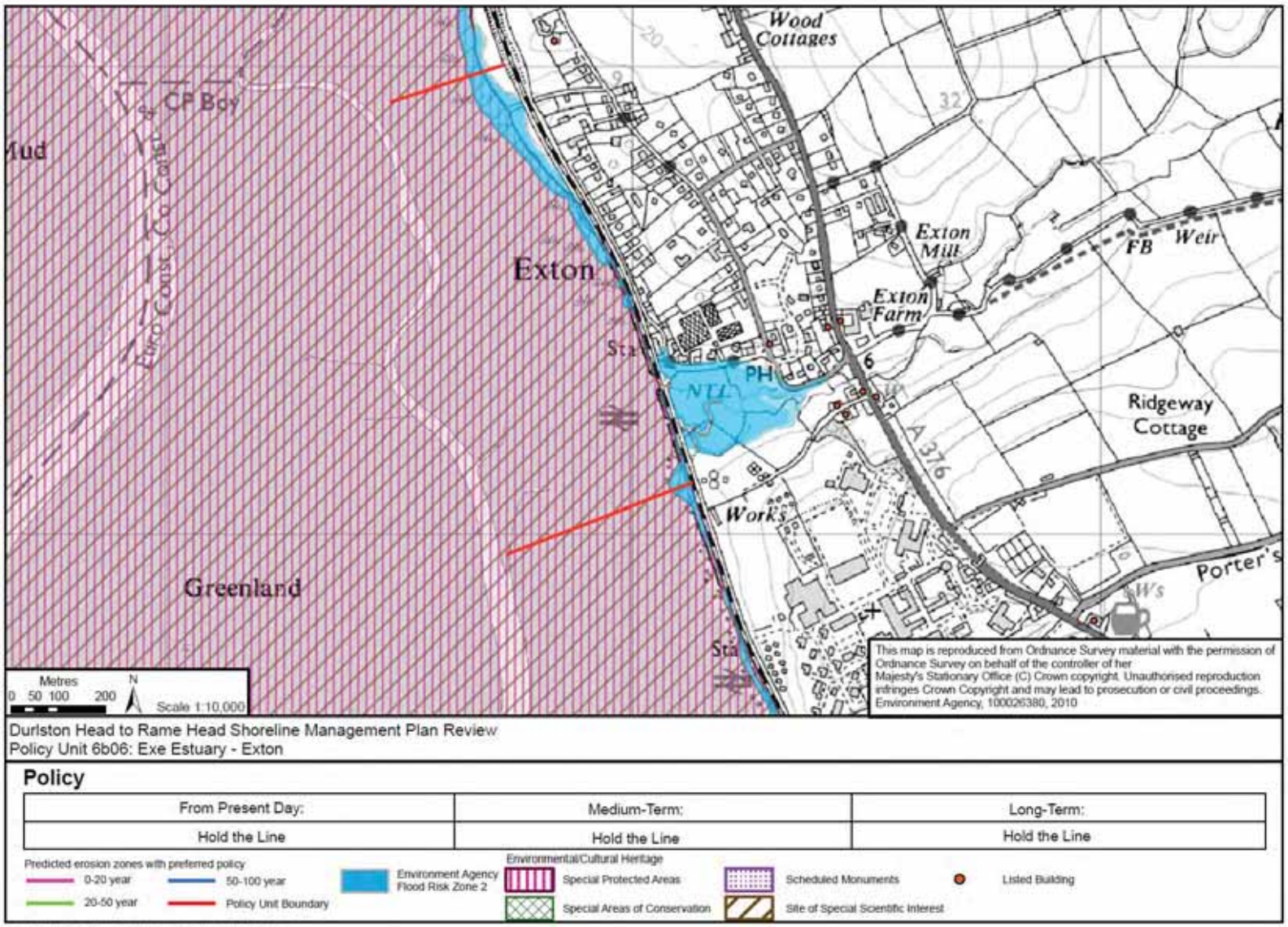
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



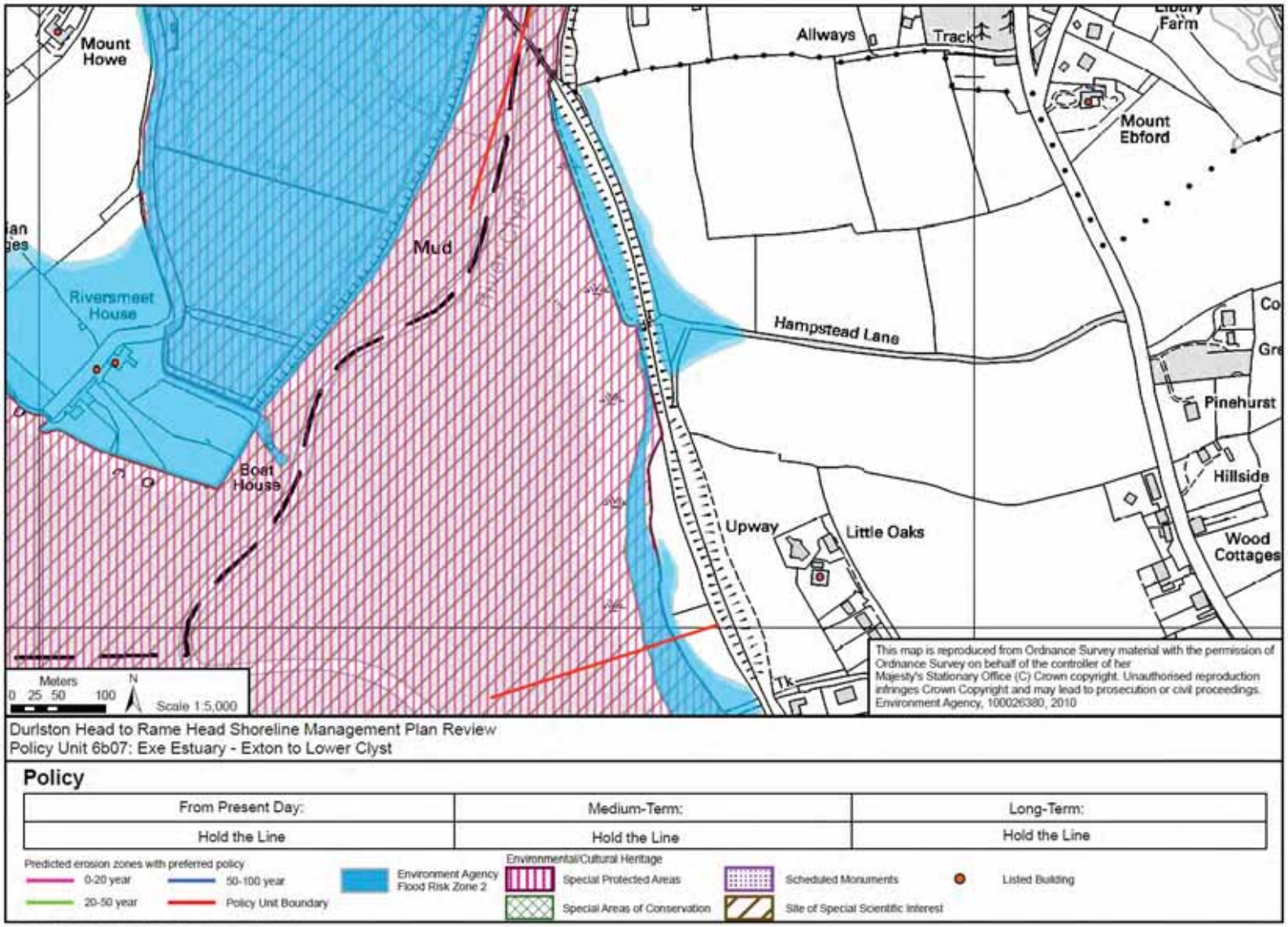
The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Exe Estuary – Lower Clyst**
Policy Unit reference:	**6b08**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The Lower Clyst valley is located along the eastern side of the wider Exe Estuary. In this area there is opportunity to realign some of the existing defences to provide significant habitat creation benefits. The long term Plan is to take a more pro-active approach to actively managing the realignment of defences in this area for the benefit of both habitat creation and some flood storage benefit to the Clyst valley.

The embankments here provide a low standard of protection against tidal and fluvial flooding of agricultural land. Managed Realignment, back to either naturally higher ground or set back defences along much of this frontage could provide benefits for both flood risk and biodiversity. This will allow for a more naturally functioning system in this area. However, in implementing this policy consideration must be given to potential impacts in the rest of the Exe Estuary as well as any impacts on the defences required to protect the railway and road links in this area as well as property at places like Topsham and Clyst St Mary.

In other parts of the estuary retention of the defence line has the potential to result in loss of some areas of inter-tidal habitat as sea level rises and the foreshore is prevented from migrating landwards by the presence of the defences. There are therefore clear benefits in allowing Managed Realignment in this area, subject to further investigation of the impacts of any realignment scheme. A feasibility study is already investigating how this may be achieved through Natural England's Higher Level Stewardship scheme. Subject to what is offered, and depending on uptake by landowners, the project being investigated currently has the potential to create up to 200 ha of intertidal habitat. Habitat created through such a scheme could contribute to replacing habitats lost as a result of coastal squeeze elsewhere in the Exe Estuary.

The Exe Estuary as a whole is dependent upon the future evolution and management of Dawlish Warren, and so the management of this section would be greatly impacted upon if the coastal defence function of Dawlish Warren spit were to be reduced as a result of natural evolution and change. However, the recommended policy for Dawlish Warren should ensure the spit is maintained during this period (refer to Policy Units 6b19 to 6b22).

Preferred policies to implement Plan:

From present day (short term):	Within the Lower Clyst valley, the recommended short term policy is for **Managed Realignment** to create new areas of intertidal habitat. This will involve either simply breaching existing defences to allow flood waters to reach naturally higher ground or, in some part of the valley, require the construction of set back lines of defence in order to continue to reduce flood risk to property and key infrastructure. Prior to proceeding there will need to be more detailed studies to assess the exact implementation and location of the realignments, as well as how existing important infrastructure such as road and rail links can be provided and protected as part of this. Development of a solution that is able to achieve these objectives will require the joint intervention of all relevant parties.
Medium term:	The medium term policy for the Lower Clyst is to continue **Managed Realignment**. This will involve ongoing maintenance of any set back lines of defence established in the short term as well as possible further realignments along other parts of this stretch if detailed study shows it to be appropriate to do so. The continued provision and protection of important infrastructure such as road and rail links will remain a key factor in the ongoing management considerations for this area. In particular, the road network in the area will require a sustainable and long-term solution involving all relevant parties and taking into account the access requirements of communities affected.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Longer-term:	The long term policy for the Lower Clyst is to continue **Managed Realignment**. This will involve ongoing maintenance of any set back lines of defence established in the short term as well as possible further realignments along other parts of this stretch if detailed study shows it to be appropriate to do so. The continued provision and protection of important infrastructure such as road and rail links will remain a key factor in the ongoing management considerations for this area. In particular, the road network in the area will require a sustainable and long-term solution involving all relevant parties and taking into account the access requirements of communities affected.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6b08	**Exe Estuary - Clyst Bridge to Railway**	Investigate and implement **Managed Realignment** within the Lower Clyst valley (excluding Bowling Green Marsh).	Continue the policy of **Managed Realignment** through maintaining any new realignments and/or implementing further realignments (including consideration of realignment at Bowling Green Marsh in the long term).	Continue the policy of **Managed Realignment** through maintaining any new realignments and/or implementing further realignments.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Exe Estuary – Lower Clyst
Policy Unit reference:	6b08

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

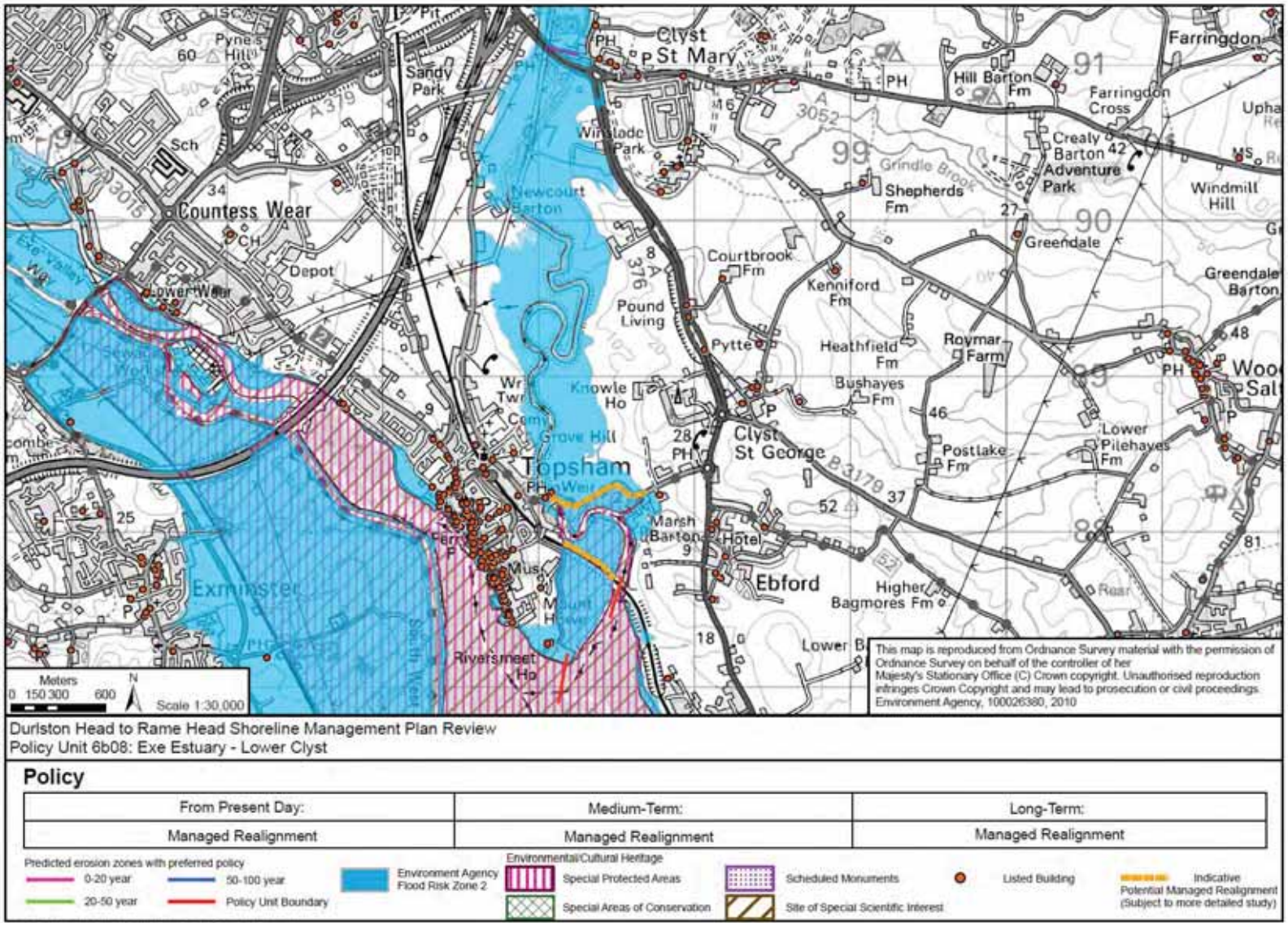
Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Investigate and implement Managed Realignment, either by constructing set-back defences or retreating to higher ground within the Lower Clyst valley.	Continued protection of property, commercial and economic assets and recreational facilities such as those in Topsham and Clyst St Mary.	The Environment Agency are carrying out a study, which will consider the impacts of Managed Realignment on the scour of bridges and banks (and associated impacts e.g. on ancient Bridge Inn). Continued protection of infrastructure from flooding. A study is being commissioned by the Environment Agency to identify a solution for protecting the road between Topsham and the A376 i.e. possibly by raising the highway on a causeway, as part of a Managed Realignment policy. Potential risk of flooding to some areas of agricultural land (e.g. between Clyst Bridge to the Railway) from Managed Realignment options Some loss of grade 2 and 3 agricultural land depending on extend of Managed Realignment, with small losses in also in some areas where agricultural land may provide an informal flood storage function.	Continued protection of Grade 2 listed buildings from flooding or erosion predominantly Topsham.	Realignments in the Lower Clyst valley would change the landscape character through habitat evolution, loss of trees and hedgerows and changes to the setting of listed buildings. However, this would result in the creation of a more natural system.	The Lower Clyst Intertidal Habitat Creation Study (prepared by Halcrow on behalf of the RSPB 2009) also identifies areas of made ground, military land and other potentially contaminated areas. These would require further investigation in areas of realignment at project level, to determine whether the risk of mobilisation of contaminants is significant.	No known impacts on water quality. Works in areas of Managed Realignment should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	There will be no adverse impacts on the Exe Estuary SPA, Ramsar site and SSSI within this policy unit – Managed Realignment will allow new intertidal habitat to be created, providing new areas where birds can feed and/or roost. The RSPB has commissioned a study in the Lower Clyst looking at intertidal habitat creation in the Lower Clyst (Halcrow 2009) on behalf of landowners. It is indicated that the habitats that could be created by breaching defences are likely to be of at least county significance for nature conservation. Increase in saltmarsh, reedbed, brackish habitat and wet grassland realigned areas. Potential reduction in arable land, freshwater grazing marsh, mainly species poor grassland, hedgerows and trees. If Bowling Green Marsh is realigned then there is potential for a reduction in its value as a high tide roost.
2025 – 2055	Maintain, and possibly improve, any set-back defences within the Lower Clyst valley as appropriate. Consider further realignments, if viable.	Continued protection of property, commercial and economic assets and recreational facilities such as those in Topsham and Clyst St Mary.	The Environment Agency are carrying out a study, which will consider the impacts of Managed Realignment on the scour of bridges and banks (and associated impacts e.g. on ancient Bridge Inn). Continued protection of infrastructure from flooding. A study is being commissioned by the Environment Agency to identify a solution for protecting the road between Topsham and the A376 i.e. possibly by raising the highway on a causeway, as part of a Managed Realignment policy.	Continued protection of Grade 2 listed buildings from flooding or erosion predominantly in Topsham.	Realignments in the Lower Clyst valley would change the landscape character through habitat evolution, loss of trees and hedgerows and changes to the setting of listed buildings. However, this would result in the creation of a more natural system.	The Lower Clyst Intertidal Habitat Creation Study (prepared by Halcrow on behalf of the RSPB 2009) also identifies areas of made ground, military land and other potentially contaminated areas. These would require further investigation in areas of realignment at project level, to determine whether the risk of mobilisation of contaminants is significant.	No known impacts on water quality. Works in areas of Managed Realignment should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	There will be no adverse impacts on the Exe Estuary SPA, Ramsar site and SSSI in this policy unit– Managed Realignment will allow new intertidal habitat to be created, providing new areas where birds can feed and/or roost. Increase in saltmarsh, reedbed, brackish habitat and wet grassland realigned areas. Potential reduction in arable land, freshwater grazing marsh, mainly species poor grassland, hedgerows and trees. If Bowling Green Marsh is

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Exe Estuary – Lower Clyst
Policy Unit reference:	6b08

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
			Some loss of grade 2 and 3 agricultural land depending on extend of Managed Realignment, with small losses in also in some areas where agricultural land may provide an informal flood storage function.					realigned then there is potential for a reduction in its value as a high tide roost.
2055 – 2105	Maintain, and possibly improve, any set-back defences within the Lower Clyst valley as appropriate. Consider further realignments, if viable.	Continued protection of property, commercial and economic assets and recreational facilities such as those in Topsham and Clyst St Mary.	The Environment Agency are carrying out a study, which will consider the impacts of Managed Realignment on the scour of bridges and banks (and associated impacts e.g. on ancient Bridge Inn). Continued protection of infrastructure from flooding. A study is being commissioned by the Environment Agency to identify a solution for protecting the road between Topsham and the A376 i.e. possibly by raising the highway on a causeway, as part of a Managed Realignment policy. Some loss of grade 2 and 3 agricultural land depending on extend of Managed Realignment, with small losses in also in some areas where agricultural land may provide an informal flood storage function.	Continued protection of Grade 2 listed buildings from flooding or erosion predominantly in Topsham.	Realignments in the Lower Clyst valley would change the landscape character through habitat evolution, loss of trees and hedgerows and changes to the setting of listed buildings. However, this would result in the creation of a more natural system.	The Lower Clyst Intertidal Habitat Creation Study (prepared by Halcrow on behalf of the RSPB 2009) also identifies areas of made ground, military land and other potentially contaminated areas. These would require further investigation in areas of realignment at project level, to determine whether the risk of mobilisation of contaminants is significant.	No known impacts on water quality. Works in areas of Managed Realignment should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	There will be no adverse impacts on the Exe Estuary SPA, Ramsar site and SSSI in this policy unit – Managed Realignment will allow new intertidal habitat to be created, providing new areas where birds can feed and/or roost. If Bowling Green Marsh is realigned then there is potential for a reduction in its value as a high tide roost.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Exe Estuary (East bank – River Clyst to Topsham Sludge Beds)**
Policy Unit reference:	**6b09 to 6b11**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The upper eastern side of the Exe Estuary is largely defended, protecting regionally important infrastructure links and residential centres. Due to the importance of these, the long term Plan is to continue to minimise the risk of erosion and flooding along this frontage over the next 100 years.

Retention of the defence line, however, has the potential to result in loss of some areas of inter-tidal habitat within the Exe Estuary, as sea levels rise and the inter-tidal area is prevented from migrating landwards by the presence of the defences. This impact may be mitigated to some extent if Managed Realignment occurs in other parts of the estuary.

The Exe Estuary as a whole is dependent upon the future evolution and management of Dawlish Warren, and so the management of this section would be greatly impacted upon if the coastal defence function of Dawlish Warren spit were to be reduced as a result of natural evolution and change. However, the recommended policy for Dawlish Warren should ensure the spit is maintained during this period (refer to Policy Units 6b19 to 6b22).

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** of the existing defences along this upper eastern side of the Exe Estuary. Defences are to be maintained along existing alignments by pro-active management. This may include the need to either raise the height of existing defences, or, if necessary, re-build larger structures, to maintain adequate levels of protection.
Medium term:	The medium term policy is to continue to **Hold the Line** of the existing defences along this upper eastern side of the Exe Estuary. Defences are to be maintained along existing alignments by pro-active management. The existing standards of protection within the inner estuary are liable to be compromised in the medium to long term necessitating the provision of new defence structures. This may include the need to re-build larger defences to maintain adequate levels of protection in the longer term as sea levels rise.
Longer-term:	The long term policy is to continue to **Hold the Line** of the existing defences along this upper eastern side of the Exe Estuary. Defences would continue to be maintained along existing alignments by pro-active management. This is likely to include the need to construct new hard defences (if not undertaken in the preceding epochs) in order to maintain adequate levels of protection. This could, however, have an impact on the Exe Estuary by restricting its ability to adapt to rising sea levels and changes in hydrology resulting from future climate change, and result in the loss of intertidal areas if sedimentation is unable to keep pace with rising sea levels.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6b09	**Exe Estuary - Topsham**	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b10	Exe Estuary - M5 (east) to St James' Weir	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.
6b11	Exe Estuary - Topsham Sludge beds	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.

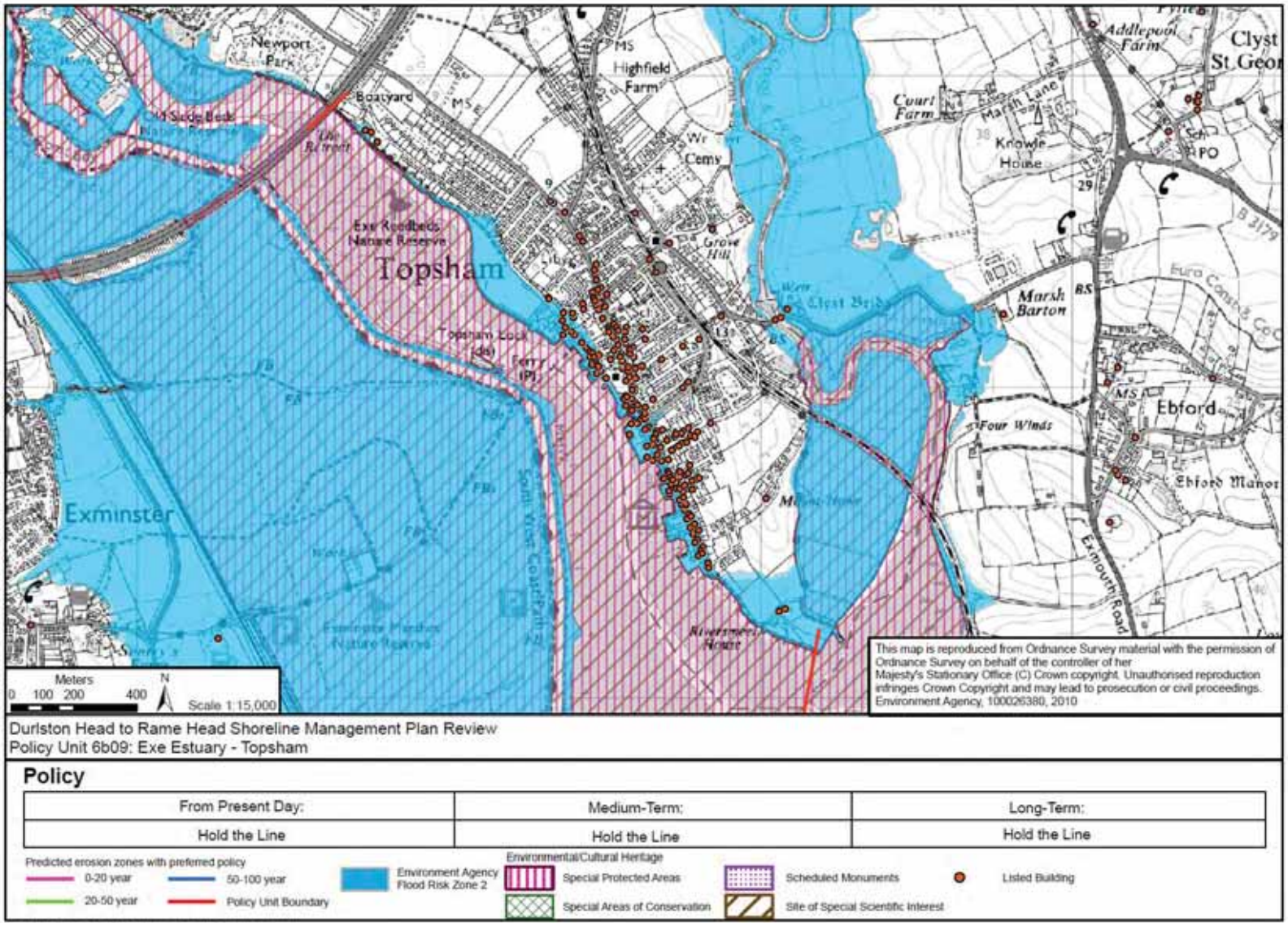
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Exe Estuary (East bank – River Clyst Topsham Sludge Beds)
Policy Unit reference:	6b09 to 6b11

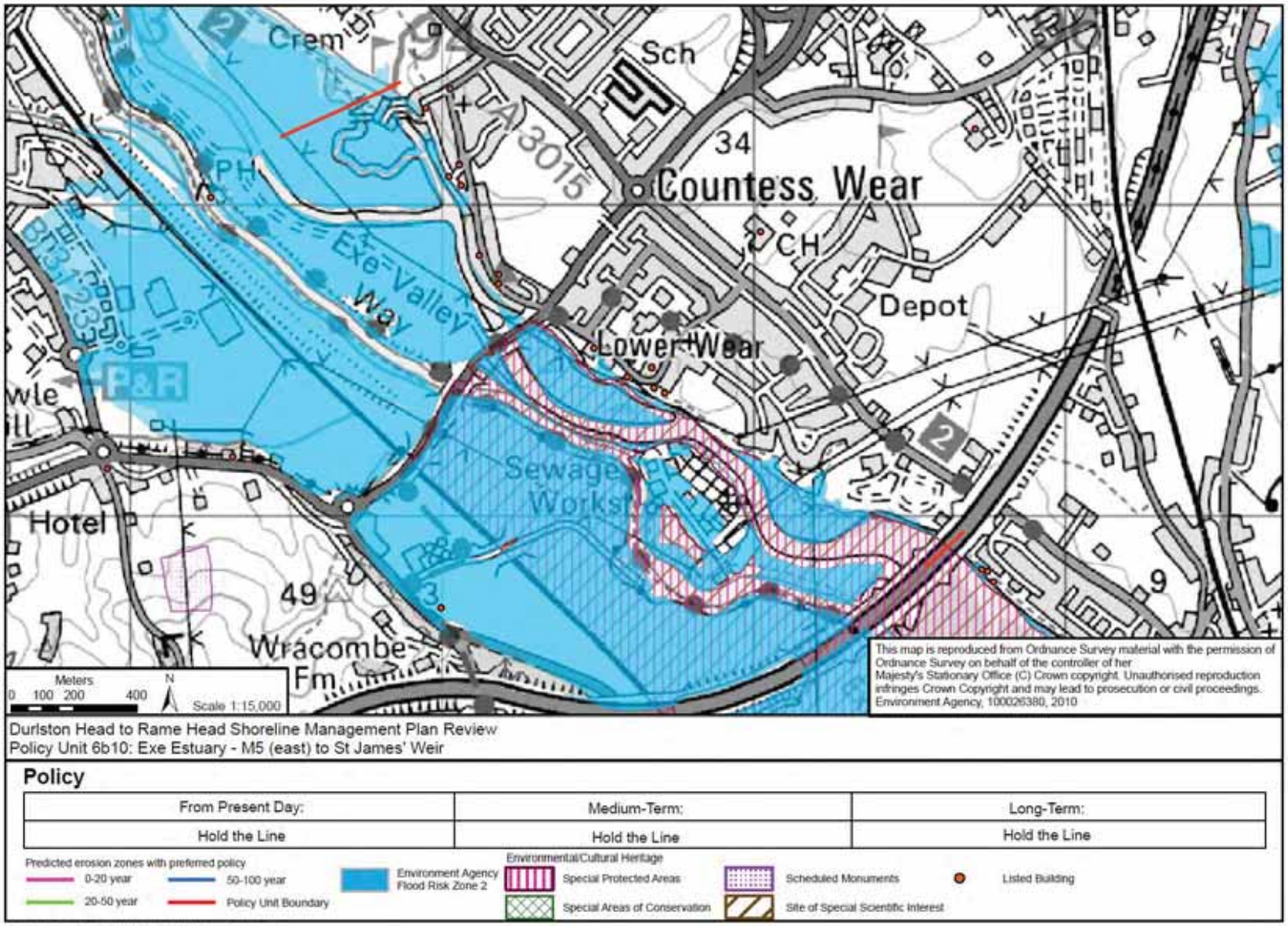
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Maintenance of, and improvements to, defences.	Continued protection of property, commercial and economic assets and recreational facilities in Topsham and Exeter.	Continued protection of the railway connections from flooding. Continued protection of infrastructure from flooding.	Continued protection of Grade 2 listed buildings from flooding or erosion predominantly in Topsham.	No known impacts on landscape character.	No known impacts earth heritage, soils and geology.	HTL to protect heavily populated areas could increase the frequency of tide-locking and subsequent water depth in the adjacent river waterbodies in response to climate change/sea level rise, thus potentially failing WFD objective 3.	A HTL policy is likely to result in the progressive loss of intertidal habitat due to coastal squeeze, resulting in the physical modification or loss of habitat used by feeding and roosting birds within the Exe Estuary SPA, Ramsar site and SSSI. Consequently, an adverse effect is anticipated on this European site.
2025 – 2055	Maintenance of, and improvements to, defences.	Continued protection of property, commercial and economic assets and recreational facilities in Topsham and Exeter.	Continued protection of the railway connections from flooding. Continued protection of infrastructure from flooding.	Continued protection of Grade 2 listed buildings from flooding or erosion predominantly in Topsham.	No known impacts on landscape character.	No known impacts earth heritage, soils and geology.	HTL to protect heavily populated areas could increase the frequency of tide-locking and subsequent water depth in the adjacent river waterbodies in response to climate change/sea level rise, thus potentially failing WFD objective 3.	A HTL policy is likely to result in the progressive loss of intertidal habitat due to coastal squeeze, resulting in the physical modification or loss of habitat used by feeding and roosting birds within the Exe Estuary SPA, Ramsar site and SSSI. Consequently, an adverse effect is anticipated on this European site.
2055 – 2105	Maintenance of, and improvements to, defences.	Continued protection of property, commercial and economic assets and recreational facilities in Topsham and Exeter.	Continued protection of the railway connections from flooding. Continued protection of infrastructure from flooding.	Continued protection of Grade 2 listed buildings from flooding or erosion predominantly in Topsham.	No known impacts on landscape character.	No known impacts earth heritage, soils and geology.	HTL to protect heavily populated areas could increase the frequency of tide-locking and subsequent water depth in the adjacent river waterbodies in response to climate change/sea level rise, thus potentially failing WFD objective 3.	A HTL policy is likely to result in the progressive loss of intertidal habitat due to coastal squeeze, resulting in the physical modification or loss of habitat used by feeding and roosting birds within the Exe Estuary SPA, Ramsar site and SSSI. Consequently, an adverse effect is anticipated on this European site.

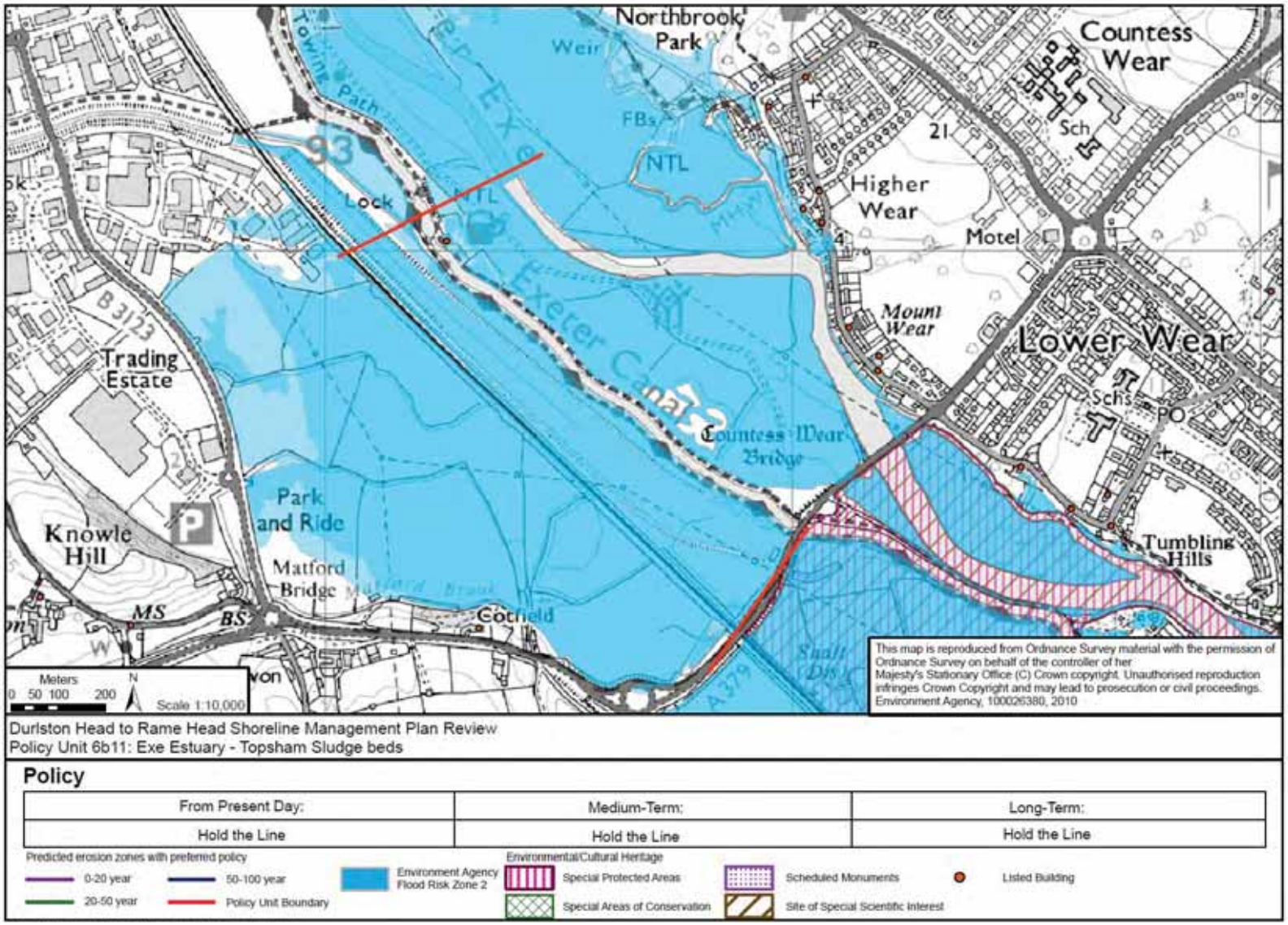
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the <u>local</u> details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details <u>must</u> be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	**Exe Estuary (West bank)**
Policy Unit reference:	**6b12 to 6b18**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The western side of the Exe Estuary is largely defended, protecting important infrastructure links and residential areas. Due to the importance of these, the long term plan is to continue to minimise the risk of erosion and flooding along this frontage over the next 100 years.

Retention of the defence line, however, has the potential to cause loss of some areas of inter-tidal habitat within the Exe Estuary, as sea levels rise and the inter-tidal area is prevented from migrating landwards by the presence of the defences.

Along the Powderham Banks there is an opportunity to realign some of the existing defences to improve flood risk management in the wider Exe Estuary and create new inter-tidal areas. This would provide habitat creation opportunities as other parts of the Exe Estuary experience loss of inter-tidal areas due to rising sea levels in the longer term. The need to continue to provide freshwater grazing marsh, potentially by creating new areas of marsh or by enhancing appropriately located low lying land would also be sought.

Consideration would though need to be given to the wider impacts of this policy on the whole Exe Estuary, as Managed Realignment in this area could have implications for the sediment regime in the estuary or at its mouth, which could cause the main channel of the Exe to meander or have an effect the distal end of Dawlish Warren. Therefore, further detailed investigation would be required before implementing any Managed Realignment, along with substantial dialogue with landowners, Network Rail and Devon County Council on the impacts of any realignment scheme to ensure that the mainline railway route and cycleway, or defences to protect it, are not adversely affected. Should it be determined as a result of these further detailed investigations that it is not possible to implement Managed Realignment in this area, then the policy would revert to continuing to holding the existing defences in line with the other parts of this stretch.

The Exe Estuary as a whole is dependent upon the future evolution and management of Dawlish Warren, and so the management of this section would be greatly impacted upon if the coastal defence function of Dawlish Warren spit were to be reduced as a result of natural evolution and change. However, the recommended policy for Dawlish Warren should ensure the spit is maintained during this period (refer to Policy Units 6b19 to 6b21).

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** of the existing defences along the entire length of this western side of the Exe Estuary. Defences are to be maintained along existing alignments by pro-active management: this may include the need to improve some defences during this period in order to maintain adequate levels of protection, notably by raising the height of the defences within Cockwood Harbour. However, the existing defences cannot be raised indefinitely and thus new defences may be required here in the long term. Along the Powderham Banks the existing defences would be maintained in the short term to allow for detailed studies looking at the viability of undertaking Managed Realignment in the medium to long term. The continued defence along this stretch could have an impact on the Exe Estuary by restricting its ability to adapt to rising sea levels; however, it is unlikely to be significant during this period and loss of inter-tidal areas as a result are likely to be limited.
Medium term:	The medium term policy is to continue to **Hold the Line** of the existing defences along the majority of this western side of the Exe Estuary, raising the height of the defences further during this period in order to maintain current

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

	levels of protection. However, the existing defence standards within the inner estuary are liable to be compromised in the medium to long term necessitating the provision of new, larger, defence structures at some point. Although these defences would continue to afford protection to the shoreline assets, they could, however, have an impact on the Exe Estuary by restricting its ability to adapt to rising sea levels and changes in hydrology resulting from future climate change, and this could lead to the loss of some inter-tidal areas as a result. Along Powderham Banks the medium term plan is to move to a policy of **Managed Realignment** along this section, following detailed studies in the short term. Implementation of Managed Realignment during this period would involve construction of secondary lines of defence and managed breaching of existing defences.
Longer-term:	The long term policy is to continue to **Hold the Line** along this western side of the Exe Estuary, which would most likely necessitate constructing new hard defences along existing alignments to maintain the required levels of protection. Along Powderham Banks, this would likely involve ongoing maintenance to the secondary lines of defence (if established in the medium term) to retain the required levels of protection.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b12	**Exe Estuary - St James' Weir to M5 (west)**	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.
6b13	**Exe Estuary - M5 (west) to Turf Lock**	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.
6b14	**Exe Estuary - Turf Lock to Powderham**	Continue to maintain existing defences under a **Hold the Line** policy. Investigate Managed Realignment opportunities.	Implement **Managed Realignment** along this stretch.	**Hold the Line** of the realigned defence.
6b15	**Exe Estuary - Powderham (south)**	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.
6b16	**Exe Estuary - Starcross**	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.
6b17	**Exe Estuary - Cockwood**	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.
6b18	**Exe Estuary - Cockwood to The Warren**	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.	Continue to maintain existing defences under a **Hold the Line** policy.

The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Exe Estuary (West bank)
Policy Unit reference:	6b12 to 6b18

IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
2005 – 2025	Maintenance of, and improvements to, defences, including raising the height of the defences within Cockwood Harbour. Investigation of Managed Realignment options.	Continued protection of property, commercial and economic assets and recreational facilities in Dawlish, Starcross and Cockwood. Continued protection of most parts of Powderham from flooding/erosion including Powderham yacht club, Deer park and castle.	Continued protection of the mainline railway from risk of flooding. Continued protection of infrastructure including a sewage works from flooding. Protection of the majority of grade 2 and 3 agricultural land with small losses in some areas. Majority of area is urban or non-agricultural.	Continued protection of Powderham Registered Park and Garden from flooding. Continued protection of Grade 2 listed buildings from flooding predominantly in Starcross and Cockwood.	No known impacts on landscape character.	No known impacts on geology or soils.	HTL to protect heavily populated areas could increase the frequency of tide-locking and subsequent water depth in the adjacent river waterbodies in response to climate change/sea level rise, thus potentially failing WFD objective 3.	A HTL policy is likely to result in the progressive loss of intertidal habitat due to coastal squeeze, resulting in the physical modification or loss of habitat used by feeding and roosting birds within the Exe Estuary SPA, Ramsar site, SSSI and RSPB Reserve. Consequently, an adverse effect is anticipated on this European site.
2025 – 2055	Maintain and possibly improve the defences. Construction of secondary defences Along Powderham Banks followed by managed breaching.	Continued protection of property, commercial and economic assets and recreational facilities in Dawlish, Starcross and Cockwood. Continued protection of most parts of Powderham from flooding/erosion including Powderham yacht club, Deer park and castle.	Continued protection of the mainline railway from risk of flooding. Continued protection of infrastructure including a sewage works from flooding Risk of flooding to some areas of agricultural land (e.g. north of Powderham) from Managed Realignment options Continued protection of the majority of grade 2 and 3 agricultural land with small losses in some areas. Majority of area is urban or non-agricultural.	Continued protection of Powderham Registered Park and Garden from flooding. Continued protection of Grade 2 listed buildings from flooding predominantly in Starcross and Cockwood. Managed Realignment 6b14 has the potential to impact on the medieval harbour at Le Turffe, canal (and hulks/fish traps) – *potentially adverse impact*	No known impacts on landscape character.	No known impacts on geology or soils.	HTL to protect heavily populated areas could increase the frequency of tide-locking and subsequent water depth in the adjacent river waterbodies in response to climate change/sea level rise, thus potentially failing WFD objective 3. Works in areas of Managed Realignment should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	A HTL policy is likely to result in the progressive loss of intertidal habitat due to coastal squeeze, resulting in the physical modification or loss of habitat used by feeding and roosting birds within the Exe Estuary SPA, Ramsar site, SSSI and RSPB Reserve. Consequently, an adverse effect is anticipated on this European site. Managed Realignment at 6b14 will help to offset losses due to coastal squeeze within the Exe Estuary SPA, Ramsar site, SSSI and RSPB Reserve, by creating intertidal habitat and providing new areas for birds to feed and/or roost. In realigned area, potential for impacts on freshwater grazing marsh. Potential gain of intertidal habitat between Turf Lock and Powderham.
2055 – 2105	Maintenance of, and improvements to existing and realigned defences.	Continued protection of property, commercial and economic assets and recreational facilities in Dawlish, Starcross and Cockwood in the short, medium and long term – *beneficial impact.* Protection of most parts of	Continued protection of the mainline railway from risk of flooding – *beneficial impact.* Continued protection of infrastructure including a sewage works from flooding– *beneficial impact.* Potential risk of flooding to	Continued protection of Powderham Registered Park and Garden from flooding. Continued protection of Grade 2 listed buildings from flooding predominantly in Starcross and Cockwood.	No known impacts on landscape character.	No known impacts on geology or soils.	HTL to protect heavily populated areas could increase the frequency of tide-locking and subsequent water depth in the adjacent river waterbodies in response to climate change/sea level rise, thus potentially failing WFD objective 3.	A HTL policy is likely to result in the progressive loss of intertidal habitat due to coastal squeeze, resulting in the physical modification or loss of habitat used by feeding and roosting birds within the Exe Estuary SPA, Ramsar site, SSSI and RSPB Reserve. Consequently, an adverse

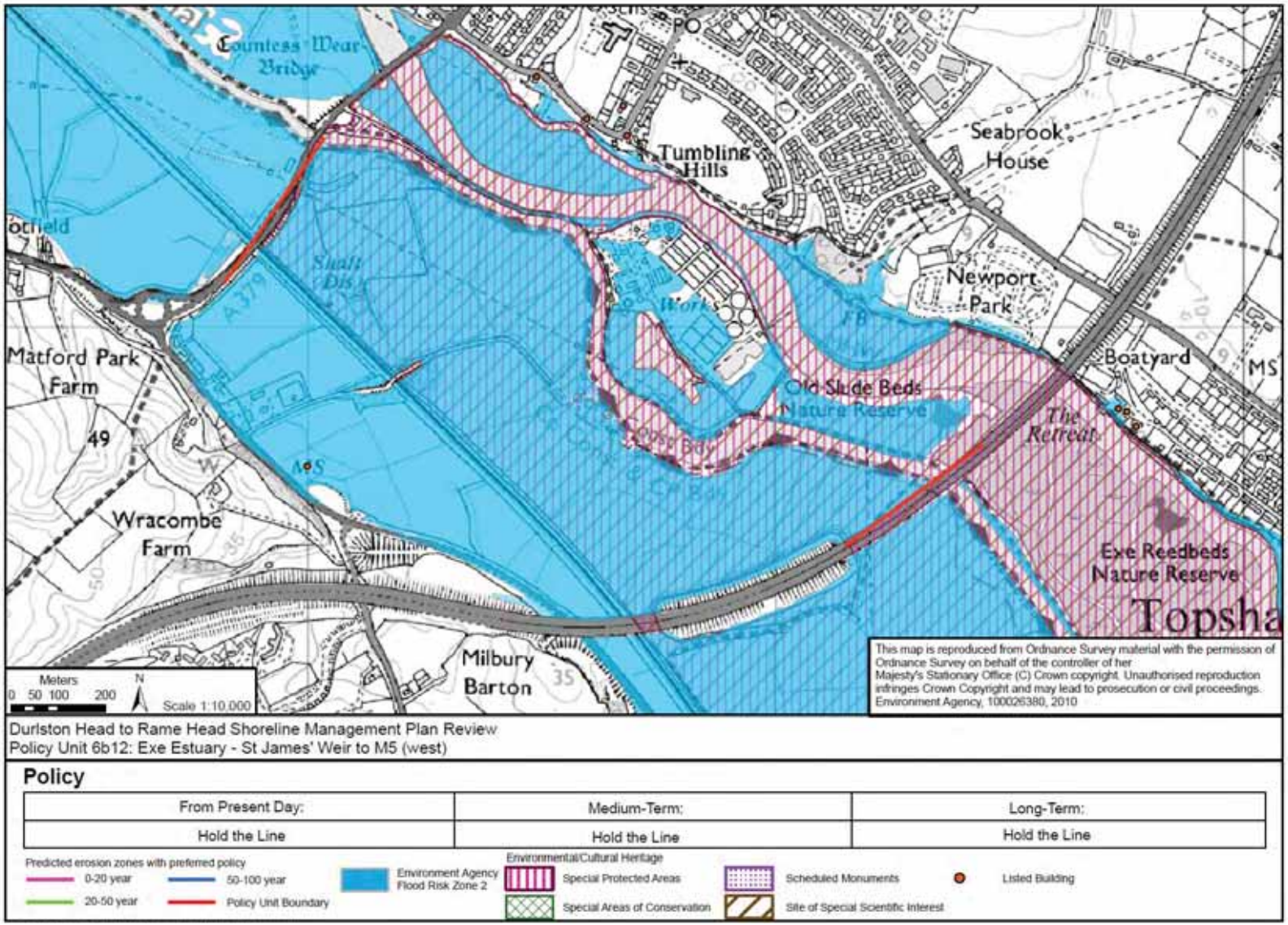
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.

Location reference:	Exe Estuary (West bank)
Policy Unit reference:	6b12 to 6b18

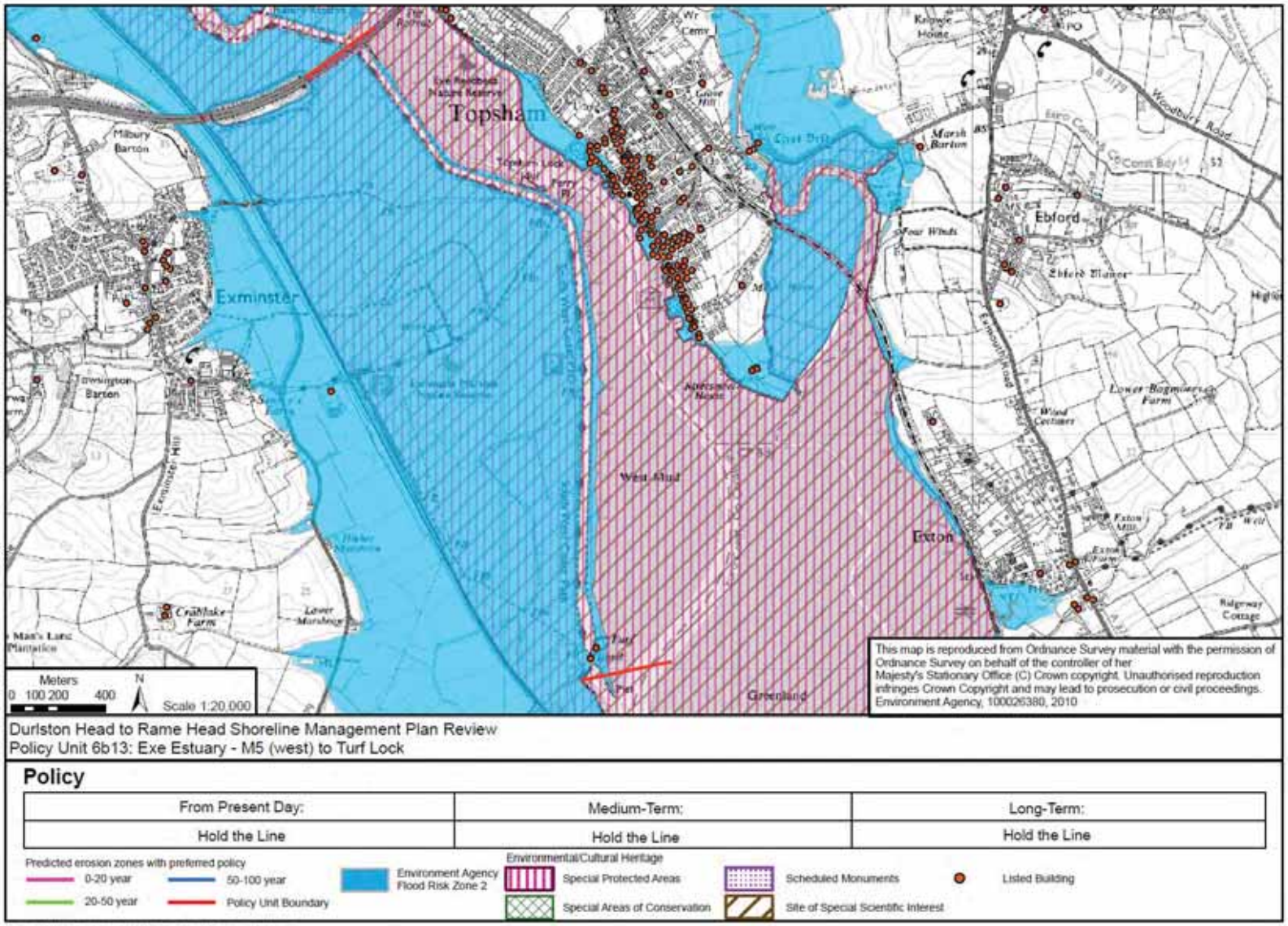
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION

Time Period	Management Activities	Property, Population and Human Health	Land Use, Infrastructure and Material Assets	Historic Environment	Landscape Character and Visual Amenity	Earth Heritage, Soils and Geology	Water	Biodiversity, Flora and Fauna
		Powderham from flooding/erosion including Powderham yacht club, Deer park and castle in the short, medium and long term – *beneficial impact.*	some areas of agricultural land (e.g. north of Powderham) from Managed Realignment options– *potential adverse impact* Continued protection of the majority of grade 2 and 3 agricultural land with small losses in some areas. Majority of area is urban or non-agricultural.				Works in areas of Managed Realignment should be implemented so as to not adversely impact on the water quality status of the coastal waters or compromise the achievement of WFD water quality targets.	effect is anticipated on this European site.

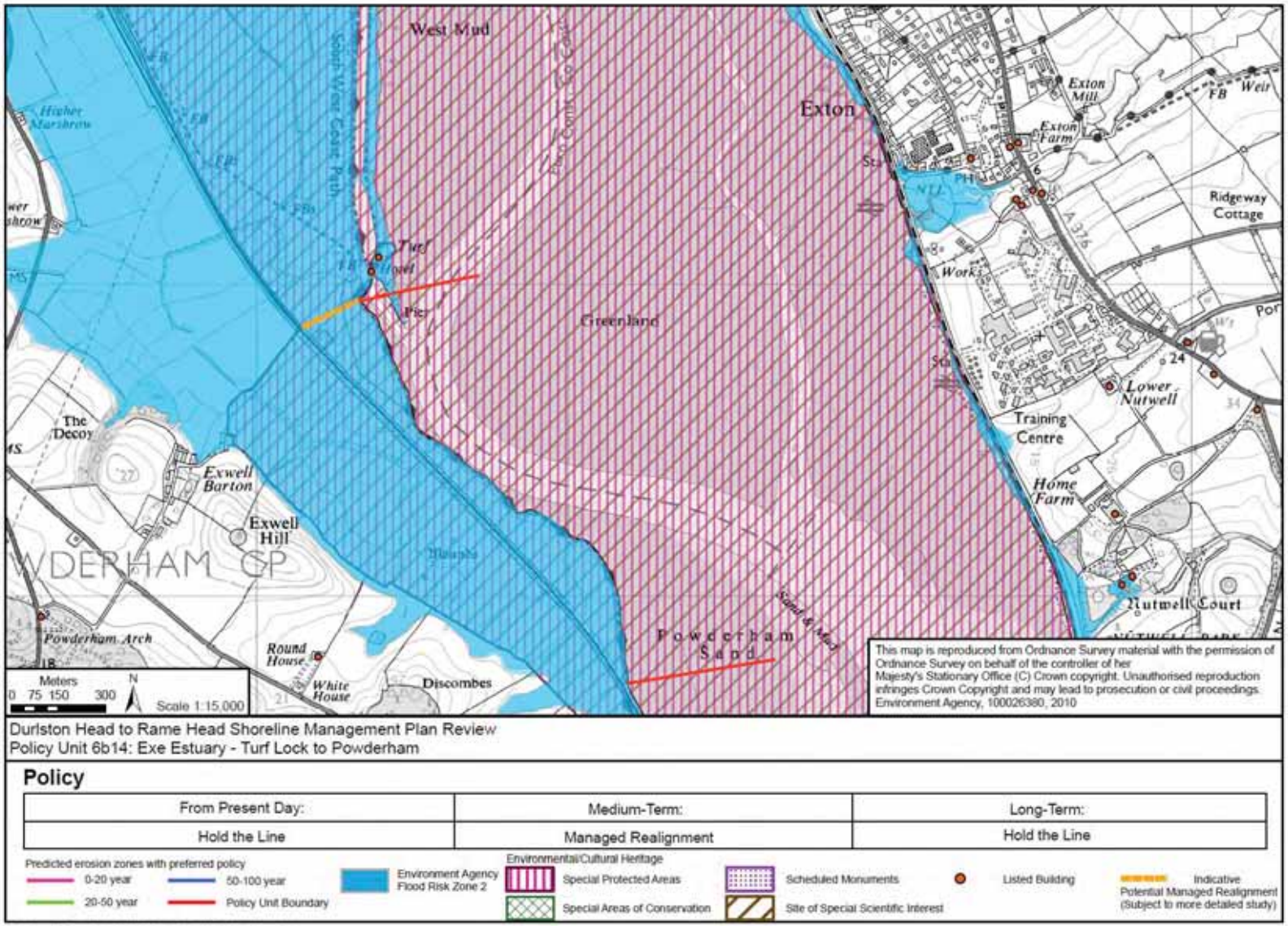
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



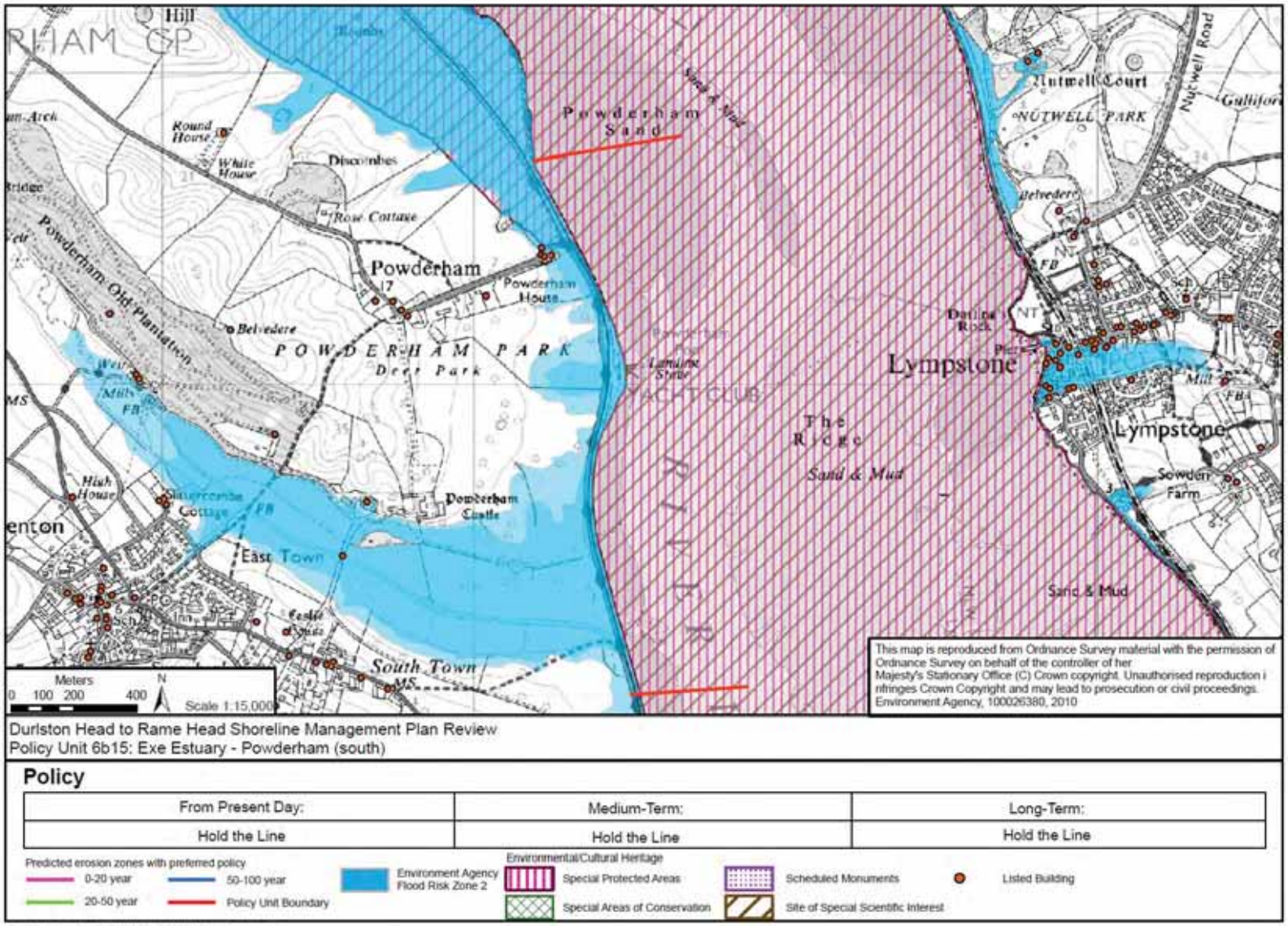
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



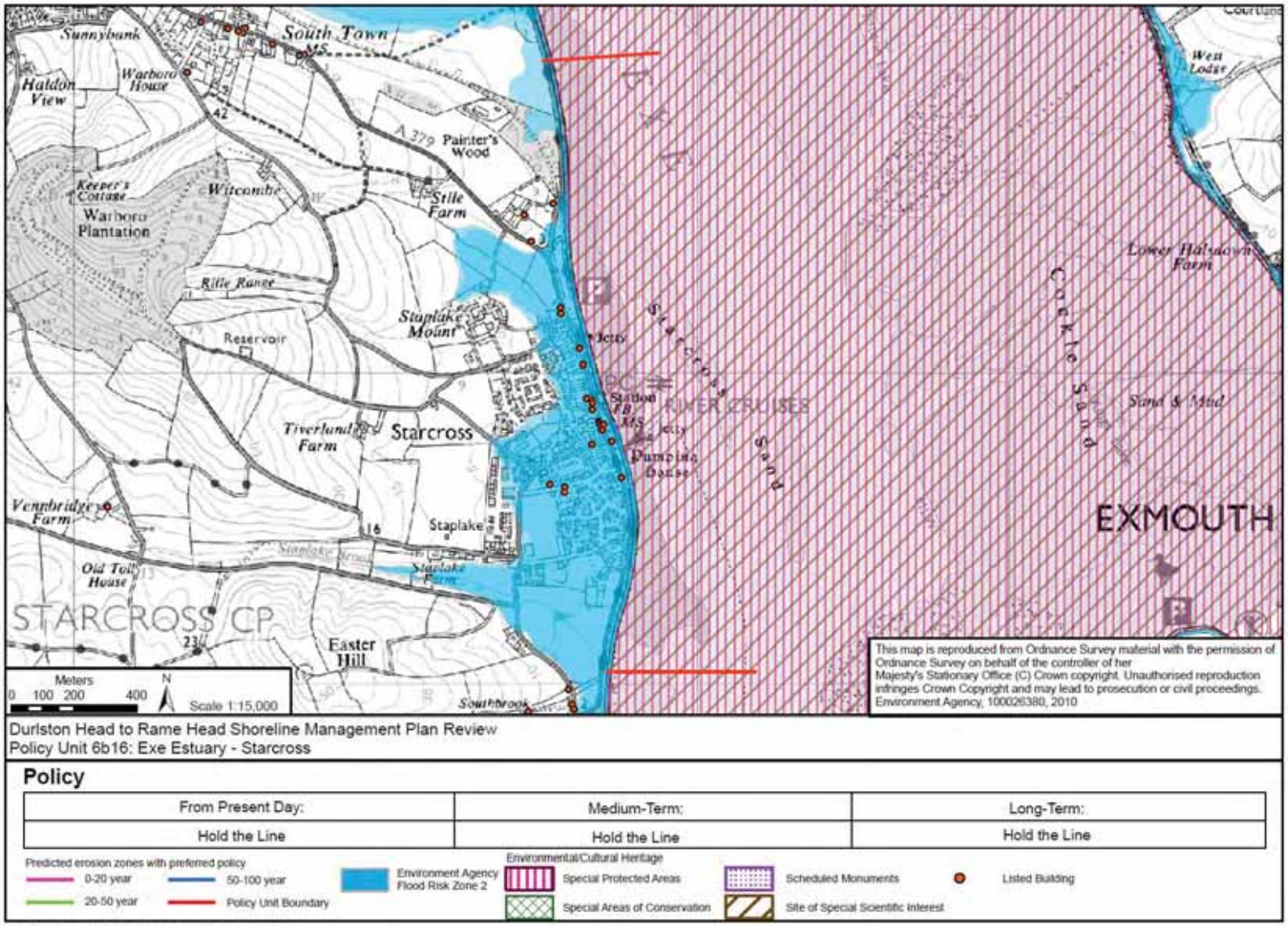
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



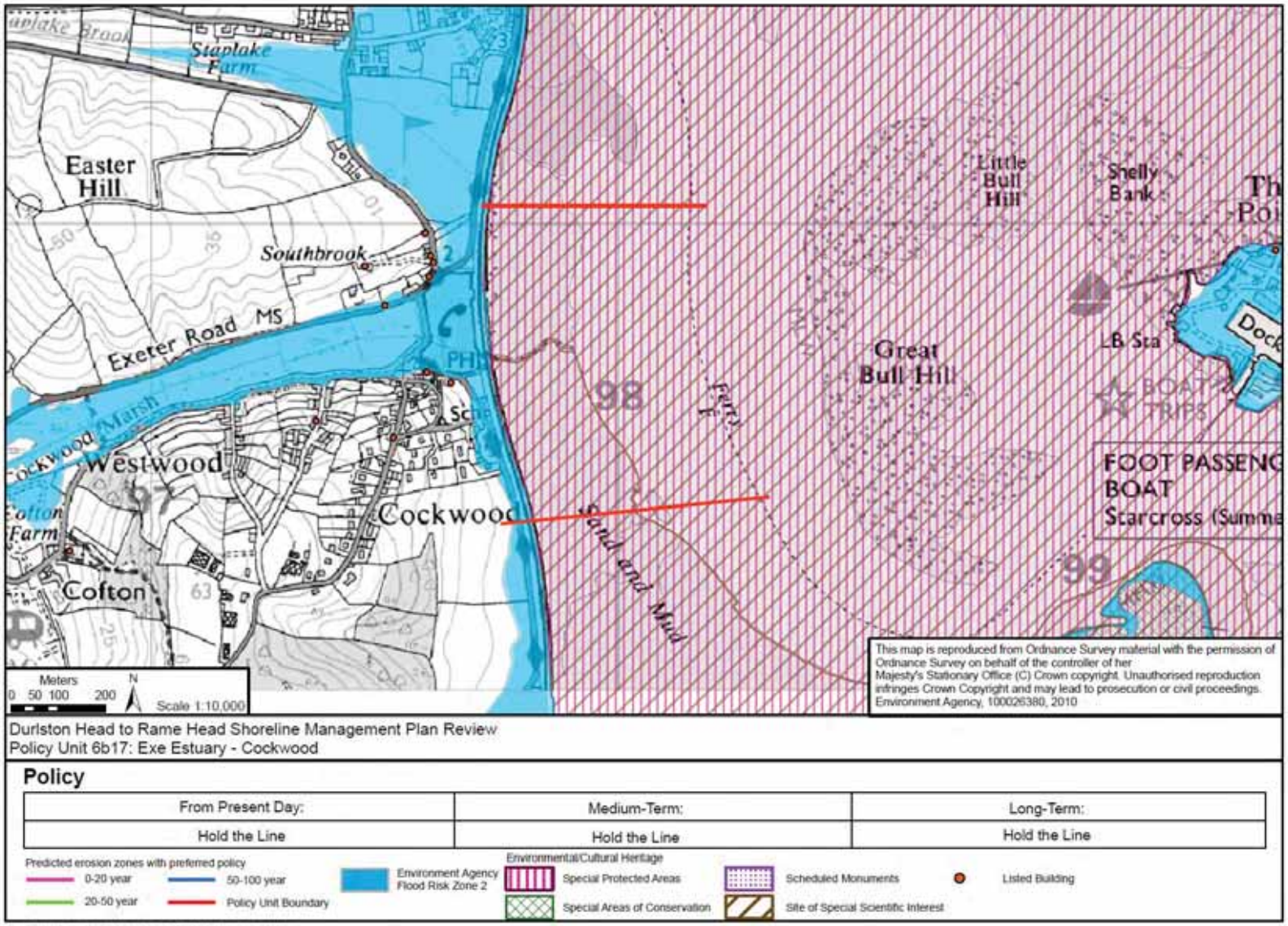
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



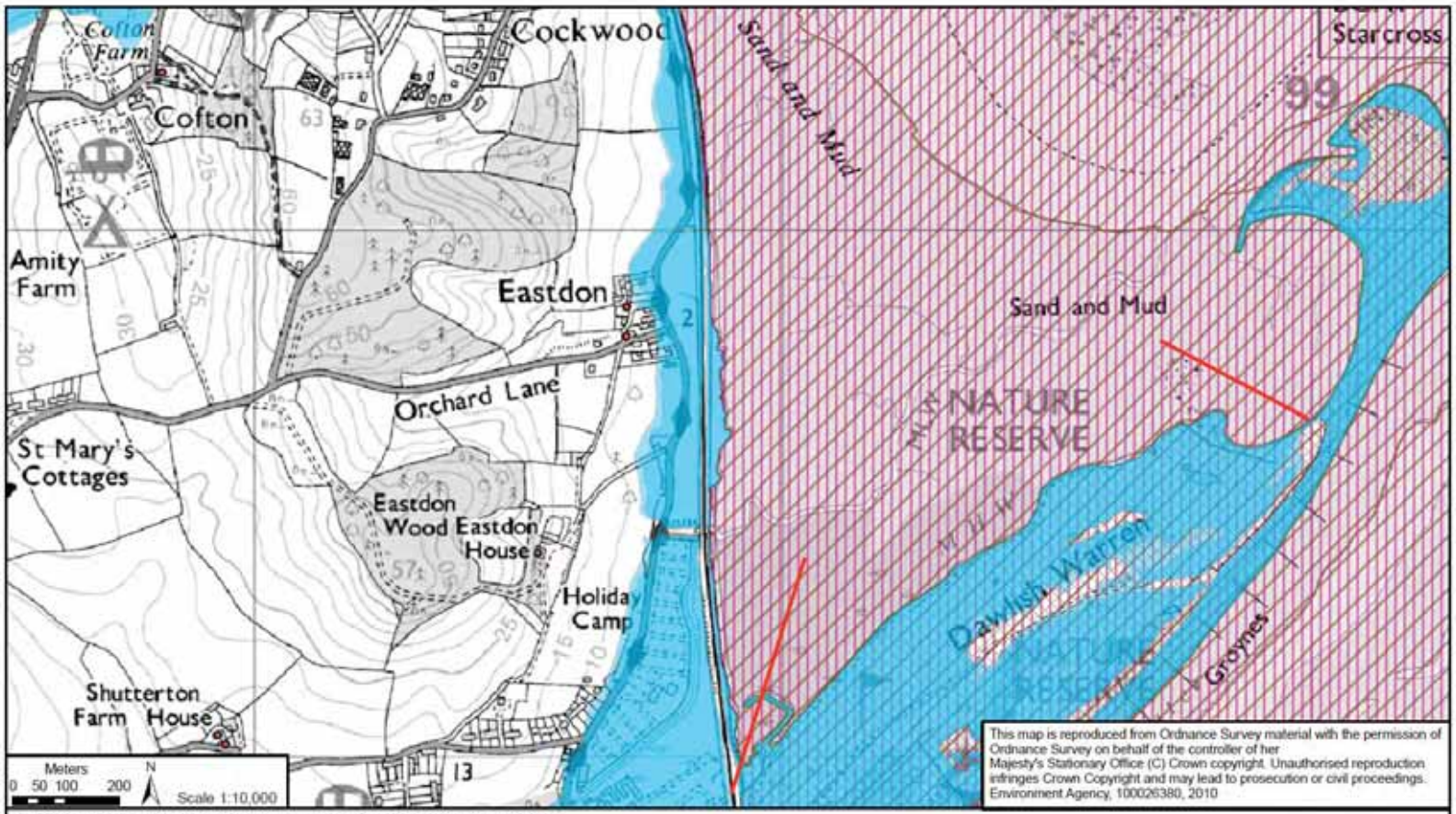
The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.



The above provides the local details in respect of the SMP-wide policy presented in the preceding sections of this Plan document. These details must be read in the context of the wider-scale issues and policy implications, as reported therein.