Location reference:	**Dawlish Warren**
Policy Unit reference:	**6b19 to 6b22**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

Dawlish Warren spit extends across approximately three quarters of the mouth of the Exe Estuary from the west, and forms an important defence function for the inner estuary by restricting wave propagation into the estuary. It has been significantly modified over the past 50 to 100 years by human activity and, whilst appearing to be a fairly natural feature, it is now in fact an artefact of past human intervention and as such is not presently a wholly-naturally functioning system. The distal end of Dawlish Warren is currently accreting and it is likely that the net west to east movement of material will continue along the spit, although no new input of sediment from the west is likely as this is prevented by defences at Langstone Rock and along the Dawlish frontage. Recent studies of the spit as part of the Exe Estuary Coastal Management Study show that the distal end has become inter-tidal at least once since about the mid-1800s. Due to the dynamic nature of the distal end, it would be preferable to allow it to evolve as naturally as possible, although at present, it is anchored by buried groynes.

On the basis of preventing significantly increased flood risk to the infrastructure and properties within the inner estuary, health and safety implications, economics and preserving and enhancing the tourist amenity at the Warren, the protection that the spit affords must be continued in the immediate term. The long term aim of the Plan is to continue to ensure that the defence function of the spit is retained in a way that is sustainable and meets the requirements of the Habitat Regulations.

However, the long term management of Dawlish Warren requires much more detailed investigation as there is much uncertainty over how the spit will evolve and what measures would be technically and environmentally acceptable to implement in this area. As such, the long term Plan in this area has not been fully determined in order to allow flexibility in approach based upon more detailed investigation in the short term, starting with the Exe Estuary Strategy Study that is due to begin in 2010 and report in 2011. Whilst these detailed studies are being undertaken, management activities in the immediate term will seek to maintain the current defence line as far as possible.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** along the seaward face of Dawlish Warren. The estuary-facing side of the spit would be left undefended and allowed to continue to evolve naturally during this period with **No Active Intervention** during this period. Following recent erosion, the current condition and standard of the defences suggests that they will not be adequate to achieve the aim of the Plan in this period. Therefore measures to repair or replace the defences need to be implemented in the immediate future whilst the long term management is determined by more detailed study in this period. The defences here are also presently very susceptible to beach lowering due to the net eastward littoral drift and lack of sediment input from the east; therefore, beach management techniques such as recycling and/or recharging could also be considered in the short term. Beach management will enhance the amenity of the tourist beach and improve the integrity of the flood defences. The distal end of Dawlish Warren is highly dynamic and presently accreting due to west-to east transport that occurs along the whole of Dawlish Warren, and the only defences are a series of partially buried groynes and gabions. This trend is expected to continue during this period. Between Dawlish Warren and Langstone Rock the coast is protected by a sea wall and rock armour, which prevents erosion along this stretch. These

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	defences could also require improvements during this period. This period of continuing to maintain the existing defence line is to be used to undertake more detailed investigation of the Dawlish Warren spit to identify the most technically appropriate and environmentally acceptable option(s) for the future management of the spit, such that it continues to provide the important defence function for the rest of the inner estuary whilst meeting the requirements of the Habitat Regulations.
Medium term:	The medium term policy is not defined as there is significant uncertainty over the most appropriate means for managing Dawlish Warren in the medium to long term such that continues to provide the important defence function for the rest of the inner estuary whilst meeting the requirements of the Habitat Regulations. It is anticipated that the policy determined by more detailed study in the short term will result in either Hold the Line or Managed Realignment being adopted for Dawlish Warren. The policy for this epoch should be determined following more detailed investigation in the short term and ongoing monitoring.
Longer-term:	The long term policy is not defined as there is significant uncertainty over the most appropriate means for managing Dawlish Warren in the medium to long term such that continues to provide the important defence function for the rest of the inner estuary whilst meeting the requirements of the Habitat Regulations. It is anticipated that the policy determined by more detailed study in the short term will result in either Hold the Line or Managed Realignment being adopted for Dawlish Warren. The policy for this epoch should be determined following more detailed investigation in the short term and ongoing monitoring.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b19	**Dawlish Warren (inner side)**	Allow natural evolution of this area as far as possible under a policy of **No Active Intervention**.	Policy to be determined by more detailed study in the short term, and may result in either Hold the Line, Managed Realignment or No Active Intervention being identified as most appropriate.	Policy to be determined by more detailed study in the short term, and may result in either Hold the Line, Managed Realignment or No Active Intervention being identified as most appropriate.
6b20	**Dawlish Warren (East - distal end)**	Continue to **Hold the Line** of Dawlish Warren to maintain its flood defence function. Investigate Managed Realignment options.	Policy to be determined by more detailed study in the short term, and may result in either Hold the Line or Managed Realignment being identified as most appropriate.	Policy to be determined by more detailed study in the short term, and may result in either Hold the Line or Managed Realignment being identified as most appropriate.
6b21	**Dawlish Warren (Central - gabion**	Continue to **Hold the Line** of Dawlish Warren to	Policy to be determined by more detailed study in	Policy to be determined by more detailed study in

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Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
	defences)	maintain its flood defence function. Investigate Managed Realignment options.	the short term, and may result in either Hold the Line or Managed Realignment being identified as most appropriate.	the short term, and may result in either Hold the Line or Managed Realignment being identified as most appropriate.
6b22	**Dawlish Warren (West - hard defences)**	Continue to maintain existing defences under a **Hold the Line** policy.	Policy to be determined by more detailed study in the short term, and may result in either Hold the Line or Managed Realignment being identified as most appropriate.	Policy to be determined by more detailed study in the short term, and may result in either Hold the Line or Managed Realignment being identified as most appropriate.

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Location reference:	Dawlish Warren
Policy Unit reference:	6b19 to 6b22

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, supported by beach management activities. Possible defence improvements along western stretch. Studies undertaken to support Managed Realignment.	Continued protection of property, commercial and economic assets and recreational facilities in Dawlish Continued protection of properties along the seafront: facilities for tourists/economic/ commercial assets in Dawlish Warren from flooding and erosion Hotel facilities at slight risk from flooding near Dawlish Warren.	Continued protection of the mainline railway from flooding. Continued protection of infrastructure from flooding	No known impacts on archaeological features.	Minor changes in landscape character within the East Devon AONB.	Continued protection of historic Greenland Lake landfill site on Dawlish Warren from flooding	No known impacts on water quality.	HTL policies will have an adverse effect on the dune habitats of Dawlish Warren SAC (plus SSSI, NNR and LNR) 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	Monitoring of the spit would occur, and possibly construction of a secondary defence line along the eastern part. Maintenance of, and possible improvements to, defences at the western end, supported by beach management activities.	Continued protection of property, commercial and economic assets and recreational facilities in Dawlish Continued protection of properties along the seafront: facilities for tourists/economic/ commercial assets in Dawlish Warren from flooding and erosion Hotel facilities at slight risk from flooding near Dawlish Warren.	Continued protection of the mainline railway from flooding. Continued protection of infrastructure from flooding	Any plans for realignment at Dawlish Warren in the medium or long term would have the potential to impact on pre-historic deposits and WWII features – *potentially adverse impact* (dependent on selected policy and would be informed by the Exe Estuary Strategy).	Minor changes in landscape character within the East Devon AONB.	Potential mobilisation of contaminants from the historic Greenland Lake landfill site on Dawlish Warren due to flooding, if Managed Realignment is implemented. Further investigation would be required at project level to determine the risk the site poses to water and soils. Natural coastal processes would be reinstated and geomorphological SSSI features enhanced through a Managed Realignment policy.	See Soils and Geology 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.	The Exe Estuary Strategy will seek to find an acceptable solution for Dawlish Warren SAC (plus SSSI, NNR and LNR).
2055 – 2105	Monitoring of the spit would occur, and possibly construction of a secondary defence line along the eastern part during this period. Maintenance of, and possible improvements to defences at the western end, supported by beach management activities, whilst sustainable.	Continued protection of property, commercial and economic assets and recreational facilities in Dawlish Continued protection of properties along the seafront: facilities for tourists/economic/ commercial assets in Dawlish Warren from flooding and erosion Hotel facilities at slight risk from flooding near Dawlish Warren	Continued protection of the mainline railway from flooding Continued protection of infrastructure from flooding	Any plans for realignment at Dawlish Warren in the medium or long term would have the potential to impact on pre-historic deposits and WWII features – *potentially adverse impact* (dependent on selected policy and would be informed by the Exe Estuary Strategy).	Minor changes in landscape character within the East Devon AONB.	Potential mobilisation of contaminants from the historic Greenland Lake landfill site on Dawlish Warren due to flooding, if Managed Realignment is implemented. Further investigation would be required at project level to determine the risk the site poses to water and soils. Natural coastal processes would be reinstated and geomorphological SSSI features enhanced through a Managed Realignment policy.	See Soils and Geology 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.	The Exe Estuary Strategy will seek to find an acceptable solution for Dawlish Warren SAC (plus SSSI, NNR and LNR).

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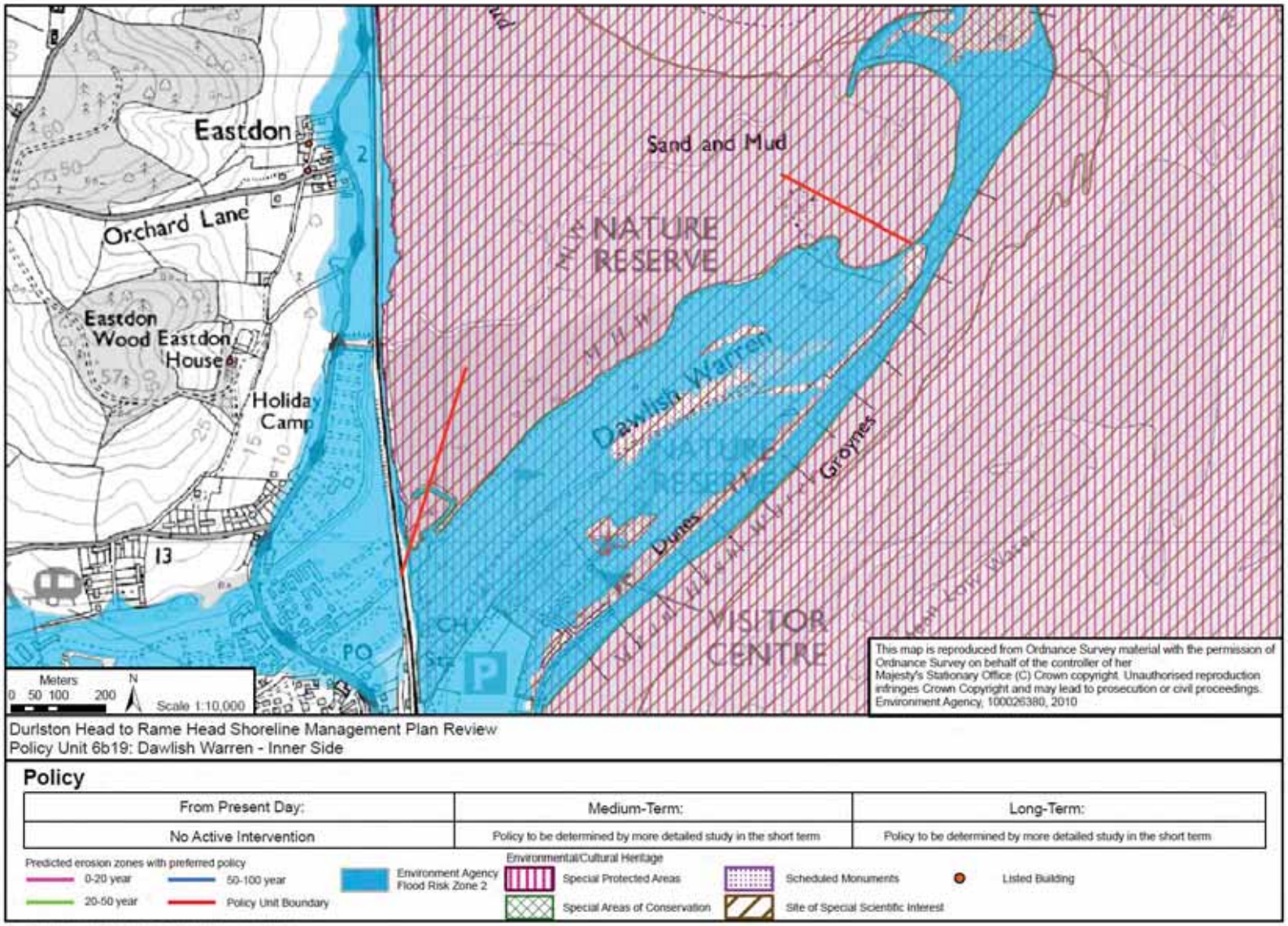

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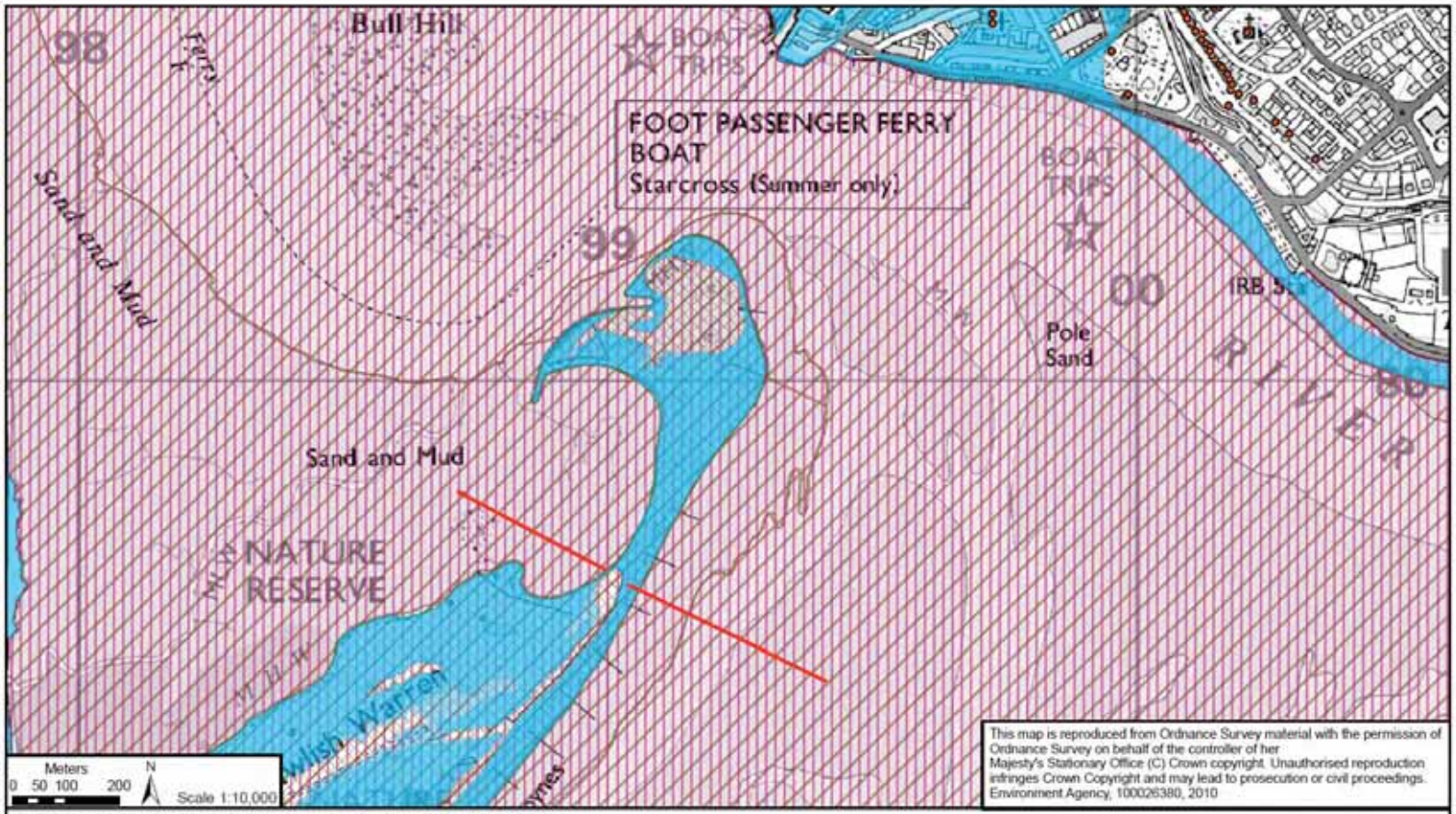

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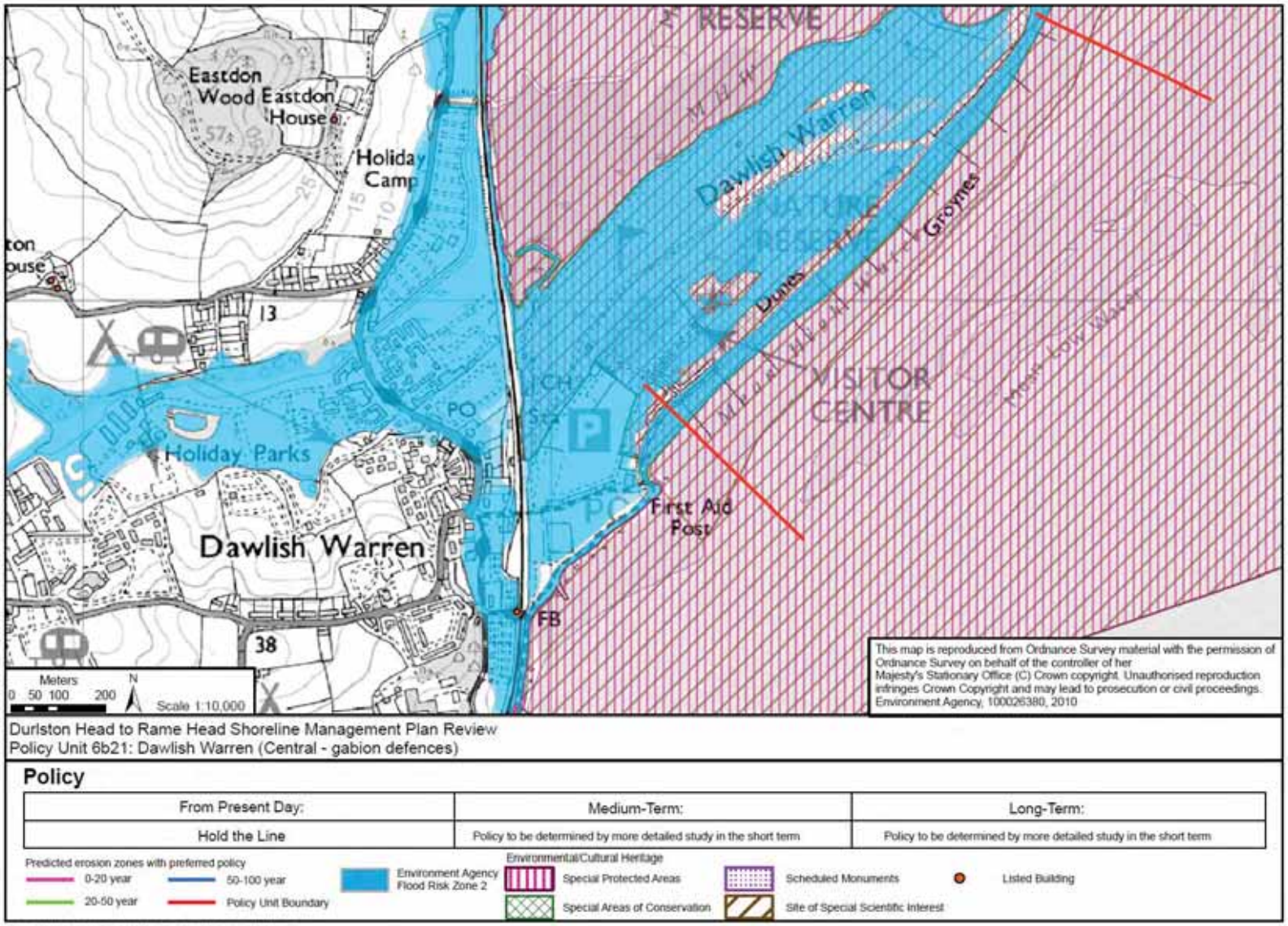

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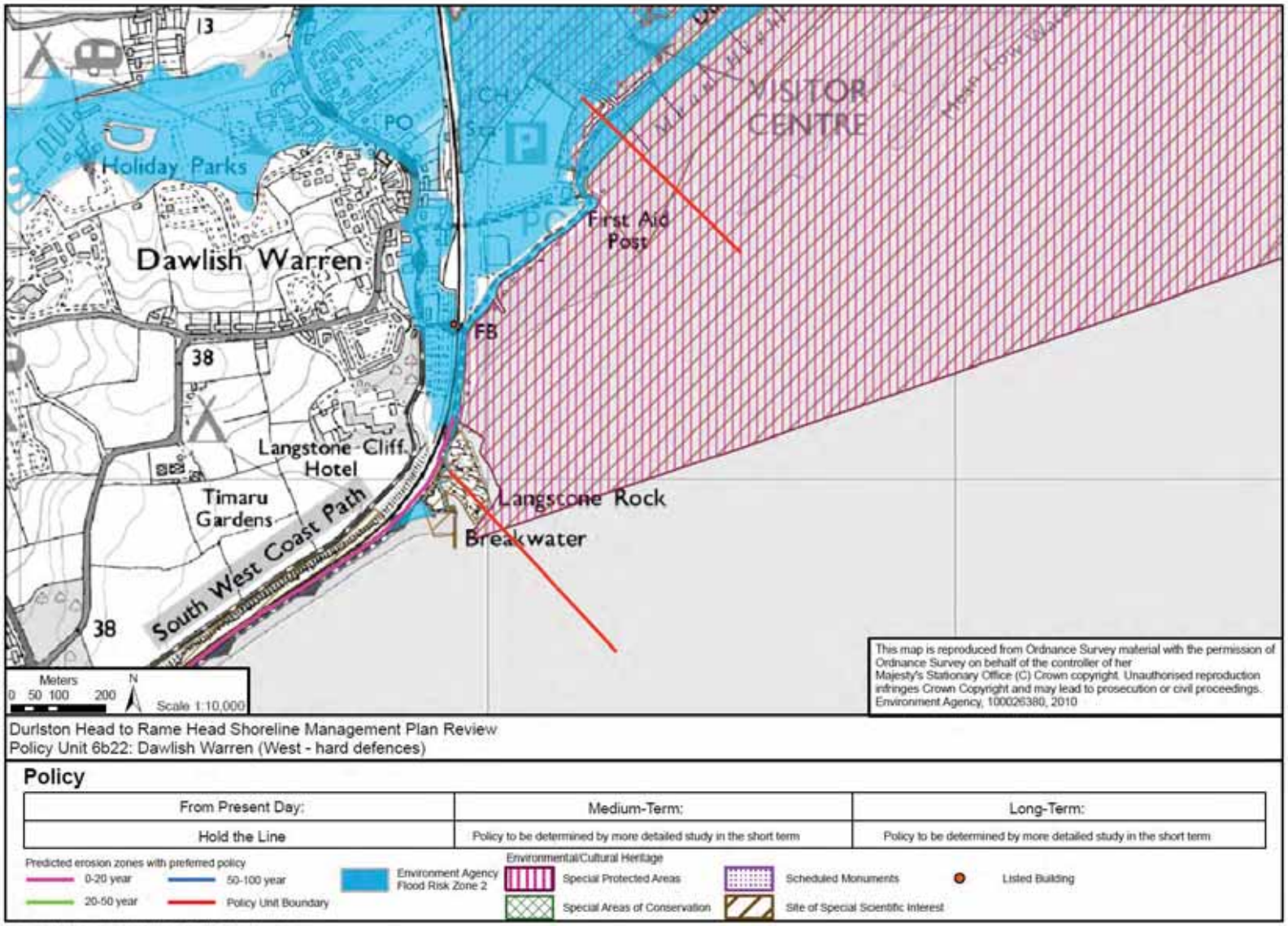

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Location reference:	**Langstone Rock to Holcombe**
Policy Unit reference:	**6b23 and 6b24**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section of coast is completely defended along its length by a seawall that extends along this section as protection to the mainline railway line. This is of significant economic importance the wider South-West region, connecting the region to the rest of the UK. These defences also protect the town of Dawlish. For these reasons, the long term Plan for this stretch is for the mainline railway to continue to be protected.

The beach fronting the seawall along the majority of this stretch is controlled by groynes and breakwaters. Towards Holcombe, short lengths of seawall that protect the mainline railway line are located at the backs of small pocket beaches. These are interrupted by short lengths of undefended rock headlands, through which the railway runs via a series of tunnels.

Larger and more substantial structures are likely to be required in the future, in response to rising sea levels and diminishing beaches in front of the defences. It is likely that much, if not all of this section would be protected by hard defences in the future; this will result in the majority of geological exposures becoming obscured. There is already limited interaction with adjacent shorelines therefore continued defence of this section would not have an additional impact up or downdrift.

The lack of beach along this stretch could also impact upon the tourism value of the area, although this may be mitigated by retention of a beach in the adjacent section at Dawlish Warren (refer to Policy Unit 6b21).

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** of the existing defences. This would involve ongoing maintenance and possibly construction of new defences during this period to ensure continued protection to the mainline railway. The seawall prevents erosion of the cliff toe along the majority of this stretch and has resulted in the cliff line being largely fixed over the past century or more. A continuation of defences will result in no change in shoreline position, and in turn no additional sediment supply to the local beaches. Despite the presence of the control structures, the beach fronting the Dawlish frontage has a long term trend of erosion and narrowing. This trend would continue during this period, although consideration of beach recharge options to improve the standard of protection to the mainline railway might reduce this effect. Towards Holcombe, the coast is characterised by small cliffed headlands indented with small pocket beaches. These beaches have been stable over the longer term and this is expected to continue to 2025, although coastal squeeze could become increasingly important towards the end of this period. The cliffed headlands are undefended and expected to continue to erode through infrequent small scale cliff failures events, but with total erosion of less than 2m predicted by 2025.
Medium term:	The medium term policy is to continue to **Hold the Line** of the existing defences. If not undertaken in the short term, it is likely that new defences would be required at the beginning of this period in order to maintain adequate levels of protection to the mainline railway. There would be no change in shoreline position along much of this stretch, due to the defences. The cliffed headlands would continue to erode as historically, although sea level rise could begin to lead to an increase in this rate during this period, with total erosion of 2 to 6m predicted by 2055.

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	Monitoring of this would be undertaken as it could begin to cause a significant risk to the railway line that runs through tunnels carved inside these headlands, and so measures may be needed to prevent this, probably through the extension of existing defences. Beach narrowing will continue to be an important issue, with most of the beaches likely to disappear during this period due to lack of sediment input, sea level rise and the defences preventing any natural shoreline response. Defences will have to be upgraded to cope with the increased pressure and risk of overtopping which will result, although options to address this increased risk might consider whether beach recharge could reduce the effect of beach narrowing.
Longer-term:	The long term policy is to continue to **Hold the Line** of the existing defences along this stretch, through ongoing maintenance of the defences. It is possible that further improvements to the defences along this stretch could be required during this period in order to maintain adequate levels of protection to the mainline railway. It is unlikely that any beaches would be present by this period and therefore there would be increased exposure and therefore pressure on the defences. Towards Holcombe, defences along parts of this section would continue to prevent cliff erosion supplying sediment to the local pocket beaches. As sea levels rise, these beaches could narrow and in places disappear as a result of the lack of sediment input. This would increase exposure of the defences and mean that they would be likely to require further improvements during this period to maintain adequate levels of protection. Continued erosion of the cliffed headlands is expected to continue, although sea level rise could begin to lead to an increase in this rate during this period, with total erosion of 5 to 30m predicted by 2105. This would likely cause a significant risk to the railway line that runs through tunnels carved inside these headlands. If not implemented in the medium term, measures may be needed to prevent this, probably through the extension of existing defences.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b23	Langstone Rock to Coryton Cove	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.
6b24	Coryton Cove to Holcombe	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.

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Location reference:	Langstone Rock to Holcombe
Policy Unit reference:	6b23 and 6b24

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 defences.	Continued protection of property, commercial and economic assets and recreational facilities in Dawlish.	Continued protection of the mainline railway from flooding Continued protection of the A379 at Dawlish from flooding. Continued protection of infrastructure from flooding	Continued protection of Grade 2 listed buildings from flooding or erosion at Dawlish.	No known impacts on landscape character.	Holding the line along this coastal section has the potential to affect the interest features of Dawlish Cliffs SSSI along this section by preventing further erosion.	No known impacts on water quality. 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.	No known impacts on designated biodiversity, flora or fauna.
2025 – 2055	New defences may need to be constructed.	Continued protection of property, commercial and economic assets and recreational facilities in Dawlish.	Continued protection of the mainline railway from flooding. Continued protection of the A379 at Dawlish from flooding. Continued protection of infrastructure from flooding	Continued protection of Grade 2 listed buildings from flooding or erosion at Dawlish.	No known impacts on landscape character.	Holding the line along this coastal section has the potential to affect the interest features of Dawlish Cliffs SSSI along this section by preventing further erosion and obscuring exposures.	No known impacts on water quality. 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.	No known impacts on designated biodiversity, flora or fauna.
2055 – 2105	Continued maintenance and possible further improvements to the defences.	Continued protection of property, commercial and economic assets and recreational facilities in Dawlish.	Continued protection of the mainline railway from flooding Continued protection of the A379 at Dawlish from flooding. Continued protection of infrastructure from flooding	Continued protection of Grade 2 listed buildings from flooding or erosion at Dawlish.	No known impacts on landscape character.	Holding the line along this coastal section has the potential to affect the interest features of Dawlish Cliffs SSSI along this section by preventing further erosion and obscuring exposures.	No known impacts on water quality. 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.	No known impacts on designated biodiversity, flora or fauna.

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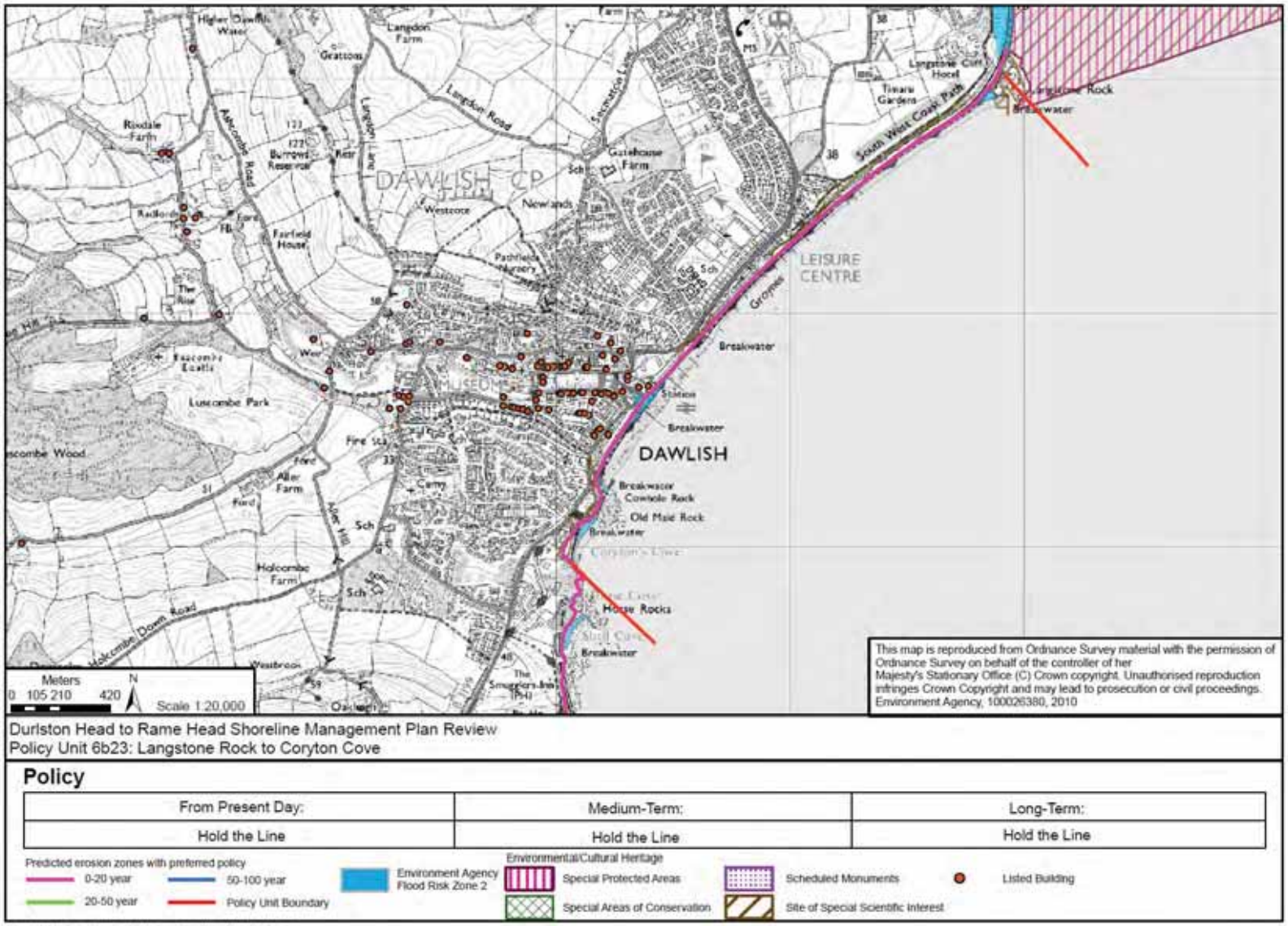

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Location reference:	**Holcombe to Teignmouth (The Point)**
Policy Unit reference:	**6b25 to 6b29**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

Due to the importance of the railway for the wider South West region, and the economic value of Teignmouth, the long term vision of the Plan for this stretch is to continue to prevent erosion and flooding of this stretch of coastline over the next 100 years.

The beach towards Teignmouth Pier has historically fluctuated as part of a cyclic sediment transport regime that exists in this area and it is uncertain as to exactly what impact this regime could have upon beach levels along the southern parts of this stretch of shoreline in the longer term as sea levels rise. Narrowing or loss of beach along this section would increase the risks to defences and would also be detrimental to the tourism value of the area.

If implementation of this policy can be achieved via beach recharge, then this will also be beneficial to retaining the amenity and tourism value of Teignmouth in the longer term, at a time when other beaches in the region are expected to be narrowing, steepening or even lost due to rising sea levels.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** along the majority of this stretch. This would involve ongoing maintenance of the defences, including seawalls and groynes, to prevent cliff erosion and reduce the risk of flooding at Teignmouth. The defences prevent erosion of the cliff toe along this section and have resulted in negligible cliff recession occurring over the past century or more, and in turn a lack of sediment supply to the local beaches. This situation will remain. The beach fronting the seawall has a long term trend of erosion and narrowing and coastal squeeze as a result of sea level rise is likely to become increasingly significant during this period to 2025, although consideration of options that include beach recharge to improve the standard of protection to the mainline railway could reduce this effect. Along the southern part of this section fronting Teignmouth, groynes also help to control the littoral drift of beach material and these would need to be maintained. The beach in this area has historically fluctuated as part of a cyclic sediment transport regime that exists in this area. This interaction is expected to remain; however, it could be affected by any changes in the management of the Teign Estuary. This would need to be looked at in further detail as part of any future Teign Estuary management. The policy for The Point, a short spit that extends into the mouth of the Teign Estuary from the north side of the mouth, is to allow it to continue to evolve largely naturally without intervention, although the recommended policy in this area is one of **Managed Realignment**. This is to allow some intervention to occur should more detailed studies during this period show that it is necessary to actively manage this area for the benefit of the wider Teign Estuary.
Medium term:	The medium term policy is to continue to **Hold the Line** along the majority of this stretch of coast. Sea level rise could cause further narrowing of the beach which would put further pressure on the existing defences. As such, it is likely that implementation of this policy would involve constructing new defences at the beginning of this period in order to maintain adequate levels of protection to the mainline railway and to continue to reduce the risk of flooding at Teignmouth. However, options to address this increased risk could consider

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	some element of beach recharge and/or control structures to reduce the effect of beach narrowing. Continued defence of the cliff toe would result in negligible cliff recession between 2025 and 2055 and no input of sediment to the local beaches. The beach fronting Teignmouth towards the pier would also be expected to continue to fluctuate as part of the cyclic sediment transport system, although sea level rise could cause some narrowing of the beach in the longer term as the seawall prevents it from responding naturally. The policy for The Point would remain one of **Managed Realignment** to allow intervention if detailed investigation in the short term and/or ongoing monitoring shows it is needed for the benefit of the wider Teign Estuary. If this is not required then this feature should be allowed to evolve as naturally as possible without intervention.
Longer-term:	The long term policy is to prevent the loss of the mainline railway and reducing flood risk to Teignmouth by continuing to **Hold the Line**, particularly as there are no plans at present to relocate the mainline railway to an inland route over the next 100 years. As a result of sea level rise it is expected that the beaches backed by seawalls will narrow and steepen, and could possibly disappear in places, which would increase pressure of the current defences. Therefore, implementation of this policy could involve construction of new, larger, defences, possibly including control structures and/or beach recharge along the southern part of this stretch, to provide continued protection to the mainline railway and to reduce the risk of flooding at Teignmouth. The policy for The Point would remain one of **Managed Realignment** to allow intervention if detailed investigation and/or ongoing monitoring show it is needed for the benefit of the wider Teign Estuary. If this is not required then this feature should be allowed to evolve as naturally as possible without intervention.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b25	**Holcombe to Sprey Point**	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.
6b26	**Sprey Point**	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.
6b27	**Sprey Point to Teignmouth Pier**	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.
6b28	**Teignmouth Pier to The Point**	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.
6b29	**The Point**	Allow the shoreline to evolve largely naturally, but allow intervention under a policy of **Managed**	Allow the shoreline to evolve largely naturally, but allow intervention under a policy of **Managed**	Allow the shoreline to evolve largely naturally, but allow intervention under a policy of **Managed**

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Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
		Realignment if more detailed studies show it is required for the benefit of the wider Teign Estuary.	**Realignment** if more detailed studies show it is required for the benefit of the wider Teign Estuary.	**Realignment** if more detailed studies show it is required for the benefit of the wider Teign Estuary.

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Location reference:	Holcombe to Teignmouth (The Point)
Policy Unit reference:	6b25 to 6b29

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 would occur. If appropriate, the section along Sprey Point would be realigned (further to more detailed investigations).	Continued protection of residential and commercial properties and recreational facilities at Teignmouth, from flooding/erosion Potential loss of access to the seafront at Sprey Point – but possibility for relocation.	Continued protection of the mainline Exeter to Plymouth railway at Teignmouth from potential flood-risk. Continued protection of the A379 at Teignmouth from flooding and erosion.	Grade 2 listed buildings potentially at risk from flooding. One Protected Wreck may experience increased erosion if changes in sediment processes/tidal circulation prevail. Holding the line at Teignmouth has the potential to also affect this wreck through a change in processes resulting from rising sea levels – *potential adverse impact*	Minor changes in landscape character.	No known impacts on geology or soils.	No known impacts on water quality. Managed Realignment at Sprey Point 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. HTL in the Teign Estuary 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 – *adverse impact*	No known impacts on designated biodiversity, flora or fauna.
2025 – 2055	Continued maintenance and improvements to the defences would occur, possibly including beach recharge along the Teignmouth frontage.	Continued protection of residential and commercial properties and recreational facilities at Teignmouth, from flooding/erosion	Continued protection of the mainline Exeter to Plymouth railway at Teignmouth from potential flood-risk. Continued protection of the A379 at Teignmouth from flooding and erosion.	Grade 2 listed buildings potentially at risk from flooding. One Protected Wreck may experience increased erosion if changes in sediment processes/tidal circulation prevail. Holding the line at Teignmouth has the potential to also affect this wreck through a change in processes resulting from rising sea levels – *potential adverse impact*	Minor changes in landscape character.	No known impacts on geology or soils.	No known impacts on water quality. HTL in the Teign Estuary 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 – *adverse impact*	No known impacts on designated biodiversity, flora or fauna.
2055 – 2105	Continued maintenance and possible further improvements to the defences would occur, possibly including beach recharge along the Teignmouth frontage..	Continued protection of residential and commercial properties and recreational facilities at Teignmouth, from flooding/erosion	Continued protection of the mainline Exeter to Plymouth railway at Teignmouth from potential flood-risk. Continued protection of the A379 at Teignmouth from flooding and erosion.	Grade 2 listed buildings potentially at risk from flooding. One Protected Wreck may experience increased erosion if changes in sediment processes/tidal circulation prevail. Holding the line at Teignmouth has the potential to also affect this wreck through a change in processes resulting from rising sea levels – *potential adverse impact*	Minor changes in landscape character.	No known impacts on geology or soils.	No known impacts on water quality. HTL in the Teign Estuary 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 – *adverse impact*	No known impacts on designated biodiversity, flora or fauna.

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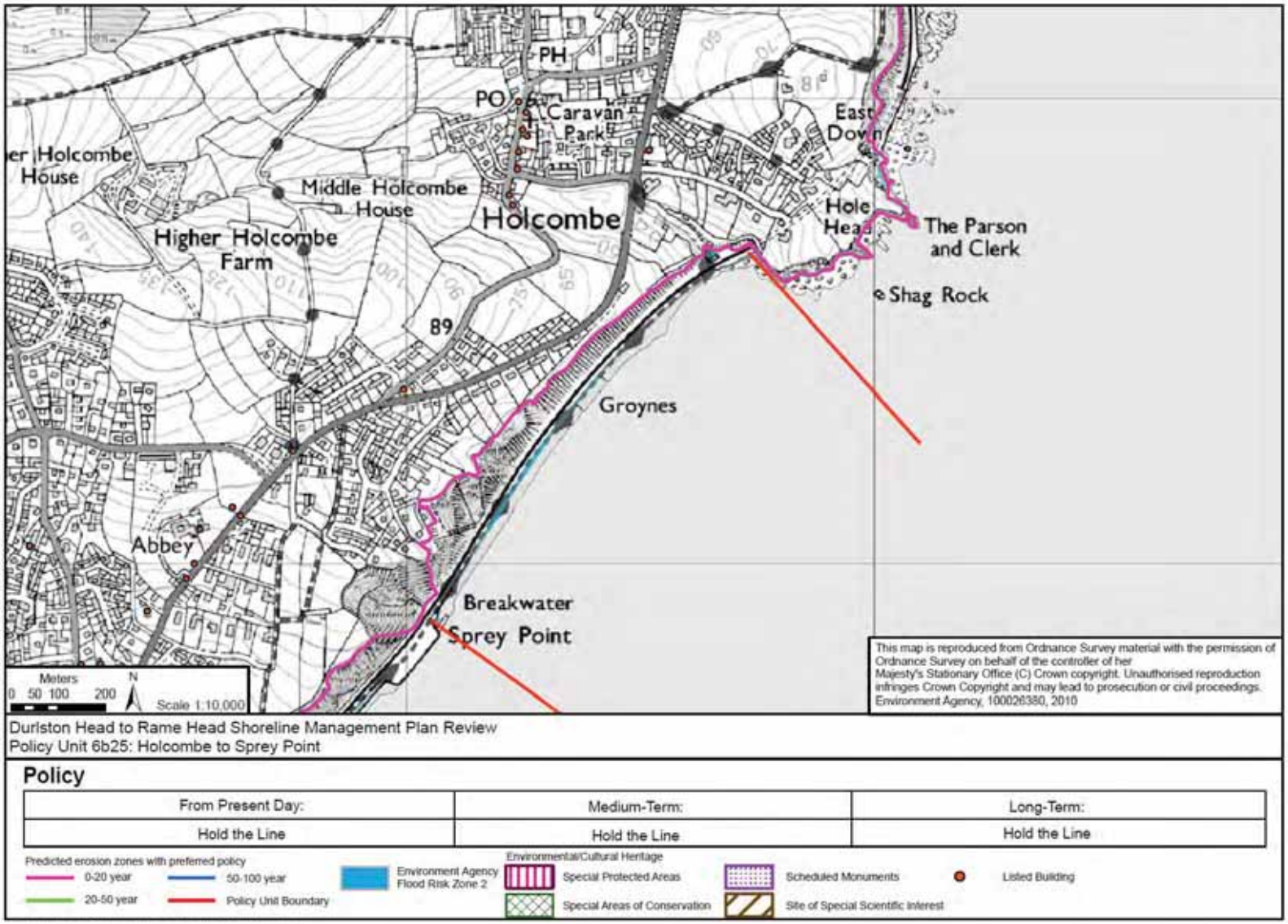

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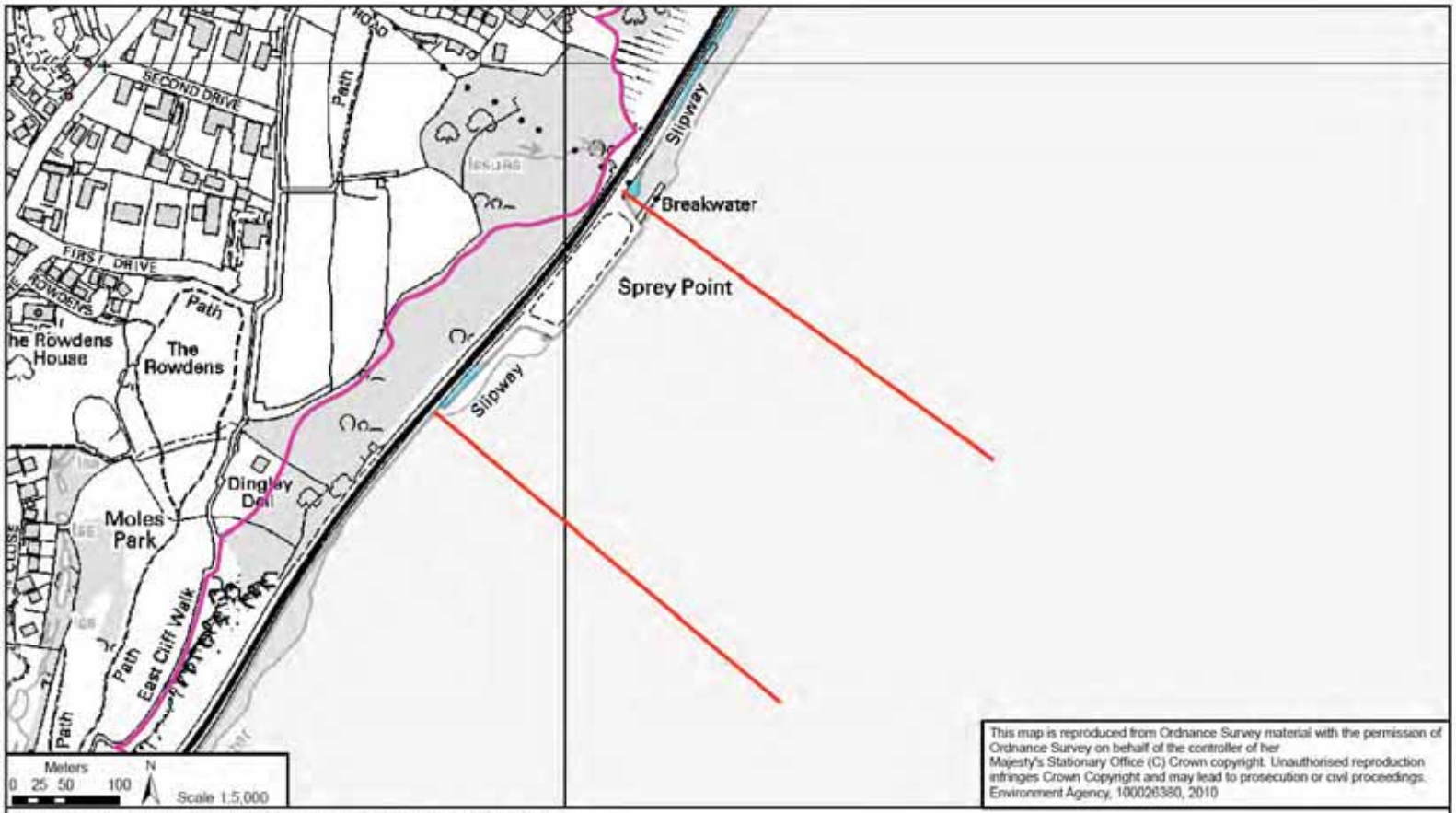

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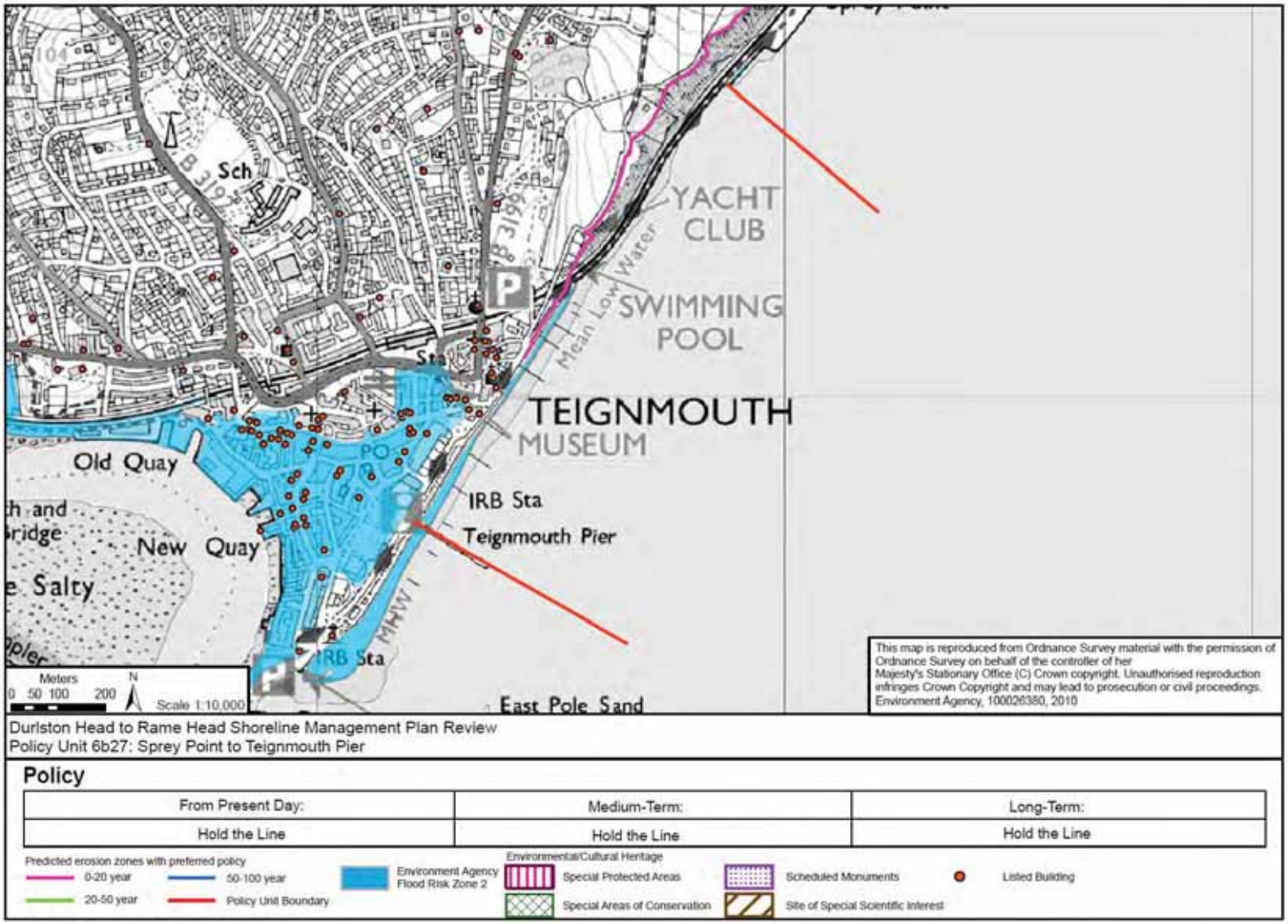

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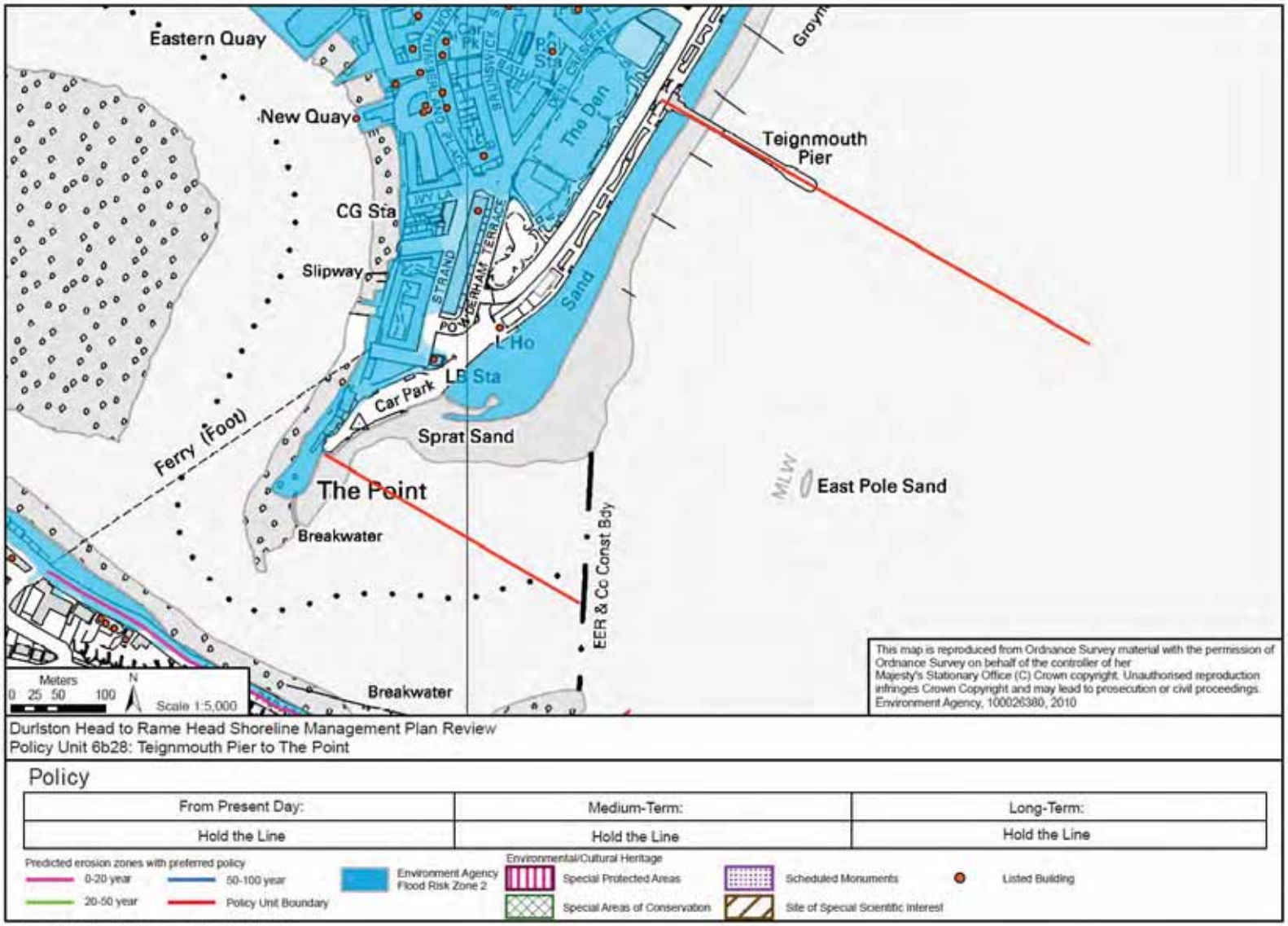

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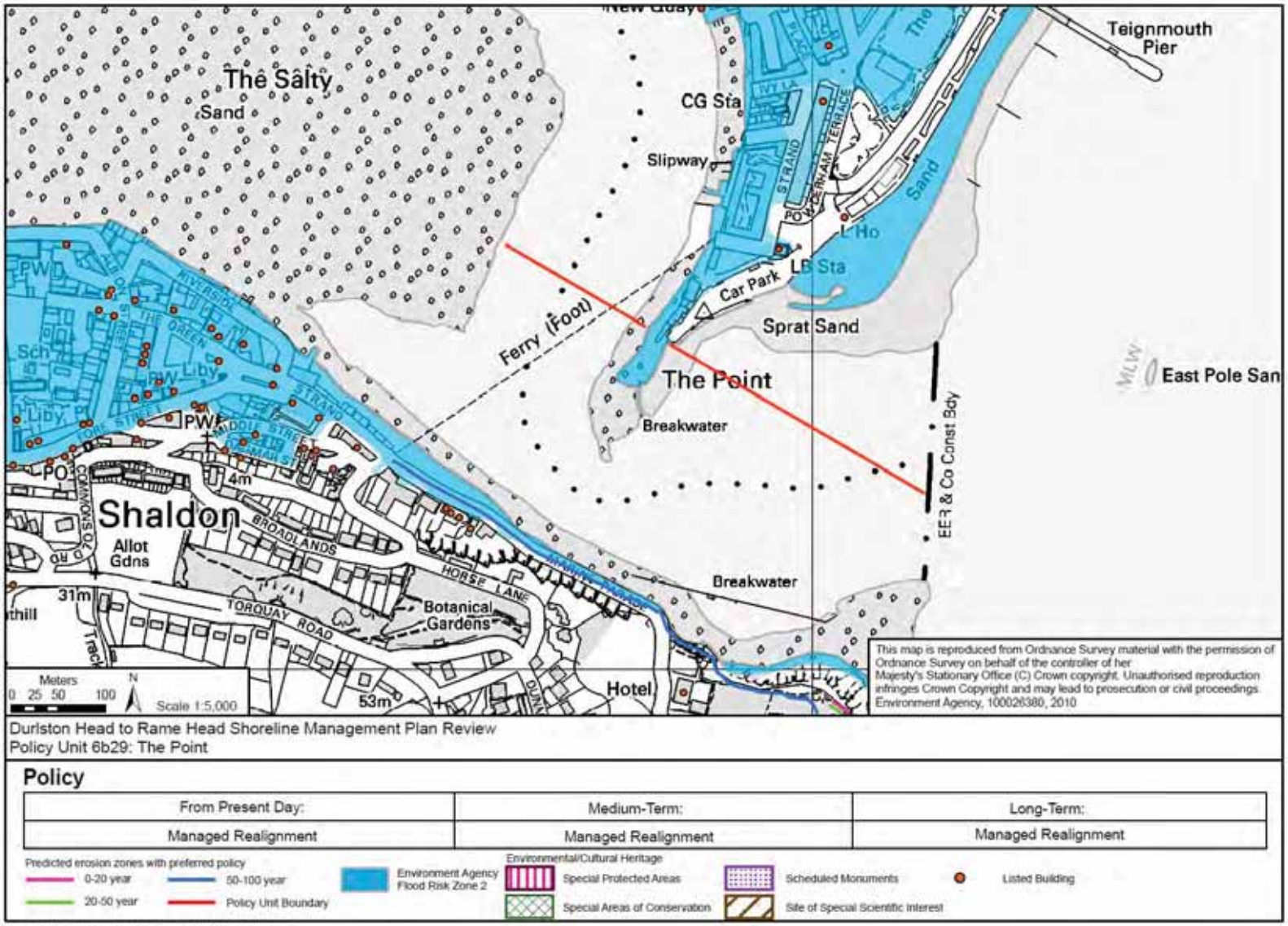

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Location reference:	**Teign Estuary**
Policy Unit reference:	**6b30 to 6b35**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term vision of the Plan for the Teign Estuary is to continue to defend against the risk of flooding to people, property and infrastructure located around the majority of the estuary. This includes the towns of Teignmouth, Newton Abbot, Kingsteignton and Shaldon, as well as the Port of Teignmouth, part of the mainline railway that links the wider South West region to the rest of the UK, and a new cycleway that is in the process of being planned. All are of important economic value to the area. Holding the line along the length of the mainline railway along the northern shore of the estuary would also be compatible with the recommended policies for the open coast between Dawlish and Teignmouth.

The Teign Estuary would not be able to translate landwards in response to sea level rise due to the constraint of continued defence, and by steeply rising ground in many of the undefended parts of the estuary. It is therefore expected that the estuary would accrete vertically at a rate keeping pace with sea level rise whilst generally maintaining its present form during this period. This would likely involve erosion in some parts of the estuary to supply sediment to allow this accretion, and new sediment inputs from upstream sources would also contribute. This in turn could have impacts on the cyclic sediment circulation around the estuary mouth, though further detailed study is required to assess the full implications of this.

In support of the aim of continuing to reduce the risk of flooding and in order to allow the estuary to adapt more naturally to rising sea levels, opportunities to implement Managed Realignment would also be explored. Within the Teign Estuary the area of the upper estuary towards Newton Abbot (Policy Unit 6b32) is identified as one such area where Managed Realignment could occur to provide benefits in reducing flood risk to the wider estuary. Other areas where Managed Realignment may be possible include parts of the north shore through the railway line utilising regulated tidal exchange, and at Netherton and Coombe Cellars along the south shore.

Managed Realignment in any part of the estuary would also offer habitat creation opportunities, but would only be implemented following more detailed studies and would have to ensure that doing so does not increase the risk of flooding in other parts of the estuary. Therefore prior to studies being carried out, management would continue as at present.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** of existing defences within the Teign Estuary through ongoing maintenance of the various defences. These include a seawall that protects the railway line along the north shore of the estuary, and other flood wall and embankment defences that reduce the risk of flooding to areas of low-lying, extensively developed land. Maintenance of defences in areas of future potential realignment would continue in the short term whilst options for implementing Managed Realignment in the medium to long term are investigated in detail. Under this policy it is not intended that any new defences would be constructed in areas that are presently undefended or where there are only short lengths of private defences, such as along the southern shore. The Teign Estuary as a whole is likely to maintain its current form during this period, assuming riverine sediment inputs continue as at present.
Medium term:	The medium term policy is to continue to **Hold the Line** of the majority of the existing defences through ongoing maintenance and possible improvement of the various defences. To maintain adequate levels of protection as sea levels rise, implementation of this policy is likely to require larger defences

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	throughout much of the estuary. Along the parts of the Teign Estuary that are presently undefended, no new defences would be constructed and as such these areas would continue to evolve naturally. In the upper estuary towards Newton Abbot (Policy Unit 6b32), it is recommended that, subject to more detailed study, **Managed Realignment** be implemented during this period. This would involve the construction of a new defence line landward of the existing line of protection. Unlike much of the Teign Estuary, Managed Realignment in this area during this period would not only increase flood storage for the rest of the estuary but also provide space for the estuary to adapt to rising sea levels in the future. However, there are potential impacts on the rest of the estuary, as well as some assets such as the new cycleway that is currently being planned, that would need to have been considered by more detailed studies carried out in the short term.
Longer-term:	The long term policy is to continue to **Hold the Line** along the currently defended shorelines of the estuary. This may involve improvement of defences in order to ensure an adequate level of protection. It is not intended that any new defences would be constructed along the currently undefended stretches. In the upper estuary towards Newton Abbot (Policy Unit 6b32), the policy of **Managed Realignment** would be continued during this period. This would involve ongoing maintenance of set-back defences constructed in the medium term, whilst also considering any further realignments. Where realignment is not possible, then existing lines of defence should be maintained in order to continue to reduce the risk of flooding to developed areas. This would be guided by more detailed study.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b30	**Teign Estuary - The Point to Teignmouth and Shaldon Bridge**	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.
6b31	**Teign Estuary - North Shore (Teignmouth and Shaldon Bridge to Passage House Hotel)**	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.
6b32	**Teign Estuary - Passage House Hotel to Kingsteignton Road Bridge**	Continue to maintain the existing defences under a **Hold the Line** policy. Investigate potential realignments.	Implement **Managed Realignment**.	Continue the policy of **Managed Realignment**.
6b33	**Teign Estuary - Kingsteignton and Newton Abbot**	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.
6b34	**Teign Estuary - South Shore (Newton Abbot to**	Continue to maintain the existing defences under a **Hold the Line** policy, but	Continue to maintain the existing defences under a **Hold the Line** policy, but	Continue to maintain the existing defences under a **Hold the Line** policy, but

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Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
	Shaldon)	**No Active Intervention** along the currently undefended sections.	**No Active Intervention** along the currently undefended sections.	**No Active Intervention** along the currently undefended sections.
6b35	**Teign Estuary - Shaldon**	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.

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Location reference:	Teign Estuary
Policy Unit reference:	6b30 to 6b35

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. Studies to investigate potential realignment in upper estuary.	Continued protection of residential and commercial properties and recreational facilities at Denn Spit to the centre of Teignmouth, along the Teign Estuary, at Newton Abbot, and in the northern parts of Shaldon from flooding/erosion. South West Coast at Risk from flooding in some areas, though risk is minimised as path currently runs along defended areas.	Continued protection of Teignmouth Harbour from flooding. Continued protection of the mainline Exeter to Plymouth railway along the north side of the Teign Estuary from potential flood-risk. Continued protection of the A381 in the Teign Estuary from flooding. The A379 and associated bridge would be protected from flooding/erosion. Grades 2, 3, 4 and 5 Agricultural land at risk of flooding/erosion in some areas	Grade 2 listed buildings potentially at risk from flooding.	No known changes in landscape character.	No known impacts to geology and soils.	Potential impacts on water quality due to Managed Realignment. 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. HTL in the Teign Estuary 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	No known impacts on designated biodiversity, flora or fauna.
2025 – 2055	Ongoing maintenance and possible improvement of defences, along with implementation of Managed Realignment in the upper estuary.	Continued protection of residential and commercial properties and recreational facilities at Denn Spit to the centre of Teignmouth, along the Teign Estuary, at Newton Abbot, and in the northern parts of Shaldon from flooding/erosion. South West Coast at Risk from flooding in some areas, though risk is minimised as path currently runs along defended areas.	Continued protection of Teignmouth Harbour from flooding. Continued protection of the mainline Exeter to Plymouth railway along the north side of the Teign Estuary from potential flood-risk. Continued protection of the A381 in the Teign Estuary from flooding. The A379 and associated bridge would be protected from flooding/erosion. Grades 2, 3, 4 and 5 Agricultural land at risk of flooding/erosion in some areas	Grade 2 listed buildings potentially at risk from flooding.	Changes in landscape character may occur as a result of Managed Realignment in parts of the Teign Estuary.	No known impacts to geology and soils.	Potential impacts on water quality due to Managed Realignment. 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. HTL in the Teign Estuary 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	Managed Realignment in parts of the Teign Estuary would provide opportunities for habitat creation
2055 – 2105	Maintenance of existing and realigned defences would occur, as well as possible	Continued protection of residential and commercial properties and recreational facilities at Denn Spit to the	Continued protection of Teignmouth Harbour from flooding.	Grade 2 listed buildings potentially at risk from flooding.	Changes in landscape character may occur as a result of Managed Realignment in parts of the Teign Estuary.	No known impacts to geology and soils.	Potential impacts on water quality due to Managed Realignment.	Managed Realignment in parts of the Teign Estuary would provide opportunities for habitat creation

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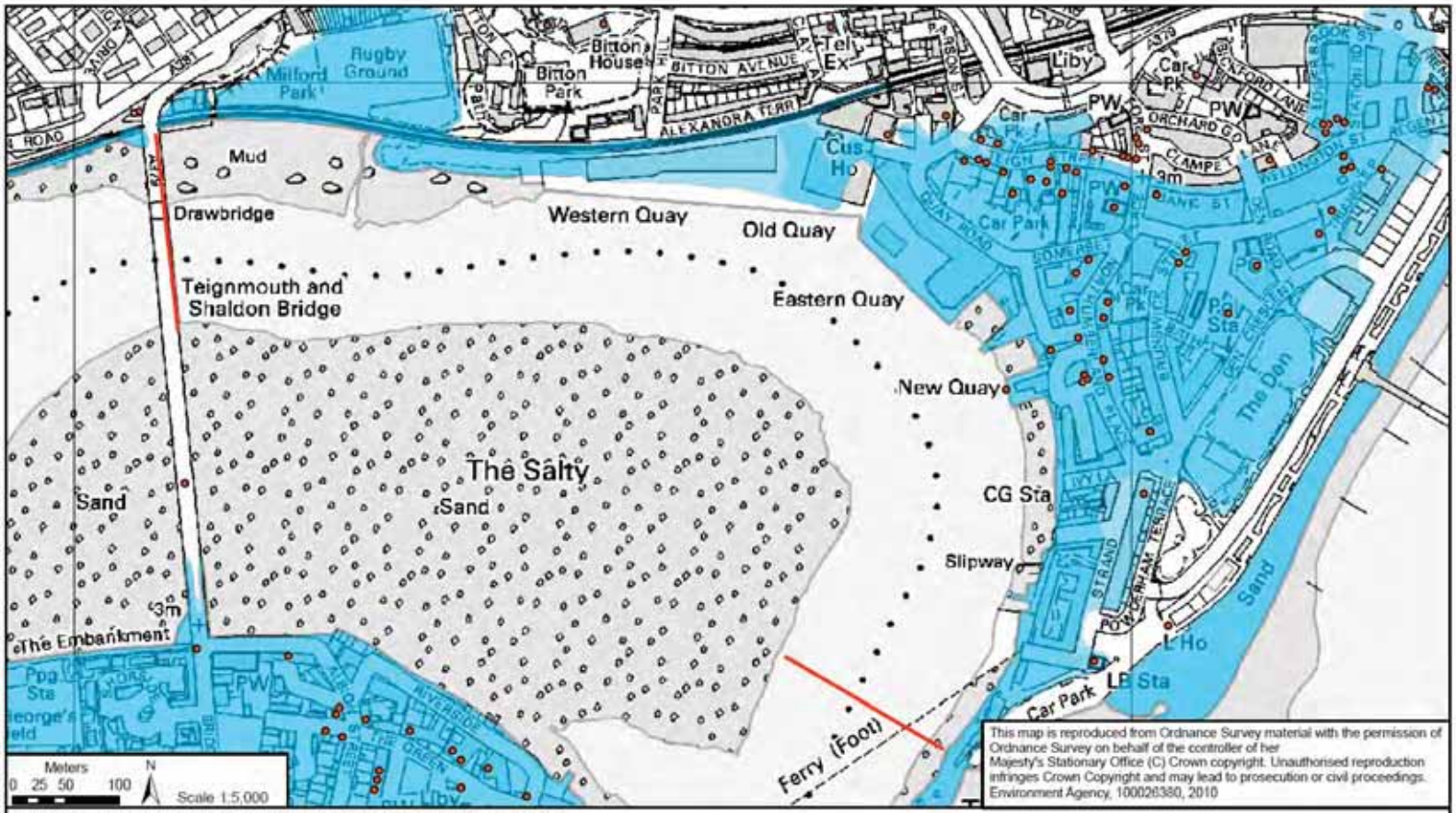
Location reference:	Teign Estuary							
Policy Unit reference:	6b30 to 6b35							
IMPLICATIONS OF THE PREFERRED PLAN FOR THIS LOCATION								
Time Period	**Management Activities**	**Property, Population and Human Health**	**Land Use, Infrastructure and Material Assets**	**Historic Environment**	**Landscape Character and Visual Amenity**	**Earth Heritage, Soils and Geology**	**Water**	**Biodiversity, Flora and Fauna**
	implementation of further realignment.	centre of Teignmouth, along the Teign Estuary, at Newton Abbot, and in the northern parts of Shaldon from flooding/erosion. South West Coast at Risk from flooding in some areas, though risk is minimised as path currently runs along defended areas.	Continued protection of the mainline Exeter to Plymouth railway along the north side of the Teign Estuary from potential flood-risk. Continued protection of the A381 in the Teign Estuary from flooding. The A379 and associated bridge would be protected from flooding/erosion. Grades 2, 3, 4 and 5 Agricultural land at risk of flooding/erosion in some areas				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. HTL in the Teign Estuary 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	



Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6b30: Teign Estuary - The Point to Teignmouth and Shaldon Bridge

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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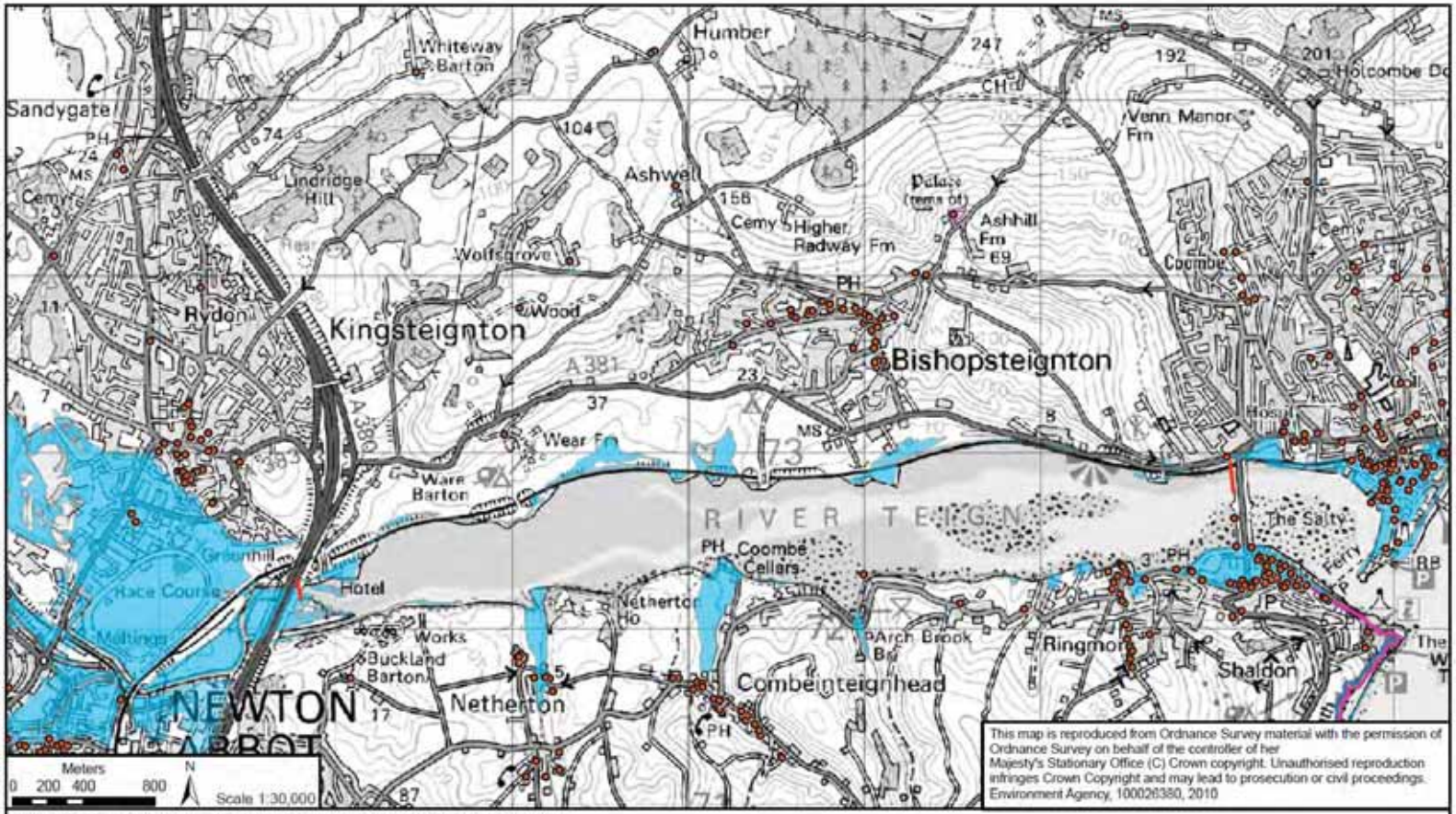

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6b31: Teign Estuary - North Shore (Teignmouth and Shaldon Bridge to Passage House Hotel)

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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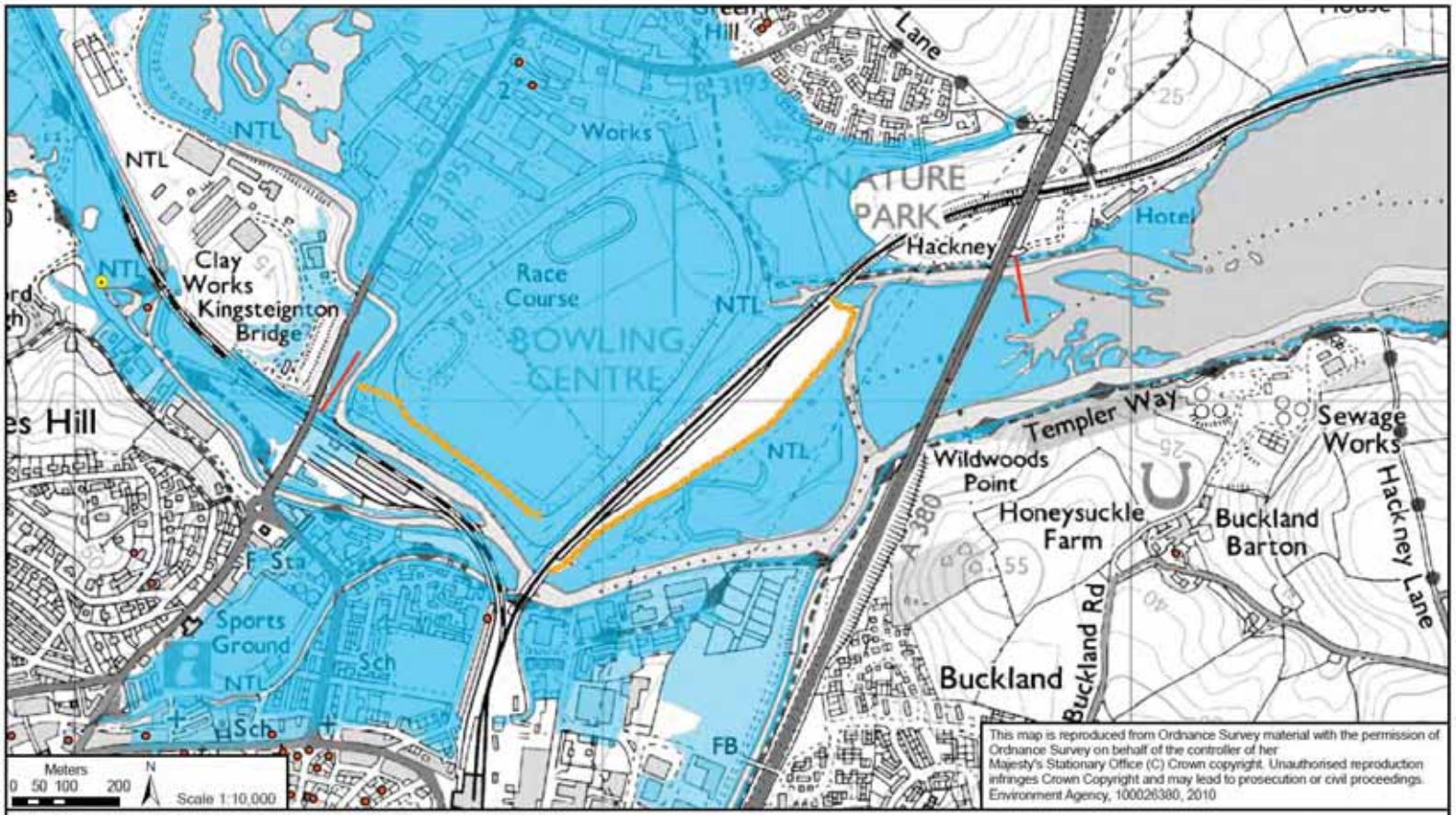

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6b32: Teign Estuary - Passage House Hotel to Kingsteignton Road Bridge

Policy

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

Predicted erosion zones with preferred policy
0-20 year
20-50 year
50-100 year
Policy Unit Boundary
Environment Agency Flood Risk Zone 2
Estuary Tidal Limits
Environmental/Cultural Heritage
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building
Indicative Potential Managed Realignment (Subject to more detailed study)

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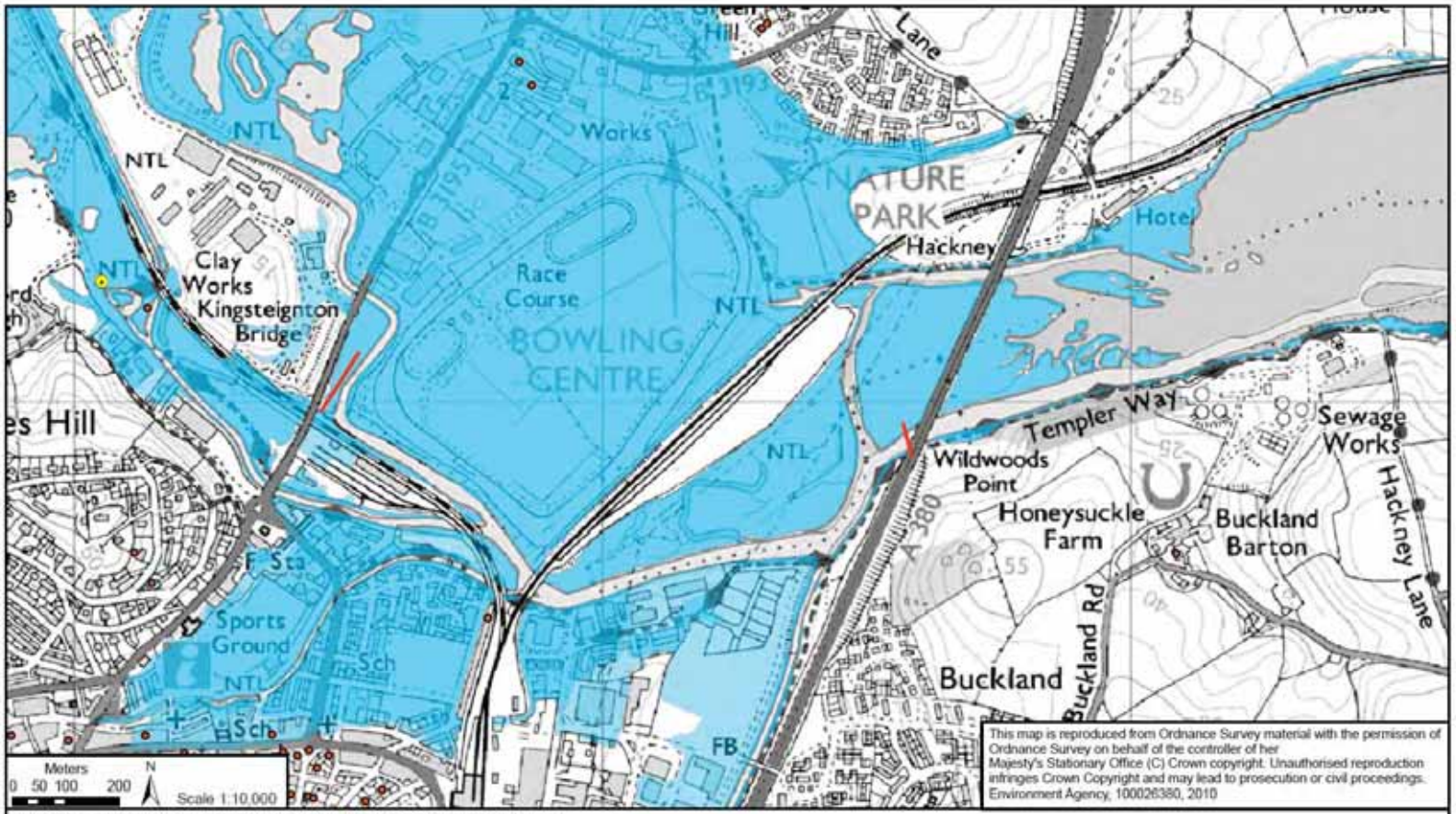

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6b33: Teign Estuary - Kingsteignton and Newton Abbot

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 | 50-100 year | 20-50 year | Policy Unit Boundary
Environment Agency Flood Risk Zone 2 | Estuary Tidal Limits
Environmental/Cultural Heritage
Special Protected Areas | Special Areas of Conservation | Scheduled Monuments | Site of Special Scientific Interest | Listed Building

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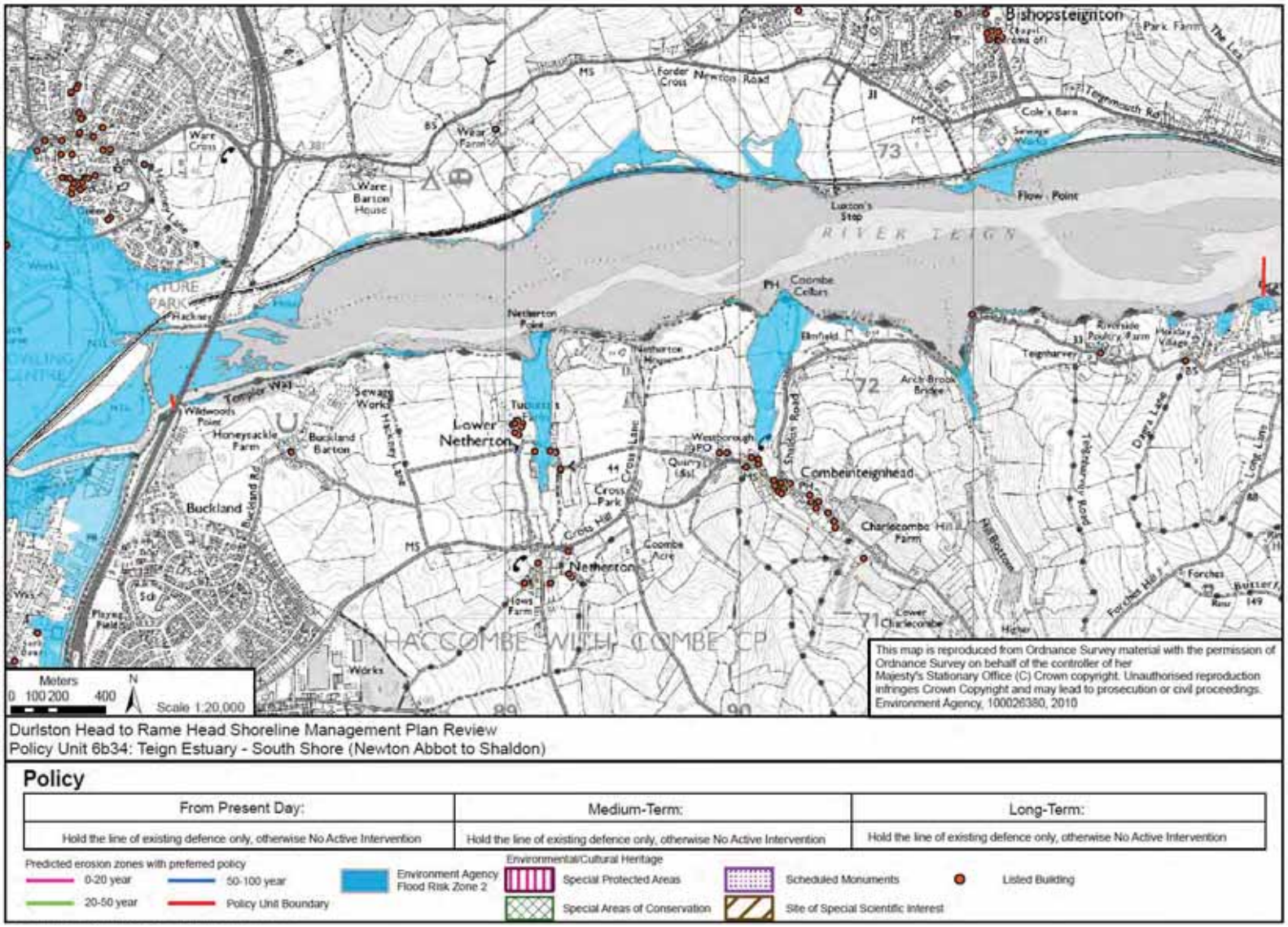

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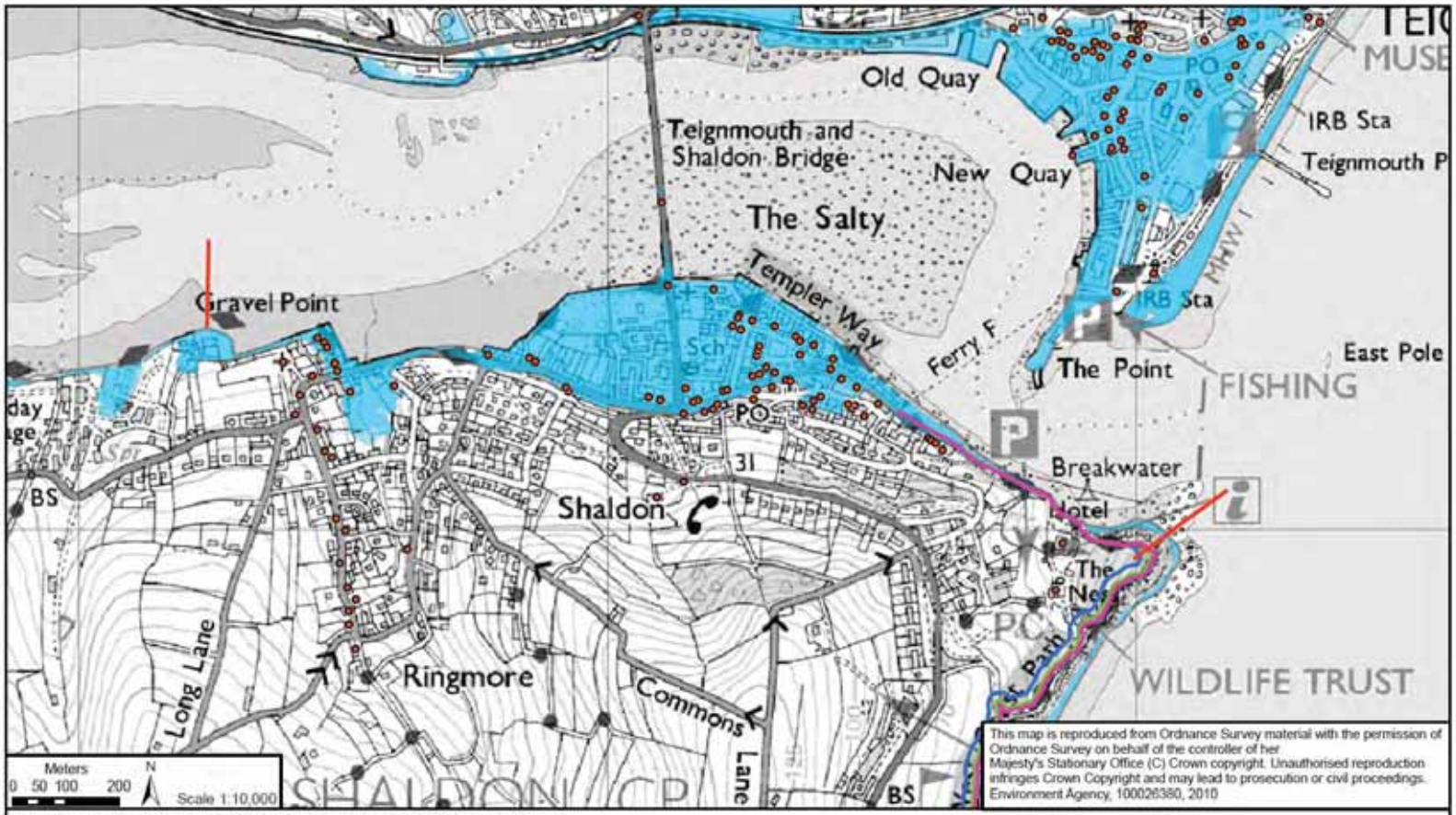

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6b35: Teign Estuary - Shaldon

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
50-100 year
20-50 year
Policy Unit Boundary
Environment Agency Flood Risk Zone 2
Environmental/Cultural Heritage
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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Location reference:	**Shaldon (The Ness) to Petit Tor Point**
Policy Unit reference:	**6b36 to 6b40**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section of mostly undefended coast is characterised by cliffs of geological and geomorphological value and lies within the English Riviera Geopark. The only defences along this stretch occur within the small pocket embayments at Maidencombe and Watcombe where there are some short lengths of wall associated with provision of facilities located at the back of the small pocket beaches.

The long term vision for this section of coast is to allow it to evolve naturally over the next 100 years. As the rate of sediment supply from cliff erosion is unlikely to be sufficient to maintain the small pocket beaches that indent this coast as sea levels rise, it is likely that many of these beaches could be lost in the longer-term.

Under this plan the small lengths of wall at Maidencombe and Watcombe would eventually fail. However, as sea levels rise and sediment supply to the beach from cliff erosion is unlikely to keep pace, this beach is likely to be lost in the longer term and the requirement to provide beach access related facilities will change.

There is also potential for parts of the South West Coast Path to be lost to erosion in the future, depending upon the location of future cliff failure events.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention** along this predominantly undefended stretch of cliffed coastline. The cliffs are comprised of relatively resistant rock that has eroded very little over the past century and this will continue to be the case. Narrow beaches may be retained as small pocket beaches that indent this section, if there is sufficient local sediment input from the sandstone cliffs. There are some short lengths of wall, associated with provision of facilities, located at the back of the small pocket beaches at Maidencombe and Watcombe. Although maintenance of these would be unlikely to attract public funds, if alternative funds were available, then there is no reason not to permit the retention of the structures as the potential impacts upon wider coastal processes will be negligible.
Medium term:	The medium term policy is for **No Active Intervention**. As sea levels rise some of the pocket beaches could become submerged as the rate of cliff erosion does not keep pace with the accelerated rate of sea level rise. Other beaches may remain if there is sufficient local erosion. The short lengths of defences at Maidencombe and Watcombe would fail (unless maintained through private funding – *refer also to Section 5.2.2 'Private Defences'*), but the slow erosion of the backing cliffs, combined with rising sea levels, will mean that the beaches at these locations will gradually narrow; therefore, provision of the associated amenity facilities may no longer be viable.
Longer-term:	The long term policy is for **No Active Intervention** along this predominantly undefended section of cliffed coastline, which would be allowed to continue to evolve naturally. Erosion of the cliff line is predicted to be up to 10-25m by 2105. Many of the small pocket beaches, including Maidencombe and Watcombe will

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have become submerged due to accelerated sea level rise meaning that cliffs here will be exposed directly to the sea.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b36	Shaldon (The Ness) to Maidencombe (North)	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**.
6b37	Maidencombe	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**.
6b38	Maidencombe (South) to Watcombe 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**.
6b39	Watcombe	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**.
6b40	Watcombe to Petit Tor 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**.

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Location reference:	Shaldon (The Ness) to Petit Tor Point
Policy Unit reference:	6b36 to 6b40

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. Maintenance of the small lengths of wall associated at Maidencombe and Watcombe, if private funds available.	Isolated properties at risk of erosion in the vicinity of Watcombe Head, Maidencombe and between Maidencombe and Shaldon. South West Coast at Risk from erosion in some areas. Potential for localised cliff recession to impact on golf courses.	Grades 2, 3, 4 and 5 Agricultural land at risk of erosion in some areas	Grade 2 listed buildings potentially at risk from erosion.	Minor changes in landscape character may occur as a result of an eroding coastline – but not considered detrimental as this is a natural process.	NAI along the majority of this coastal section would allow natural erosion to continue and would maintain the English Riviera Geopark and geological SSSIs.	No known impacts on water quality.	No known impacts on biodiversity, flora or fauna.
2025 – 2055	Continued slow cliffline retreat. No management activities along majority of coast. Possible private maintenance of defences at Maidencombe and Watcombe, if still viable.	Isolated properties at risk of erosion in the vicinity of Watcombe Head. Maidencombe and between Maidencombe and Shaldon. South West Coast at Risk from erosion in some areas Potential for localised cliff recession to impact on golf courses.	Grades 2, 3, 4 and 5 Agricultural land at risk of erosion in some areas	Grade 2 listed buildings potentially at risk from erosion.	Minor changes in landscape character may occur as a result of an eroding coastline – but not considered detrimental as this is a natural process.	NAI along the majority of this coastal section would allow natural erosion to continue and would maintain the English Riviera Geopark and geological SSSIs. One historic landfill site (Sladnor Park) potentially at risk of erosion at Maidencombe, though risk is small due to slow rate of erosion.	Potential impacts on water quality due to potential erosion of landfill site – see soils and geology.	No known impacts on biodiversity, flora or fauna.
2055 – 2105	Continued slow cliffline retreat. No management activities along majority of coast. Possible private maintenance of defences at Maidencombe and Watcombe, if still viable.	Isolated properties at risk of erosion in the vicinity of Watcombe Head, Maidencombe and between Maidencombe and Shaldon – South West Coast at Risk from erosion in some areas. Potential for localised cliff recession to impact on golf courses.	Grades 2, 3, 4 and 5 Agricultural land at risk of erosion in some areas	Grade 2 listed buildings potentially at risk from erosion	Minor changes in landscape character may occur as a result of an eroding coastline – but not considered detrimental as this is a natural process.	NAI along the majority of this coastal section would allow natural erosion to continue and would maintain the English Riviera Geopark and geological SSSIs. One historic landfill site (Sladnor Park) potentially at risk of erosion at Maidencombe, though risk is small due to slow rate of erosion.	Potential impacts on water quality due to potential medium and long term erosion of landfill site – see soils and geology.	No known impacts on biodiversity, flora or fauna.

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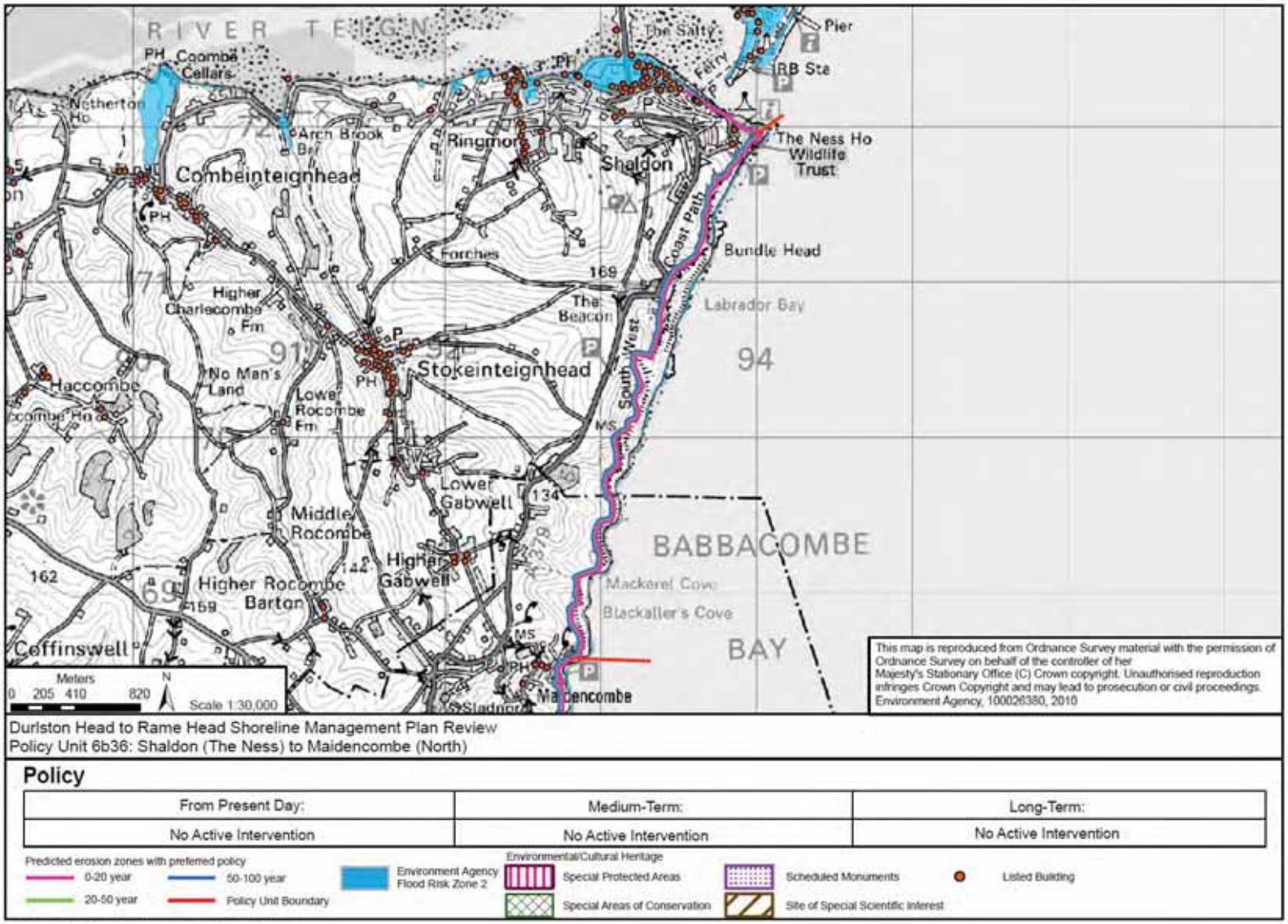

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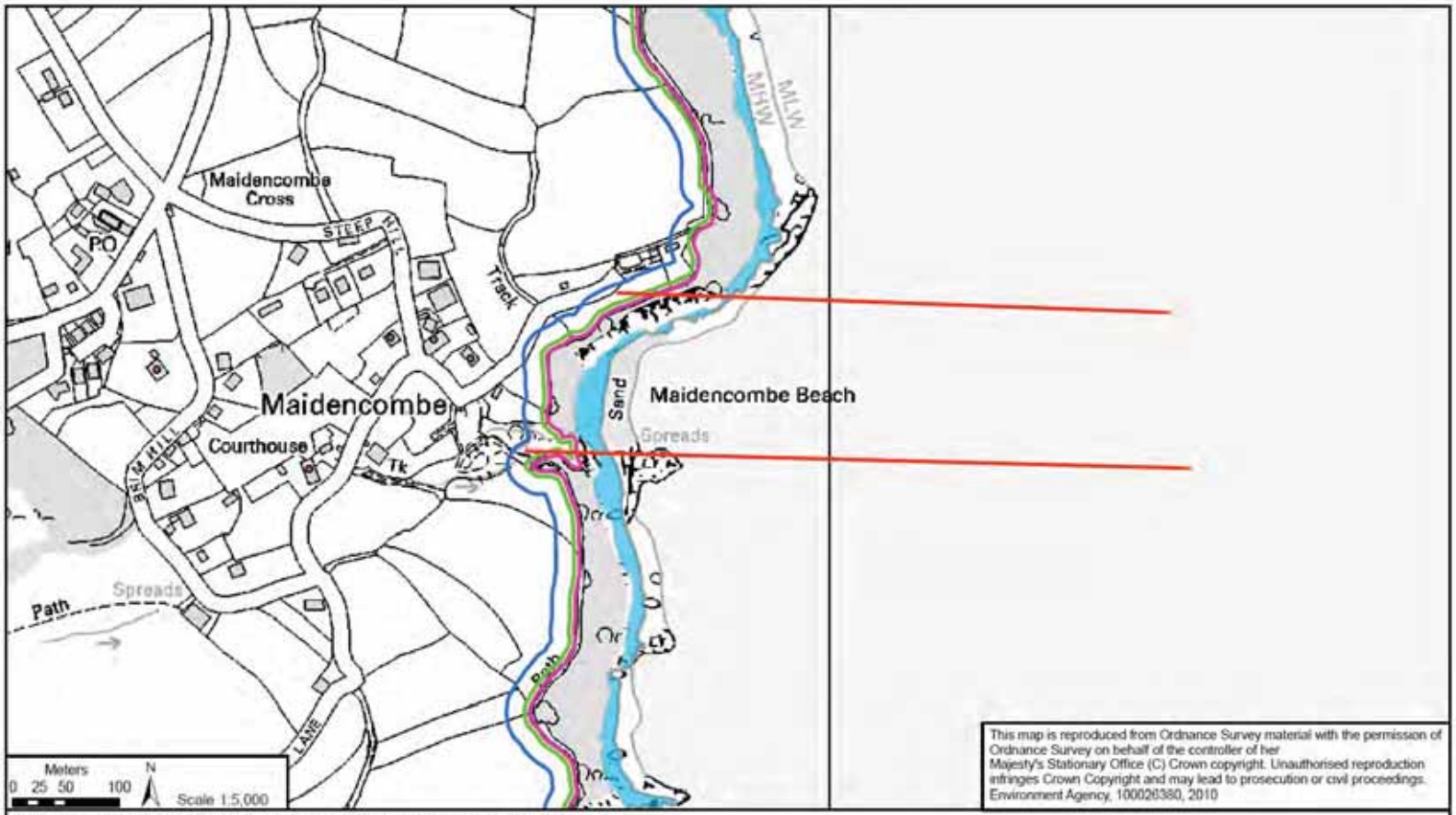

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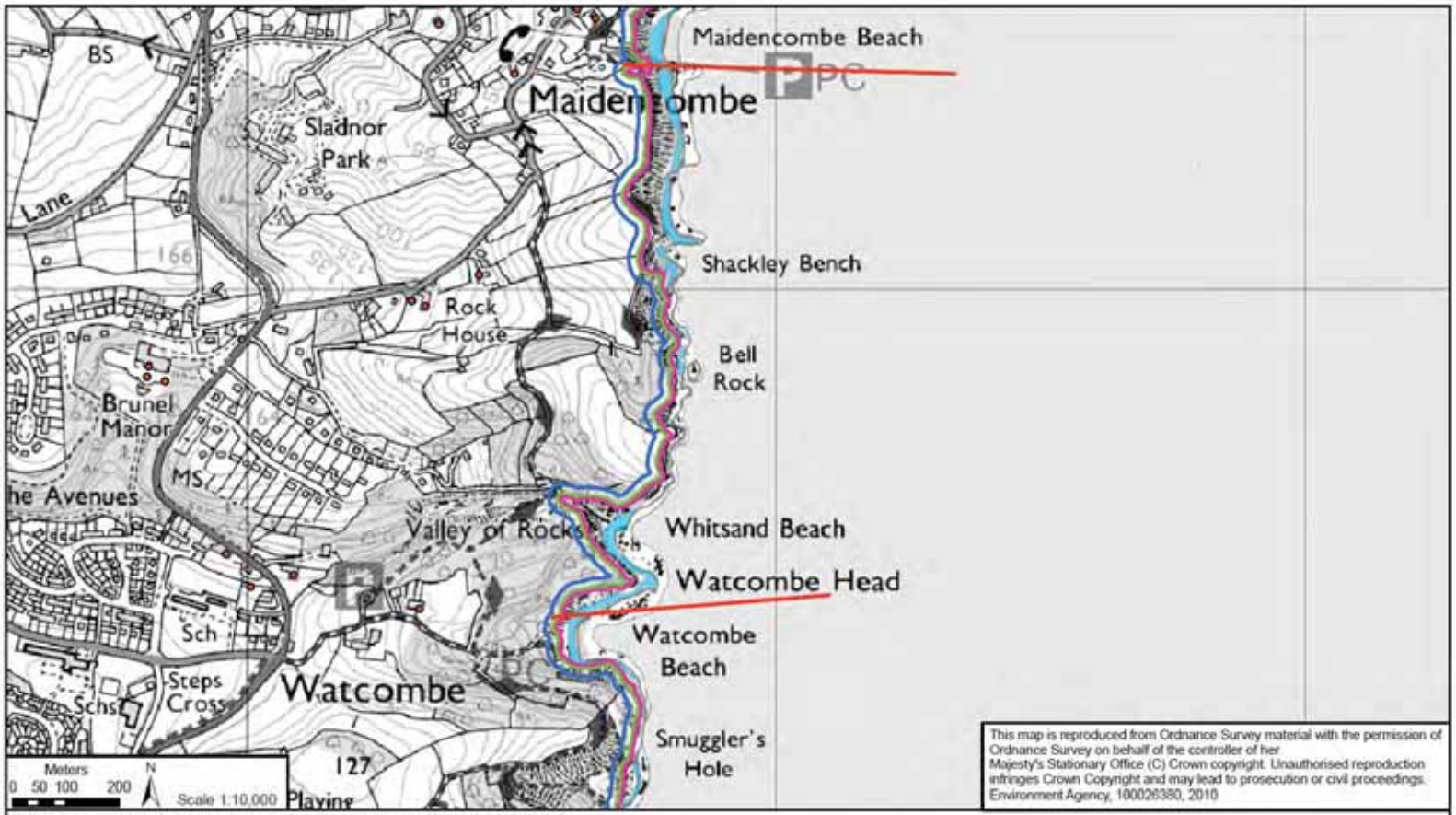

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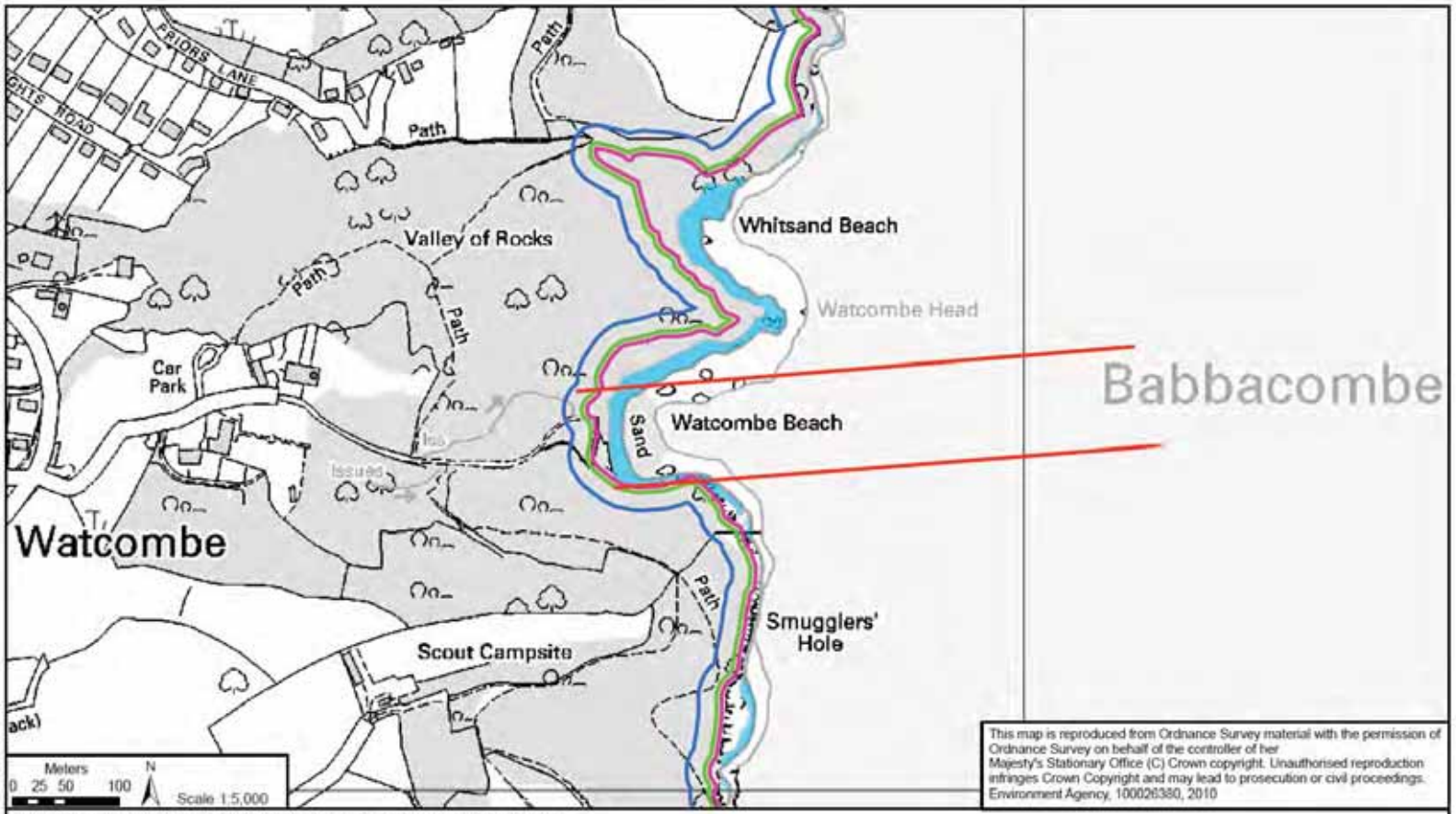

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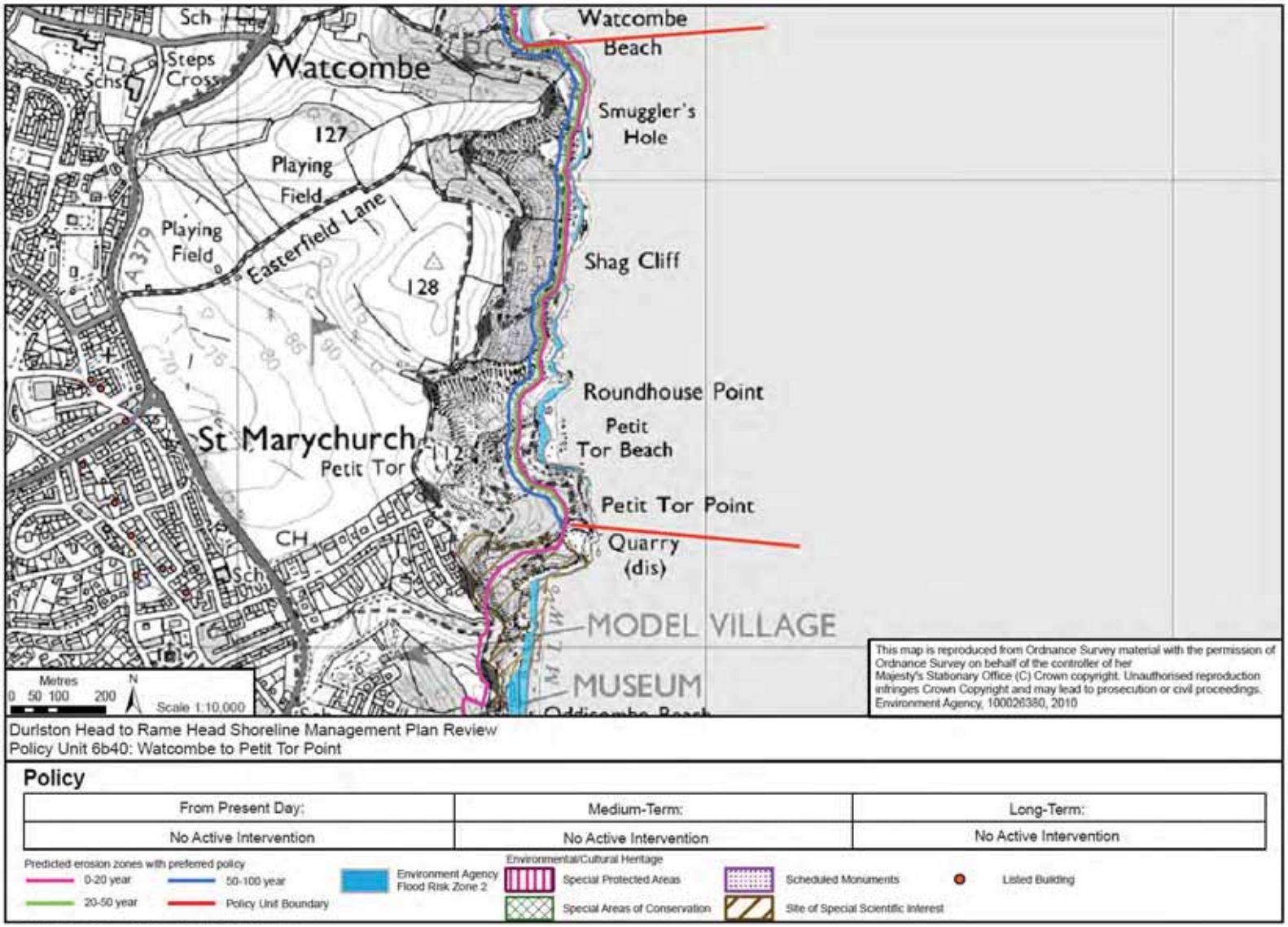

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Location reference:	**Petit Tor Point to Walls Hill**
Policy Unit reference:	**6b41**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

Defences along this stretch are important for protecting important tourism facilities and infrastructure, as well as the wider cliff top along this section which is extensively developed and forms the northern part of the town of Torquay, an important tourist and key service centre for the area. The long term vision of the Plan is therefore to continue to protect Torquay from the risk of erosion.

Implementation of this policy will involve the retention of coastal defences. Due to the limited sediment linkages within this area, this would not have a detrimental impact on adjacent areas. Continued defence would, however, exacerbate coastal squeeze along this section as sea levels rise. This could impact on their amenity value.

Under this policy, it is not proposed that any new defences would be constructed along the presently undefended cliffs, thereby conserving their geological value within the English Riviera Geopark site.

Preferred policies to implement Plan:

From present day (short term):	Property along much of this cliffed frontage is protected by a range of structures including seawalls and revetments. The short term policy is to **Hold the Line** through maintenance of these existing defences. Along Oddicombe Beach there are defences in front of the cliff toe which protect the lift and facilities at the back of the beach. These also prevent any local release of sediment from cliff erosion. Here beaches will continue to narrow and steepen, as experienced historically. There is a similar situation at Redgate Beach. The short length of unprotected sandstone cliffs along the northern part of this section have eroded slowly in the past as a result of infrequent and small scale cliff failures. This is expected to continue during this period.
Medium term:	The medium term policy is to continue to **Hold the Line** through maintenance and possible improvement of the existing defences. Beach narrowing in front of the existing defences would increase due to accelerated sea level rise, and necessitate upgrading of the defences through construction of larger structures. Slow erosion of the short length of unprotected cliffs would continue as historically at a rate of about 0.15m/yr, although the effect of rising sea level would have varying impacts depending upon the nature of the cliffs. Total erosion of between 7 and 10m is predicted by 2055.
Longer-term:	The long term policy is to continue to **Hold the Line** during this period. This will require maintenance and possible improvement of the defences during this period in order to maintain adequate levels of protection. As sea levels rise and with insufficient input of sediment from cliff erosion, the beaches are likely to disappear with water levels at the toe of the defences. This may require further improvements to the defences as they become exposed to larger waves that are no longer attenuated by a beach. Slow erosion of the short length of unprotected cliffs would continue, although the effect of rising sea level would have varying impacts depending upon the nature of the cliffs. Total erosion of up to 15m is predicted by 2105 along most

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of that section.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b41	Petit Tor Point to Walls Hill	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.

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Location reference:	Petit Tor Point to Walls Hill
Policy Unit reference:	6b41

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	Ongoing maintenance of defences would occur.	Oddicombe beach and associated tourism facilities protected from flooding/erosion. South West Coast at Risk from erosion in some areas	Continued protection of local infrastructure from erosion risk.	Grade 2 listed buildings protected against erosion.	Minor changes in landscape character may occur as a result of works to Hold the Line at Oddicombe Beach	Holding the line between Petit Tor Point and Walls Hill would adversely affect the geological interest of the English Riviera and Babbacombe Cliffs SSSI.	No known impacts on water quality.	No adverse effect on the submerged or partially submerged sea caves within the Poole Bay to Lyme Bay Reefs pSAC at the northern end of this policy unit. The defence work in this unit is minimal and likely to be in the bay and the caves are already exposed to natural coastal processes. Holding the line in this policy unit may provide some protection to the terrestrial habitats of the adjacent Hope's Nose to Wall Hill SSSI.
2025 – 2055	Maintenance and possible improvement of defences would occur.	Oddicombe beach and associated tourism facilities protected from flooding/erosion. South West Coast at Risk from erosion in some	Continued protection of local infrastructure from erosion risk.	Grade 2 listed buildings protected against erosion.	Minor changes in landscape character may occur as a result of works to Hold the Line at Oddicombe Beach	Holding the line between Petit Tor Point and Walls Hill would adversely affect the geological interest of the English Riviera and Babbacombe Cliffs SSSI.	No known impacts on water quality.	HTL may damage the submerged or partially submerged sea caves within the Poole Bay to Lyme Bay Reefs pSAC at the very northern end of this policy unit. However, the defence work in this unit is minimal and likely to be in the bay, the caves are already exposed to natural coastal processes and therefore an adverse effect is not anticipated. Holding the line in this policy unit may provide some protection to the terrestrial habitats of the adjacent Hope's Nose to Wall Hill SSSI.
2055 – 2105	Maintenance and possible improvement of defences would occur.	Oddicombe beach and associated tourism facilities protected from flooding/erosion. South West Coast at Risk from erosion in some areas	Continued protection of local infrastructure from erosion risk.	Grade 2 listed buildings protected against erosion.	Minor changes in landscape character may occur as a result of works to Hold the Line at Oddicombe Beach.	Holding the line between Petit Tor Point and Walls Hill would adversely affect the geological interest of the English Riviera and Babbacombe Cliffs SSSI.	No known impacts on water quality.	No adverse effect on submerged or partially submerged sea caves within the Poole Bay to Lyme Bay Reefs pSAC at the northern end of this policy unit. The defence work in this unit is minimal and likely to be in the bay, and the caves are already exposed to natural coastal processes. Holding the line in this policy

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Location reference:	Petit Tor Point to Walls Hill							
Policy Unit reference:	6b41							
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**
								unit may provide some protection to the terrestrial habitats of the adjacent Hope's Nose to Wall Hill SSSI.

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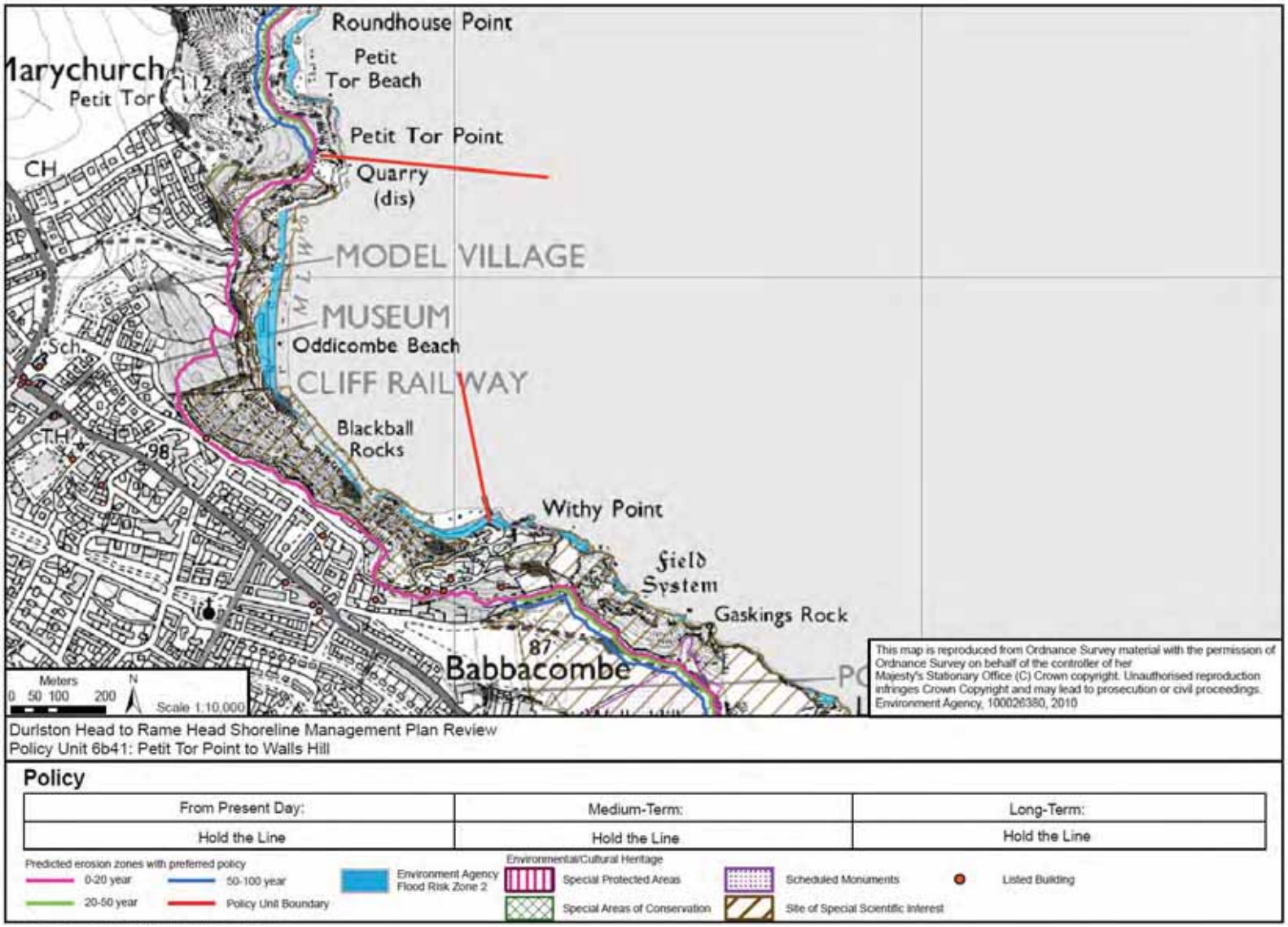

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Location reference:	**Walls Hill to Hope's Nose**
Policy Unit reference:	**6b42 to 6b44**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The cliffs here are of geological and geomorphological importance, and lie within the English Riviera Geopark. As such, the long term vision for this stretch is to allow the natural evolution of the coast to occur with no intervention.

Whilst the continued retreat of the cliffline would be beneficial to the geological interests of this stretch, the continued cliffline retreat could cause the potential loss of parts or all of the Field Meadow System Scheduled Monument located along the cliff top at Walls Hill. There is also potential for part of a cliff top highway that provides access to a number of properties in the vicinity of Hope's Nose to be lost should a cliff failure event occur in its vicinity.

Although most of this stretch of coast is unprotected, within the small pocket bay at Anstey's Cove there is a seawall that protects a promenade and tourism assets, as well as preventing local erosion. As sea levels rise and sediment supply to the beach from cliff erosion is unlikely to keep pace in the longer term, this beach is likely to be lost and the requirement to provide beach access related facilities may change.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention**. The cliffs have eroded slowly in the past as a result of infrequent and small scale cliff failures and this will continue, with rates of erosion varying depending upon specific local geology and the occurrence of small scale localised cliff failure events. Although maintenance of the short length of defence within Anstey's Cove would be unlikely to attract public funds, if alternative funds were available then there is no reason (in terms of impacts on the coast) not to permit the retention of these structures. The few small pocket beaches that indent other parts of this stretch of coast have been relatively stable over the long term, and this is expected to continue during this period.
Medium term:	The medium term policy is for **No Active Intervention** allowing the cliffs to retreat naturally. The short length of defences at Anstey's Cove would fail (unless maintained through private funding – *(refer also to Section 5.2.2 'Private Defences'*), but the slow erosion of the backing cliffs, combined with rising sea levels, will mean that the beaches at these locations will gradually narrow; therefore, provision of these amenity facilities may no longer be necessary. Sea level rise would also cause narrowing and steepening of the small pocket beaches along other parts of this stretch as there is limited new sediment input from local cliff erosion and they are prevented from retreating landwards by the resistant cliffs that back them.
Longer-term:	The long term policy is for **No Active Intervention** to continue along this stretch of largely undefended cliffed coast, which would be allowed to continue to evolve naturally. As sea levels rise and with insufficient input of sediment from cliff erosion, the beach at Anstey's Cove is likely to disappear with water levels up to the toe of the defences (if they remain). It is questionable as to whether or not defences

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will still be required during this period as they are for the purpose of providing access to the beach, which would be lost.

As sea levels rise, it is expected that there would also be further narrowing and steepening of the small pocket beaches along the rest of this stretch of coast due to no new inputs of sediment. By the end of this period beaches would either be very narrow or non-existent along this shoreline.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b42	Walls 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 occur through **No Active Intervention**.
6b43	Anstey's Cove	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**.
6b44	Anstey's Cove to Hope's Nose	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**.

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Location reference:	Walls Hill to Hope's Nose
Policy Unit reference:	6b42 to 6b44

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. Maintenance of the small lengths of wall associated with provision of beach access facilities at Anstey's Cove (if funding available).	Properties at potential risk of localised erosion along the cliff top, depending where future cliff falls occur. South West Coast at potential risk from erosion, but only very localised.	Potential loss of cliff top roads to localised erosion, depending where future cliff falls occur.	Grade 2 listed buildings potentially at risk from erosion. Potential loss due to erosion of the Prehistoric Field System Scheduled Monument (SM) at Walls Hill.	Minor changes in landscape character may occur as a result of an eroding coastline where NAI is implemented	NAI along the majority of this coastal section would allow natural erosion to continue and would maintain the English Riviera Geopark and geological SSSIs.	No known impacts on water quality.	NAI may affect some of the terrestrial habitats of the Hope's Nose to Walls Hill SSSI (biological) – *potential for beneficial and adverse impacts.*
2025 – 2055	Continued slow cliffline retreat. Maintenance of the small lengths of wall associated with provision of beach access facilities at Anstey's Cove (if funding available) – but may no longer be required..	Properties at potential risk of localised erosion along the cliff top, depending where future cliff falls occur. South West Coast at potential risk from erosion, but only very localised. Potential loss of amenity at Anstey's Cove from erosion.	Potential loss of cliff top roads to localised erosion, depending where future cliff falls occur.	Grade 2 listed buildings potentially at risk from erosion. Potential loss due to erosion of the Prehistoric Field System Scheduled Monument (SM) at Walls Hill.	Minor changes in landscape character may occur as a result of an eroding coastline where NAI is implemented	NAI along the majority of this coastal section would allow natural erosion to continue and would maintain the English Riviera Geopark and geological SSSIs.	No known impacts on water quality.	NAI may affect some of the terrestrial habitats of the Hope's Nose to Walls Hill SSSI (biological) – *potential for beneficial and adverse impacts.*
2055 – 2105	Continued slow cliffline retreat.	Properties at potential risk of localised erosion along the cliff top, depending where future cliff falls occur. South West Coast at potential risk from erosion, but only very localised. Potential loss of amenity at Anstey's Cove from erosion	Potential loss of cliff top roads to localised erosion, depending where future cliff falls occur.	Grade 2 listed buildings potentially at risk from erosion Potential loss due to erosion of the Prehistoric Field System Scheduled Monument (SM) at Walls Hill.	Minor changes in landscape character may occur as a result of an eroding coastline where NAI is implemented.	NAI along the majority of this coastal section would allow natural erosion to continue and would maintain the English Riviera Geopark and geological SSSIs.	No known impacts on water quality.	NAI may affect some of the terrestrial habitats of the Hope's Nose to Walls Hill SSSI (biological) – *potential for beneficial and adverse impacts.*

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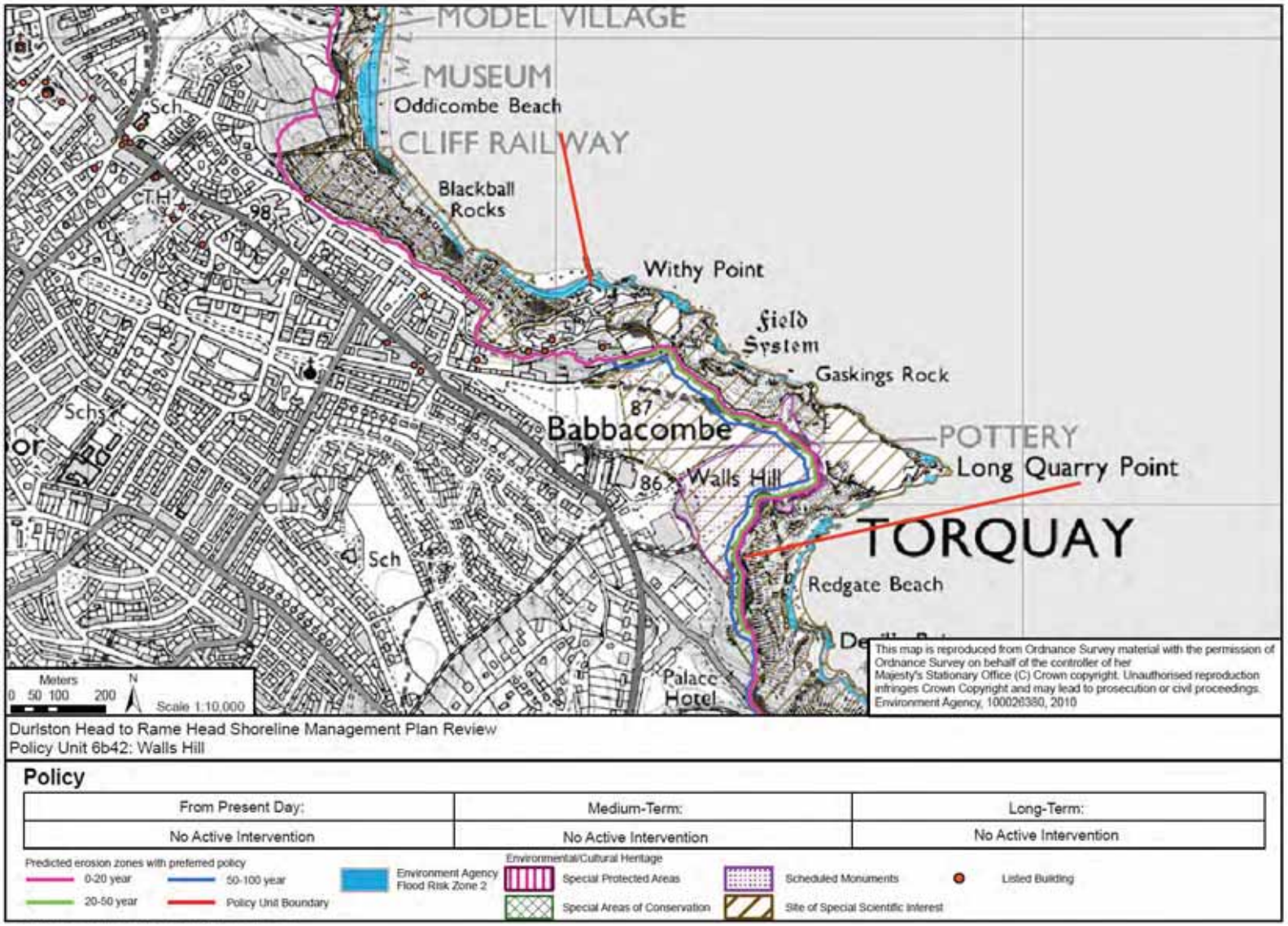

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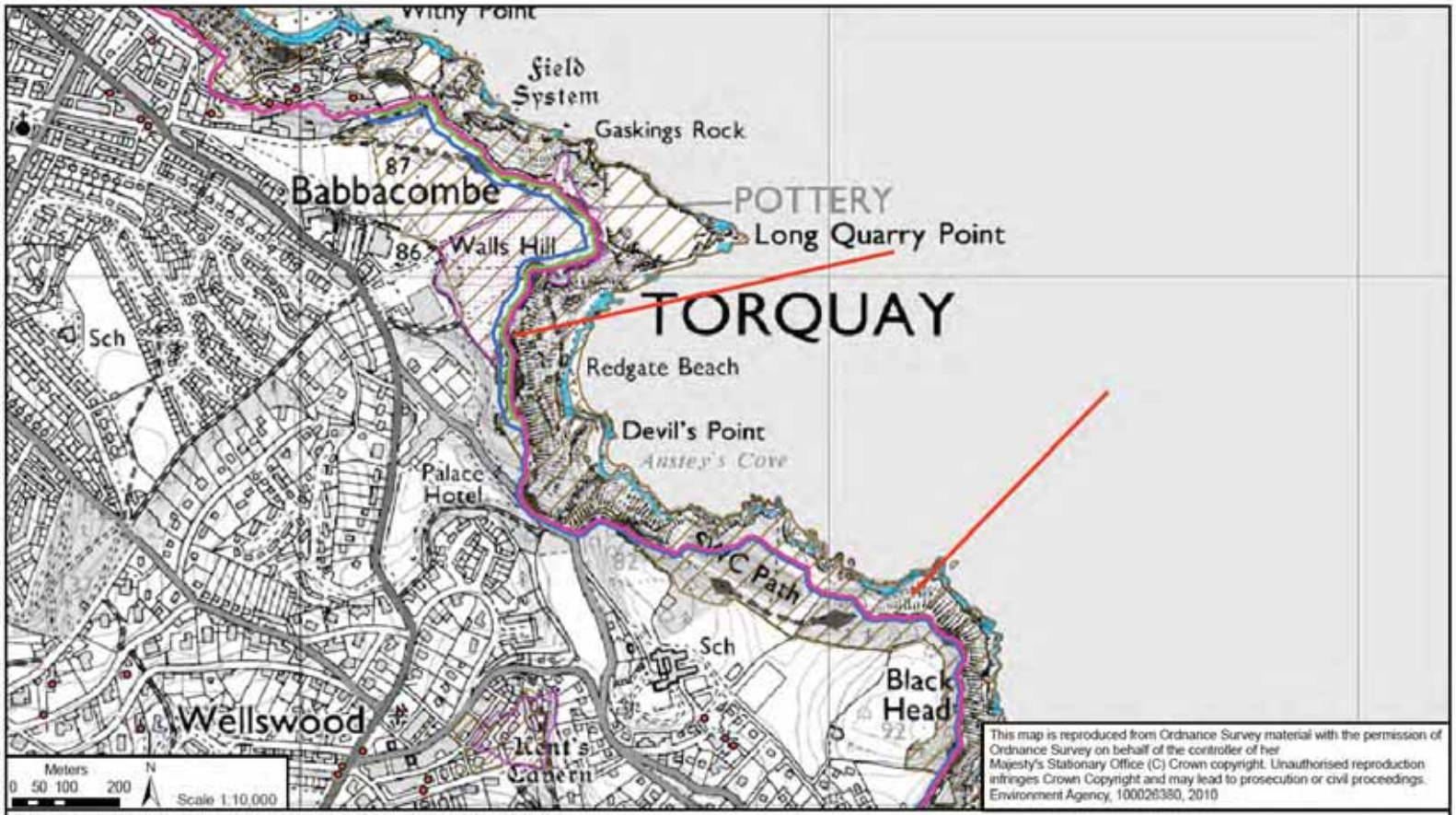

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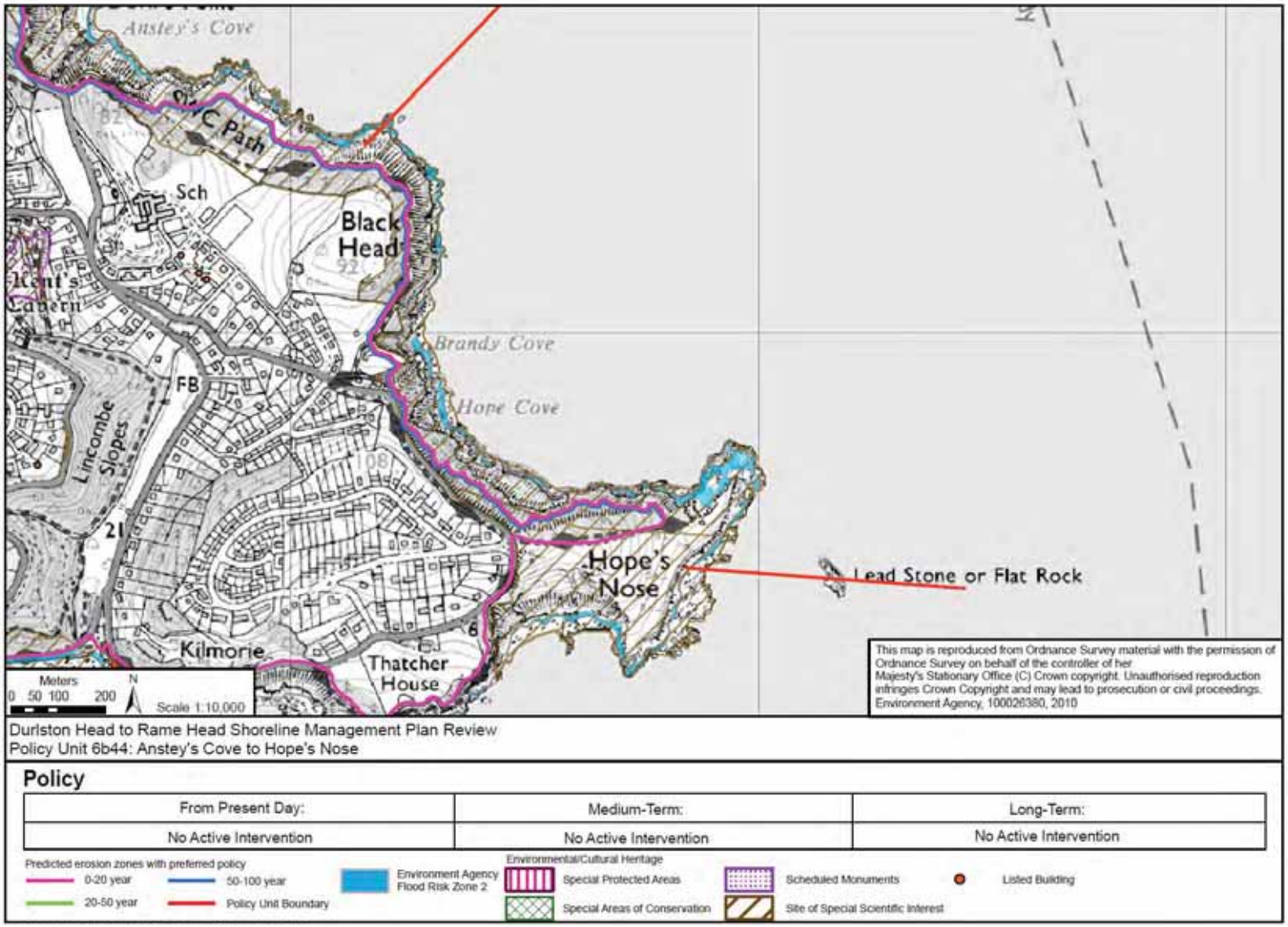

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Location reference:	**Hope's Nose to Beacon Cove**
Policy Unit reference:	**6b45 to 6b47**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The majority of this stretch of coast is undefended and comprised largely of slowly eroding sandstone cliffs, which are of geological and geomorphological importance within the English Riviera Geopark. For this reason the long term Plan is to allow the majority of the coastline to continue to retreat naturally.

Whilst this would be beneficial for conserving the geological value of this coastline, it could result in the potential loss of parts of a cliff top road unless it is relocated. This provides access to a number of properties in the vicinity of Hope's Nose, as well as the potential loss of a few cliff top properties towards Torquay Marina.

At Meadfoot Beach, however, the long term plan is to minimise the risk of erosion and flooding to property and infrastructure by continuing to provide protection. The embayed nature of this coastline means that the beach tends to be self-contained, with limited sediment linkages with adjacent lengths of beach within Tor Bay, so any impacts of this would be confined locally.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** along Meadfoot Beach to provide protection against both erosion and flooding of property and infrastructure. This would be achieved through maintaining the existing seawalls and revetments. The beach along this section of coast has been relatively stable over the long term and this is expected to continue during most of this period. Along the rest of this undefended stretch of cliffed coastline, the short term policy is for **No Active Intervention**. These cliffs consist of relatively resistant rocks that have historically eroded very slowly and this is expected to continue. The few small pocket beaches that indent the rest of this stretch of coast have been relatively stable over the long term, and these are expected to remain.
Medium term:	The medium term policy is to continue to **Hold the Line** along Meadfoot Beach. This would be implemented through maintaining the existing seawalls and revetments and, if necessary, building larger defences in order to provide adequate levels of protection. Coastal squeeze could become an issue, which would increase pressure on the defences and hasten their failure, particularly as Meadfoot Beach is already very narrow. Along the rest of this undefended stretch of cliffed coastline, the recommended medium term policy will remain as one of **No Active Intervention**. Erosion of the unprotected cliffs would continue only very slowly as has occurred historically, with total erosion of 2 to 13m predicted by 2055 depending upon specific local geology and the occurrence of small scale, localised cliff failure events. Sea level rise would cause narrowing and steepening of the small pocket beaches along this stretch, as there is limited new sediment input from local cliff erosion and they are prevented from rolling landwards by the resistant cliffs that back them.
Longer-term:	The long term policy at Meadfoot Beach is to continue to prevent retreat of the shoreline and provide protection by **Holding the Line** of the existing defences. If not undertaken in the medium term, then larger defences would

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need to be built to withstand the greater exposure to wave action due to sea level rise and narrower beaches.

Along the rest of this undefended stretch of cliffed coastline, the recommended long term policy remains **No Active Intervention**. Natural cliff erosion is expected to result in a total retreat of between 5 and 30m by 2105, with the extent of recession at any one location dependent upon specific local geology and the occurrence of small scale, localised cliff failure events.

As sea levels rise, it is expected that there would be further narrowing and steepening of the beaches along this stretch due to low inputs of new sediment. By the end of this period beaches would either be very narrow or non-existent along this shoreline.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b45	**Hope's Nose to Meadfoot Beach (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**.
6b46	**Meadfoot Beach**	Continue to maintain defences under a **Hold the Line policy**.	Continue to maintain defences under a **Hold the Line policy**.	Continue to maintain defences under a **Hold the Line policy**.
6b47	**Meadfoot Beach (West) to Beacon Cove**	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**.

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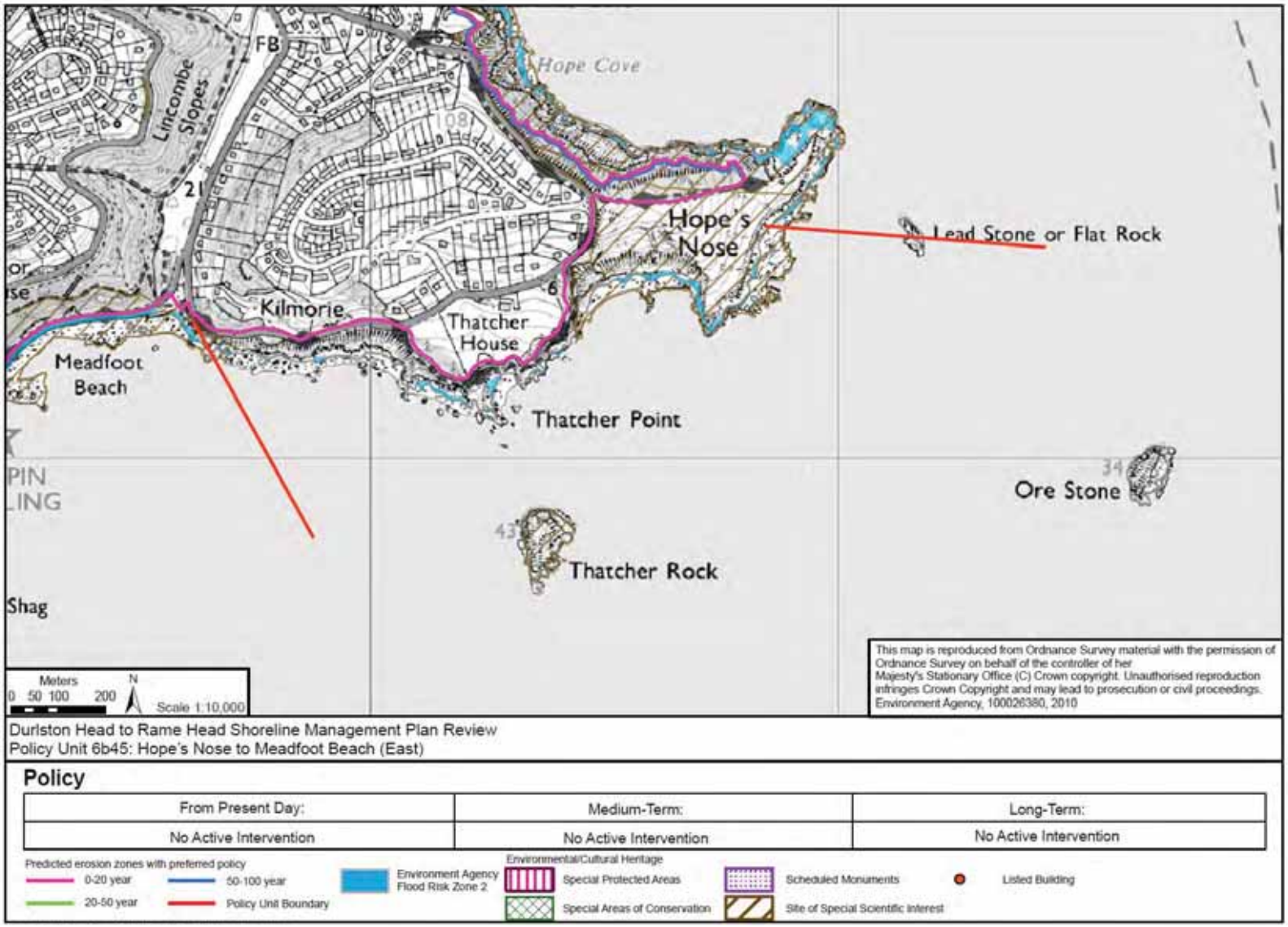
Location reference:	Hope's Nose to Beacon Cove
Policy Unit reference:	6b45 to 6b47

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 along majority of coastline. Maintenance of the defences at Meadfoot Beach.	Continued protection of properties and tourism facilities at Meadfoot Beach from flooding and erosion. Potential, localised risk of erosion to people and properties where cliff recession occurs along undefended parts.	Potential, localised risk of erosion to local roads where cliff recession occurs along undefended parts.	Potential loss of grade 2 listed buildings from localised cliff recession along undefended parts.	No known impacts on landscape character.	Continuation of natural processes is key to the integrity of the English Riviera Geopark, Daddyhole, Dyer's Quarry and Meadfoot Sea Road, SSSIs; NAI in these areas would continue to maintain these features. However, holding the line at Meadfoot has the potential to adversely affect the geological features.	No known impacts on water quality.	Sea level rise may accelerate natural erosion patterns resulting in the loss of cliff/ledge top grassland habitats at Hopes Nose to Wall's Hill SSSI. However, this would not be a result of a change in SMP policy. HTL in 6b46 is not considered to have an adverse effect on the Poole Bay to Lyme Bay Reefs pSAC.
2025 – 2055	Continued slow cliffline retreat along majority of coastline. Maintenance and improvement of the defences at Meadfoot Beach.	Continued protection of properties and tourism facilities at Meadfoot Beach from flooding and erosion. Potential, localised risk of erosion to people and properties where cliff recession occurs along undefended parts.	Potential, localised risk of erosion to local roads where cliff recession occurs along undefended parts.	Potential loss of grade 2 listed buildings from localised cliff recession along undefended parts.	No known impacts on landscape character.	Continuation of natural processes is key to the integrity of the English Riviera Geopark, Daddyhole, Dyer's Quarry and Meadfoot Sea Road, SSSIs; NAI in these areas would continue to maintain these features. However, holding the line at Meadfoot has the potential to adversely affect the geological features.	No known impacts on water quality.	Sea level rise may accelerate natural erosion patterns resulting in the loss of cliff/ledge top grassland habitats at Hopes Nose to Wall's Hill SSSI. However, this would not be a result of a change in SMP policy. HTL in 6b46 is not considered to have an adverse effect on the Poole Bay to Lyme Bay Reefs pSAC.
2055 – 2105	Continued slow cliffline retreat along majority of coastline. Maintenance and possible further improvement of the defences at Meadfoot Beach.	Continued protection of properties and tourism facilities at Meadfoot Beach from flooding and erosion. Potential, localised risk of erosion to people and properties where cliff recession occurs along undefended parts.	Potential, localised risk of erosion to local roads where cliff recession occurs along undefended parts.	Potential loss of grade 2 listed buildings from localised cliff recession along undefended parts.	No known impacts on landscape character.	Continuation of natural processes is key to the integrity of the English Riviera Geopark, Daddyhole, Dyer's Quarry and Meadfoot Sea Road, SSSIs; NAI in these areas would continue to maintain these features. However, holding the line at Meadfoot has the potential to adversely affect the geological features.	No known impacts on water quality.	Sea level rise may accelerate natural erosion patterns resulting in the loss of cliff/ledge top grassland habitats at Hopes Nose to Wall's Hill SSSI. However, this would not be a result of a change in SMP policy. HTL in 6b46 is not considered to have an adverse effect on the Poole Bay to Lyme Bay Reefs pSAC.



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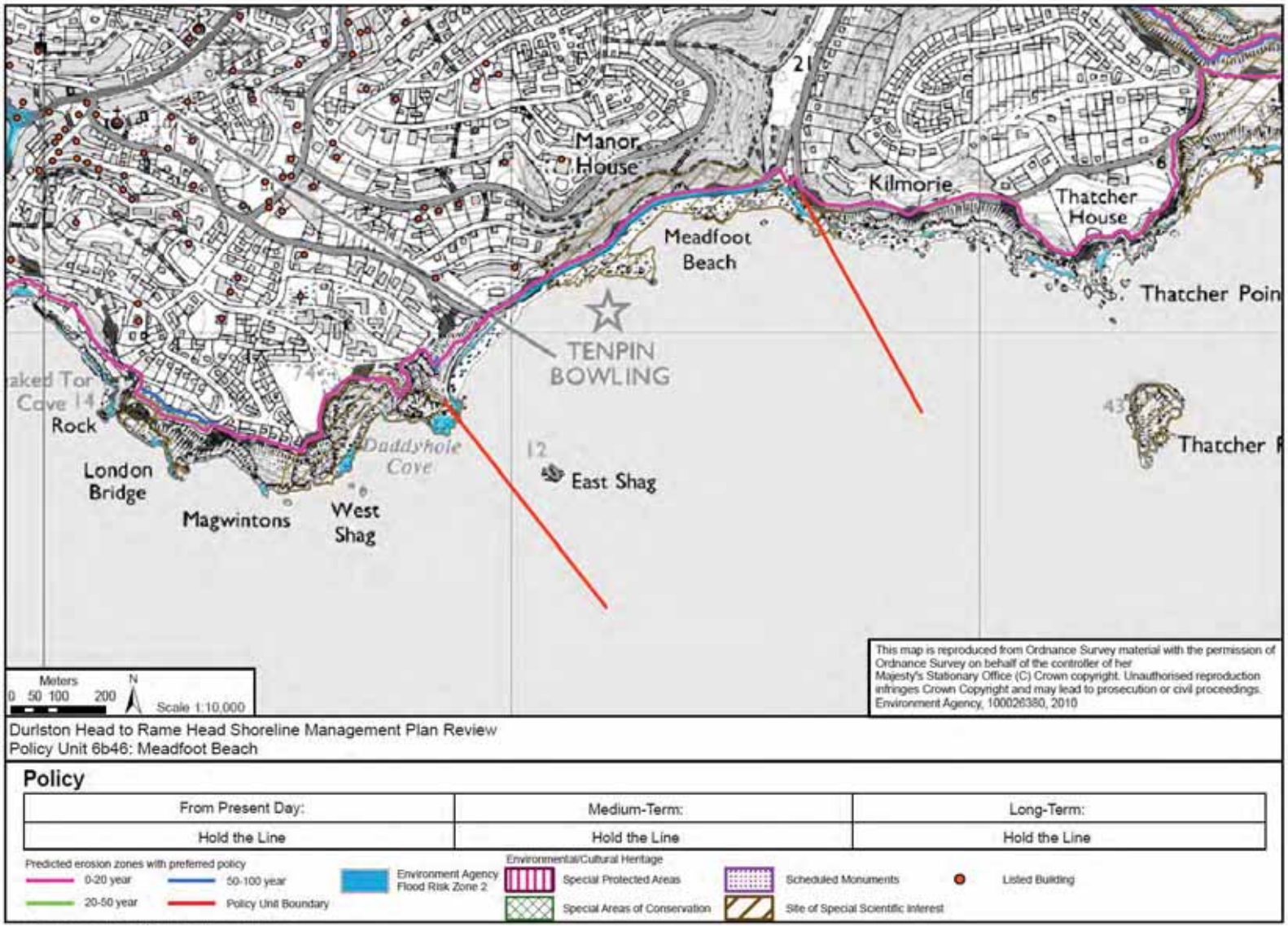

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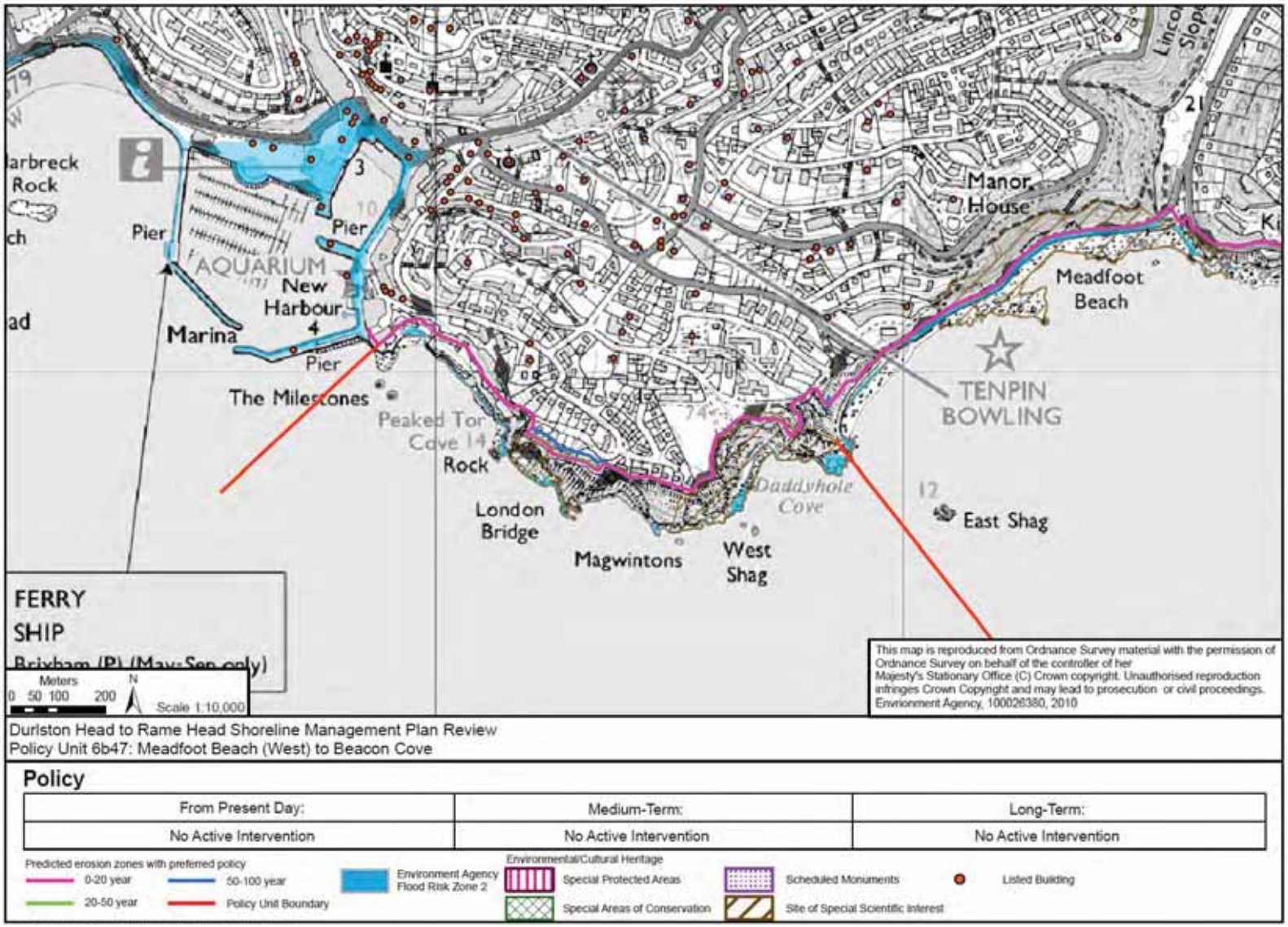

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Location reference:	**Beacon Cove to Roundham Head**
Policy Unit reference:	**6b48 to 6b55**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This northern part of Tor Bay is characterised by a range of important social, commercial and heritage assets, as well as undefended rock headlands which are part of the English Riviera Geopark.

The long term Plan is therefore to minimise the risk of flooding and erosion to a currently defended areas, whilst allowing natural retreat of the undefended cliff areas to continue. Under this policy, it is not proposed that any new defences would be constructed along the presently undefended cliffs, thereby conserving their geological value within the English Riviera Geopark site. Although this policy will protect the majority of assets, erosion risk to a section of cliff top road and one or two cliff top properties would remain.

A key future issue within the wider Tor Bay is the technicality of maintaining sandy beaches along this important tourist resort in the future as sea levels rise. In general, the sheltered nature of Tor Bay may mean that it is feasible to retain artificially renourished beaches, which may be increasingly important as other beaches in the area and wider region are lost in the long term due to rising sea levels. As such, not only would future protection using beach recharge help to reduce the risk of flooding, it would also provide a beach of benefit to the tourism economy of the area.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to continue to protect the developed frontages, through a **Hold the Line** policy. There is already a range of defences and other structures including seawalls and revetments along the shoreline, as well as breakwaters associated with Torquay Marina. These currently protect the cliff toe from erosion and low-lying areas from flooding, although not all of the structures are coastal defence structures, e.g. the marina breakwaters. Under this policy defences would be maintained. Beaches along this frontage are expected to remain relatively stable during this period. Along the undefended rocky headlands, **No Active Intervention** will be adopted. Here cliff recession is likely to be low, although localised landslide events could cause recession of up to 10m in a single event. There is therefore a potential risk to a cliff top road and one or two cliff top properties. It is recommended that this erosion risk is monitored to allow sufficient time for strategies to be put in place to deal with any potential losses.
Medium term:	The medium term policy is to continue to **Hold the Line** along the developed frontages. It is likely that to maintain adequate standards of protection during this period, larger defences will be required. A beach renourishment scheme could also be considered, particularly as beaches along this stretch may start to narrow in response to sea level rise and the lack of new sediment inputs from natural sources. Along the undefended lengths of rock headland, the medium term policy would be to allow coastal retreat through **No Active Intervention**. This may result in increased erosion risk to the coastal road and isolated properties so this risk would need to be monitored and managed.
Longer-term:	The long term policy is to continue to **Hold the Line** to protect current assets. Due to the impacts of sea level rise, larger defences may be required to maintain adequate standards of protection. Further beach recharge could also be required if this type of scheme was implemented.

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Along the undefended lengths of rock headland, the long term policy would be to allow continued coastal retreat, through **No Active Intervention**. This may result in increased erosion risk to the coastal road and isolated properties; therefore this risk would need to be monitored and managed.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b48	**Beacon Cove to Torre Abbey Sands (Torquay Harbour)**	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.
6b49	**Torre Abbey Sands**	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.
6b50	**Corbyn'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**.
6b51	**Livermead Sands**	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.
6b52	**Livermead 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**.
6b53	**Hollicombe Beach**	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.
6b54	**Hollicombe 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**.
6b55	**Hollicombe Head to Roundham Head**	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.

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Location reference:	Beacon Cove to Roundham Head
Policy Unit reference:	6b48 to 6b55

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 and structures. Continued slow cliffline retreat in undefended areas.	Continued protection of Torquay Harbour and Paignton (Torbay), and associated industrial properties, and properties along the seafront. Potential loss of some tourist facilities due to flood risk, especially at Paignton.	Risk of flooding to the A379 at Torquay north of the marina	Protection of Princess Gardens and Royal Terrace Gardens Registered Park and Garden from flooding Protection of a large area of Torre Abbey Scheduled Monument from flooding	Minor change in landscape character of South Devon AONB through raising defences.	Continuation of natural processes is key to the integrity of the English Riviera Geopark, New Cut Torquay and Roundham Head SSSIs; NAI in these areas would continue to maintain these features – *beneficial impact.* However, holding the line in some areas has the potential to *adversely affect* the geological features.	No known impacts on water quality. 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.	No adverse effect on the submerged or partially submerged sea caves in 6b55 within the Poole Bay to Lyme Bay Reefs pSAC as there is no need to extend the existing defences on the seacaves.
2025 – 2055	Maintenance and improvement of the defences and structures. Continued slow cliffline retreat in undefended areas.	Continued protection of Torquay Harbour and Paignton (Torbay), and associated industrial properties, and properties along the seafront. Potential loss of some tourist facilities due to flood risk, especially at Paignton. Low erosion risk to isolated properties along undefended headlands.	Risk of flooding to the A379 at Torquay north of the marina Low erosion risk to cliff top coastal road.	Protection of Princess Gardens and Royal Terrace Gardens Registered Park and Garden from flooding Protection of a large area of Torre Abbey Scheduled Monument from flooding	Minor change in landscape character of South Devon AONB through raising defences.	Continuation of natural processes is key to the integrity of the English Riviera Geopark, New Cut Torquay and Roundham Head SSSIs; NAI in these areas would continue to maintain these features. However, holding the line in some areas has the potential to adversely affect the geological features.	A beach renourishment scheme has the potential to impact on water quality. 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.	No adverse effect on the submerged or partially submerged sea caves in 6b55 within the Poole Bay to Lyme Bay Reefs pSAC as there is no need to extend the existing defences on the seacaves.
2055 – 2105	Maintenance and improvement of the defences and structures. Continued slow cliffline retreat in undefended areas.	Continued protection of Torquay Harbour, and Paignton (Torbay), and associated industrial properties, and properties along the seafront. Potential loss of some tourist facilities due to flood risk, especially at Paignton. Low erosion risk to isolated properties along undefended headlands.	Risk of flooding to the A379 at Torquay north of the marina Low erosion risk to cliff top coastal road.	Protection of Princess Gardens and Royal Terrace Gardens Registered Park and Garden from flooding Protection of a large area of Torre Abbey Scheduled Monument from flooding	Minor change in landscape character of South Devon AONB through raising defences.	Continuation of natural processes is key to the integrity of the English Riviera Geopark, New Cut Torquay and Roundham Head SSSIs; NAI in these areas would continue to maintain these features. However, holding the line in some areas has the potential to adversely affect the geological features.	A beach renourishment scheme has the potential to impact on water quality. 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.	No adverse effect on the submerged or partially submerged sea caves in 6b55 within the Poole Bay to Lyme Bay Reefs pSAC as there is no need to extend the existing defences on the seacaves.

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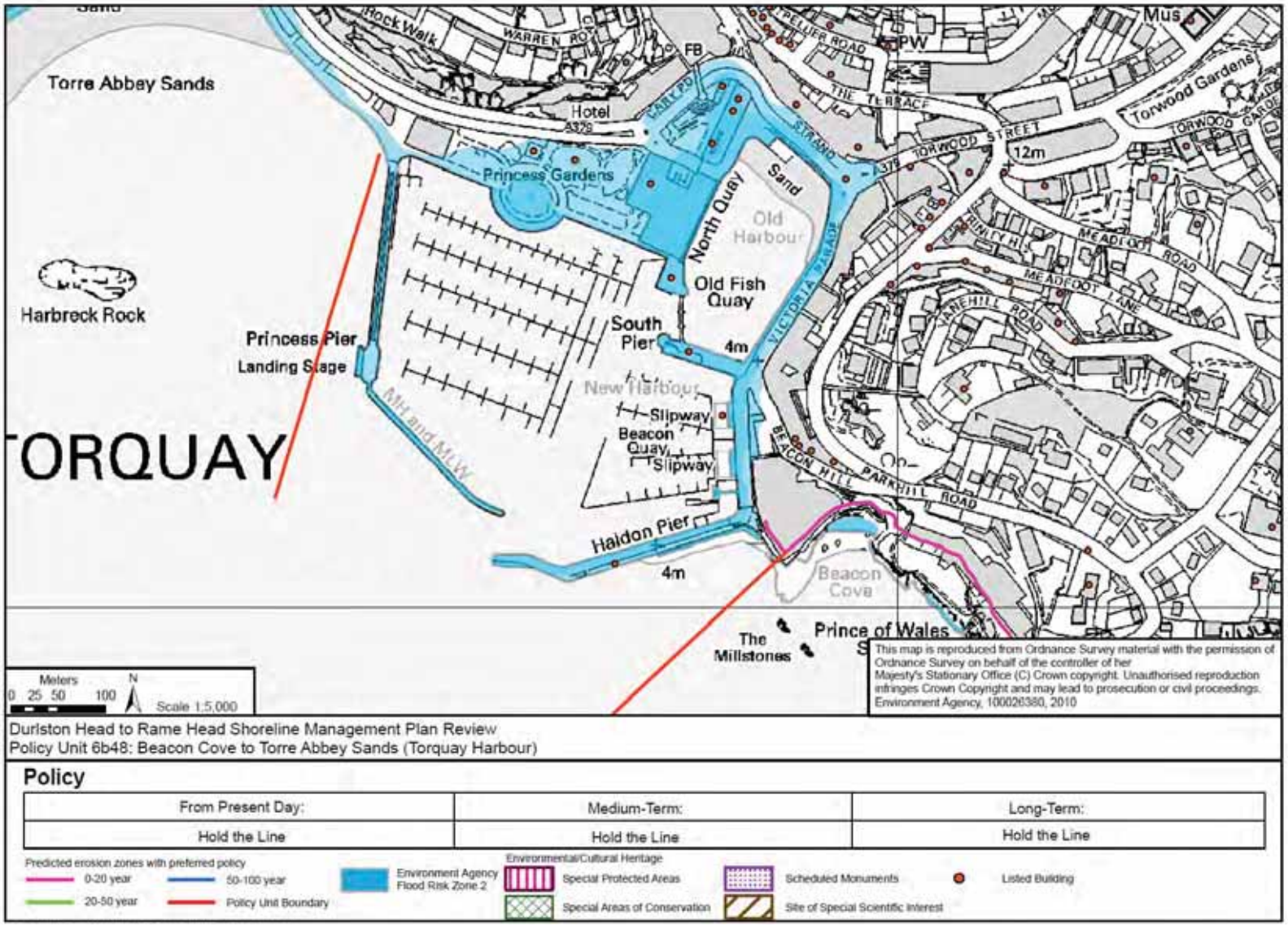

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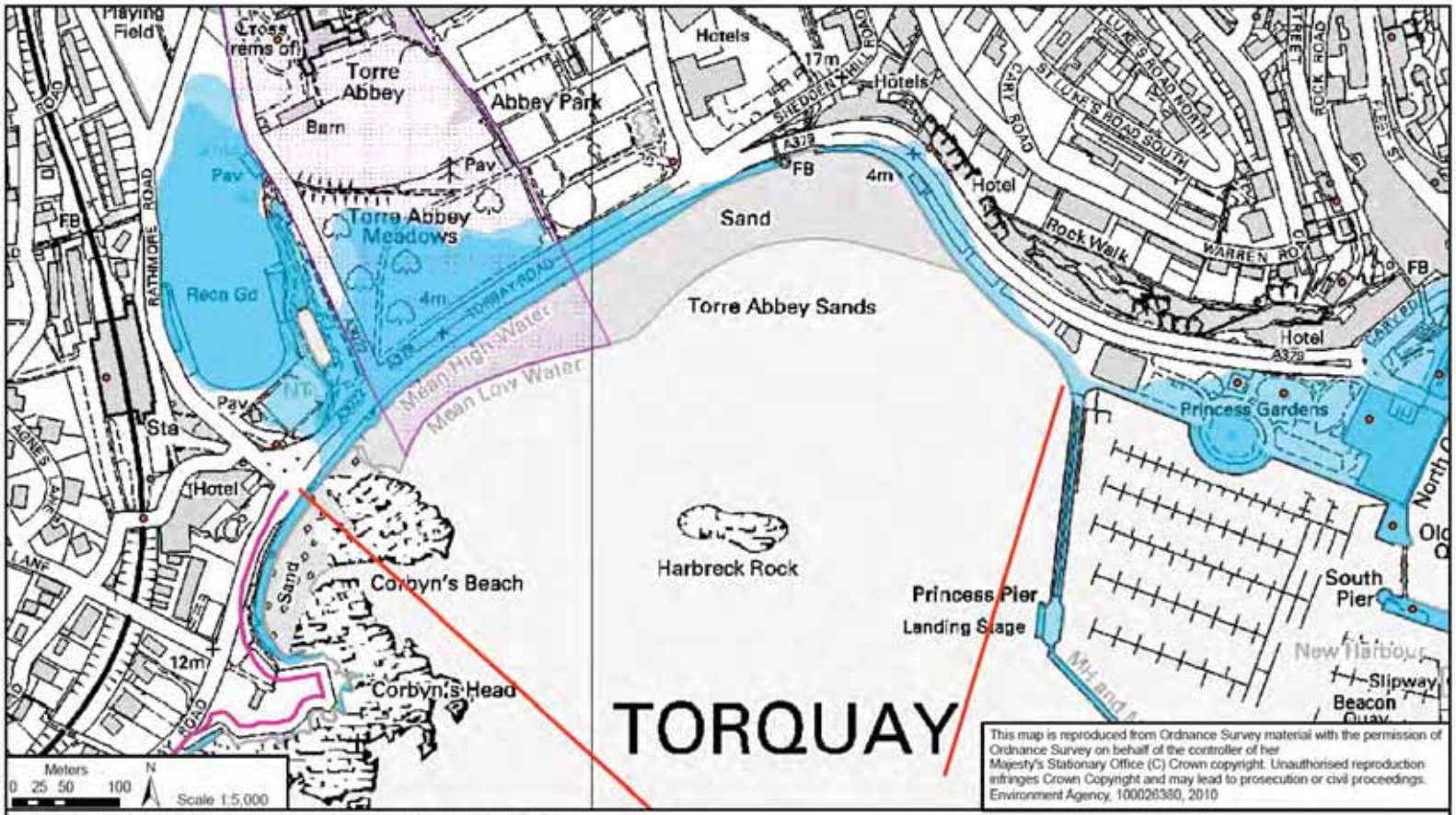

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6b49: Torre Abbey Sands

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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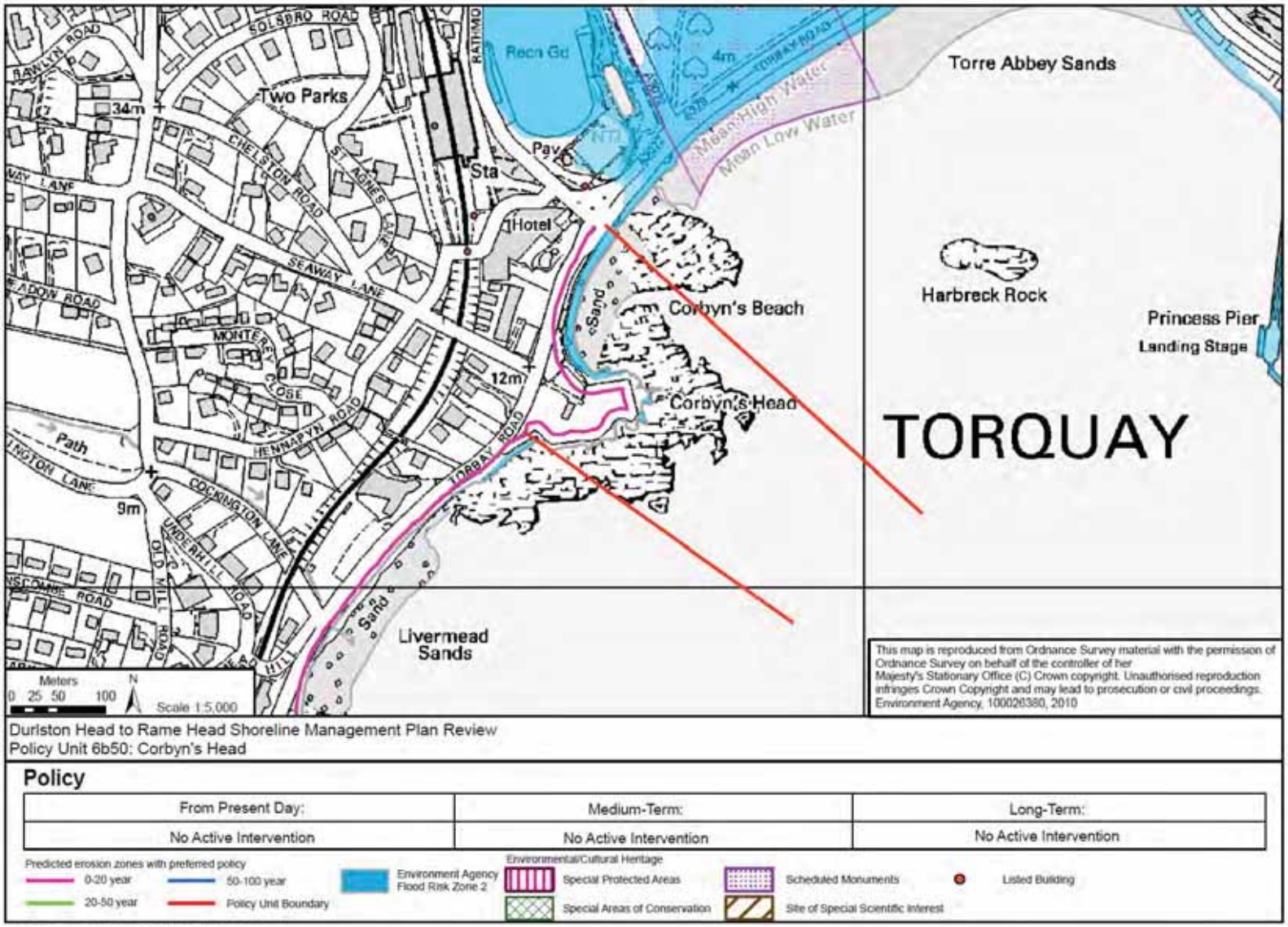

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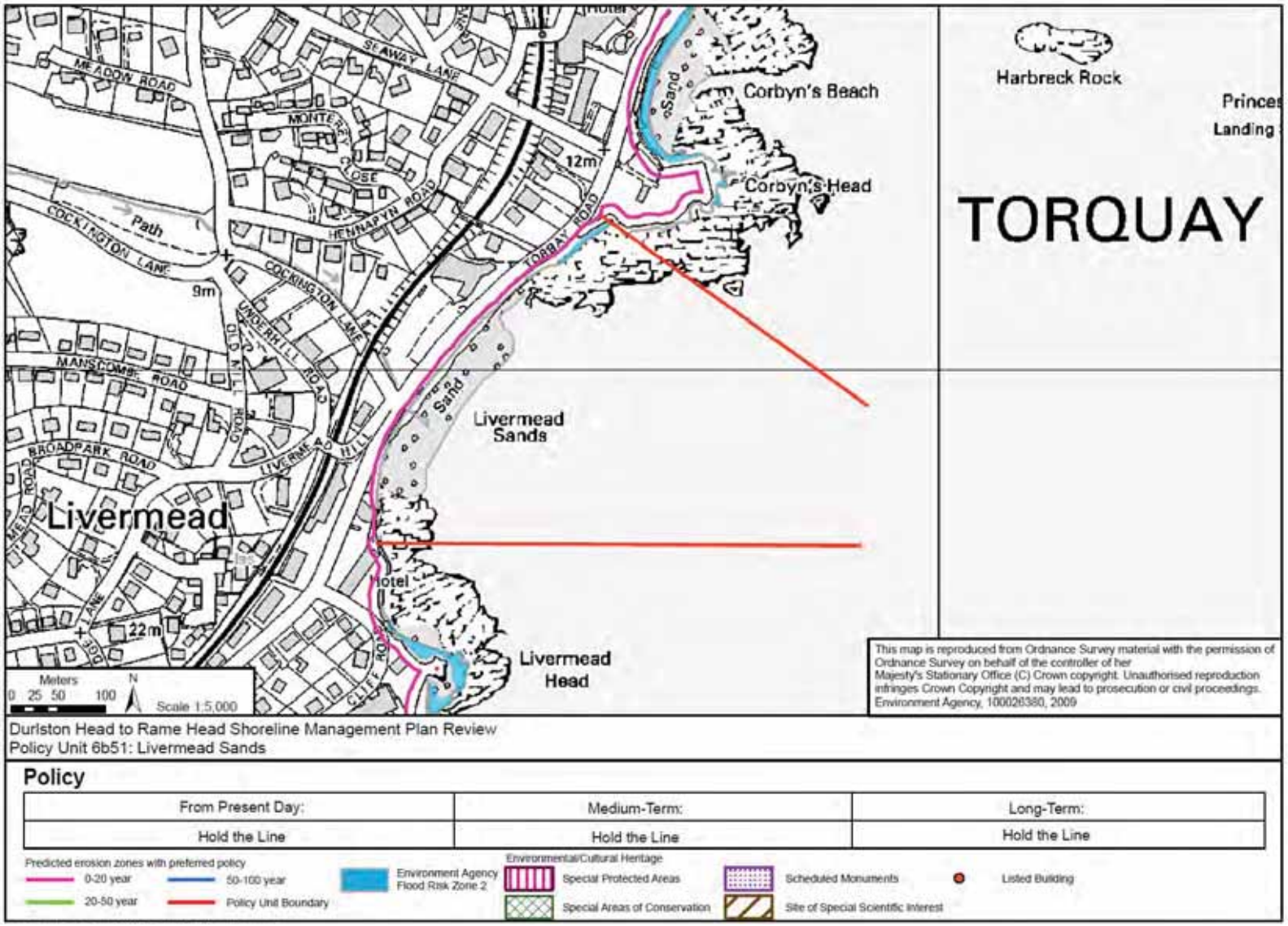

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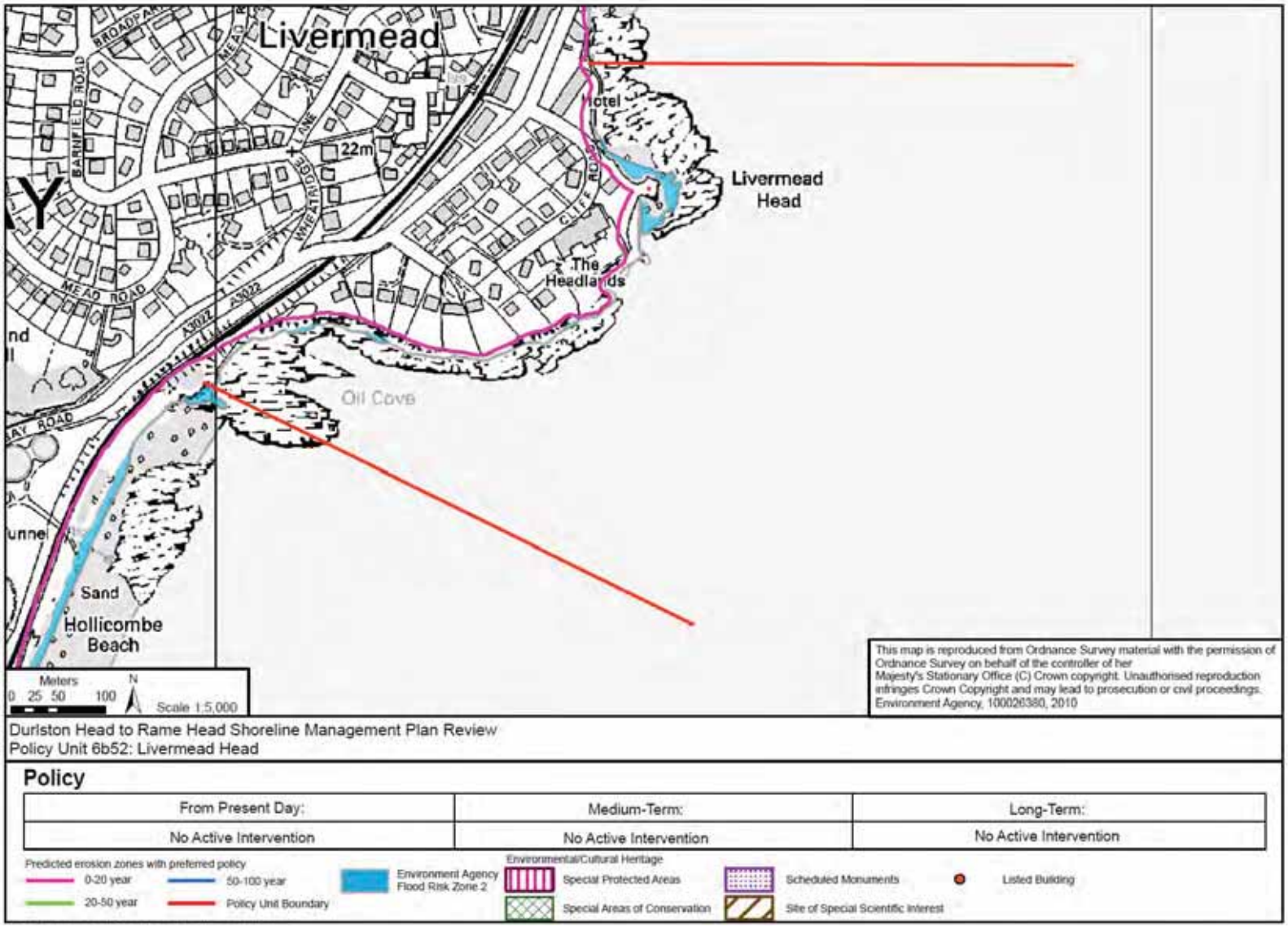

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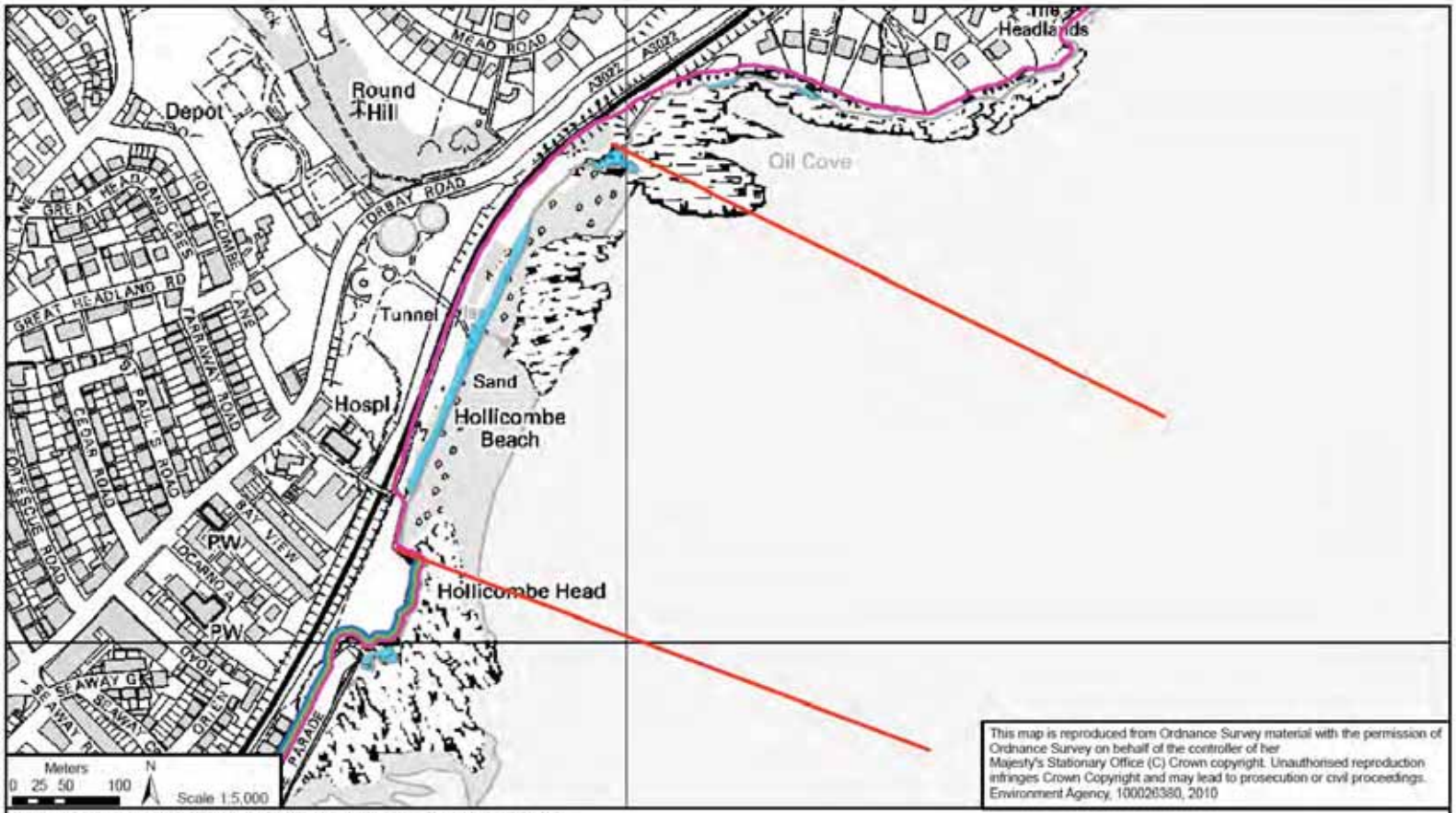

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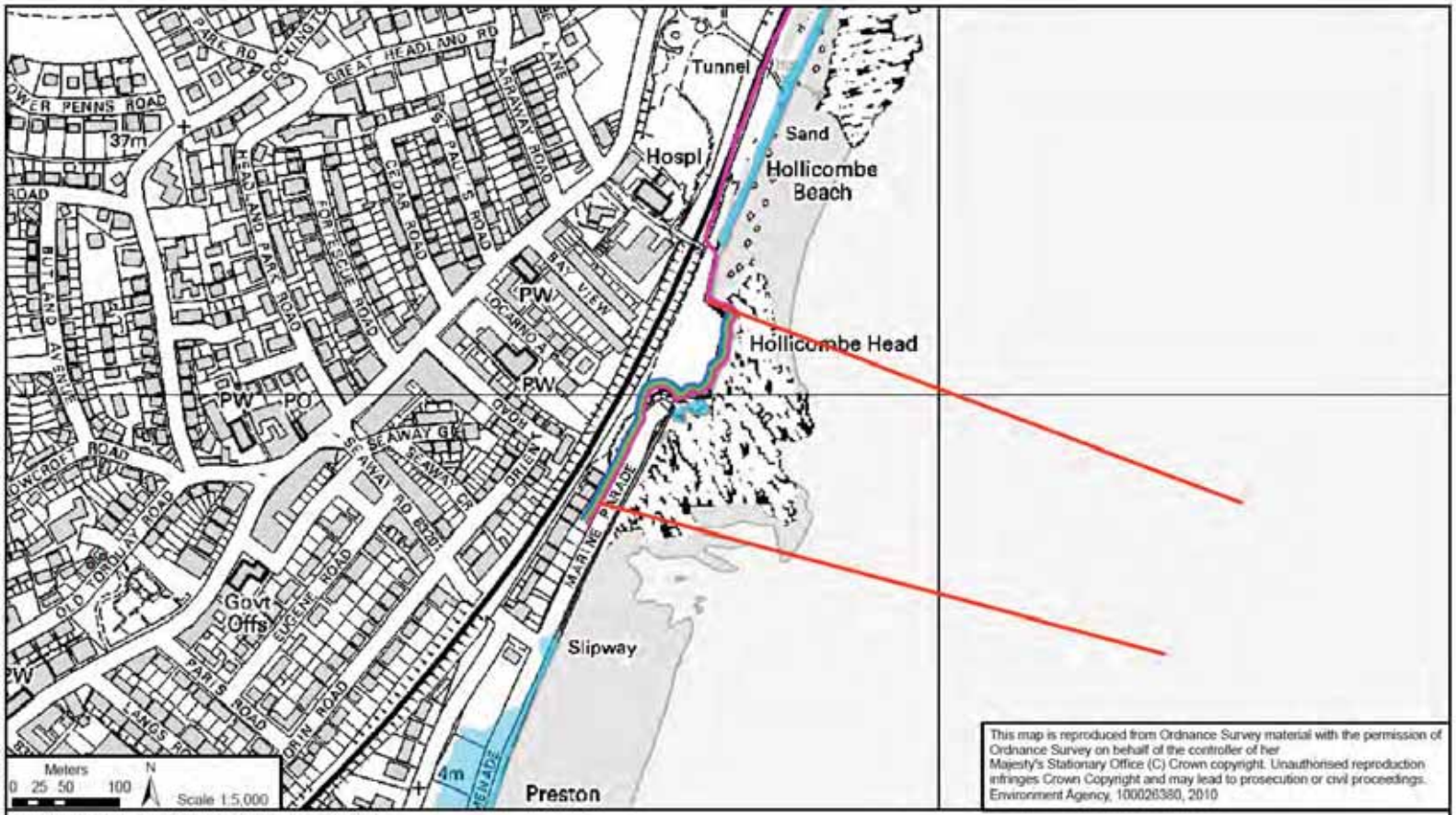

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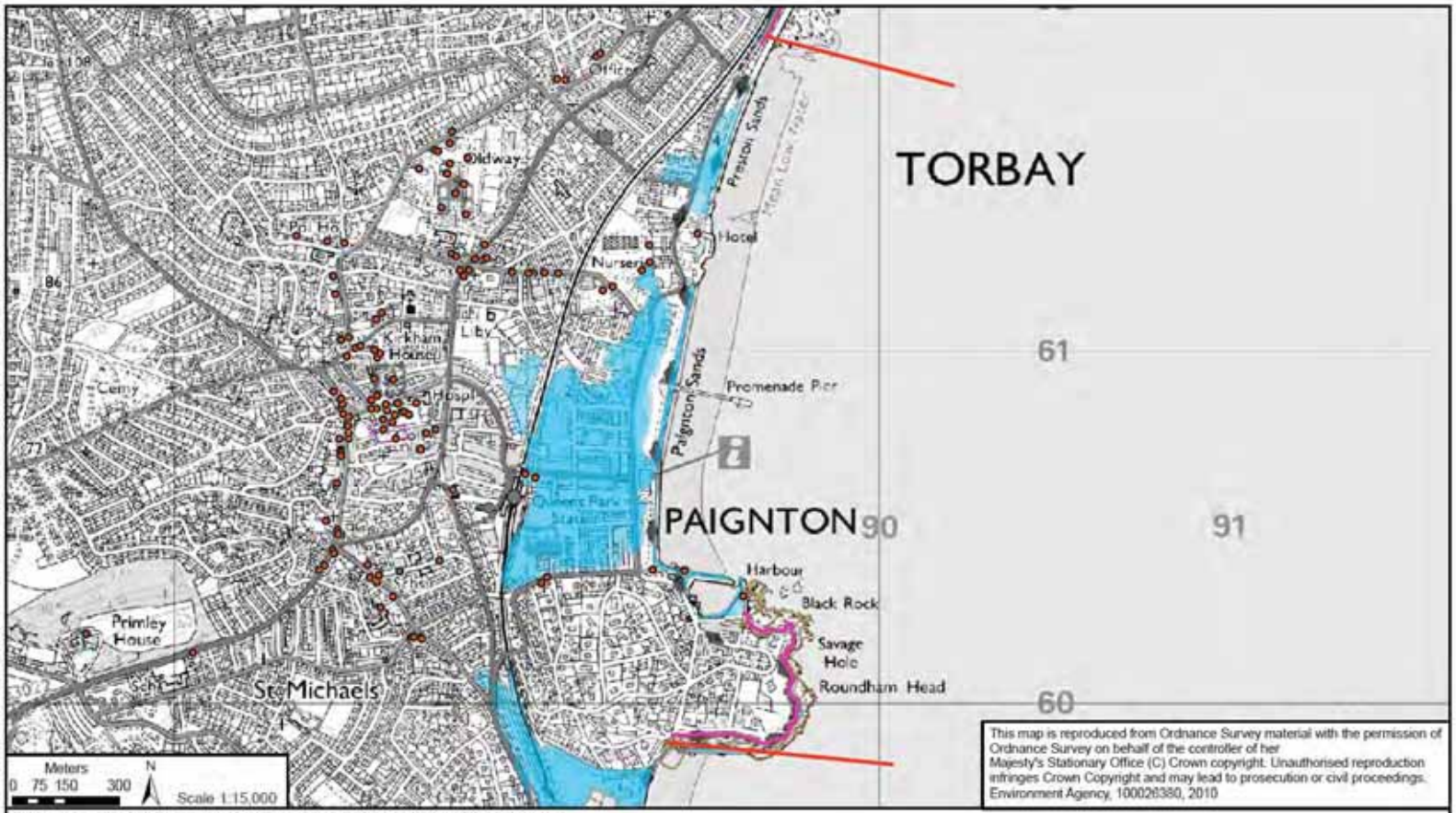

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6b55: Hollicombe Head to Roundham Head

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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Location reference:	**Roundham Head to Churston Cove (East)**
Policy Unit reference:	**6b56 to 6b59**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term Plan along this section of the Tor Bay shoreline is to achieve a more sustainable defence line, through allowing the shoreline to roll back landwards and adapt more naturally to rising sea levels. This would be achieved through undertaking Managed Realignment of the seawalls that presently defend the low-lying land at Goodrington Sands and Broadsands against flood risk. As such, not only would future protection be provided in a more sustainable way, but this should also enable a beach to be retained in front of the defences, which would be of amenity value.

The remainder of the coastline is characterised by undefended cliffs of geological and landscape value, which lie within the English Riviera Geopark. Under this policy, it is not proposed that any new defences would be constructed along these presently undefended cliffs, thereby conserving their geological value within the English Riviera Geopark site. The Plan is for these sections to allow the slow coastal retreat to continue. An erosion risk would however remain to part of a scheduled monument along the cliff top on the eastern side of Churston Cove in the event of small landslides.

Parts of this undefended stretch of coast, particularly towards Churston Cove, may be affected by the presence of the Brixham Harbour breakwater farther east, which serves to reduce wave exposure along parts of this section. It is, however, assumed that the breakwater will be maintained and will therefore remain through to the long term (refer to Policy Unit 6b58). If this were not to be the case it would not affect the SMP policies, merely how they are implemented as the shoreline in other parts of Tor Bay would be exposed greater wave action in places.

Preferred policies to implement Plan:

From present day (short term):	Along the undefended parts of this stretch, the short term policy is for **No Active Intervention**. Negligible cliff recession is predicted. At Goodrington Sands and Broadsands the policy is to continue to provide protection from flooding and erosion, through **Hold the Line**, whilst plans are put in place for Managed Realignment of the defences along parts or all of these frontages in the medium term. Existing defences will therefore be maintained. The beaches along these frontages are expected to remain relatively stable during this period, but there is a risk of beach narrowing as a result of sea level rise. The very small pocket beaches at Elberry and Churston Coves have been stable and slowly accreting over the long term, with material likely derived from local cliff erosion. This trend is expected to continue.
Medium term:	Along the undefended parts of this stretch, the medium term policy is to allow continued cliff retreat, through **No Active Intervention**, with negligible change expected in cliff top position due to the resistant nature of these cliffs. The two pocket beaches at Elberry and Churston Coves could change from accreting states to eroding states, due to sea level rise. Along parts of the Goodrington Sands and Broadsands sections, subject to detailed study in the short term, this will be a period of transition, with a move towards a policy of **Managed Realignment**. This policy would involve construction of a new set back defence line in the northern half of Goodrington Sands, therefore flood risk would continue to be minimised. Realignment in the southern half of Goodrington Sands is not likely to be feasible due to the close proximity to the shoreline of key infrastructure.

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	Therefore the defences here would need to be maintained under a policy to Hold the Line in this area. This would be guided by detailed study in the short term. At Broadsands it is possible that instead of a set back defence, realignment could be to the higher ground behind. Due to the lack of linkages with other beaches within Tor Bay, this is unlikely to have a wider impact beyond these areas.
Longer-term:	Along the undefended remainder of this stretch, the long term policy is for **No Active Intervention** to continue. Little or no change in cliff position is expected, due to the resistant geology of the cliffs. As sea levels rise, the small pocket beaches at Elberry and Churston Coves could become narrower and steeper if there is insufficient material supplied from erosion of local cliffs. The long term policy at Goodrington Sands will be to **Hold the Line** of defences, either along existing lines or along realigned positions established in the medium term. If realignment at Broadsands in the medium term involves construction of a set back defence then this would also be maintained under this policy. However, if realignment at Broadsands only occurs to higher ground then it is likely that the policy in this period would move towards **No Active Intervention**. Due to the lack of linkages with other beaches within Tor Bay, this is unlikely to have a wider impact beyond this section.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b56	**Goodrington Sands**	Continue to maintain existing defences under a **Hold the Line** policy. Investigate Managed Realignment options along northern part of this stretch.	Implement **Managed Realignment** through constructing a set-back defence where detailed study finds it is appropriate to do so. Continue to maintain and improve defences under a **Hold the Line** policy in areas where realignment is not found to be appropriate.	**Hold the Line** of defence, either along existing or realigned extents.
6b57	**Goodrington Sands to Broadsands**	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**.
6b58	**Broadsands**	Continue to maintain existing defences under a **Hold the Line** policy. Investigate Managed Realignment options.	Implement **Managed Realignment** where detailed study finds it is appropriate to do so, either through constructing a set-back defence or simply to higher ground.	**Hold the Line** of the realigned defence if constructed in medium term, else **No Active Intervention** if realigned to higher ground.
6b59	**Broadsands to Churston Cove**	Allow natural coastal evolution to continue	Allow natural coastal evolution to continue	Allow natural coastal evolution to continue

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Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
	(East)	through **No Active Intervention**.	through **No Active Intervention**.	through **No Active Intervention**.

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Location reference:	Roundham Head to Churston Cove (East)
Policy Unit reference:	6b56 to 6b59

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 at Goodrington and Broadsands, whilst Managed Realignment options are investigated. Continued slow cliffline retreat in undefended areas.	Risk of flooding to people and properties to the south of Goodrington Sands, to the preserved Paignton to Broadsands railway in some areas and to Broadsand wetland area. Loss of some tourist facilities, including parts of the coast path due to flood risk.	Risk of flooding/ erosion to local roads would be minimised by continued defence provision.	No known impacts on scheduled monuments or archaeological features.	Minor changes in landscape character of South Devon AONB.	Continuation of natural processes is key to the integrity of the English Riviera Geopark, Saltern Cove and Roundham Head SSSIs; NAI in these areas would continue to maintain these features Two historic landfill sites protected from flooding.	No known impacts on water quality.	Holding the line (e.g. at Goodrington Sands) may result in a net change in the area of intertidal habitats at Saltern Cove SSSI, and increased risk of coastal squeeze due to the presence of a railway embankment located at the back of the cove. No adverse effect on the submerged or partially submerged sea caves in 6b55 within the Poole Bay to Lyme Bay Reefs pSAC as there is no need to extend the existing defences on the seacaves.
2025 – 2055	Implementation of Managed Realignment. Continued slow cliffline retreat in undefended areas.	Risk of flooding to people and properties to the south of Goodrington Sands, to the preserved Paignton to Broadsands railway in some areas and to Broadsand wetland area Loss of some tourist facilities, including parts of the coast path due to flood risk	Risk of flooding/ erosion to local roads.	No known impacts on scheduled monuments or archaeological features.	Minor changes in landscape character of South Devon AONB	Continuation of natural processes is key to the integrity of the English Riviera Geopark, Saltern Cove and Roundham Head SSSIs; NAI in these areas would continue to maintain these features. Two historic landfill sites at risk of flooding depending on location of Managed Realignments.	Potential impacts on water quality due to realignment, potentially affecting landfill sites – see soils and geology. 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.	Implementing Managed Realignment may result in a net change in the area of intertidal habitats at Saltern Cove SSSI, and increased risk of coastal squeeze due to the presence of a railway embankment located at the back of the cove.
2055 – 2105	Maintenance of set back defence lines. Continued slow cliffline retreat in undefended areas.	Risk of flooding to people and properties to the south of Goodrington Sands, to the preserved Paignton to Broadsands railway in some areas and to Broadsand wetland area Loss of some tourist facilities, including parts of the coast path due to flood risk	Risk of flooding/ erosion to local roads.	No known impacts on scheduled monuments or archaeological features.	Minor changes in landscape character of South Devon AONB	Continuation of natural processes is key to the integrity of the English Riviera Geopark, Saltern Cove and Roundham Head SSSIs; NAI in these areas would continue to maintain these Two historic landfill sites at risk of flooding depending on location of Managed Realignments.	Potential impacts on water quality due to realignment, potentially affecting landfill sites – see soils and geology. 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.	Holding the line of realigned defences may result in a net change in the area of intertidal habitats at Saltern Cove SSSI, and increased risk of coastal squeeze due to the presence of a railway embankment located at the back of the cove.

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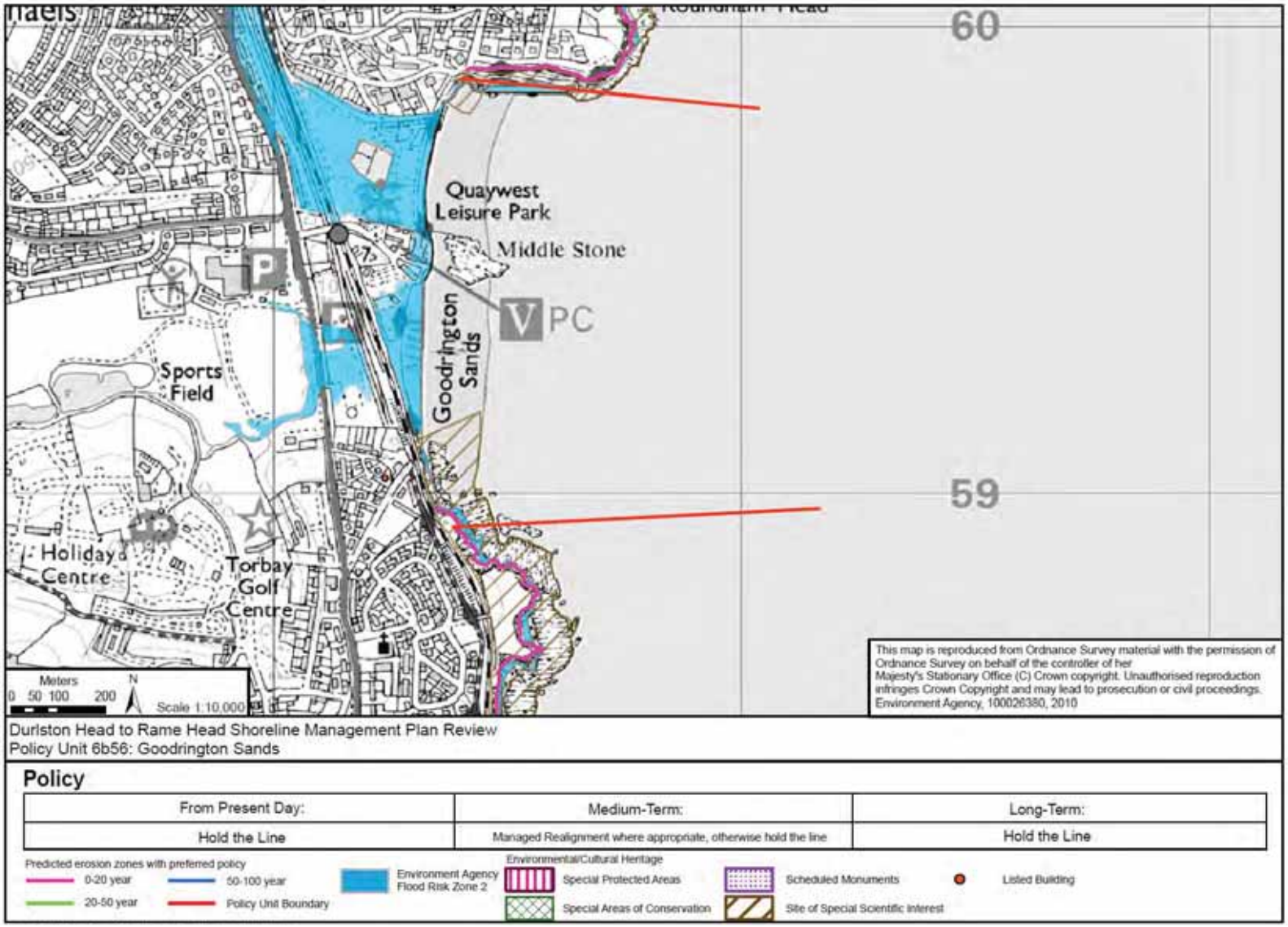

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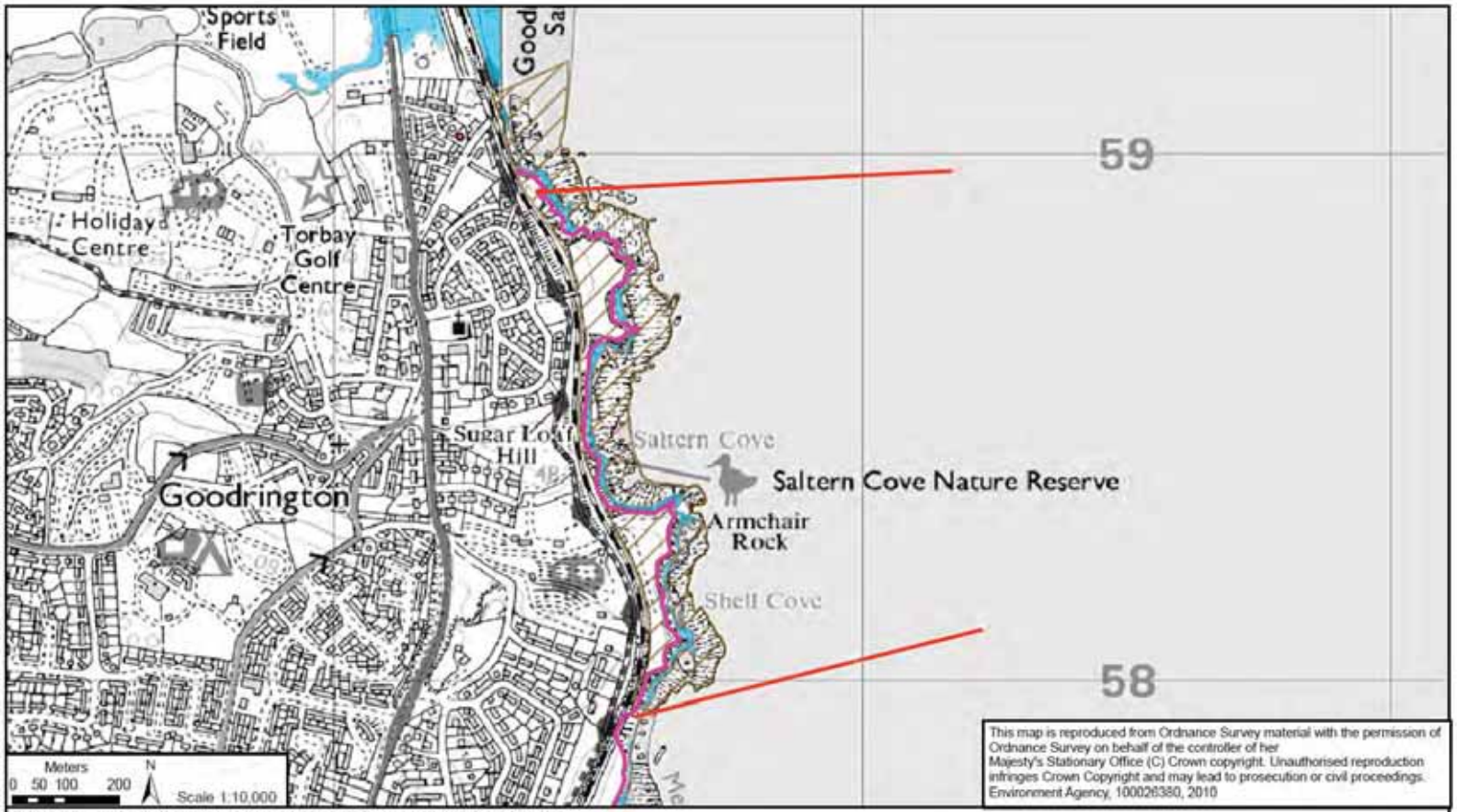

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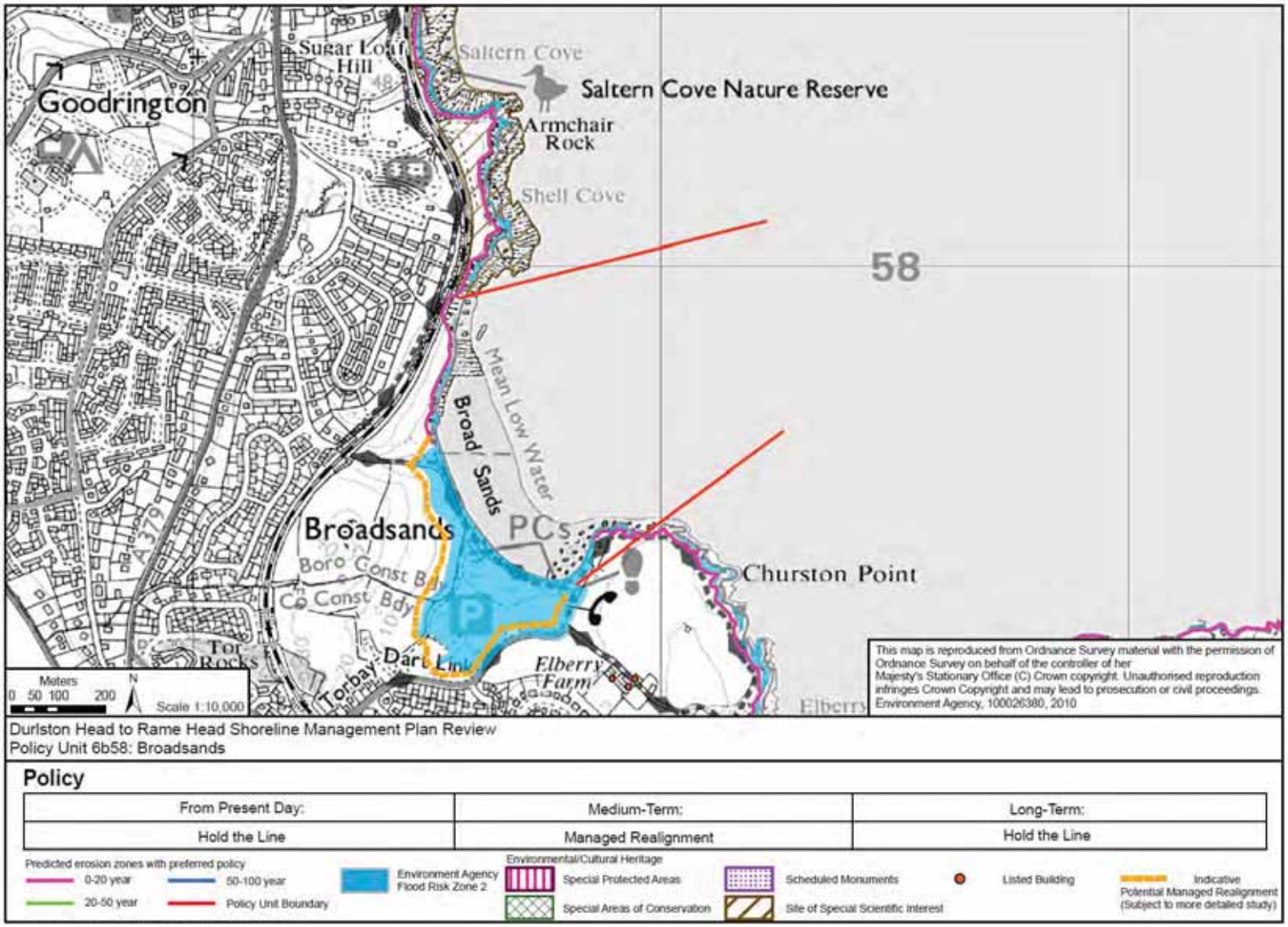

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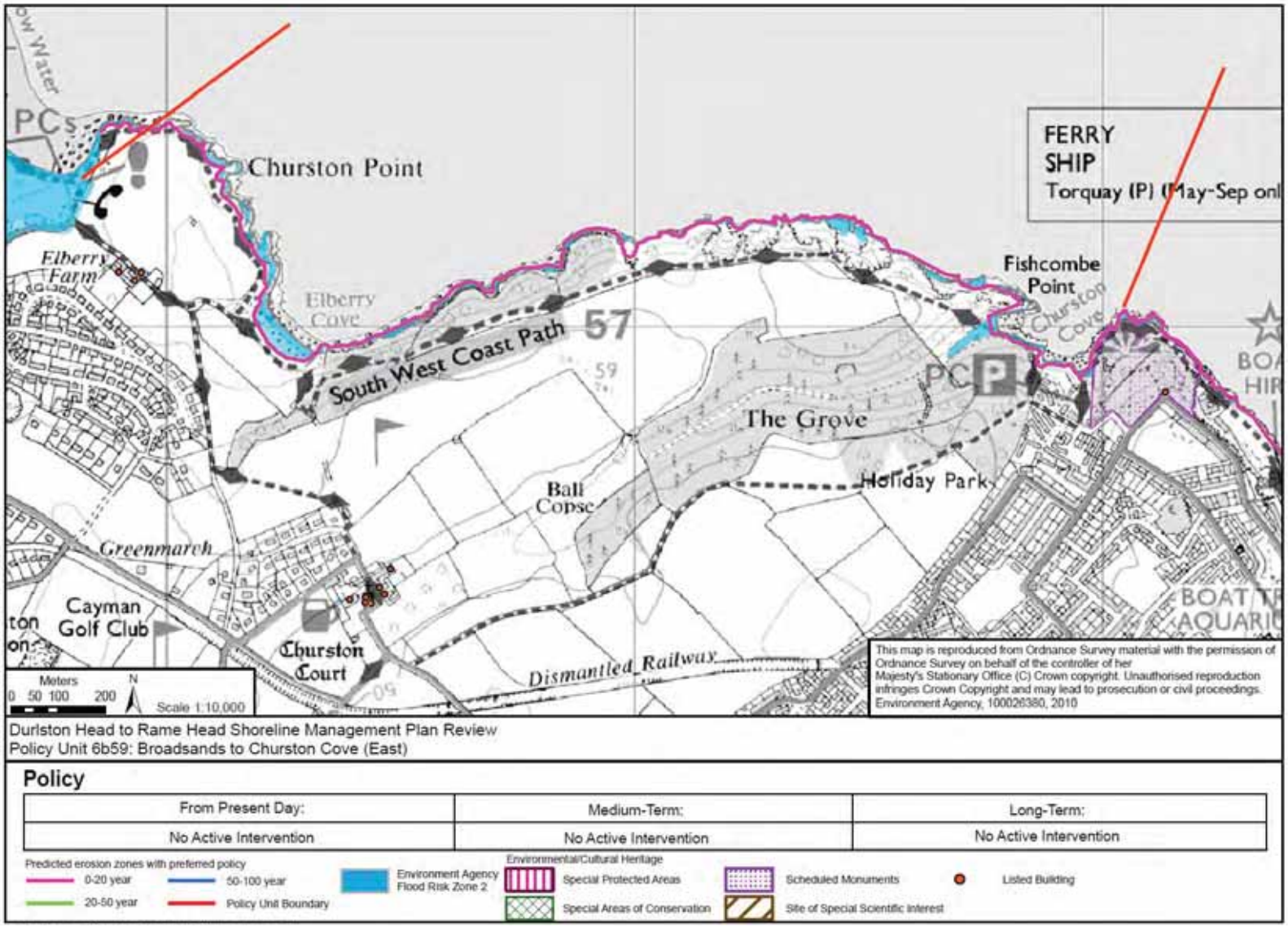

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Location reference:	**Brixham**
Policy Unit reference:	**6b60 and 6b61**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term Plan is to continue to protect the various residential, commercial, heritage and tourist assets which make up the town and harbour at Brixham against the risk of flooding and erosion. To the east of Brixham Harbour breakwater, towards Berry Head, the shoreline is undefended and the cliffs along this section are important for their geological/geomorphological value within the English Riviera Geopark site; here. The long term vision for this stretch is to allow the natural evolution of this part of the coast to continue and retain this value. The resistant nature of these cliffs means that there will negligible erosion over the next century and therefore no loss of assets.

Of significance to achievement of this Plan is the presence of the Brixham Harbour breakwater, as this structure influences wave action along the western part of this section and provides protection to much of this area.

Preferred policies to implement Plan:

From present day (short term):	From the present day, the policy is to continue to maintain existing defences along the Brixham frontage to **Hold the Line**. This would include the Brixham Harbour breakwater. The limited sediment linkages along this frontage mean that this is unlikely to have a detrimental impact along the rest of the coast. Along the undefended hard rock stretches of coast, where little or no change in cliffline position is expected, a policy of **No Active Intervention** would apply.
Medium term:	The medium term policy is to continue to **Hold the Line** to protect the town of Brixham. Higher defences may be required towards the end of this period to provide adequate protection. Maintenance of the Brixham Harbour breakwater would also be required. Along the undefended parts of this coast that consist of very hard rock cliffs, the medium term policy remains as **No Active Intervention**, with negligible cliff recession predicted.
Longer-term:	The long term policy is to continue to **Hold the Line** around the town of Brixham. This would involve maintenance and likely improvement of these defences during this period to maintain adequate levels of protection. If not undertaken in the preceding epochs, then higher defences may be required to maintain adequate levels of protection. Along the undefended parts of this coast that consist of very hard rock cliffs, the long term policy is for **No Active Intervention** to continue. Negligible cliff recession is predicted by 2105.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6b60	**Churston Cove (East) to Shoalstone Point**	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.
6b61	**Shoalstone Point to Berry Head**	Allow natural coastal evolution to continue	Allow natural coastal evolution to continue	Allow natural coastal evolution to continue

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Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
		through **No Active Intervention**.	through **No Active Intervention**.	through **No Active Intervention**.

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Location reference:	Brixham
Policy Unit reference:	6b60 and 6b61

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 defences around Brixham, with no management activities along the undefended rocky coasts.	Continued protection of Brixham, Brixham Harbour and associated industrial properties, and properties along the seafront in Brixham (Berryhead Road.	Though very small, remains a potential risk of erosion to local cliff top roads towards Berry Head as a result of localised erosion, depending if and where any future occasional cliff falls occur.	Continued protection of a WW2 Battery Scheduled Monument.	Negligible changes in landscape character of South Devon AONB.	Holding the line at Brixham has the potential to have an adverse effect, by obscuring the geological features, including the English Riviera Geopark, although the remainder of the coast will remain undefended.	No known impacts on water quality.	Sea level rise may accelerate natural erosion patterns resulting in the loss of cliff/ledge top grassland habitats at South Hams SAC. As this would not be a result of a change in SMP policy, there would be no significant impacts on this European site. Though likely to be minimal, potential for some erosion of caves and sea cliffs to the east of Shoalstone Point at Berry Head to Sharkham Point SSSI and Berry Head NNR. Also small potential loss of some designated flora and fauna. No adverse effect on the submerged or partially submerged sea caves in 6b55 within the Poole Bay to Lyme Bay Reefs pSAC as there is no need to extend the existing defences on the seacaves.
2025 – 2055	Maintenance and improvement of defences around Brixham, with no management activities along the undefended rocky coasts.	Continued protection of Brixham, Brixham Harbour and associated industrial properties, and properties along the seafront in Brixham (Berryhead Road.	Though very small, remains a potential risk of erosion to local cliff top roads towards Berry Head as a result of localised erosion, depending if and where any future occasional cliff falls occur	Continued protection of a WW2 Battery Scheduled Monument.	Negligible changes in landscape character of South Devon AONB.	Holding the line at Brixham has the potential to have an adverse effect, by obscuring the geological features, including the English Riviera Geopark, although the remainder of the coast will remain undefended.	No known impacts on water quality.	Sea level rise may accelerate natural erosion patterns resulting in the loss of cliff/ledge top grassland habitats at South Hams SAC. As this would not be a result of a change in SMP policy, there would be no significant impacts on this European site. Though likely to be minimal, potential for some erosion of caves and sea cliffs to the east of Shoalstone Point at Berry Head to Sharkham Point SSSI and Berry Head NNR. Also small potential loss of some designated flora and fauna. No adverse effect on the submerged or partially submerged sea caves in 6b55 within the Poole Bay to Lyme Bay Reefs pSAC as there is no need to extend the existing

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Location reference:	Brixham
Policy Unit reference:	6b60 and 6b61

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 on the seacaves.
2055 – 2105	Maintenance and improvement of defences around Brixham, with no management activities along the undefended rocky coasts.	Continued protection of Brixham, Brixham Harbour and associated industrial properties, and properties along the seafront in Brixham (Berryhead Road.	Though very small, remains a potential risk of erosion to local cliff top roads towards Berry Head as a result of localised erosion, depending if and where any future occasional cliff falls occur	Continued protection of a WW2 Battery Scheduled Monument.	Negligible changes in landscape character of South Devon AONB.	Holding the line at Brixham has the potential to have an adverse effect, by obscuring the geological features, including the English Riviera Geopark, although the remainder of the coast will remain undefended.	No known impacts on water quality.	Sea level rise may accelerate natural erosion patterns resulting in the loss of cliff/ledge top grassland habitats at South Hams SAC. As this would not be a result of a change in SMP policy, there would be no significant impacts on this European site. Though likely to be minimal, potential for some erosion of caves and sea cliffs to the east of Shoalstone Point at Berry Head to Sharkham Point SSSI and Berry Head NNR. Also small potential loss of some designated flora and fauna. No adverse effect on the submerged or partially submerged sea caves in 6b55 within the Poole Bay to Lyme Bay Reefs pSAC as there is no need to extend the existing defences on the seacaves.

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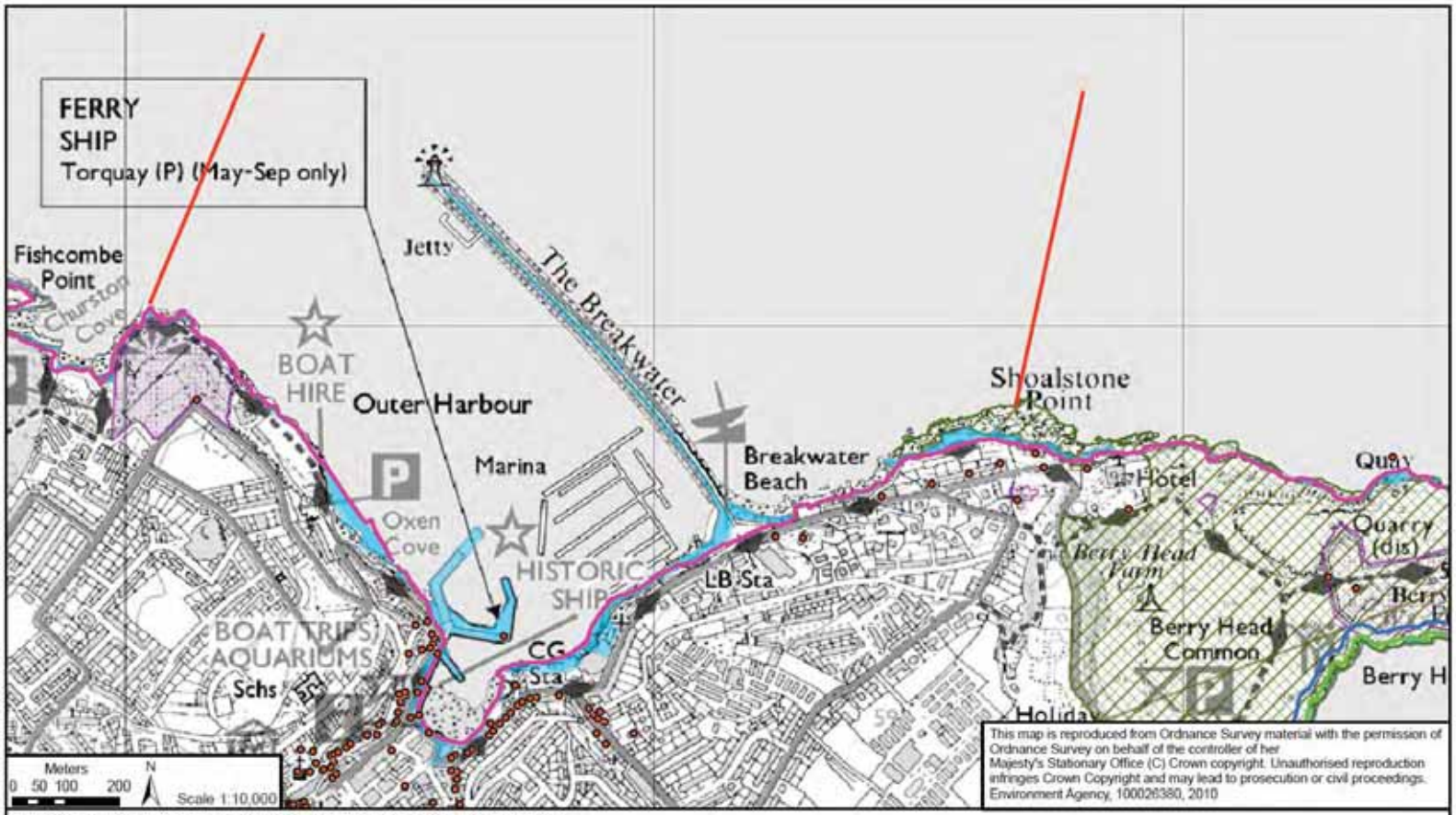

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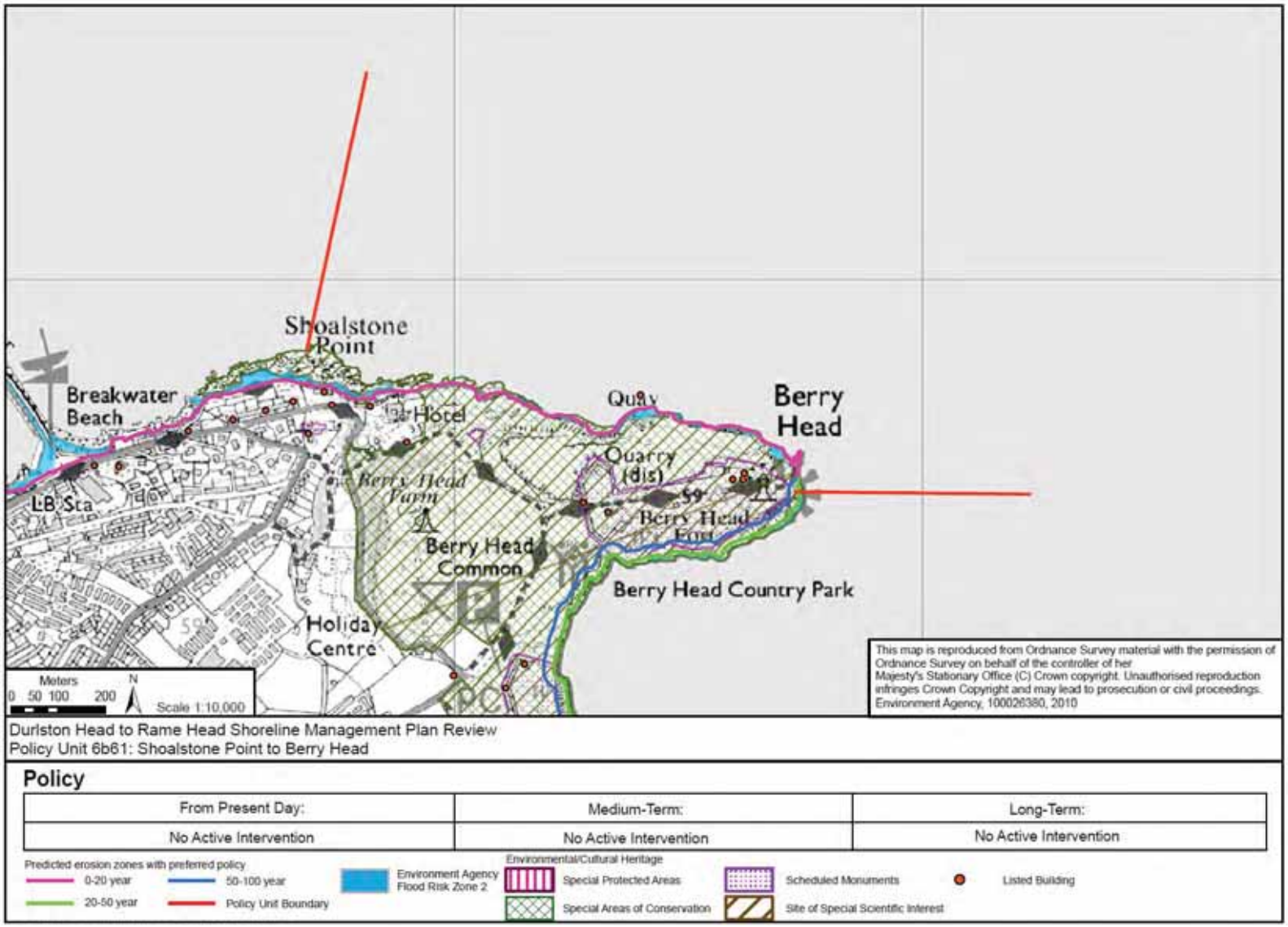

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Location reference:	**Berry Head to Kingswear (South)**
Policy Unit reference:	**6b62 and 6b63**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This stretch of undefended coast, which extends into the outermost part of the Dart Estuary, is characterised by cliffs of outstanding landscape value. The long term vision is therefore to allow this to continue to evolve naturally over the next 100 years.

The cliffs vary in geology and in places there is a risk of small, localised landslide events. Therefore, with this plan a number of cliff top assets might become at risk from erosion, including: two scheduled monuments, parts of a Registered Park and Garden and a number of listed building located along parts of the cliff top, as well as a number of properties and tourism related facilities along the cliff top area within St Mary's Bay. There is uncertainty over the timing of loss as this will depend upon the occurrence of landslide events, which it is not possible to predict with any certainty. Therefore, some of the aforementioned may not be lost over the next century.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to allow natural retreat, through **No Active Intervention** along this undefended stretch of coast. The cliffs along this section vary in character and small scale landslide events occur about every 10-100 years within the shale cliffs. Cliff erosion along this stretch would continue during this period at varying rates, with up to 10m possible locally by 2025. Isolated pocket beaches, such as at St Mary's Bay, will continue to be supplied with sediment only from local cliff erosion as they are separated by rocky headlands and there is no other sediment source available.
Medium term:	**No Active Intervention** will remain the medium term policy along this undefended stretch of coast. Total erosion of between 7 and 10m is predicted along St Mary's Bay by 2055. Erosion of the shale cliffs is driven by both marine erosion of the toe and heavy rain, so they are sensitive to both changes in precipitation and sea level. However, due to uncertainty in the possible future changes in precipitation, no direct account has been taken of this in the recession predictions. Sea level rise could also result in the narrowing and steepening of the majority of the small pocket beaches along this section as it is unlikely that sufficient sediment would be released from the relatively resistant backing cliffs. At Man Sands, beach narrowing could result in more frequent localised flooding of the low-lying area behind. However, in St Mary's Bay the increased rate of cliff erosion could release beach material to this area which will help to counter coastal squeeze and should ensure that a narrow beach remains.
Longer-term:	The long term policy is for **No Active Intervention**. Cliff erosion would continue at variable rates due to local geological characteristics. The more erodible shale cliffs that occur along St Mary's Bay are more sensitive to both sea level rise and any increase in precipitation, both of which could increase the rate of erosion along this stretch. As sea levels rise, the small pocket beaches along this stretch could narrow further and ultimately could be lost where they are backed by steep resistant

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cliffs. At Man Sands, there could be some rollback possible in front of the low-lying hinterland, but beach narrowing may result in more frequent localised flooding of this low-lying area behind. Within St Mary's Bay, the beach may narrow with increased erosion of the backing cliffs which, in turn, will release beach sediment and reduce cliff exposure. This may slow erosion locally, but it is still likely to be at a greater rate than historically, due to the acceleration of sea level rise predicted during this period.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6b62	**Berry Head to Sharkham 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**.
6b63	**Sharkham Point to Kingswear (South)**	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**.

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Location reference:	Berry Head to Kingswear (South)
Policy Unit reference:	6b62 and 6b63

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. No management activities.	Potential localised loss of parts of the South West Coast path due to erosion – but erosion rates are likely to be low (<10m), therefore potential for relocation.	Limited loss of Grades 3 and 4 agricultural land from erosion (<10m recession predicted).	Potential loss to erosion of a number of Grade 2 and a Grade 1 listed buildings and part of a Registered Parks and Garden.	Little or no change in landscape character of South Devon AONB.	Continuation of natural processes is key to the integrity of the English Riviera Geopark; NAI between Berry Head and Sharkham Point would continue to maintain these features.	No known impacts on water quality.	Sea level rise may accelerate natural erosion patterns resulting in the loss of cliff/ledge top grassland habitats at South Hams SAC and Froward Point SSSI. As this would not be a result of a change in SMP policy, there would be no significant impacts on this European site. Minimal erosion of caves and sea cliffs at Berry Head to Sharkham Point SSSI and Berry Head (Southern Redoubt) ASP
2025 – 2055	Continued cliffline retreat. No management activities.	Potential localised loss of parts of the South West Coast path due to erosion – but erosion rates are likely to be low (<10m), therefore potential for relocation. Potential loss of some properties, including holiday accommodation, due to erosion at St Marys Bay in medium to long term	Limited loss of Grades 3 and 4 agricultural land from erosion (<10m recession predicted).	Potential loss to erosion of a number of Grade 2 and a Grade 1 listed buildings and part of a Registered Parks and Garden.	Little or no change in landscape character of South Devon AONB.	Continuation of natural processes is key to the integrity of the English Riviera Geopark; NAI between Berry Head and Sharkham Point would continue to maintain these features. Sharkham Point tip at risk of erosion in the medium and long term.	Potential impacts on water quality due to a No Active Intervention policy potentially affecting landfill sites – see soils and geology.	Sea level rise may accelerate natural erosion patterns resulting in the loss of cliff/ledge top grassland habitats at South Hams SAC and Froward Point SSSI. As this would not be a result of a change in SMP policy there would be no significant impacts on this European site. Minimal erosion of caves and sea cliffs at Berry Head to Sharkham Point SSSI and Berry Head (Southern Redoubt) ASP
2055 – 2105	Continued cliffline retreat. No management activities.	Potential localised loss of parts of the South West Coast path due to erosion – but erosion rates are likely to be low (<10m), therefore potential for relocation. Potential loss of some properties, including holiday accommodation, due to erosion at St Marys Bay in medium to long term	Limited loss of Grades 3 and 4 agricultural land from erosion (<10m recession predicted).	Potential loss to erosion of a number of Grade 2 and a Grade 1 listed buildings and part of a Registered Parks and Garden.	Little or no change in landscape character of South Devon AONB.	Continuation of natural processes is key to the integrity of the English Riviera Geopark; NAI between Berry Head and Sharkham Point would continue to maintain these features. Sharkham Point tip at risk of erosion in the medium and long term.	Potential impacts on water quality due to a No Active Intervention policy potentially affecting landfill sites – see soils and geology.	Sea level rise may accelerate natural erosion patterns resulting in the loss of cliff/ledge top grassland habitats at South Hams SAC and Froward Point SSSI. As this would not be a result of a change in SMP policy there would be no significant impacts on this European site. Minimal erosion of caves and sea cliffs at Berry Head to Sharkham Point SSSI and Berry Head (Southern Redoubt) ASP

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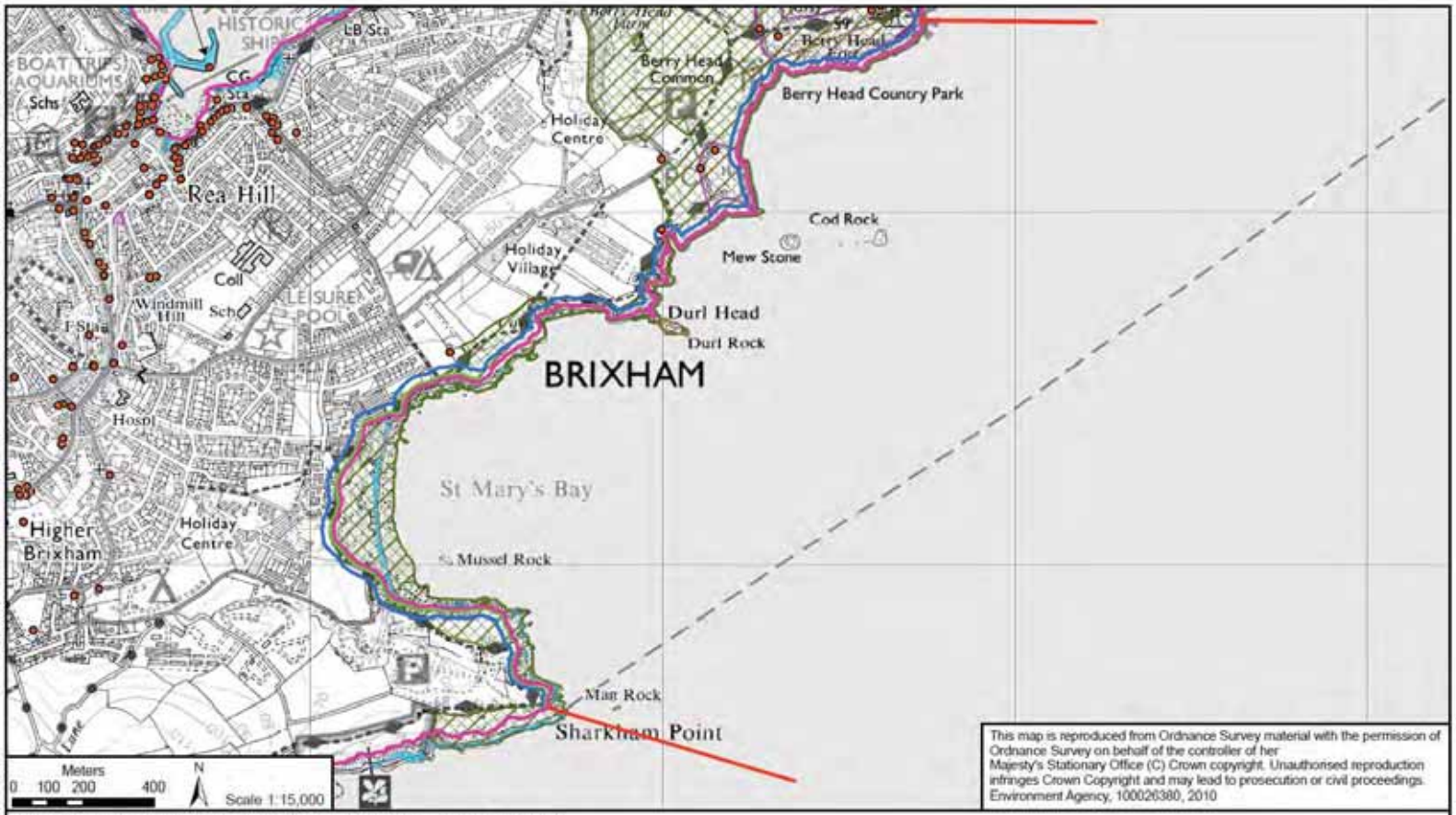

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6b62: Berry Head to Sharkham Point

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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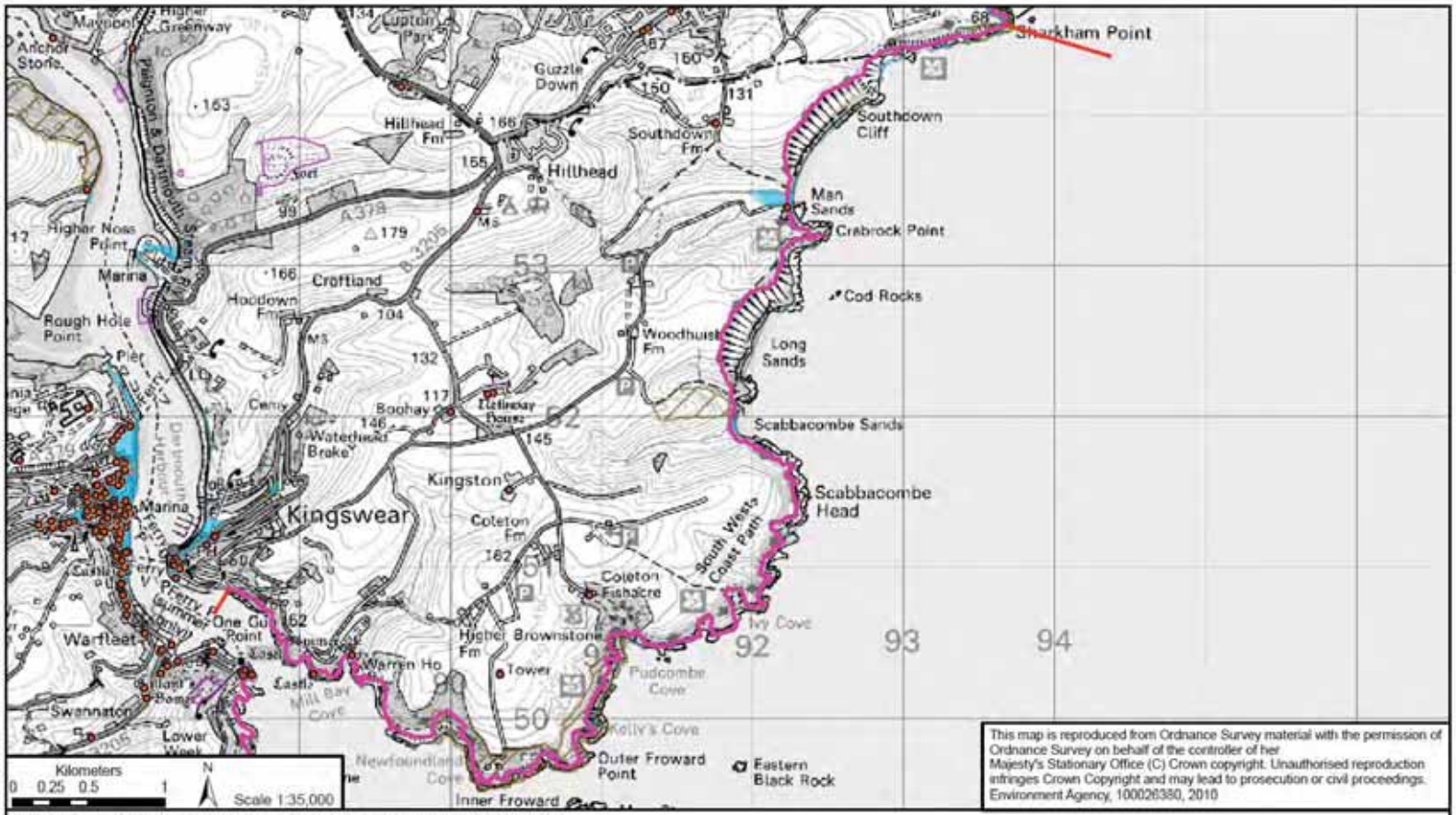

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Location reference:	**Dart Estuary**
Policy Unit reference:	**6b64 to 6b70**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

Within the Dart Estuary there are a number of settlements, such as Kingswear, Totnes and Dartmouth. These are currently defended against the risk of flooding by a range of defences including flood walls and embankments. There are also defences associated with infrastructure along the estuary shoreline including the Dart Railway.

The long term Plan is to continue to reduce the risk of flooding to this property and infrastructure where this is currently provided. However, under this plan it is not intended that any new defences would be built in currently undefended areas; these would be allowed to continue to evolve naturally.

The impact of continued defence on the long term evolution of the Dart Estuary as a whole is expected to be minimal, as it is a ria-type estuary characterised by a deep channel confined by steep resistant cliffs which already naturally constrain physical change within the estuary.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to continue to **Hold the Line**, where defences already exist. This will continue to provide flood protection to people, property and infrastructure throughout the Dart Estuary, including the sizeable settlements of Kingswear, Totnes and Dartmouth as well as the Dart Railway. This would involve maintenance and possible improvement of existing flood defences during this period. Investigation of the future need for defence improvement should also be carried out during this period to provide a more definitive plan for implementation of policy. No new defences will be built along currently undefended sections, where a policy of **No Active Intervention** would apply. Little change in the overall estuary form is predicted during this period
Medium term:	The medium term policy is to continue to **Hold the Line** of the existing range of defences that provide flood protection to property and infrastructure. In order to provide adequate levels of protection, under a scenario of rising sea levels, higher defences may be required. Elsewhere a policy of **No Active Intervention** will remain.
Longer-term:	The **Hold the Line** policy will continue into the long term for locations presently protected. If not carried out in the preceding epochs, this would likely involve re-building defences to be larger than at present to be able to provide adequate levels of protection. Elsewhere **No Active Intervention** will apply. This combination of policies is not expected to have any significant impact upon the overall form of the estuary as it is already constrained by its geology.

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Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b64	Dart Estuary - Kingswear (South) to Waterhead Creek	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.
6b65	Dart Estuary - Waterhead Creek to Greenway Viaduct	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.
6b66	Dart Estuary - Greenway Viaduct to Totnes South (east bank)	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.
6b67	Dart Estuary - Totnes	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.
6b68	Dart Estuary - Totnes South (west bank) to Dartmouth (North)	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.
6b69	Dart Estuary - Dartmouth (North) to Halftide Rock	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.
6b70	Dart Estuary - Halftide Rock to Blackstone Point	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.

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Location reference:	Dart Estuary
Policy Unit reference:	6b64 to 6b70

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.	Protection of parts of South West Coast path, whilst other parts remain at risk from periodic flooding. Continued protection of people & properties in Dartmouth (including residential, commercial properties & Yacht Club), bordering the River Dart at Dittisham and of farms on the River Dart near Cornworthy from flooding. Continued protection to people and property in Kingswear and Totnes from flooding/erosion. Risk of erosion to cliff top properties at the western bank of the entrance to the River Dart Estuary, is slight due to low rates of recession.	Continued protection of Kingswear Station, and the B3205 transport connections from flooding. Limited loss of Grades 3 and 4 agricultural land from flooding/ erosion.	No loss of Scheduled Monuments or Registered Parks and Gardens.	Minor changes in landscape character of South Devon AONB.	No known impacts.	No known impacts on water quality. HTL in the Dart Estuary 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 – *adverse impact*	HTL in 6b64 is not considered to have an adverse effect on the Poole Bay to Lyme Bay Reefs pSAC
2025 – 2055	Maintenance and improvement of the existing defences.	Protection of parts of South West Coast path, whilst other parts remain at risk from periodic flooding. Continued protection of people & properties in Dartmouth (including residential, commercial properties & Yacht Club), bordering the River Dart at Dittisham and of farms on the River Dart near Cornworthy from flooding. Continued protection to people and property in Kingswear and Totnes from flooding/erosion. Risk of erosion to cliff top properties at the western bank of the entrance to the River Dart Estuary, is slight due to low rates of recession.	Continued protection of Kingswear Station, and the B3205 transport connections from flooding. Limited loss of Grades 3 and 4 agricultural land from flooding/ erosion.	No loss of Scheduled Monuments or Registered Parks and Gardens.	Minor changes in landscape character of South Devon AONB.	Waterhead Creek historic landfill site at potential risk of flooding.	Potential impacts on water quality due to a No Active Intervention policy potentially affecting landfill sites – see soils and geology. HTL in the Dart Estuary 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 – *adverse impact*	HTL in 6b64 is not considered to have an adverse effect on the Poole Bay to Lyme Bay Reefs pSAC
2055 –	Maintenance and	Protection of parts of South	Continued protection of	No loss of Scheduled	Minor changes in landscape	Waterhead Creek historic	Potential impacts on water	HTL in 6b64 is not considered

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Location reference:	Dart Estuary
Policy Unit reference:	6b64 to 6b70

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
2105	improvement of the existing defences.	West Coast path, whilst other parts remain at risk from periodic flooding. Continued protection of people & properties in Dartmouth (including residential, commercial properties & Yacht Club), bordering the River Dart at Dittisham and of farms on the River Dart near Cornworthy from flooding. Continued protection to people and property in Kingswear and Totnes from flooding/erosion. Risk of erosion to cliff top properties at the western bank of the entrance to the River Dart Estuary, is slight due to low rates of recession.	Kingswear Station, and the B3205 transport connections from flooding. Limited loss of Grades 3 and 4 agricultural land from flooding/ erosion.	Monuments or Registered Parks and Gardens.	character of South Devon AONB.	landfill site at potential risk of flooding.	quality due to a No Active Intervention policy potentially affecting landfill sites – see soils and geology. HTL in the Dart Estuary 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 – *adverse impact*	to have an adverse effect on the Poole Bay to Lyme Bay Reefs pSAC

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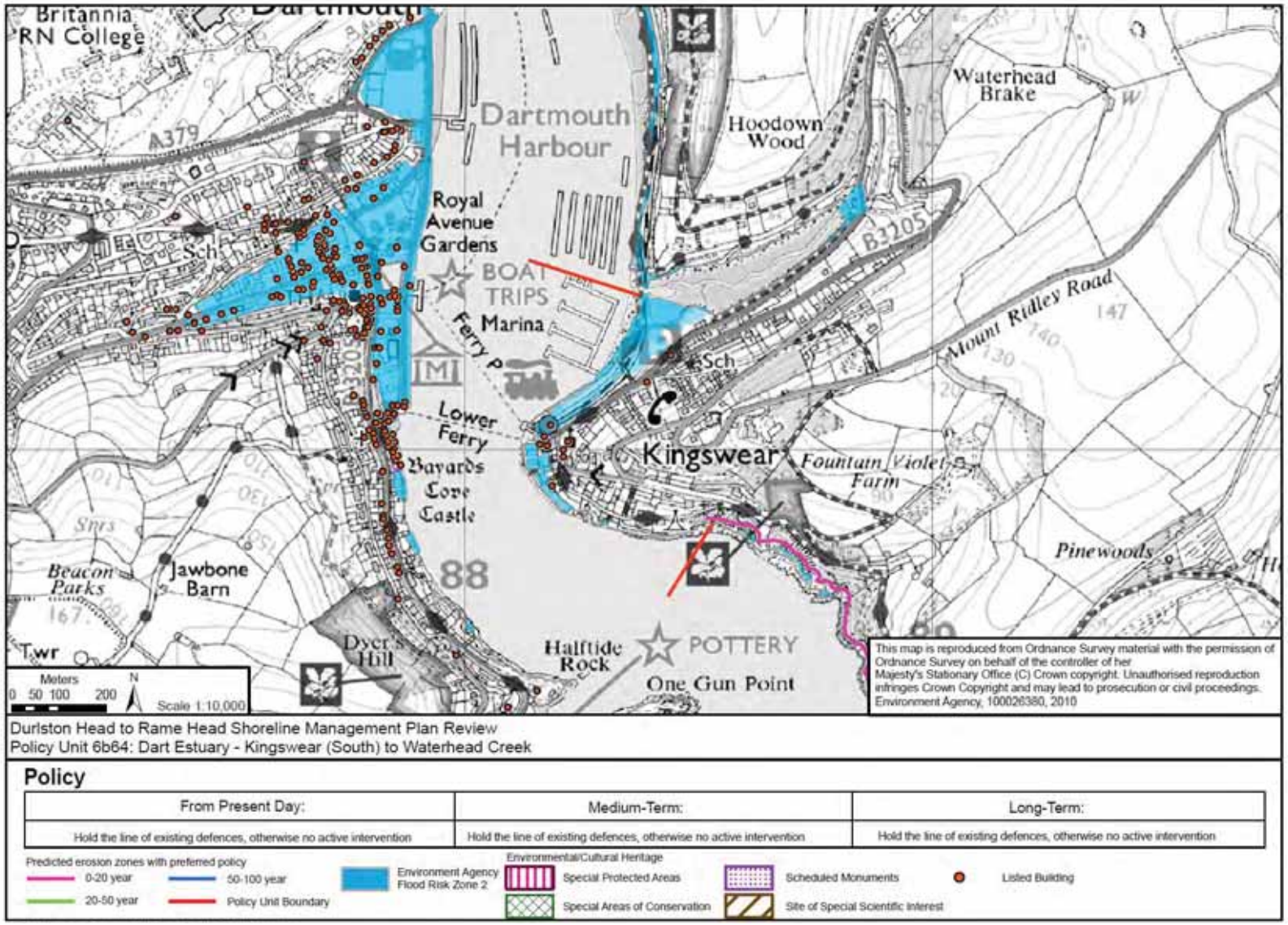

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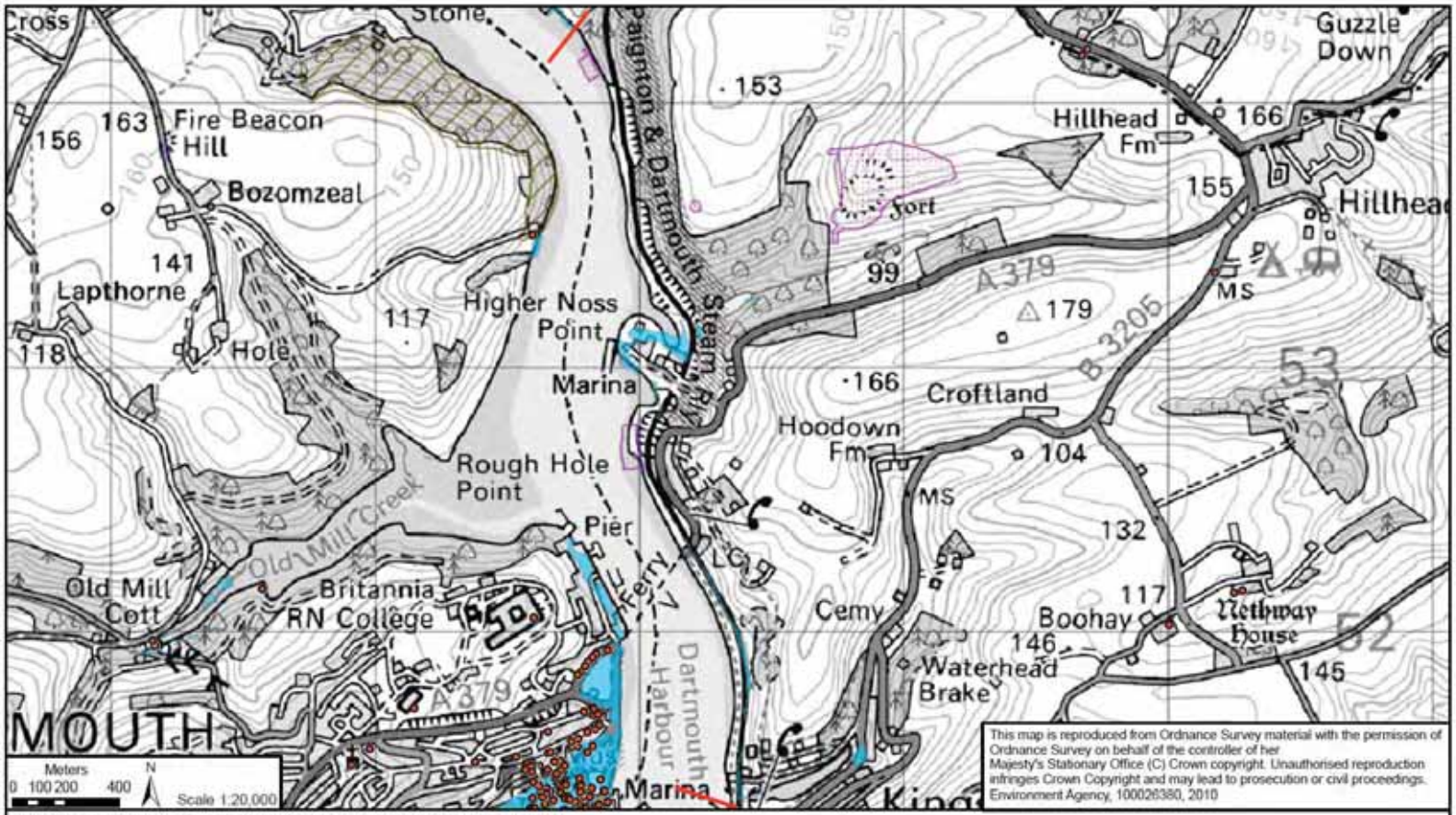

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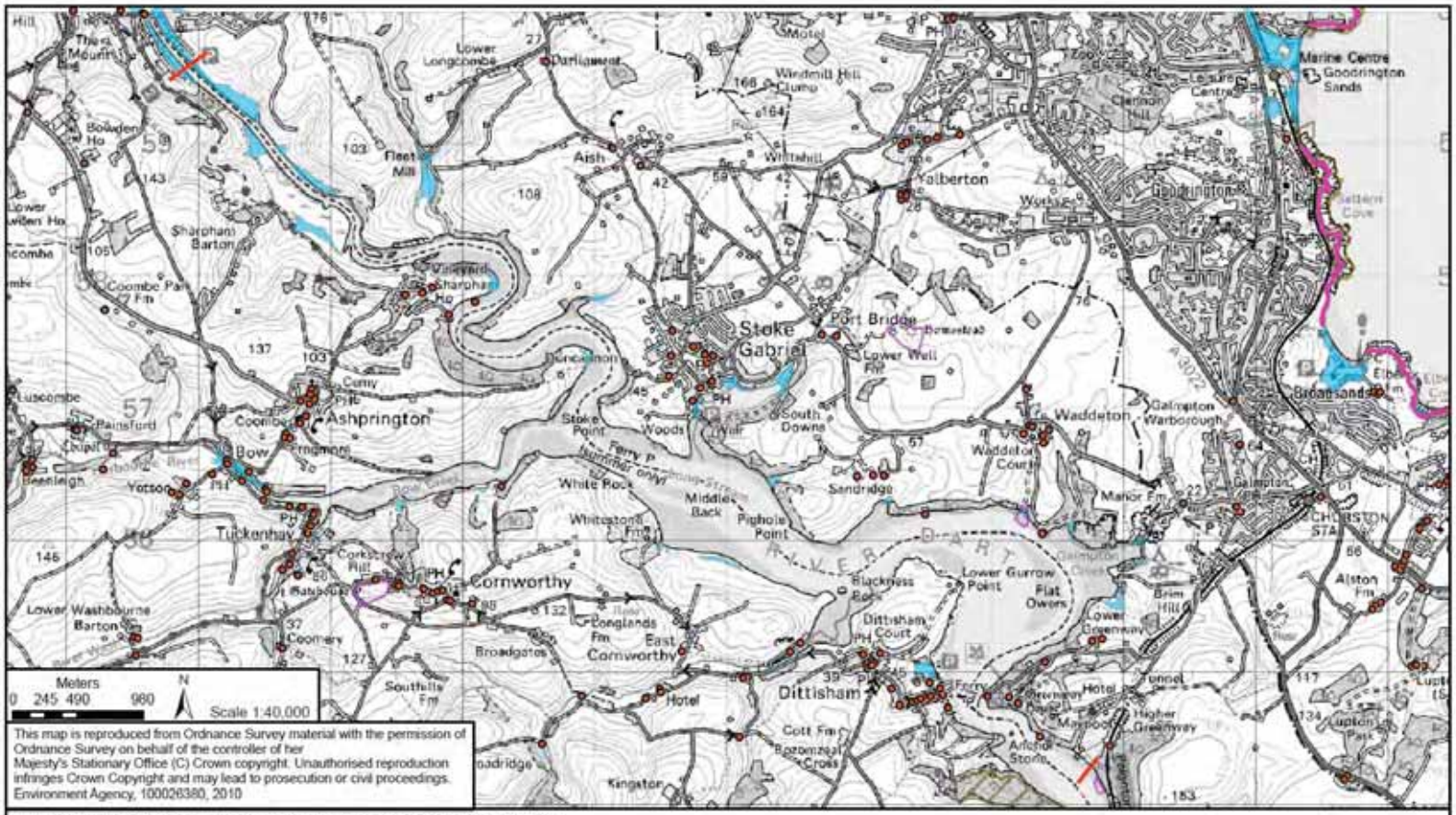

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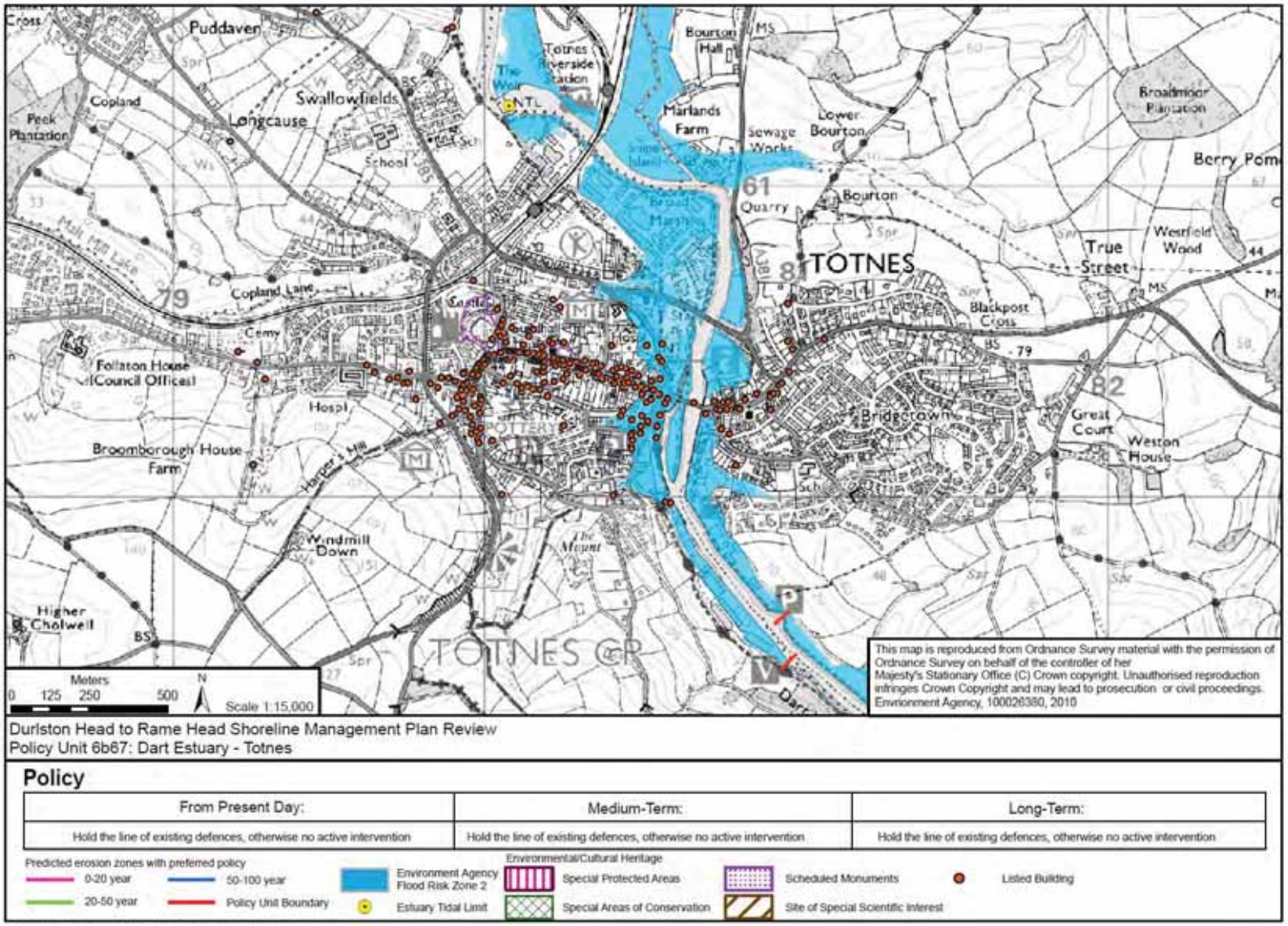

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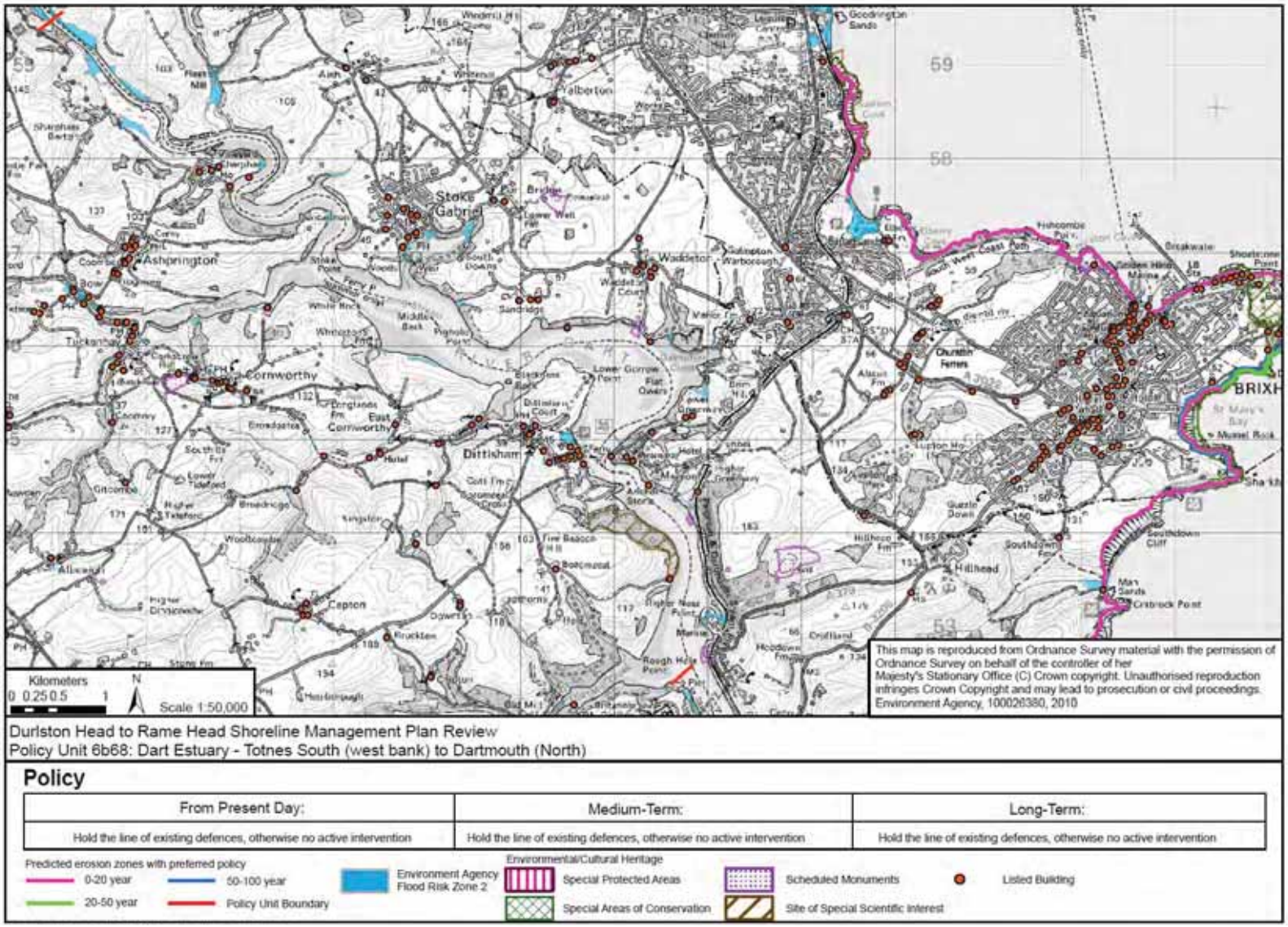

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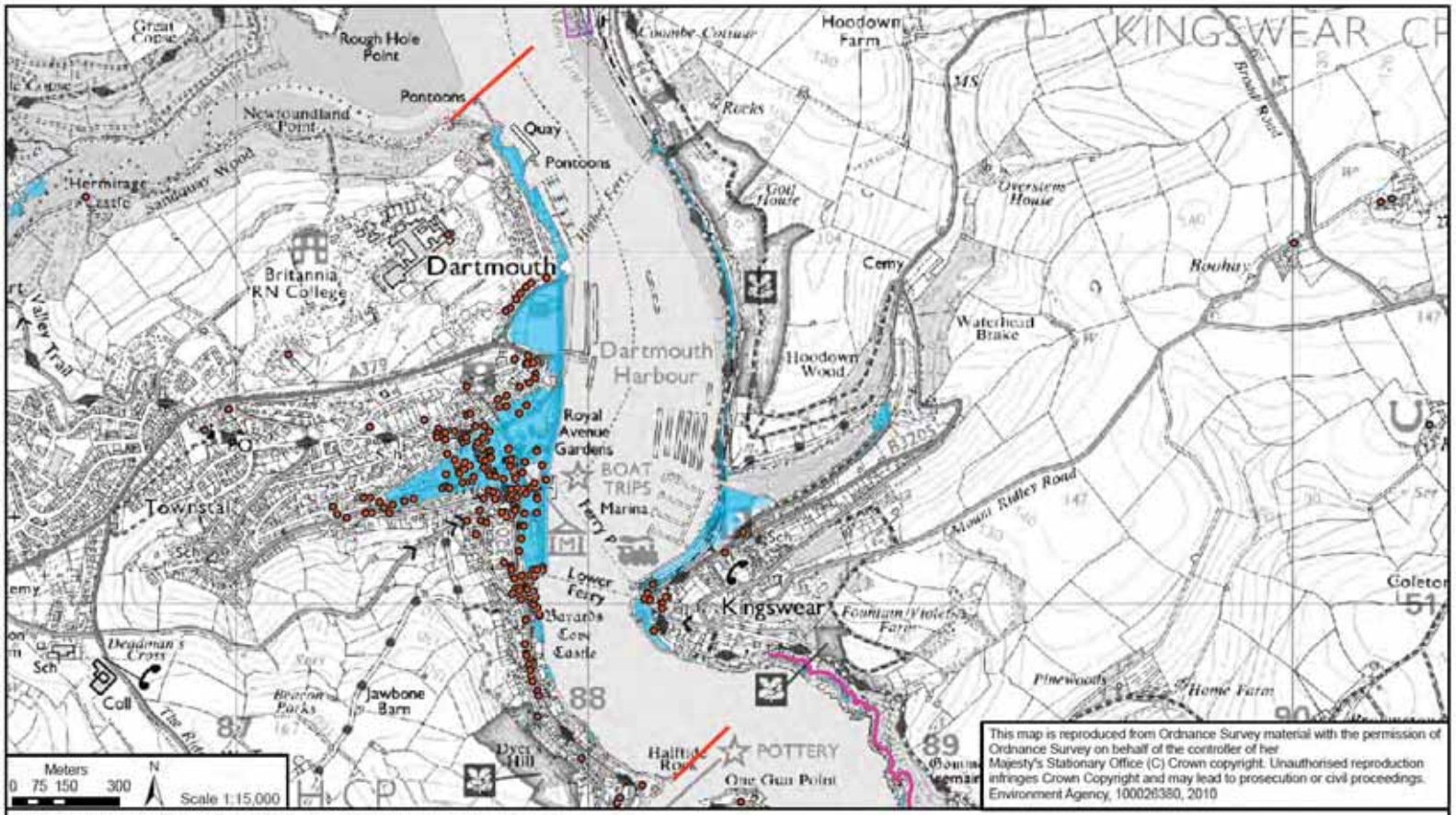

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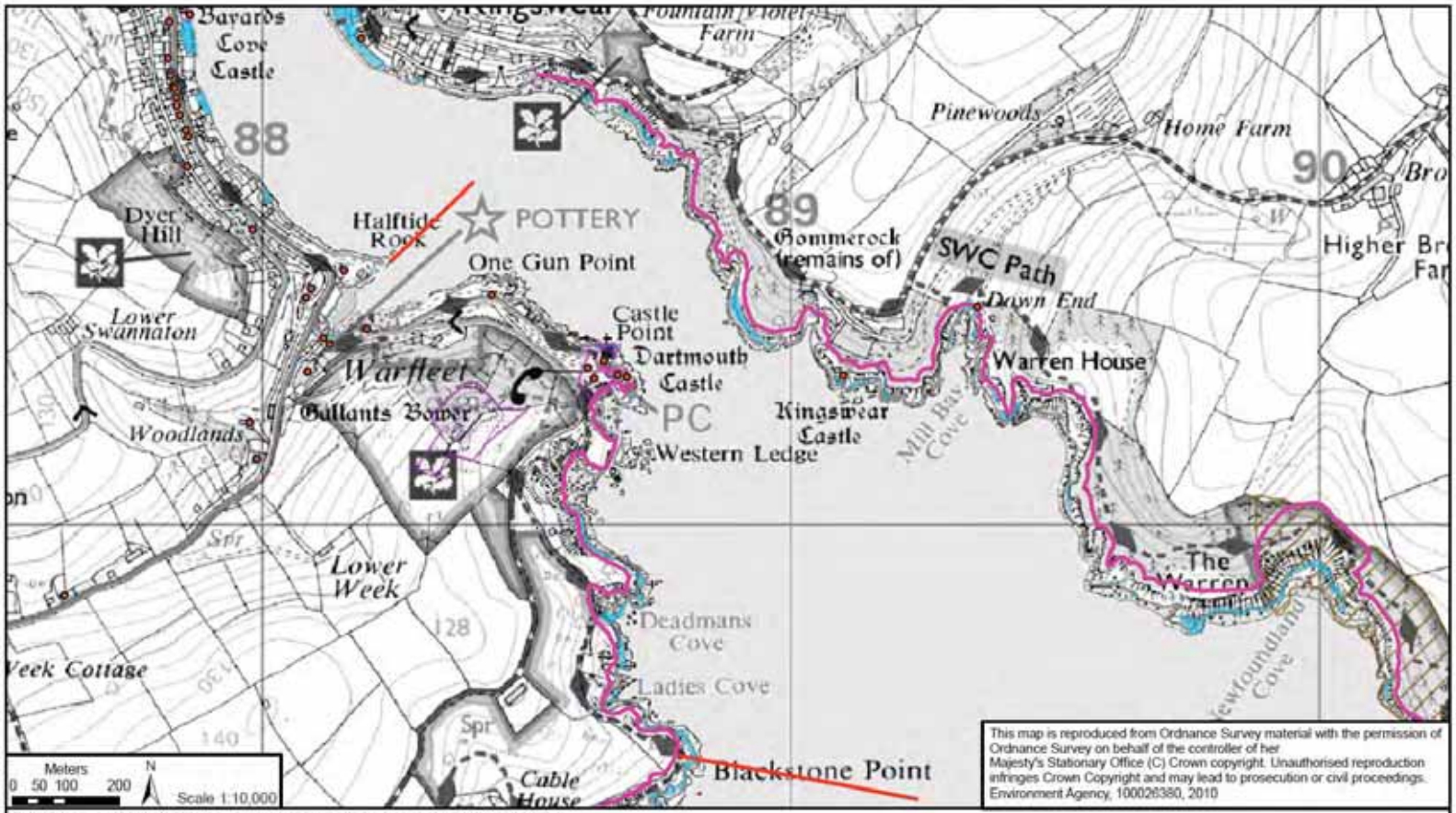

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6b70: Dart Estuary - Dart Estuary - Halftide Rock to Blackstone Point

Policy

From Present Day:	Medium-Term:	Long-Term:
Hold the line of existing defences, otherwise no active intervention	Hold the line of existing defences, otherwise no active intervention	Hold the line of existing defences, otherwise 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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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Location reference:	**Blackstone Point to Strete**
Policy Unit reference:	**6b71 to 6b74**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The natural characteristics of this coastline are of outstanding environmental, landscape, geological and geomorphological value. The long term vision for this section of predominantly undefended cliffed coastline is therefore to continue to allow it to evolve naturally.

There would continue to be cliff top retreat, but at very slow rates, with less than 10m predicted. Erosion risks are therefore low although landslide events could cause greater erosion locally. This could impact on parts of the South West Coast Path and a cliff top road, depending upon the location of future cliff failure events.

In the immediate term, it would be appropriate to continue to protect assets at the back of Blackpool Sands, that provide tourism related facilities, including the car park, as to do so will have no significant impacts on coastal processes in the wider area. However to do so will be unlikely to attract public (flood and coastal defence budget) funds and so continued protection of these private assets would depend on the availability of other funding (refer also to Section 5.2.2 'Private Defences').

The beach at Blackpool Sands would be expected to narrow and steepen in the longer term as sea level rise causes coastal squeeze, and this would likely be exacerbated by defences in this area if it continues to be provided. In the long term it may even become unnecessary to provide defences for the purpose of beach access if the beach is lost. Should the beach reduce to such an extent, it may be necessary to consider localised defences in a realigned position to protect the A379 at the back of the beach.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention** along this predominantly undefended stretch of coast, allowing it to continue to evolve naturally. This coastline is largely cliffed with isolated pocket beaches separated by rocky headlands. The cliffs historically have experienced varying rates of recession, dependent upon local geological characteristics. This is expected to continue with rates of about 0.2 to 0.3 m/yr combined with the occurrence of infrequent, small scale cliff failure events that result in localised increases in recession. The small pocket beaches that indent this section of coast are supplied with sediment from local cliff erosion as there is no other sediment source available. These beaches have gradually narrowed over the long term, suggesting a trend of erosion as a result of insufficient sediment supply from local cliffs. The privately owned structures that are located at the back of Blackpool Sands could continue to be maintained during this period if funds are available to ensure continued protection of the low-lying land and maintain access for amenity purposes. The beach here has gradually narrowed over the long term and this is expected to continue.
Medium term:	The medium term policy is to continue with **No Active Intervention** along this predominantly undefended stretch of coast. Slow, variable rates of cliff erosion would occur, with total erosion of between 4 and 10m predicted by 2055 depending on the occurrence of small scale cliff failure events during this period. At Blackpool Sands, the short lengths of privately owned structures could continue to be maintained if funds are available to protect the low-lying land and maintain access for amenity purposes. As sea level rise continues, the

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	retention of the existing defence line would exacerbate the current trend of beach narrowing and steepening, which will increase pressure on the existing defences.
Longer-term:	The long term policy is for **No Active Intervention** along this predominantly undefended stretch of coast. Erosion of the cliffs would continue to occur at historically slow rates, with total erosion of about 10m predicted by 2105, depending on the occurrence of small scale cliff failure events during this period. As sea levels rise, the small pocket beaches along this section could narrow and possibly become submerged as it is unlikely that sufficient material would be supplied by the backing resistant cliffs. This would not result in more rapid erosion of the cliffs, with cliff failures dominated by geological factors. As the beaches narrow, headlands will become more prominent which may further interrupt littoral drift. At Blackpool Sands, as sea level rise continues, the retention of the existing defence line would exacerbate the current trend of beach narrowing and steepening; potentially reducing its amenity value. Consequently it may be that continued defence here for providing beach access for amenity purposes becomes unjustifiable. Depending on the amount of beach narrowing that occurs, there may be a need for very localised intervention in a realigned position to defend the A379 that passes at the back of Blackpool Sands if it becomes at significant risk during this period. This could occur under this policy if funds are available, although consideration could also be given to alternative options.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b71	**Blackstone Point to Stoke Fleming**	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**.
6b72	**Stoke Fleming to Blackpool Sands**	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**.
6b73	**Blackpool Sands**	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**	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**	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**

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Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
		Active Intervention.	**Active Intervention**.	**Active Intervention**.
6b74	**Blackpool Sands to Strete**	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**.

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Location reference:	Blackstone Point to Strete
Policy Unit reference:	6b671 to 6b74

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 along the undefended parts of the coast. Maintenance of existing defences at Blackpool Sands dependent on availability of private funds. Any future management at Blackpool Sands will need to take account of IT and telephone cabling that runs beneath the beach.	Continued protection to assets at Blackpool Sands.	Continued protection of A379 at the back of Blackpool Sands. Small areas of Grade 3 and 5 agricultural land at risk due to flooding/ erosion between Blackstone Point and Stoke Fleming. (but minor loss as cliff erosion <10m).	Grade 2 listed buildings at potential risk of erosion in some areas. The submerged forest at Blackpool Sands will remain submerged through a NAI policy – *neutral impact* Possible impact on the palaeo-environmental deposits through NAI at Blackpool Sands, though this would not be a result of SMP policy – *neutral impact.*	Change in landscape character of South Devon AONB at Blackpool Sands. Generally a policy of NAI along the rest of the coast complements the AONB Management Policies.	Continuation of natural processes is key to the integrity of the SSSIs and GCRs; NAI along the coast (except at Blackpool Sands) would continue to maintain these features.	No known impacts on water quality.	No known impacts on designated biodiversity, flora or fauna.
2025 – 2055	Continued cliffline retreat would occur along the undefended parts of the coast. Maintenance of defences at Blackpool Sands as long as it remains economically feasible to do so and dependent on availability of private funds. Studies to appraise possible realignment of the defence. Any future management at Blackpool Sands will need to take account of IT and telephone cabling that runs beneath the beach.	Isolated properties in Strete at risk due to erosion South West Coast Path at risk due to erosion. Continued protection of tourist facilities and car parks at Blackpool Sands, as long as this remains a requirement.	Continued protection of A379 at the back of Blackpool Sands. Small areas of Grade 3 and 5 agricultural land at risk due to erosion between Blackstone point and Stoke Fleming (but minor loss as cliff erosion <10m). At some locations, beach narrowing may affect beach access and moorings.	Grade 2 listed buildings at potential risk of erosion in some areas. The submerged forest at Blackpool Sands will remain submerged through a NAI policy – *neutral impact* Possible impact on the palaeo-environmental deposits through NAI at Blackpool Sands, though this would not be a result of SMP policy – *neutral impact.*	Change in landscape character of South Devon AONB at Blackpool Sands. Generally a policy of NAI along the rest of the coast complements the AONB Management Policies.	Continuation of natural processes is key to the integrity of the SSSIs and GCRs; NAI along the coast (except at Blackpool Sands) would continue to maintain these features.	No known impacts on water quality.	No known impacts on designated biodiversity, flora or fauna.
2055 – 2105	Continued cliffline retreat would occur along the undefended parts of the coast. Maintenance of defences at Blackpool Sands as long as it remains economically feasible to do so and dependent on availability of private funds. Any future	Isolated properties in Strete at risk due to erosion South West Coast Path at risk due to erosion. Possible loss of tourist facilities and car parks at Blackpool Sands, if defences are realigned.	Continued protection of A379 at the back of Blackpool Sands. Small areas of Grade 3 and 5 agricultural land at risk due to erosion between Blackstone point and Stoke Fleming (but minor loss as cliff erosion <10m). At some locations, beach narrowing may affect beach access and moorings.	Grade 2 listed buildings at potential risk of erosion in some areas. The submerged forest at Blackpool Sands will remain submerged through a NAI policy – *neutral impact* Possible impact on the palaeo-environmental deposits through NAI at Blackpool Sands, though this would not	Change in landscape character of South Devon AONB at Blackpool Sands. Generally a policy of NAI along the rest of the coast complements the AONB Management Policies.	Continuation of natural processes is key to the integrity of the SSSIs and GCRs; NAI along the coast (except at Blackpool Sands) would continue to maintain these features.	Potential realignment at Blackpool Sands 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 known impacts on designated biodiversity, flora or fauna.

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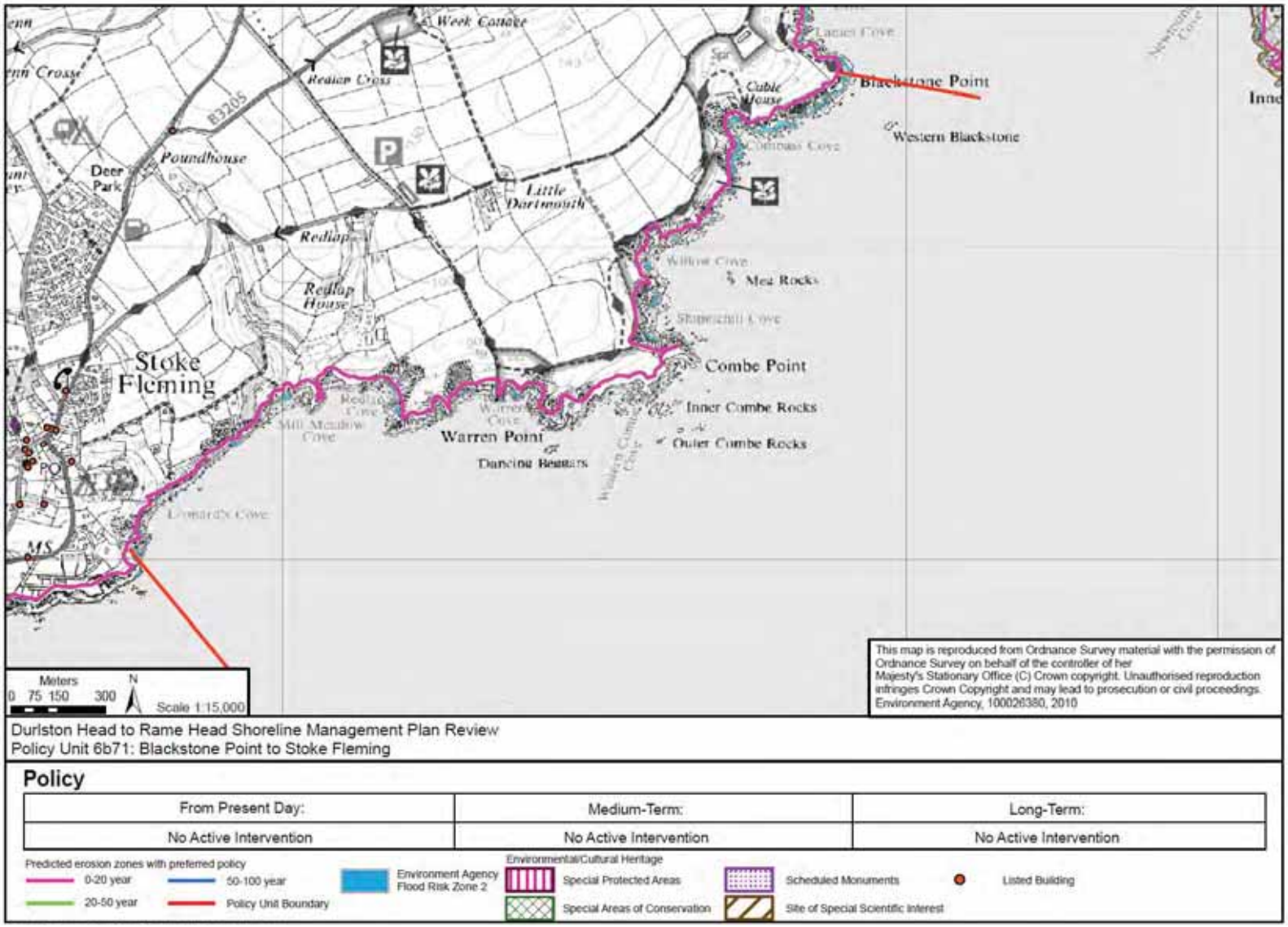
Location reference:	Blackstone Point to Strete
Policy Unit reference:	6b671 to 6b74

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
	management at Blackpool Sands will need to take account of IT and telephone cabling that runs beneath the beach.			be a result of SMP policy – *neutral impact.*				



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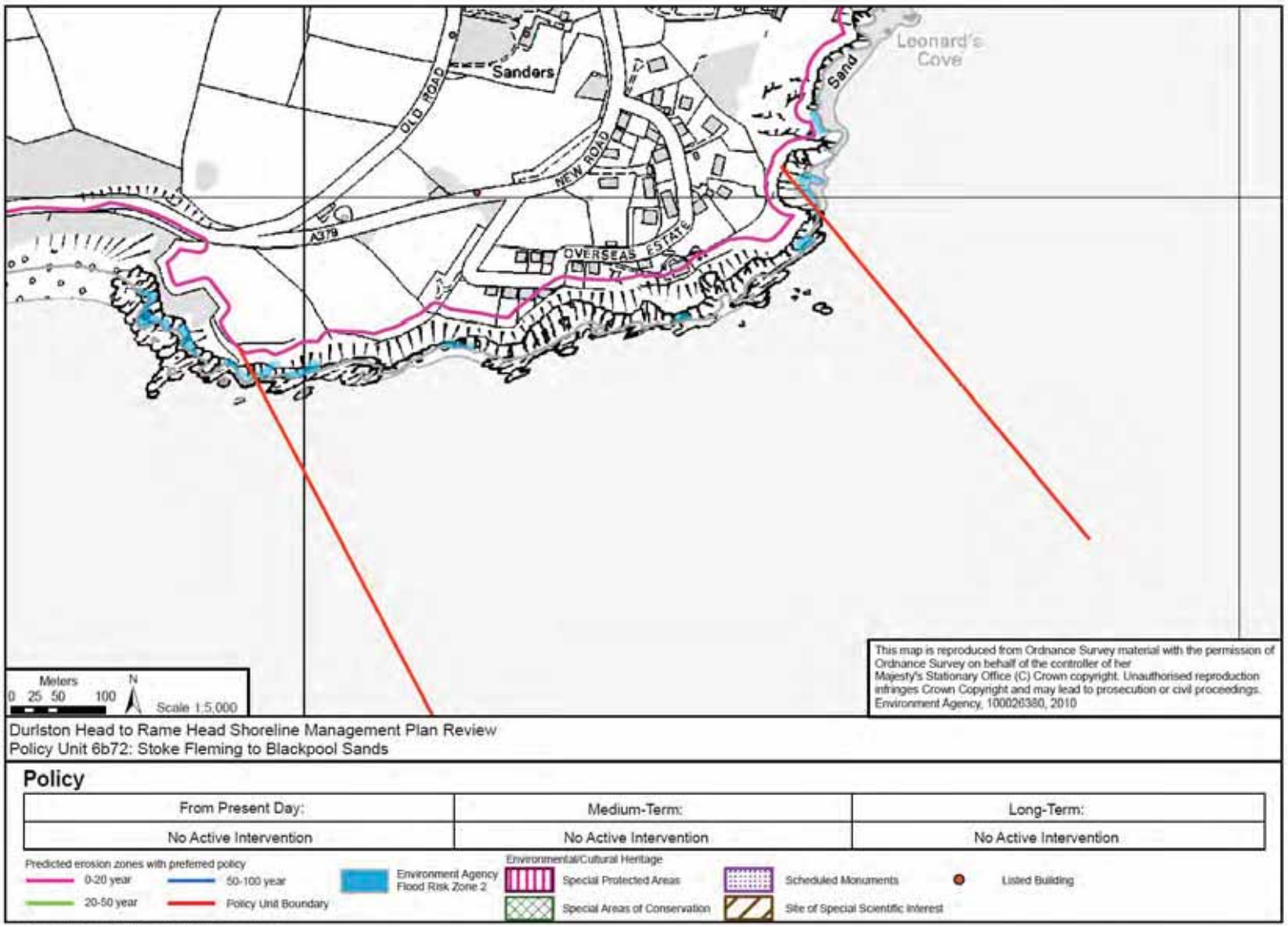

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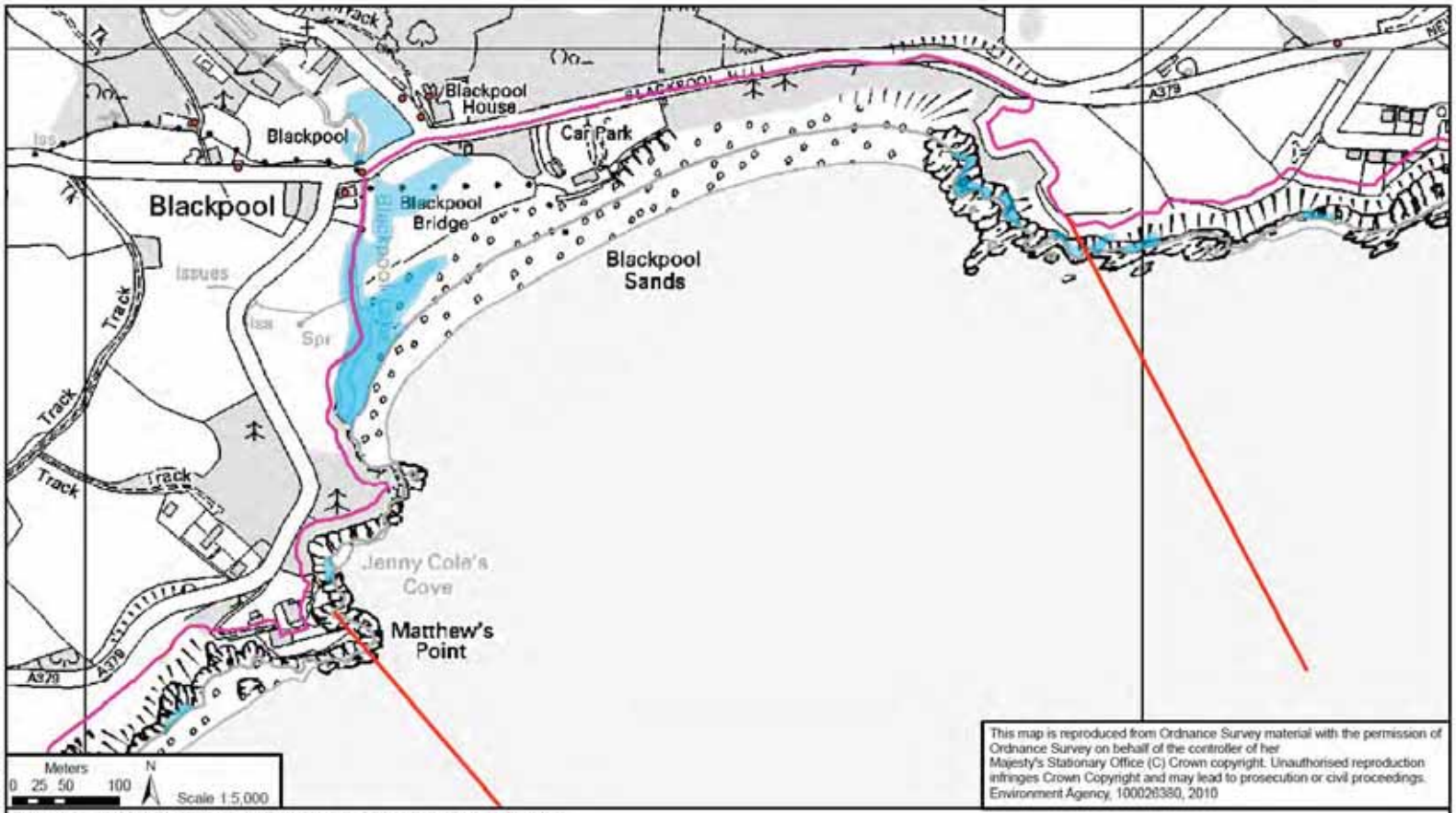

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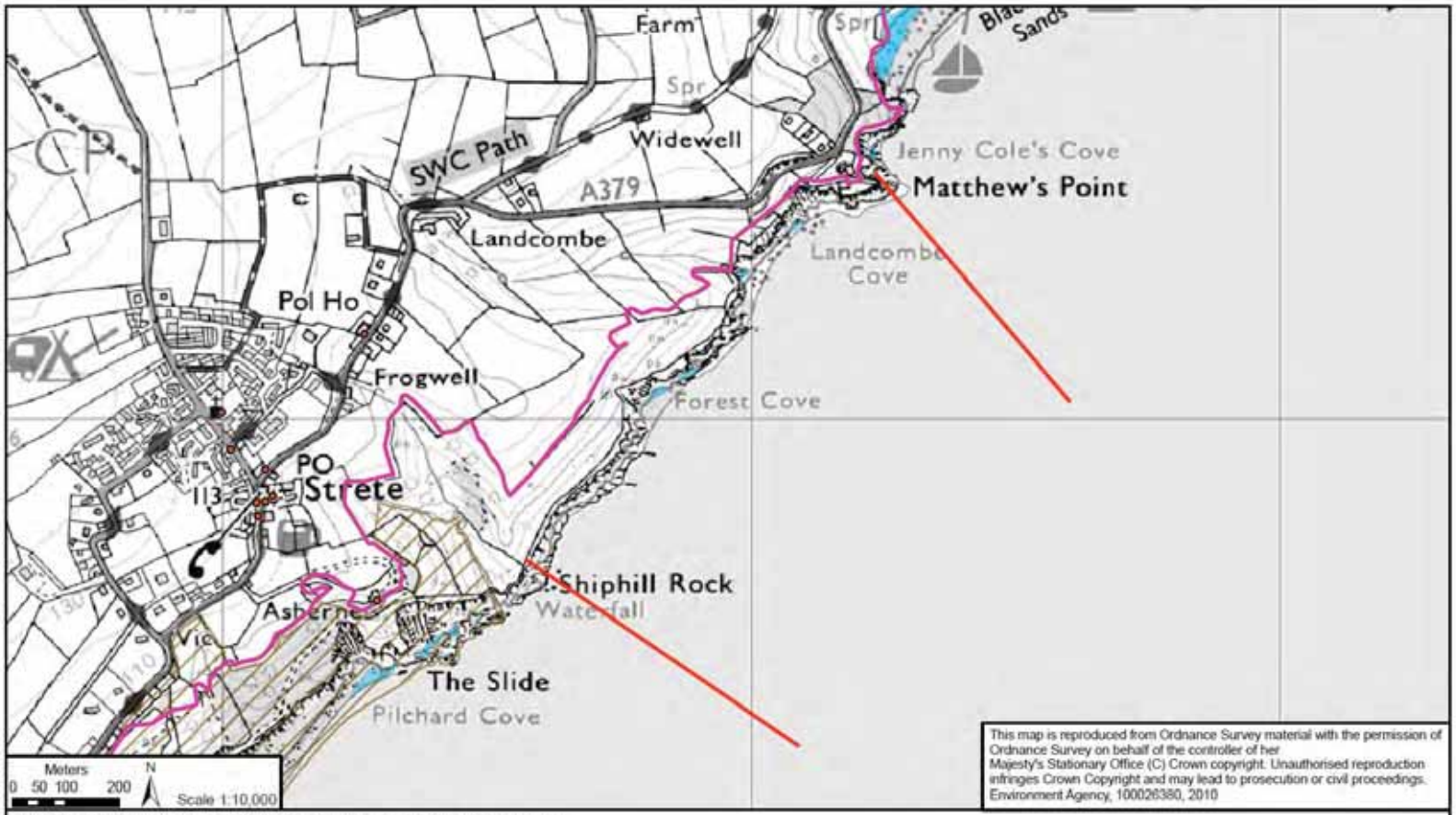

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Location reference:	**Strete to Limpet Rocks**
Policy Unit reference:	**6b75 and 6b76**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The coastline is characterised by vegetated sea cliffs, freshwater lagoons and shingle ridges. These features have formed over geological timescales as a result of a shingle barrier migrating landwards, in response to rising sea levels, and have become progressively segmented by emerging headlands. There are a number of shingle beaches along the coastline, with the longest stretch being Slapton Sands (Policy Unit 6b75) which is an important tourist attraction. At the southern end of this area is the seaward portion of the village of Torcross (Policy Unit 6b76).

This area is of outstanding environmental, landscape and geological/geomorphological value and therefore a key driver of policy is conservation of this asset through allowing natural processes to occur whilst undertaking measures to ensure the sustainability of the shingle ridge. However the A379, an important link road, runs along the crest of the Slapton Sands barrier beach and the village of Torcross also lies to the south. The A379 has recently suffered damage as a result of beach cutback and is also affected by the natural rollback of the shingle barrier, which will continue in response to sea level rise. It is therefore unsustainable in its current location. However, it is recognised that the road is also an important transport route and is of economic and social value for the area and Devon County Council are committed to maintaining the highway whilst it is technically feasible and cost effective to do so. However, there is acceptance that it will not be possible to do this indefinitely and whilst some upgrading of small inland routes is possible, these would not be sufficient to adequately replace the A379. Investigations into how the long term social and economic structure of the area could adapt to the situation when this road link is no longer viable are currently underway.

The long term vision for this coastline is to allow the beach-barrier to evolve naturally and thereby ensure its integrity and geomorphological and environmental value is maintained through to the next century. The main implication of this will be the long term loss of road access across Slapton Sands; which will become increasingly difficult to sustain in its current form. Plans therefore need to be developed now such that future transport provision is addressed in good time. In the short and medium term the policy is to allow the barrier to retreat naturally whilst enabling local measures to be put in place to allow localised realignment of the road as required.

In the long term sea level rise and increased storminess will impact upon the sustainability of continuing to defend the seaward part of Torcross. In addition, as the rest of Slapton Sands to the north will roll back landwards this could potentially lead to significant outflanking of defences here. The beaches fronting the defences along the Torcross frontage will narrow and steepen as a result of coastal squeeze resulting from sea level rise. All of these processes will increase exposure of the defences on the seaward part of Torcross to wave action and so make it increasingly technically and economically difficult to sustain defences in this position.

In the long term, realignment of these defences in some form will be required. This may involve constructing much larger defences around the more seaward part of Torcross and extending them across the southern part of the Ley towards the west. If this is not economically viable to implement, then abandoning the seaward part of Torcross will need to be considered, taking a new defence line along the western (landward) shore of Slapton Ley. However, there are a number of socio-economic assets that will be at risk under this approach and therefore the immediate future defences will be maintained as long as possible within existing economic justification, whilst adaptive measures are put in place to manage this risk and mitigate the displacement of people and loss of property and facilities.

Preferred policies to implement Plan:

From present day (short term):	The recommended short term policy for the Slapton Sands frontage is **Managed Realignment** to allow the natural retreat of the shingle barrier but enable local beach management measures to be implemented where necessary to allow local realignment of the road. The A379 coast road extends along the crest for the length of this section

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	although it is not all protected by defences. While the long term aim is to move towards a more sustainable solution, in the short term the current defences along parts of the coast road (apart from at Torcross) would be maintained (but not enhanced), as it would be economically damaging to the area to simply allow the road to be lost without suitable measures being in place. At Torcross the present-day policy is to **Hold the Line** to protect assets within the village through maintaining existing defences where this can be economically justified. This would include maintenance and any reconstruction of seawalls. As the long term policy could result in some properties being lost at Torcross it is recommended that during the short and medium term measures are investigated which will help in the management of this risk. Similarly, measures to upgrade inland routes and investigate adaptation measures for the local community in readiness for the future case when the A379 route along the shingle ridge becomes unviable should continue. These should take forward the work done to date in this regard by the Slaptonline Partnership. Local beach management activities may be required to help ensure integrity of the road and allow time for realignment of it along the shingle ridge to be undertaken as it becomes required. Under this policy the net trend for a small net drift of material from south to north along this section will continue, resulting in a net trend of accretion towards the northern end of the beach and erosion at the southern end. There will also be local fluctuations in beach levels and a beach management plan should be put in place to identify action levels for the road realignment and any necessary beach management activities. Due to the net northward drift of sediment, combined with a lack of new sediment input to the beach, coastal squeeze at Torcross will increasingly become an issue, resulting in narrower beaches.
Medium term:	The recommended medium term policy is to continue to manage the natural retreat of the shingle barrier through **Managed Realignment** along the Slapton Sands frontage. This will involve reactive realignment of the road along the barrier crest and beach management activities as necessary to maintain the integrity of the barrier. Maintenance of existing defences along the road may be carried out whilst they remain effective but new defences should not be built. During this period it may become increasingly difficult to retain the shingle ridge in a condition where it can support the road, and it will become increasingly important that inland routes are upgraded as far as possible in readiness for when the current route of the A379 becomes unsustainable to maintain. This will occur as unprotected sections of the road are eroded and can not be realigned any further. When it becomes apparent that maintaining the road link is no longer sustainable (either in part or in whole) then the road should be closed. This will have economic and social implications, Therefore adaptive measures will need to be in place to manage this process. At Torcross, a **Hold the Line** policy would continue to be implemented through maintaining the existing defences for as long as is technically possible. However, to comply with the long term Plan it will be necessary to assess whether it is economically viable to replace defences along current alignments with much larger structures than present, or if not economically viable

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	consider realigning the defences westwards to the landward side of Slapton Ley. The area at Torcross Point would become increasingly vulnerable during this period, both due to narrowing beaches and due to continuation of the south-north sediment drift along Slapton Sands. This could lead to an increased risk of the barrier breaching during this period around this location. Measures to realign the defence position either by reclaiming the southernmost part of Slapton Ley, or even completely to the landward side of Slapton Ley, will need to be considered towards the end of this period as the current alignment becomes increasingly difficult to sustain. Realignment could have social implications, therefore during this period adaptive measures may need to be 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. This policy is not considered to be detrimental to the long term Plan, as long as monitoring is undertaken to ensure that the natural retreat of the barrier is not being hindered by the presence of defences; as loss of barrier volume could occur if the barrier is held seaward of its natural position.
Longer-term:	The long term recommendation is to continue a policy of **Managed Realignment** along the whole of this coast. This will involve construction and maintenance of defences in a realigned, more sustainable position at Torcross (if not already undertaken in the medium term). It is not currently certain whether or not is will be economically viable to retain defences to the more seaward part of Torcross as defences would need to be much larger than at present, as well as extending defences along the southernmost part of Slapton Ley. If it is not economically viable to provide defence to the seaward part of Torcross in this period then consideration will need to be given to abandoning the seaward part of Torcross and moving the defence line to be realigned to the western (landward) shore of Slapton Ley. It is expected that by, or at least, during this period, it will be no longer sustainable for a transport route to exist along the barrier crest. Therefore adaptation measures will need to be in effect by this time. Any remaining defences would be allowed to fail (and be removed if necessary) to allow the ridge to rollback naturally once the road has been abandoned. Should the shingle barrier be breached during this period it would not be repaired as the policy moves towards one of **No Active Intervention** following abandonment of the A379. Any breaches are likely to impact upon the environmental interests of the Ley, although this would be a change as a result of natural processes. Studies such as that recently undertaken by the Slaptonline Partnership to investigate the impact of breaches along this stretch and saline intrusion will be needed so that measures for managing habitat change can be developed and implemented. Changes along this shoreline would not impact on the adjacent sections of coast as there is little or no sediment exchange with the beaches to the south except during infrequent high energy wave events. The small section of cliffs at the northern end of this section would be expected to continue to erode as historically, with total erosion by 2105 of about 10m predicted, depending on the occurrence of small scale cliff failure events during this period.

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Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6b75	**Strete to Torcross North (Slapton Sands)**	Allow the barrier to retreat, through **Managed Realignment**, with local beach management as necessary to support localised realignment of the A379.	Allow the barrier to retreat, through **Managed Realignment**, with local beach management as necessary to support localised realignment of the A379. Studies to investigate implementation of **No Active Intervention**.	Allow the barrier to retreat, with localised beach management as necessary through **Managed Realignment,** with **No Active Intervention** once the road is abandoned.
6b76	**Torcross North to Limpet Rocks**	Continue to maintain existing defences 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 set-back position, through **Managed Realignment**.

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Location reference:	Strete to Limpet Rocks
Policy Unit reference:	6b75 and 6b76

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 to end of effective life and localised beach management. Re-active realignment of the A379, as necessary. Maintenance of defences at Torcross.	Continued protection to people and properties in Torcross and the centre of Slapton village.	Continued management to maintain the A379 route between Torcross and Slapton.	Continued protection to Grade 2 listed buildings in Torcross.	Little change in landscape character of South Devon AONB. Generally a policy of Managed Realignment complements the AONB Management Policies e.g. at Slapton Ley NNR where there is an action to develop a strategy for adapting the reserve to predicted climate and coastal change.	Limited management intervention will allow a more naturally functioning barrier beach.	A potential breach of the barrier has the potential to impact on water quality.	Managing the realignment of Slapton Sands may result in some changes to the designated habitats at Slapton Ley SSSI/NNR but will protect the extent of the freshwater lagoons.
2025 – 2055	Maintenance of existing defences to end of effective life and localised beach management. Re-active realignment of the A379, as necessary. Maintenance of defences at Torcross, with studies to investigate realignment options.	Continued protection to people and properties in Torcross and the centre of Slapton village. Isolated properties in Strete at risk due to erosion, though risk is small due to low rates of recession. Potential beach access issues, e.g. near Strete Gate.	The A379 route between Torcross and Slapton Sands will continue to be provided as long as is feasible.	Continued protection to Grade 2 listed buildings in Torcross. Managed Realignment in the long term between Strete and Limpet has the potential to impact on Slapton prehistoric deposits and WWII sites – *potentially adverse impact*	Change in landscape character of South Devon AONB. Generally a policy of Managed Realignment complements the AONB Management Policies e.g. at Slapton Ley NNR where there is an action to develop a strategy for adapting the reserve to predicted climate and coastal change.	Limited management intervention will allow a more naturally functioning barrier beach.	No known impacts on water quality. 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.	Managing the realignment of Slapton Sands may result in some changes to the designated habitats at Slapton Ley SSSI/NNR but may protect the extent of the freshwater lagoons.
2055 – 2105	Re-active realignment of the A379, as long as is cost-effective, together with supporting beach management. Construction of set back defences at Torcross.	Potential loss of assets at Torcross, under a Managed Realignment policy. People and properties in Slapton Sands in the centre of Slapton village at risk from flooding/erosion in long term Isolated properties in Strete at risk due to erosion, though risk is small due to low rates of recession. Potential for loss of tourist facilities, beach access and car parks.	The A379 route between Torcross and Slapton Sands will continue to be provided as long as is feasible, but road is likely to be lost during this period.	Potential risk to Grade 2 listed buildings in Torcross when Managed Realignment implemented, depending upon location of realignment. Managed Realignment in the long term between Strete and Limpet has the potential to impact on Slapton prehistoric deposits and WWII sites – *potentially adverse impact*	Change in landscape character of South Devon AONB. Generally a policy of Managed Realignment complements the AONB Management Policies e.g. at Slapton Ley NNR where there is an action to develop a strategy for adapting the reserve to predicted climate and coastal change.	Limited management intervention will allow a more naturally functioning barrier beach.	No known impacts on water quality. 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.	In the long term, likely changes to the salinity of the Slapton Ley due to a potential breach of shingle barrier beach at Slapton Sands resulting in a change to the lake system from freshwater to a tidal lagoon. This would result in a change in the flora and fauna that the lagoon currently supports and to the SSSI interests of the Ley. The timescales of these events depend on prediction scenarios for wave energy and sea level changes and storm return periods. However, this policy will allow natural functioning of the system.

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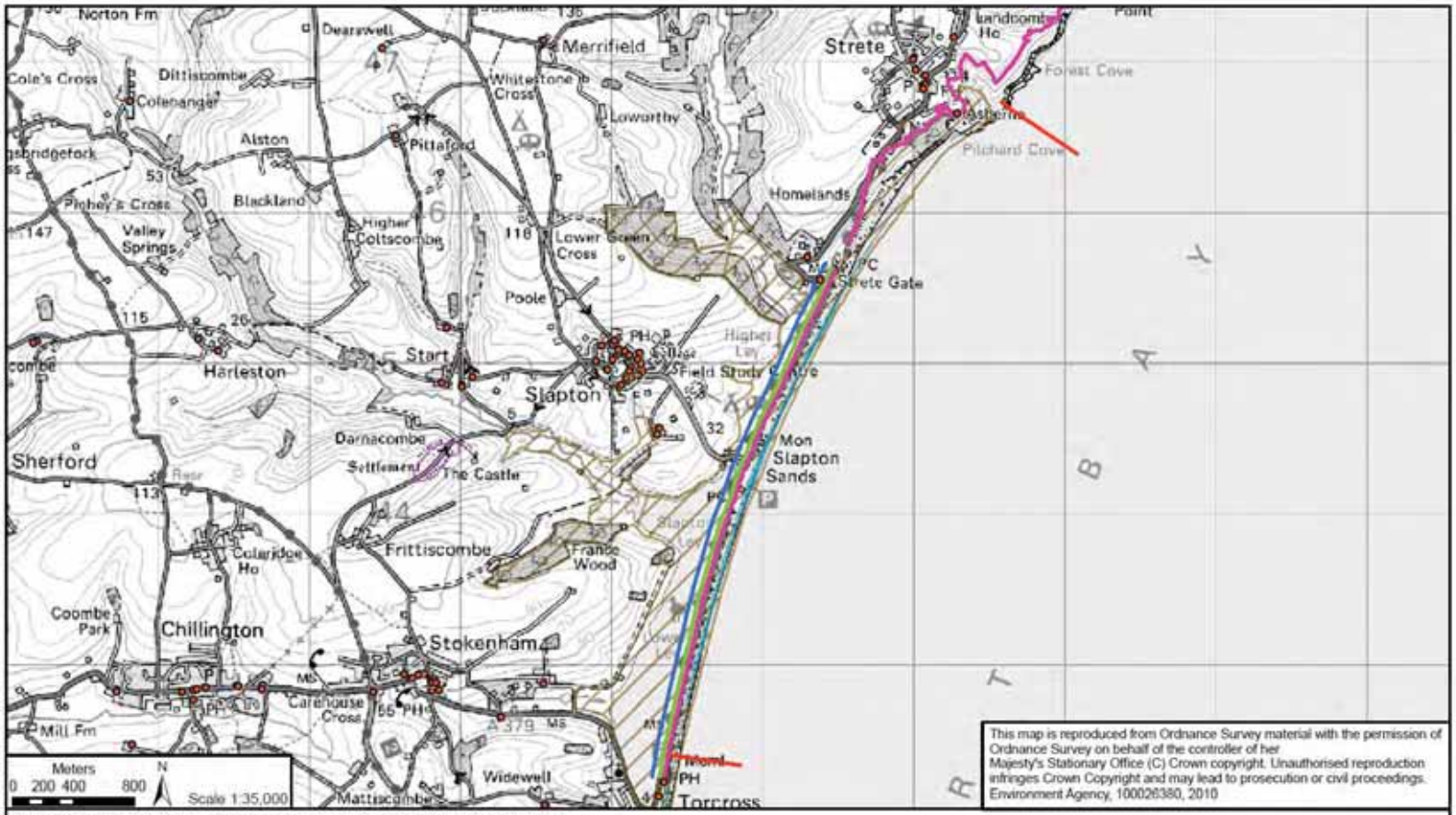

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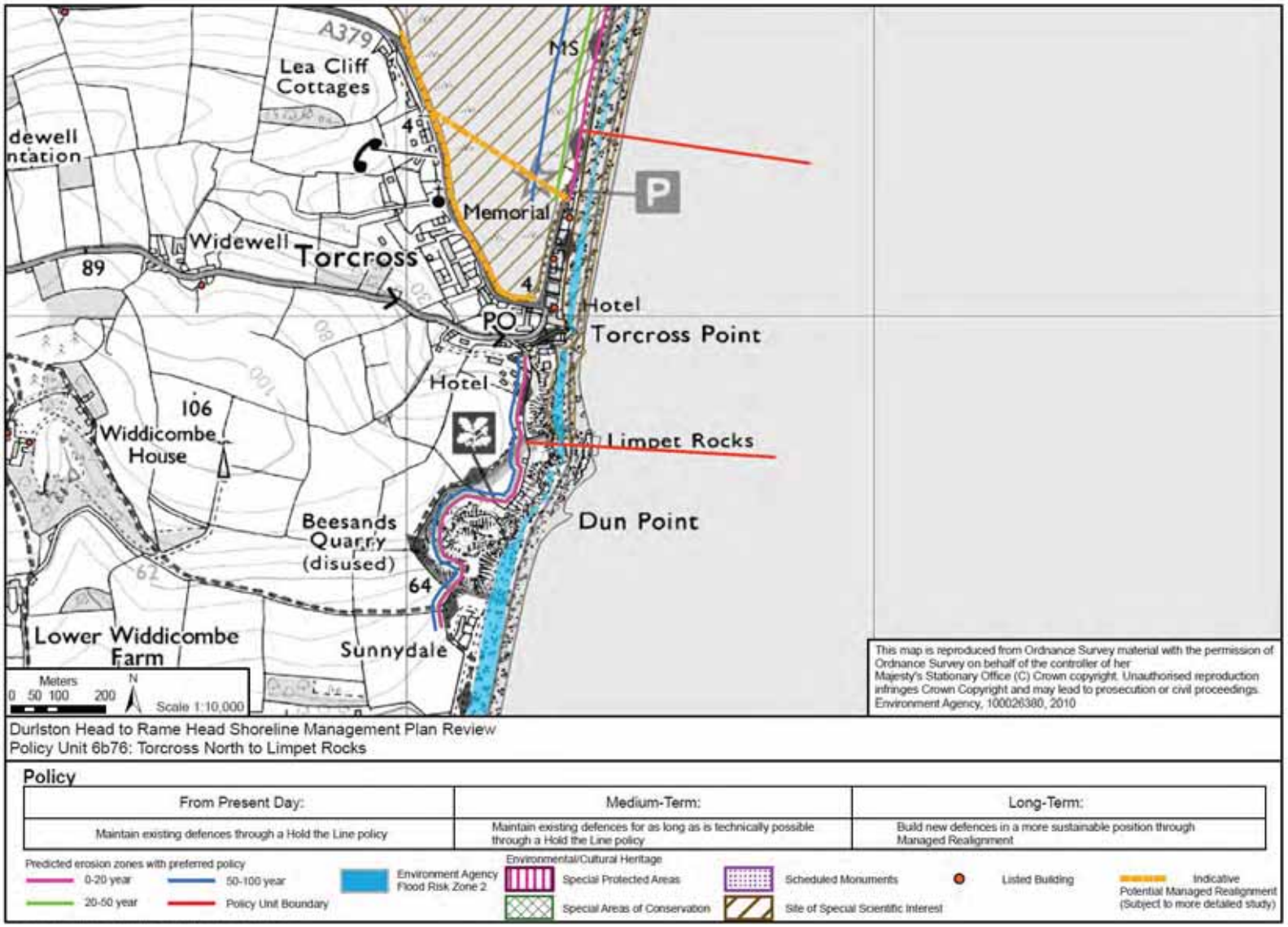

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Location reference:	**Limpet Rocks to Beesands**
Policy Unit reference:	**6b77 and 6b78**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section of coastline within Start Bay consists of an area of low-lying land backed by rising ground, fronted by a shingle barrier beach and bounded at its northern and southern ends by rock headlands. Sediment is largely confined to this section, with only infrequent transport of material to and from adjacent beaches during high energy wave events. The shingle beach along this stretch is one of several within Start Bay that have evolved as a result landward transgression of a larger shingle barrier system which over geological timescales has progressively become segmented by emerging headlands.

This section of coast is an important tourist attraction as well as being of outstanding environmental, landscape and geological/geomorphological value. There are a number of properties along this section at risk from either erosion or flooding, the majority of which are located within the village of Beesands on the south side of Widdicombe Ley. The long term vision is to manage this coast in order that a more sustainable, naturally functioning coastal system may be achieved, whilst ensuring continued protection to much of Beesands, which has recently had new defences constructed with a 100 year scheme life along its southern part.

Implementation of this policy would involve allowing the beach to roll back landwards into Widdicombe Ley, whilst taking steps to minimise any increased flood risk this may pose to the developed area of Beesands on the southern side of the Ley. As a result of this the link along Widdicombe Ley between the northern end of Beesands village and Beesands Cellars on the northern side of the Ley would not be maintained. This policy would result in the potential loss of some assets, including the current car park and a few low-lying properties along the northern end of Beesands; therefore measures will need to be in place to manage this transition from existing policy.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** through maintenance of the existing seawall and rock revetment that are present along the southern part of this frontage, providing protection against flooding and erosion. The remainder of this section is undefended and is backed by Widdicombe Ley which would be allowed to evolve naturally through **No Active Intervention**. The beach has a long term trend of erosion, with narrowing and steepening having occurred historically, a situation exacerbated by the presence of the defences that back the beach. There is no contemporary sediment supply to the beach and so coastal squeeze as a result of sea level rise is likely to increase. This will result in further narrowing and steepening of the defended parts of the beach, whilst the unprotected northern part could rollback onto the low-lying land behind. Whilst maintenance of the defences would be undertaken during this period, measures would be developed to allow the realignment of defences along parts of the Beesands frontage in the medium to long term to accommodate this natural evolution and manage the transition between the defended and undefended parts of this stretch of coast. The rock headlands of Limpet Rocks and Tinsey Head that bound this section would be expected to erode slowly as has occurred historically.
Medium term:	The recommended medium term policy is to continue to **Hold the Line** at Beesands through maintenance of the existing seawall and rock revetment, providing protection against flooding and erosion. The remainder of this section is undefended and is backed by Widdicombe Ley which would be allowed to evolve naturally through **No Active Intervention**. However,

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	consideration may need to be given to localised realignment of defences at the northern end of Beesands village to manage the transition from the defended to undefended coast such that flood and erosion risk to the rest of Beesands continues to be reduced. Sea level rise would be expected to cause further narrowing and steepening of the beach where it is backed by defences, whilst the natural tendency for the beach ridge would be to roll back in response to sea level rise, and this could occur along the unprotected northern part of the beach. This could lead to a step change in the shoreline plan form and result in increased wave exposure of the defended southern part of this section. Therefore defences may be required in a realigned position at the base of the higher ground in the area along the northern end of Beesands village to minimise the risk of flooding and erosion, whilst the fronting beach is allowed to roll back naturally into Widdicombe Ley. The recently constructed defences along the southern part of Beesands would continue to be maintained during this period. Erosion of the rock headlands that bound this section is expected to continue as has occurred historically, with total erosion of 10 to 12m predicted by 2055 depending on the occurrence of small scale cliff failure events during this period. This erosion is more likely at Limpet Rocks than Tinsey Head. These headlands would, however, remain prominent features.
Long term:	The recommended long term policy is to continue to **Hold the Line** at Beesands through maintenance and improvement of the defences along this section, providing protection against flooding and erosion. The remainder of this section is undefended and is backed by Widdicombe Ley which would be allowed to evolve naturally through **No Active Intervention**. However (if not undertaken in the medium term) consideration may need to be given to localised realignment of defences at the northern end of Beesands village to manage the transition from the defended to undefended coast such that flood and erosion risk to the rest of Beesands continues to be reduced. Roll back of the beach ridge along the unprotected northern section would continue in response to sea level rise. As a consequence the northern end of the defences at Beesands could become a new 'headland', and an embayment start to form between this and Limpet Rocks. This could affect the integrity of the barrier and could result in increased risk of breaching along this section, particularly at the start of the defences. Along the remaining part of Beesands the defences would continue to be maintained along existing alignments. The fronting beaches would be expected to continue to narrow and steepen and could disappear at the southern end of this stretch. This would increase the risk of flooding and erosion to the small number of properties at the southern end of Beesands village and it may be appropriate to consider relocating assets away from areas of risk along the southern part of Beesands rather than building higher defences. The rock headlands that bound this section would be expected to continue to erode as historically, with total erosion by 2105 of between 10 and 25m predicted depending on the occurrence of small scale cliff failure events during this period. This erosion is more likely at Limpet Rocks than Tinsey Head.

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Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b77	Limpet Rocks to Beesands (North)	**No Active Intervention** along this largely undefended stretch.	**No Active Intervention** along this largely undefended stretch.	**No Active Intervention** along this largely undefended stretch.
6b78	Beesands	Maintain existing defences where they occur, through **Hold the Line**.	Maintain existing defences where they occur, through **Hold the Line**. Possibly undertake **Managed Realignment** along northern parts of this stretch as it becomes unsustainable to maintain the existing line of defence.	Maintain existing defences where they occur, through **Hold the Line**. Possibly undertake **Managed Realignment** along northern parts of this stretch as it becomes unsustainable to maintain the existing line of defence.

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Location reference:	Limpet Rocks to Beesands
Policy Unit reference:	6b77 and 6b78

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, and possibly beach management activities, would occur.	Protection of people and property on the sea front at Beesands from flooding Potential flooding of promenade at Beesands	There is likely to be some slip ways and mooring vulnerable to flooding and erosion. Potential loss of car park along Widdicombe Ley frontage unless relocated as part of localised realignment.	Grade 2 listed buildings protected from flooding at Beesands	Change in landscape character of South Devon AONB.	Holding the line at Beesands in the southern section of this policy unit has the potential to adversely affect the geological features of Hallsands to Beesands SSSI (geological) and GCRs	No known impacts on water quality. Works to maintain the existing defences 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.	Protection of freshwater habitats at Widdicombe Ley CWS
2025 – 2055	Implementation of Managed Realignment, as well as continued maintenance of existing defences, and possibly beach management activities, would occur.	People and property on the sea front at Beesands at risk from flooding/ erosion Potential flooding of promenade at Beesands South West Coast Path south of Beesands at risk due to erosion/ flooding.	There is likely to be some slip ways and mooring vulnerable to flooding and erosion. Potential loss of car park along Widdicombe Ley frontage unless relocated as part of localised realignment.	Grade 2 listed buildings at risk of flooding at Beesands when Managed Realignment implemented	Change in landscape character of South Devon AONB.	A move towards Managed Realignment in this policy unit would allow the geological features of Hallsands to Beesands SSSI (geological) and GCRs to function naturally.	No known impacts on water quality. 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.	Net area of freshwater habitat at Widdicombe Ley CWS may be reduced
2055 – 2105	Implementation of Managed Realignment, as well as continued maintenance of existing defences, and possibly beach management activities, would occur.	People and property on the sea front at Beesands at risk from flooding/ erosion Potential flooding of promenade at Beesands South West Coast Path south of Beesands at risk due to erosion/ flooding.	There is likely to be some slip ways and mooring vulnerable to flooding and erosion. Potential loss of car park along Widdicombe Ley frontage unless relocated as part of localised realignment.	Grade 2 listed buildings at risk of erosion/flooding in parts of Beesands	Change in landscape character of South Devon AONB.	A move towards Managed Realignment in this policy unit would allow the geological features of Hallsands to Beesands SSSI (geological) and GCRs to function naturally.	No known impacts on water quality. 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.	Net area of freshwater habitat at Widdicombe Ley CWS may be reduced

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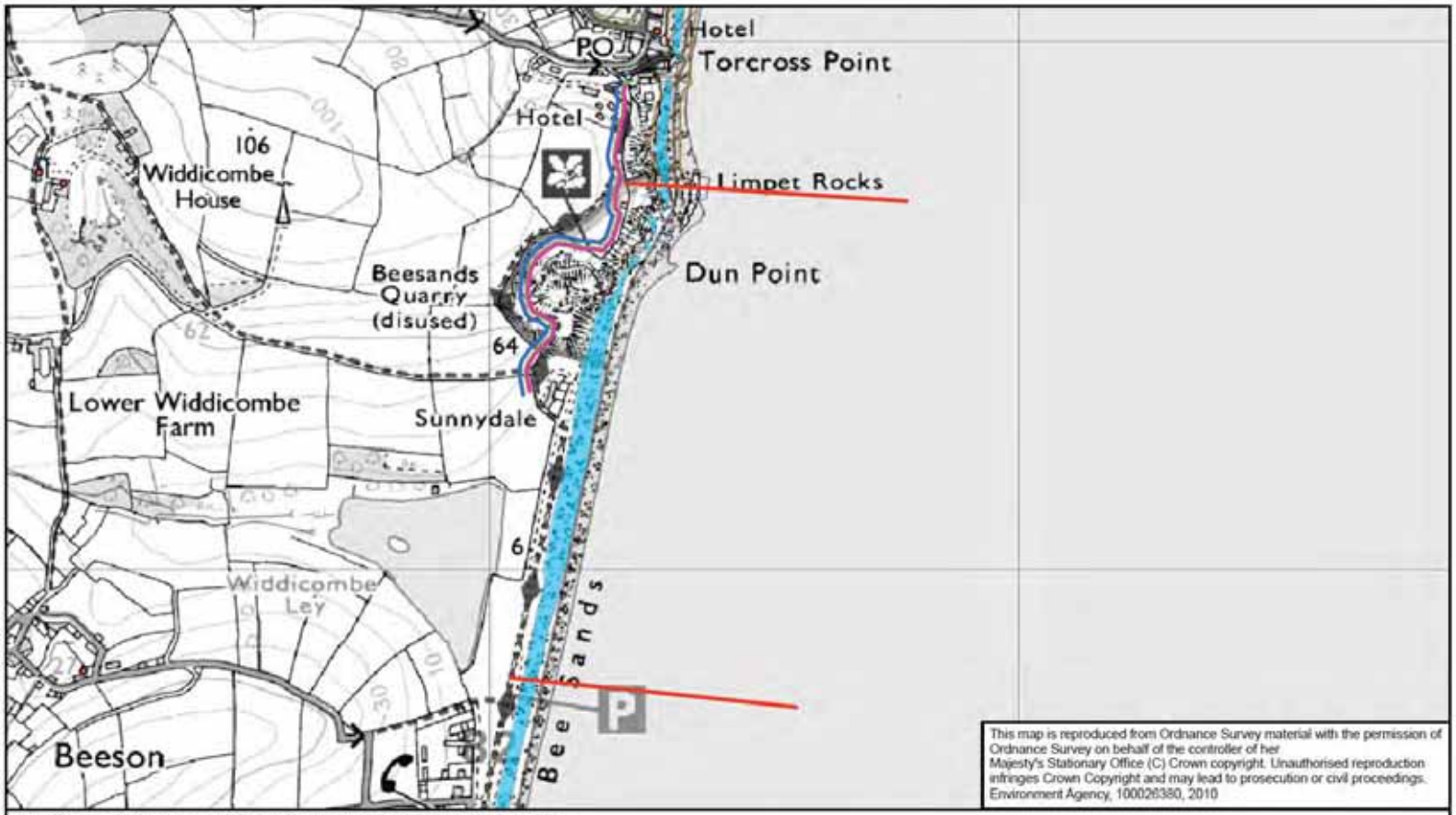

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6b77: Limpet Rocks to Beesands (North)

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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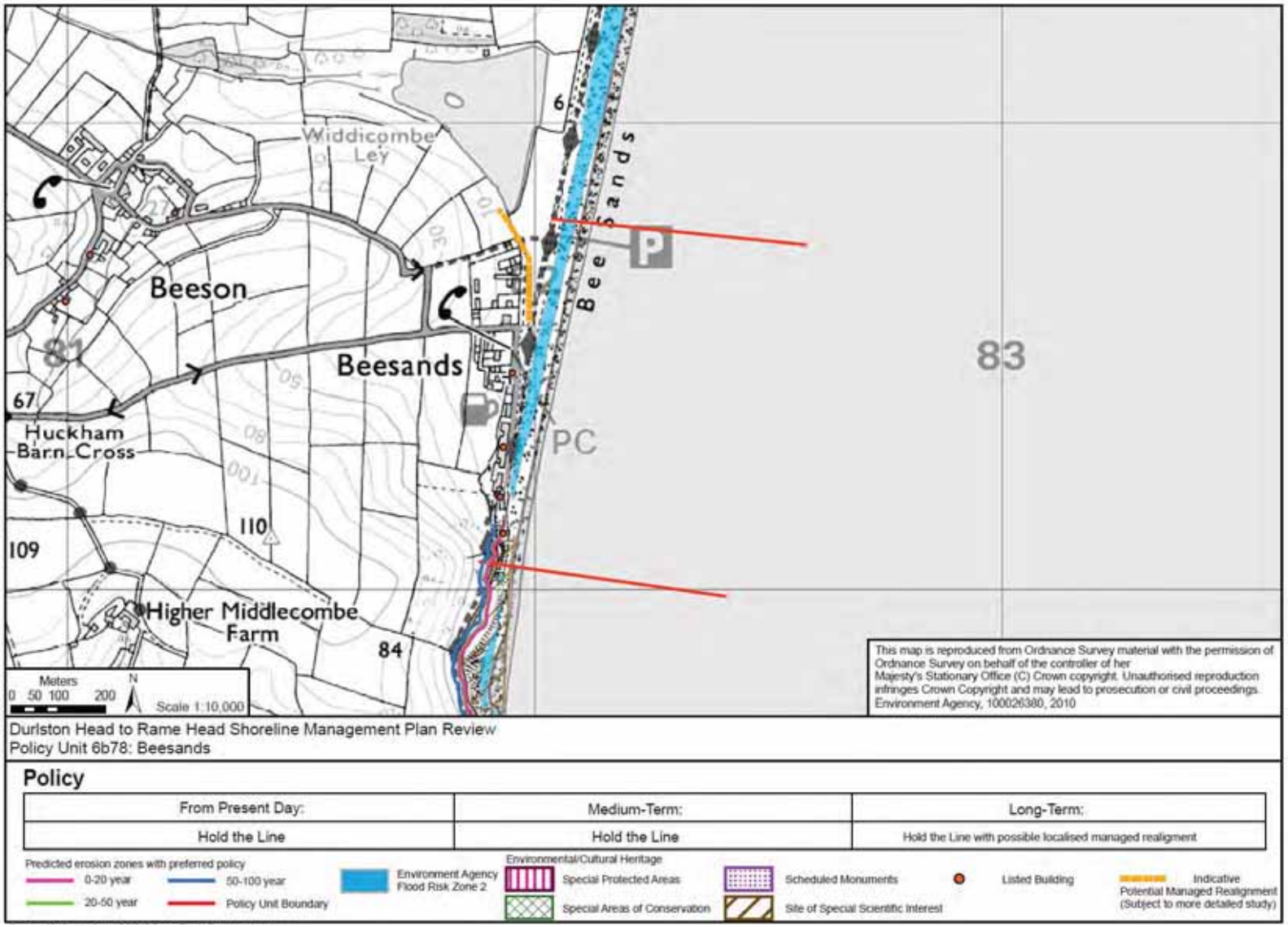

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Location reference:	**Beesands (South) to Start Point**
Policy Unit reference:	**6b79**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section of coast has outstanding environmental, landscape, geological and geomorphological value. The long term vision is therefore to allow a naturally functioning coastal system.

With the natural evolution of this coastline, there would continue to be slow cliffline retreat. This could potentially cause the loss of a number of listed buildings over this period, depending upon where future cliff failure events occur.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention** along this largely undefended section of coast. The cliffs along this section consist of hard, resistant rock that has eroded very little over the long term. This will continue, with negligible cliff recession over this period. In places, narrow beaches front the steep cliffs and these would continue to narrow. Whilst there are no defences present along most of this section, there has been ad-hoc rock placement at the back of Hallsands beach to protect a local development. Maintenance of these defences is unlikely to attract public (flood and coastal defence) funding, however, there are no technical reasons, i.e. impacts upon sediment processes, that preclude defences being maintained in their current location until the end of their effective life. At Hallsands the beach fronts a small valley: this is likely to remain in a similar form to today, although there could be steepening of the beach, which could start to undermine the rock defences here.
Medium term:	The medium term policy is for continuation of **No Active Intervention**. Negligible erosion of the hard rock cliffs that dominate this section is predicted. Many of the narrow beaches that front the steep cliffs could become submerged under a scenario of accelerated sea level rise. At Hallsands, beach narrowing will continue, which will place increased pressure on the defences. If not maintained in the short term, the rock placement is likely to fail, but due to rising sea levels it is likely that, even if maintained, it would become less effective during this period due to rising sea levels. There could also be an increased risk of localised flooding. If defences at Hallsands are to be maintained (by private funds – *(refer also to Section 5.2.2 'Private Defences'*), they would require significant and costly improvement during this period with larger defences than at present in order to continue to be effective at protecting this area in the longer-term. This may impact on the natural roll back of the beach and would have adverse impacts on the landscape character and geological interests of the area and as such would require further environmental assessment at scheme level.
Longer-term:	**No Active Intervention** would remain as the long term policy for this coast, allowing it to continue to evolve naturally. Negligible erosion of the hard rock cliffs would be expected. At Hallsands there would be continued migration of the beach in response to sea level rise, which would become increasing contained within the small

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valley. This would be unlikely to result in increased erosion of the cliffs on either side of this pocket beach. There could be an increased risk of very localised flooding. If they have been maintained (by private funds) then the continued presence of defences at Hallsands will constrain this beach migration.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6b79	Beesands (South) to Start Point	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**.

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Location reference:	Beesands (South) to Start Point
Policy Unit reference:	6b79

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. Localised defences at Hallsands may be maintained (if funds are available).	Properties at Hallsands unlikely to be at risk of erosion in this period due to continued defence.	Small areas of Grade 3 and 5 agricultural land at risk due to erosion between Bee Sands and Start point	Hallsands 'lost village' at risk of further damage	Change in landscape character of South Devon AONB. Generally a policy of NAI complements the AONB Management Policies though if permitted, continued defence works at Hallsands are likely to adversely impact upon landscape character.	Continuation of natural processes is key to the integrity of the SSSIs and GCRs; NAI along the coast would continue to maintain these features. However, if continued defence works are permitted at Hallsands, they would adversely affect the designated geological interests.	No known impacts on water quality.	Potential for change in cliff top vegetation through erosion at Prawle Point and Start Point SSSI.
2025 – 2055	Continued slow cliffline retreat would occur. Localised defences at Hallsands may be maintained (if funds are available).	Isolated properties in Hallsands at risk due to erosion South West Coast Path south of Beesands at erosion risk.	Small areas of Grade 3 and 5 agricultural land at risk due to erosion between Bee Sands and Start point-.	Hallsands 'lost village' at risk of further erosion	Change in landscape character of South Devon AONB. Generally a policy of NAI complements the AONB Management Policies, though if permitted, continued defence works at Hallsands are likely to adversely impact upon landscape character.	Continuation of natural processes is key to the integrity of the SSSIs and GCRs; NAI along the coast would continue to maintain these features. However, if continued defence works are permitted at Hallsands, they would adversely affect the designated geological interests.	No known impacts on water quality.	Potential for change in cliff top vegetation through erosion at Prawle Point and Start Point SSSI.
2055 – 2105	Continued slow cliffline retreat would occur. Localised defences at Hallsands may be maintained (if funds are available).	Isolated properties in Hallsands at risk due to erosion. South West Coast Path south of Beesands at erosion risk.	Small areas of Grade 3 and 5 agricultural land at risk due to erosion between Bee Sands and Start point.	Hallsands 'lost village' at risk of further erosion	Change in landscape character of South Devon AONB. Generally a policy of NAI complements the AONB Management Policies, though if permitted, continued defence works at Hallsands are likely to adversely impact upon landscape character through the construction of larger defence structures.	Continuation of natural processes is key to the integrity of the SSSIs and GCRs; NAI along the coast would continue to maintain these features. However, if continued defence works are permitted at Hallsands, they would adversely affect the designated geological interests.	No known impacts on water quality.	Potential for change in cliff top vegetation through erosion at Prawle Point and Start Point SSSI.

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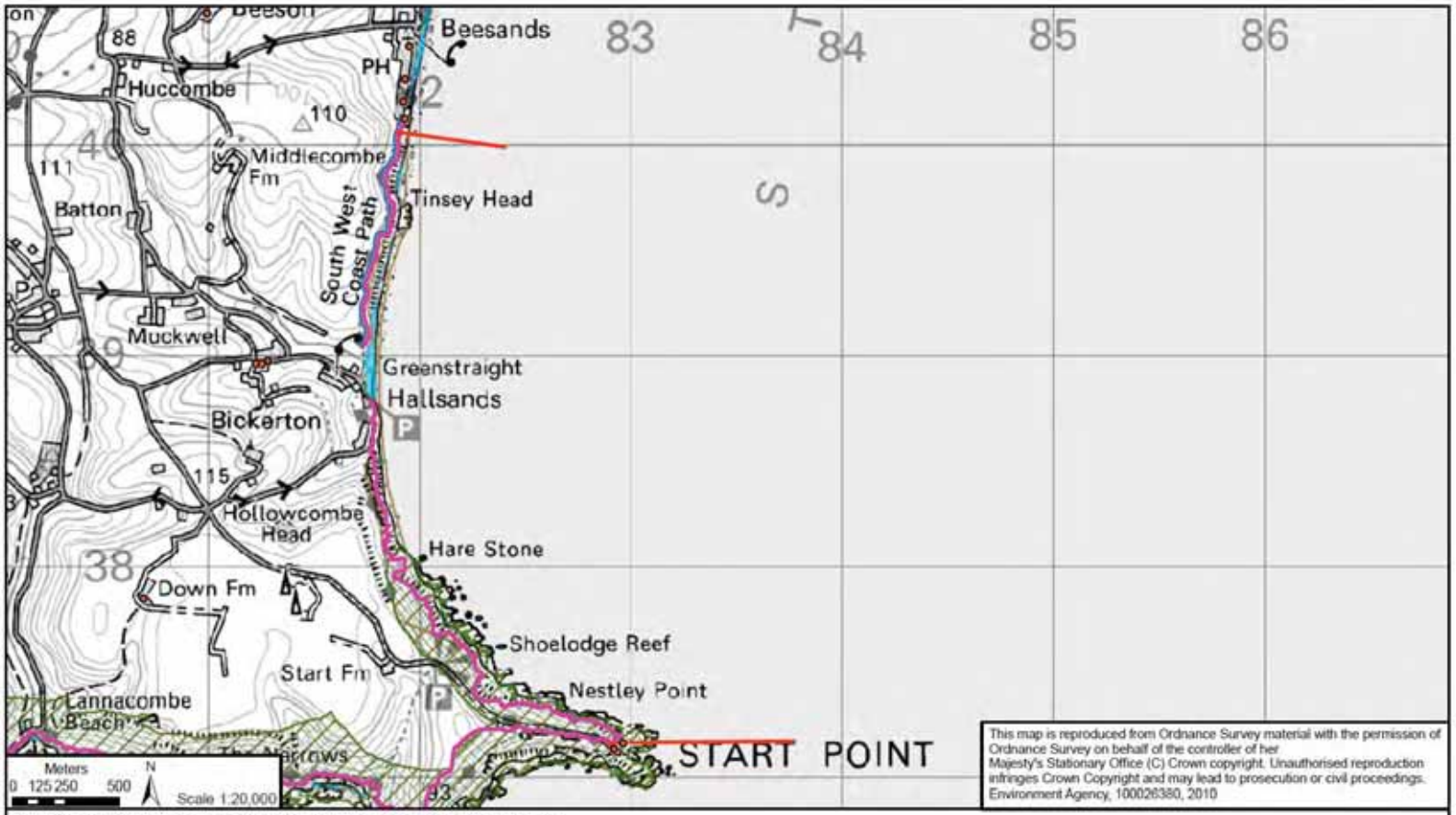

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6b79: Beesands (South) to Start Point

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
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:	**Start Point to Limebury Point**
Policy Unit reference:	**6c01 and 6c02**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section of hard rock cliffs is undefended along almost its entire length, and is characterised by cliffs of outstanding landscape and geological /geomorphological value, the continued natural functioning of which is a key policy driver. As such, the long term vision of the Plan is to allow this shoreline to evolve naturally.

This would have a beneficial impact on the geological features within this unit, particularly within Start Point to Prawle Point SSSI. However, there is the potential for a net change in the extent of internationally designated habitat (e.g. SAC cliff top vegetation).

The continued small scale, infrequent cliff failure events could potentially result in the loss of parts of two scheduled monuments situated along the cliff top of this stretch of coast.

The only defences along this section are private ones at the back of Lannacombe Beach, which protect an isolated property against the risk of flooding whilst also providing access to the coast. Although it is unlikely that continuing to defend here would attract public funding, there are no technical (coastal process impact) reasons for not maintaining and providing defence in the future should alternative (private) funds be available (refer also to Section 5.2.2 'Private Defences').

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention** along this predominantly undefended section of coast. Negligible cliff recession is predicted over this period. The small pocket beaches fluctuate seasonally but have remained largely unchanged over the long term. These are supplied by erosion of the slightly more erodible cliffs within which they are located. There is little, if any, interaction with adjacent beaches. If private funds are available to maintain the seawall defence at Lannacombe Beach which protect an isolated property, these will have no adverse impact upon sediment processes elsewhere and thus would be permissible on technical grounds.
Medium term:	The medium term policy is to continue **No Active Intervention** along this section of coast. Cliff recession would continue to be negligible for most areas, although faster rates of cliff recession within slightly softer cliffs could occur, although this is not expected to exceed 10m. Sea level rise could lead to the narrowing and possible submergence of the pocket beaches that indent the cliffs along this section, as there is insufficient supply of sediment from localised cliff erosion, or where beaches front resistant cliffs and are unable to roll landwards. The defence at Lannacombe could continue to be retained during this period, if (private) funds are available. However, sea level rise could also cause the narrowing of Lannacombe Beach and this would put pressure on any defences; therefore the sustainability of maintaining these would need to be considered.
Longer-term:	The long term policy is to continue **No Active Intervention** along this predominantly undefended section of coast, which would be allowed to continue to evolve naturally as a result.

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There would be negligible cliff recession, although very localised small scale cliff failures could occur. It is unlikely that erosion would be greater than 10m along any part of this shoreline.

As sea levels rise, there would continue to be further narrowing and submergence of remaining pocket beaches.

Sea level rise could cause further narrowing and even likely loss of Lannacombe Beach and this would put pressure on any remaining defences (if maintained through private funds). The sustainability of maintaining these would need to be reviewed as they would need to be re-built and much larger than the present defences, so would be more costly to construct.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6c01	Start Point to Prawle 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**.
6c02	Prawle Point to Limebury 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**.

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Location reference:	Start Point to Limebury Point
Policy Unit reference:	6c01 and 6c02

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. Maintenance of the short length of defence at Lannacombe (if private funds available).	Isolated properties at potential risk at both Lannacombe beach (if defences not maintained) and to the west of Lannacombe Beach.	Grade 3 and 4 agricultural land at minor risk of erosion - although erosion rates very low (<10m).	Potential loss of a very small area of the Coaxial Field System Scheduled Monument	Minimal change in landscape character of South Devon AONB and Heritage Coast.	Continuation of natural processes is key to the integrity of Prawle Point and Start Point SSSI; NAI along the coast would continue to maintain and enhance the geological interest features.	No known impacts on water quality.	Sea level rise may accelerate natural erosion patterns resulting in the loss of vegetated sea cliffs at South Devon Shore Dock SAC. However, this would not be a result of a change in SMP policy – *no significant impacts* Continuation of natural processes is key to the integrity of the Prawle Point and Start Point SSSI (biological): NAI would continue to maintain the biological interest features and enhance the lower cliff vegetation above the intertidal zone
2025 – 2055	Continued slow cliffline retreat would occur. Maintenance of the short length of defence at Lannacombe (if private funds available).	Isolated properties at potential risk at both Lannacombe beach (if defences not maintained) and to the west of Lannacombe Beach.	Grade 3 and 4 agricultural land at minor risk of erosion - although erosion rates very low (<10m).	Potential loss of part of the Coaxial Field System Scheduled Monument	Minimal change in landscape character of South Devon AONB and Heritage Coast.	Continuation of natural processes is key to the integrity of Prawle Point and Start Point SSSI; NAI along the coast would continue to maintain and enhance the geological interest features.	No known impacts on water quality.	Sea level rise may accelerate natural erosion patterns resulting in the loss of vegetated sea cliffs at South Devon Shore Dock SAC. However, this would not be a result of a change in SMP policy – *no significant impacts* Continuation of natural processes is key to the integrity of the Prawle Point and Start Point SSSI (biological); NAI would continue to maintain the biological interest features and enhance the lower cliff vegetation above the intertidal zone
2055 – 2105	Continued slow cliffline retreat would occur. Maintenance of the short length of defence at Lannacombe (if private funds available) – but likely to be unsustainable	Isolated properties at potential risk at both Lannacombe beach (if defences not maintained) and to the west of Lannacombe Beach.	Grade 3 and 4 agricultural land at minor risk of erosion - although erosion rates very low (<10m).	Potential loss of part of the Coaxial Field System Scheduled Monument	Minimal change in landscape character of South Devon AONB and Heritage Coast.	Continuation of natural processes is key to the integrity of Prawle Point and Start Point SSSI; NAI along the coast would continue to maintain and enhance the geological interest features.	No known impacts on water quality.	Sea level rise may accelerate natural erosion patterns resulting in the loss of vegetated sea cliffs at South Devon Shore Dock SAC. However, this would not be a result of a change in SMP policy – *no significant impacts* Continuation of natural processes is key to the integrity of the Prawle Point and Start Point SSSI

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:	Start Point to Limebury Point							
Policy Unit reference:	6c01 and 6c02							
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**
								(biological); NAI would continue to maintain the biological interest features and enhance the lower cliff vegetation above the intertidal zone

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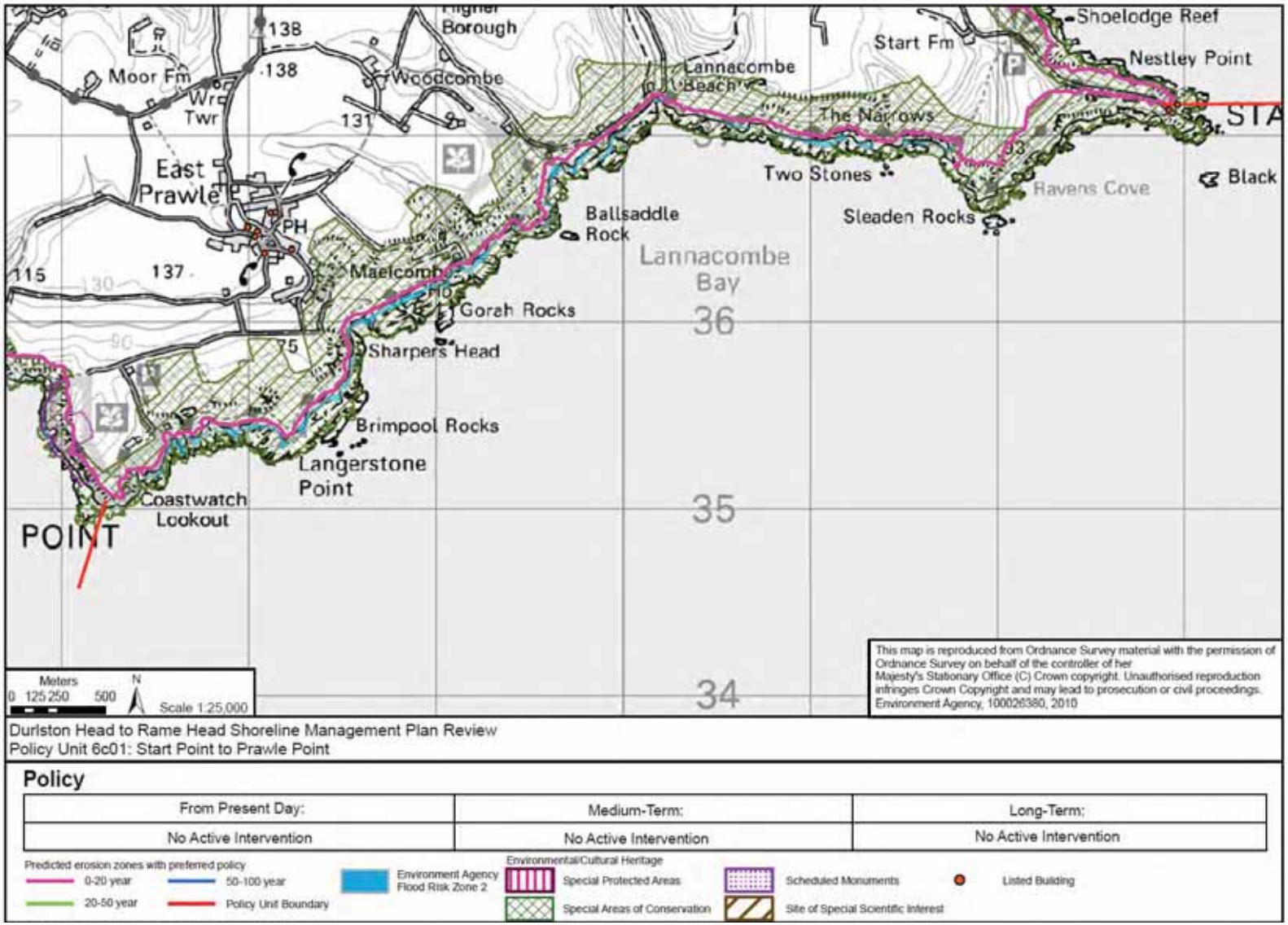

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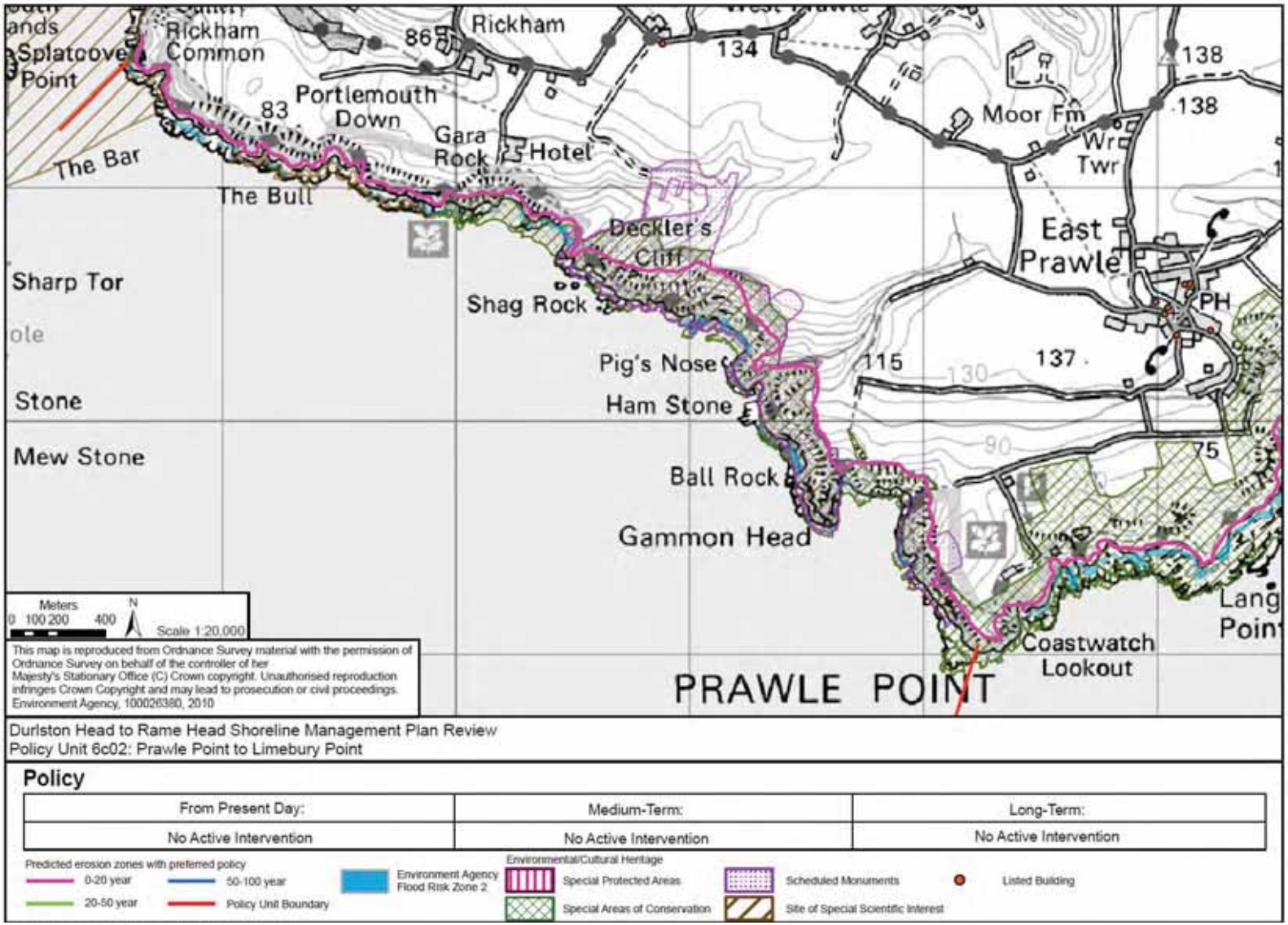

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Location reference:	**Salcombe Harbour (Limebury Point to Kingsbridge Estuary – Scoble Point)**
Policy Unit reference:	**6c03**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section of the eastern side of Salcombe Harbour, which forms part of the outer section of the Kingsbridge Estuary, is largely natural, although there are a number of scattered settlements and infrastructure which are currently protected from flooding. The long term Plan is to continue to provide defence to these areas such that flood risk in these areas continues to be reduced. This continued defence would lead to the loss of some designated intertidal habitat due to coastal squeeze, although the majority of this section, which would remain undefended, would continue to evolve naturally.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** where there are existing defences which reduce flood risk to a number of scattered settlements. This would be achieved through maintenance of the existing structures which include flood walls and embankments. Elsewhere a policy of **No Active Intervention** would be adopted.
Medium term:	The medium term policy is to continue to **Hold the Line** and minimise flood risk to settlements along this section of shoreline through maintaining and if necessary raising and replacing existing defences to maintain an adequate standard of protection. A consequence of continued defence of these areas would be the further loss of inter-tidal areas through coastal squeeze. Elsewhere a policy of **No Active Intervention** would be adopted; it is not intended that any new areas would be defended. Existing river and tidal processes would continue relatively unchanged in the rural areas surrounding the estuaries.
Longer-term:	The long term policy is to continue to **Hold the Line** through improving and rebuilding of existing defence structures in order to retain adequate protection. Elsewhere, the policy of **No Active Intervention** will remain. Defence of the populated areas would continue to minimise localised flood risk. In these areas there will, however, continue to be loss of inter-tidal area. Existing river and tidal processes would continue relatively unchanged.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6c03	**Salcombe Harbour (Limebury Point to Kingsbridge Estuary - Scoble Point)**	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are 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.

Location reference:	Salcombe Harbour (Limebury Point to Kingsbridge Estuary – Scoble Point)
Policy Unit reference:	6c03

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	Ongoing maintenance of existing defences. The undefended parts of the estuary would continue to evolve naturally.	Isolated properties at potential risk from flooding. Potential risk of flooding to some community and recreational amenities.	Grade 3 and 4 agricultural land at potential risk of flooding. Local roads will continue to be protected against the risk of flooding.	Grade 2 and 3 listed buildings at risk of flooding in parts of this section.	Limited change in landscape character of South Devon AONB and Heritage Coast	No known impacts on geology or soils.	No known impacts on water quality.	Potential loss of intertidal habitat along defended areas, therefore impact on Kingsbridge Estuary SSSI (biological) and LNR. No adverse effect is anticipated on the Prawle Point to Plymouth Sound and Eddystone pSAC.
2025 – 2055	Ongoing maintenance and potential improvement of existing defences. The undefended parts of the estuary would continue to evolve naturally.	Isolated properties at potential risk from flooding. Potential risk of flooding to some community and recreational amenities.	Grade 3 and 4 agricultural land at potential risk of flooding. Local roads will continue to be protected against the risk of flooding.	Grade 2 and 3 listed buildings at risk of flooding in parts of this section.	Limited change in landscape character of South Devon AONB and Heritage Coast	No known impacts on geology or soils.	No known impacts on water quality.	Potential loss of inter-tidal habitat along defended areas, therefore impact on Kingsbridge Estuary SSSI (biological) and LNR. No adverse effect is anticipated on the Prawle Point to Plymouth Sound and Eddystone pSAC.
2055 – 2105	Ongoing maintenance and potential improvement of existing defences. The undefended parts of the estuary would continue to evolve naturally.	Isolated properties at potential risk from flooding. Potential risk of flooding to some community and recreational amenities.	Grade 3 and 4 agricultural land at potential risk of flooding. Local roads will continue to be protected against the risk of flooding.	Grade 2 and 3 listed buildings at risk of flooding in parts of this section.	Limited change in landscape character of South Devon AONB and Heritage Coast	No known impacts on geology or soils.	No known impacts on water quality.	Potential loss of inter-tidal habitat along defended areas, therefore impact on Kingsbridge Estuary SSSI (biological) and LNR. No adverse effect is anticipated on the Prawle Point to Plymouth Sound and Eddystone pSAC.

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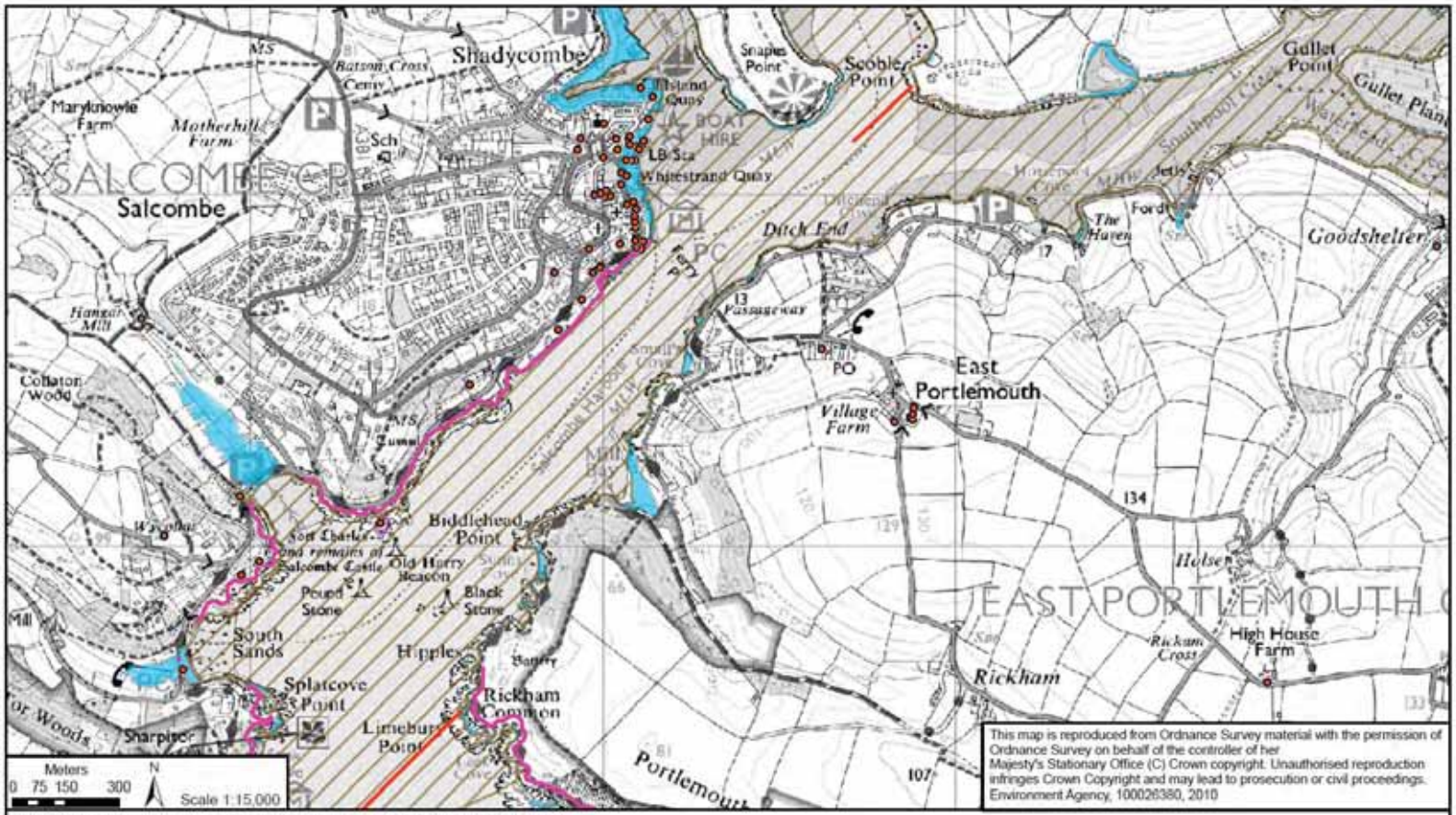

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Location reference:	**Kingsbridge Estuary**
Policy Unit reference:	**6c04 to 6c06**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The Kingsbridge Estuary system is largely natural and unconstrained; although some developed areas are defended. The estuary would be expected to undergo landward translation in response to rising sea levels in the natural areas though this would be constrained locally where defences are in place or where the estuary is bounded by steeply rising land. In these areas there it is likely that gradual loss of inter-tidal areas would occur.

There are a number of defended areas at the creek heads that protect scattered settlements, roads and other infrastructure from flood risk. Defences also serve to protect the more extensively developed town of Kingsbridge at the head of the estuary.

The long term Plan is to continue to protect these areas over the next 100 years, such that the risk of flooding to people, property and infrastructure continues to be reduced. However, it is not envisaged that any new areas would be defended in the future, allowing the remaining parts of the estuary to evolve naturally.

The continued defence in parts of the estuary will lead to the loss of some designated intertidal habitat due to coastal squeeze in those areas, although this could also occur naturally in the majority of the natural undefended estuary where steeply rising ground would constrain the ability of the estuary to adapt.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** of the existing defences to ensure that the risk of flooding in these areas continues to be minimised. Implementation of this policy will involve ongoing maintenance of the range of flood defences during this period. However, if appropriate and opportunity arises, then consideration could also be given to undertaking Managed Realignment in parts of the estuary (subject to detailed study) rather than maintaining or improving defences, provided that doing so will not be adverse to the long term aim of the Plan to continue to reduce flood risk to people, property and infrastructure. It is not intended that new defences would be built along currently undefended sections under this Policy; here a policy of **No Active Intervention** would apply, allowing existing river and tidal processes to continue.
Medium term:	Where defences are already present, a **Hold the Line** policy will continue into the medium term. Implementation of this policy will be through continued maintenance to the range of flood defences within the estuary during this period. It is likely, that due to rising sea level and the resultant increase in flood risk, higher defences will be required to provide an adequate standard of protection. However, if appropriate and opportunity arises, then consideration could again be given to undertaking Managed Realignment in parts of the estuary, subject to the same caveats described for the short term. Elsewhere, **No Active Intervention** will apply.
Longer-term:	The long term policy is to continue to **Hold the Line** of the existing defences. It is likely, that due to rising sea level and the resultant increase in flood risk, higher defences will be required if not already provided in previous epochs to provide an adequate standard of protection. Again, if appropriate and opportunity arises, then consideration could also be given to undertaking Managed Realignment in parts of 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.

Natural translation of the estuary in response to sea level rise would be partially inhibited by the continued provision of flood defences. In these areas there will be the eventual loss of inter-tidal areas. This is however also expected to occur in the natural areas backed by rising ground.

No new defences will be built along currently undefended sections of the estuary, where a policy of **No Active Intervention** will apply.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6c04	**Kingsbridge Estuary East (Scoble Point to Kingsbridge)**	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.
6c05	**Kingsbridge Estuary - Kingsbridge**	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.
6c06	**Kingsbridge Estuary West (Kingsbridge to Snapes Point)**	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.

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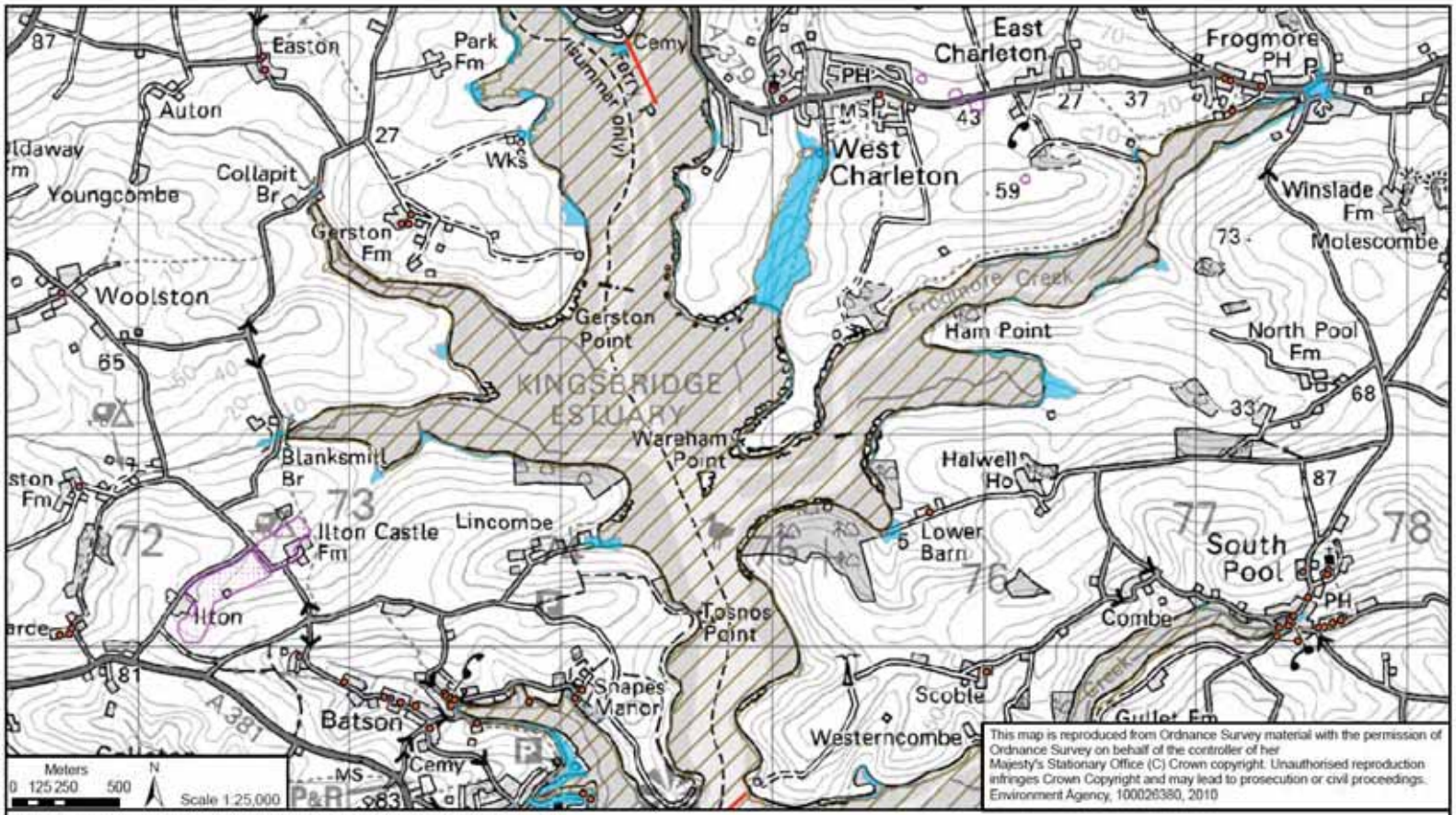
Location reference:	Kingsbridge Estuary
Policy Unit reference:	6c04 to 6c06

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	Ongoing maintenance of existing defences. The undefended parts of the estuary would continue to evolve naturally.	Isolated properties at potential risk from flooding. Potential risk of flooding to some community and recreational amenities. Continued protection to people and properties in the centre of Kingsbridge, Frogmore and other defended parts.	Grade 3 and 4 agricultural land at potential risk of flooding.	Grade 2 and 3 listed buildings protected against the risk of flooding throughout the section; predominantly at Kingsbridge.	Limited change in landscape character of South Devon AONB and Heritage Coast.	No known impacts on geology or soils.	No known impacts on water quality.	Potential loss of intertidal habitat along defended areas, therefore impact on Salcombe to Kingsbridge Estuary SSSI (biological) and LNR.
2025 – 2055	Ongoing maintenance and potential improvement of existing defences. The undefended parts of the estuary would continue to evolve naturally.	Isolated properties at potential risk from flooding. Potential risk of flooding to some community and recreational amenities. Continued protection to people and properties in the centre of Kingsbridge, Frogmore and other defended parts.	Grade 3 and 4 agricultural land at potential risk of flooding.	Grade 2 and 3 listed buildings protected against the risk of flooding throughout the section; predominantly at Kingsbridge.	Limited change in landscape character of South Devon AONB and Heritage Coast.	No known impacts on geology or soils.	No known impacts on water quality.	Potential loss of intertidal habitat along defended areas, therefore impact on Salcombe to Kingsbridge Estuary SSSI (biological) and LNR.
2055 – 2105	Ongoing maintenance and potential improvement of existing defences. The undefended parts of the estuary would continue to evolve naturally.	Isolated properties at potential risk from flooding. Potential risk of flooding to some community and recreational amenities. Continued protection to people and properties in the centre of Kingsbridge, Frogmore and other defended parts.	Grade 3 and 4 agricultural land at potential risk of flooding.	Grade 2 and 3 listed buildings protected against the risk of flooding throughout the section; predominantly at Kingsbridge.	Limited change in landscape character of South Devon AONB and Heritage Coast.	No known impacts on geology or soils.	No known impacts on water quality.	Potential loss of intertidal habitat along defended areas, therefore impact on Salcombe to Kingsbridge Estuary SSSI (biological) and LNR.

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.



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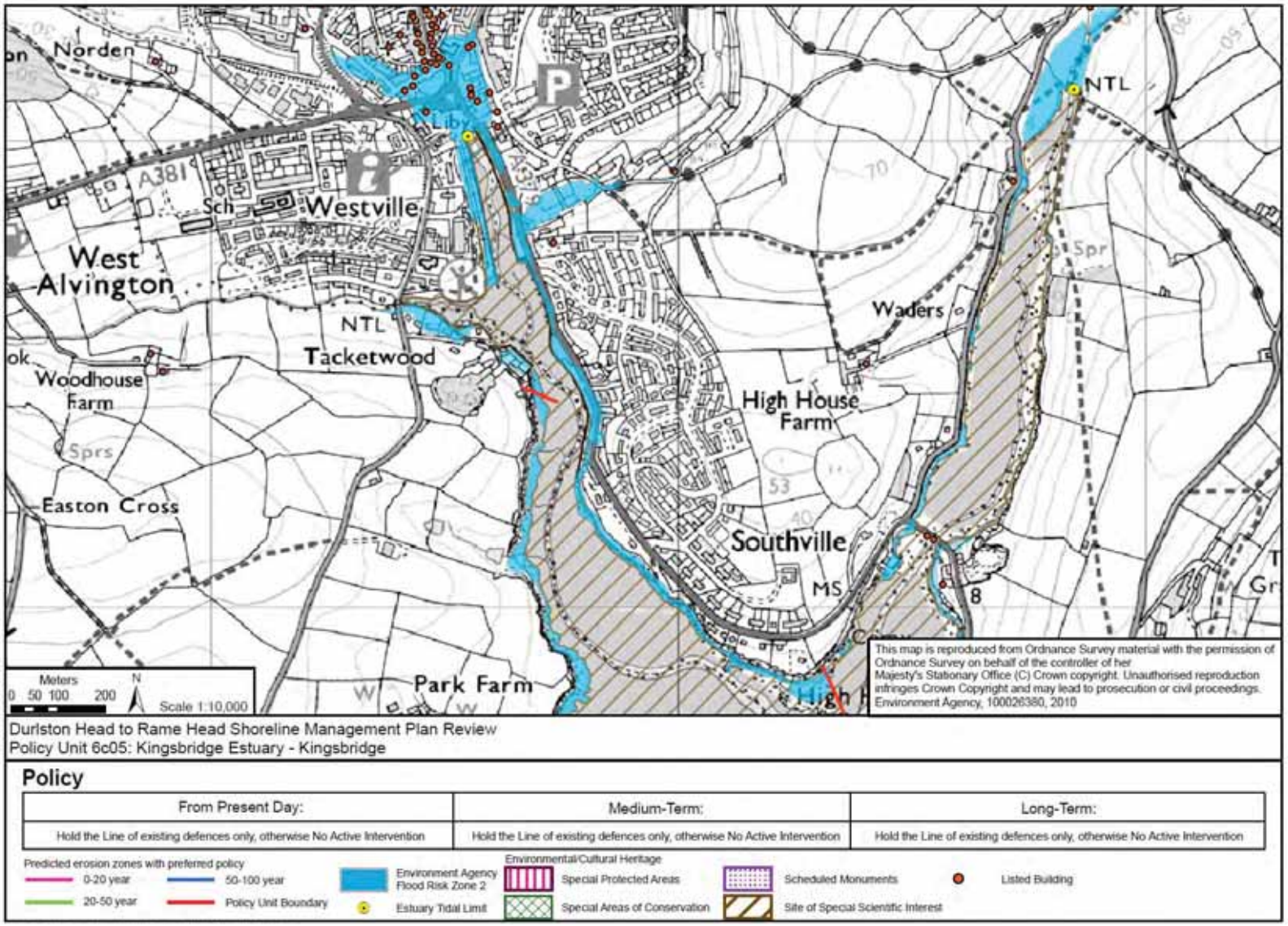

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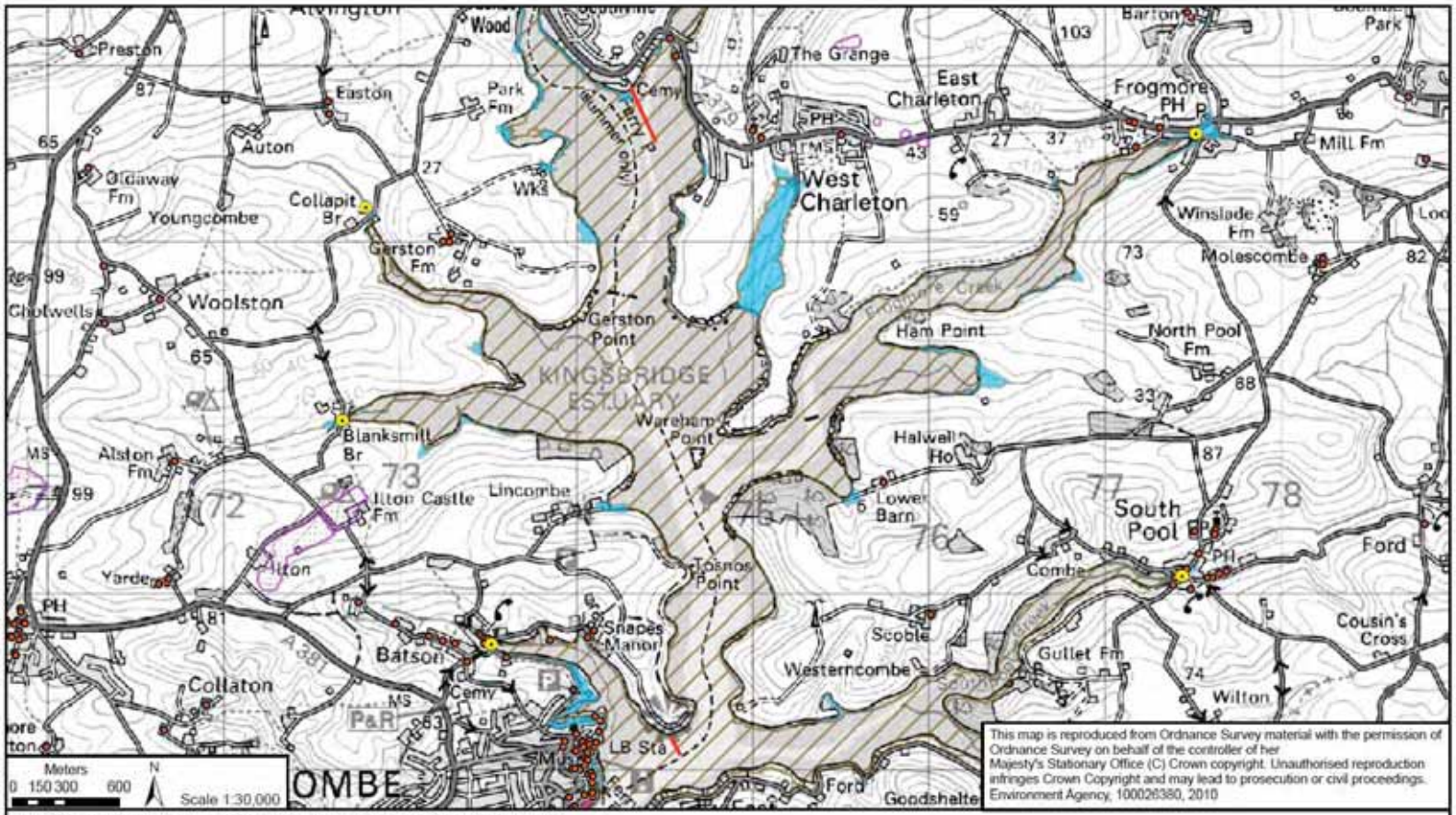

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6c06: Kingsbridge Estuary West (Kingsbridge to Snapes Point)

Policy

From Present Day:	Medium-Term:	Long-Term:
Hold the Line of existing defences only, otherwise No Active Intervention	Hold the Line of existing defences only, otherwise No Active Intervention	Hold the Line of existing defences only, otherwise 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
Estuary Tidal Limit
Environmental/Cultural Heritage
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
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:	**Salcombe (Snapes Point to Splat Cove Point)**
Policy Unit reference:	**6c07**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section on the western side of Salcombe Harbour, in the outer part of the Kingsbridge Estuary, encompasses the defended frontage of the town of Salcombe. The long term Plan is to continue to minimise flood risk to this developed area over the next century. The continued defence in parts of this section would lead to the loss of designated intertidal habitat due to coastal squeeze in these areas, although the majority of the estuary which is undefended would continue to evolve naturally.

Where areas are currently undefended, it is not intended that new defences are constructed.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** of the existing defences to ensure that the risk of flooding in these areas continues to be reduced. Implementation of this policy will involve ongoing maintenance of the range of flood defences during this period. It is not intended that new defences would be built along currently undefended sections under this policy, so **No Active Intervention** would apply.
Medium term:	The medium term policy is to continue to **Hold the Line** and minimise flood risk to Salcombe through maintaining existing defences. It is likely, that due to rising sea level and the resultant increase in flood risk, higher defences will need to be constructed to provide an adequate standard of protection. This would inhibit the ability of the estuary to respond naturally and it is likely that gradual loss of inter-tidal areas would occur in this area as a result. Along areas where there are presently no defences **No Active Intervention** would continue to apply.
Longer-term:	The long term policy is to continue to **Hold the Line** through improving and rebuilding of existing defence structures. Elsewhere, the policy of **No Active Intervention** will remain. Continued provision of flood defences along this frontage would reduce the flood risk to Salcombe. This would inhibit the ability of the estuary locally to respond naturally and it is likely that eventual loss of inter-tidal areas would occur as a result. Existing river and tidal processes would continue relatively unchanged.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6c07	**Salcombe (Snapes Point to Splat Cove Point)**	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.

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Location reference:	Salcombe (Snapes Point to Splat Cove Point)
Policy Unit reference:	6c07

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	Ongoing maintenance of existing defences. The undefended parts of the estuary would continue to evolve naturally.	Isolated properties at potential risk from flooding. Potential risk of flooding to some community and recreational amenities. Continued protection to people and properties in Salcombe (predominantly along Cliff Road and Island Street).	Grade 3 and 4 agricultural land at potential risk of flooding. Section of the A381 and B3204 (Cliff Road) protected from flooding/erosion.	Continued protection of Grade 2 and 3 listed buildings protected throughout the section; predominantly at Salcombe. A small area of Overbecks Registered Park and Garden at potential risk of flooding. Potential for impact on anti-aircraft batteries between Salcombe and Splat Cove – *potential adverse impact*	Limited change in landscape character of South Devon AONB and Heritage Coast.	No known impacts on geology or soils.	No known impacts on water quality.	Potential loss of intertidal habitat along defended areas, therefore impact on Salcombe to Kingsbridge Estuary SSSI (biological) and LNR.
2025 – 2055	Ongoing maintenance and potential improvement of existing defences. The undefended parts of the estuary would continue to evolve naturally.	Isolated properties at potential risk from flooding. Potential risk of flooding to some community and recreational amenities. Continued protection to people and properties in Salcombe (predominantly along Cliff Road and Island Street).	Grade 3 and 4 agricultural land at potential risk of flooding. Section of the A381 and B3204 (Cliff Road) protected from flooding/erosion.	Continued protection of Grade 2 and 3 listed buildings protected throughout the section; predominantly at Salcombe. A small area of Overbecks Registered Park and Garden at potential risk of flooding. Potential for impact on anti-aircraft batteries between Salcombe and Splat Cove – *potential adverse impact*	Limited change in landscape character of South Devon AONB and Heritage Coast.	No known impacts on geology or soils.	No known impacts on water quality.	Potential loss of intertidal habitat along defended areas, therefore impact on Salcombe to Kingsbridge Estuary SSSI (biological) and LNR.
2055 – 2105	Ongoing maintenance and potential improvement of existing defences. The undefended parts of the estuary would continue to evolve naturally.	Isolated properties at potential risk from flooding. Potential risk of flooding to some community and recreational amenities. Continued protection to people and properties in Salcombe (predominantly along Cliff Road and Island Street).	Grade 3 and 4 agricultural land at potential risk of flooding. Section of the A381 and B3204 (Cliff Road) protected from flooding/erosion.	Continued protection of Grade 2 and 3 listed buildings protected throughout the section; predominantly at Salcombe. A small area of Overbecks Registered Park and Garden at potential risk of flooding. Potential for impact on anti-aircraft batteries between Salcombe and Splat Cove – *potential adverse impact*	Limited change in landscape character of South Devon AONB and Heritage Coast.	No known impacts on geology or soils.	No known impacts on water quality.	Potential loss of intertidal habitat along defended areas, therefore impact on Salcombe to Kingsbridge Estuary SSSI (biological) and LNR.

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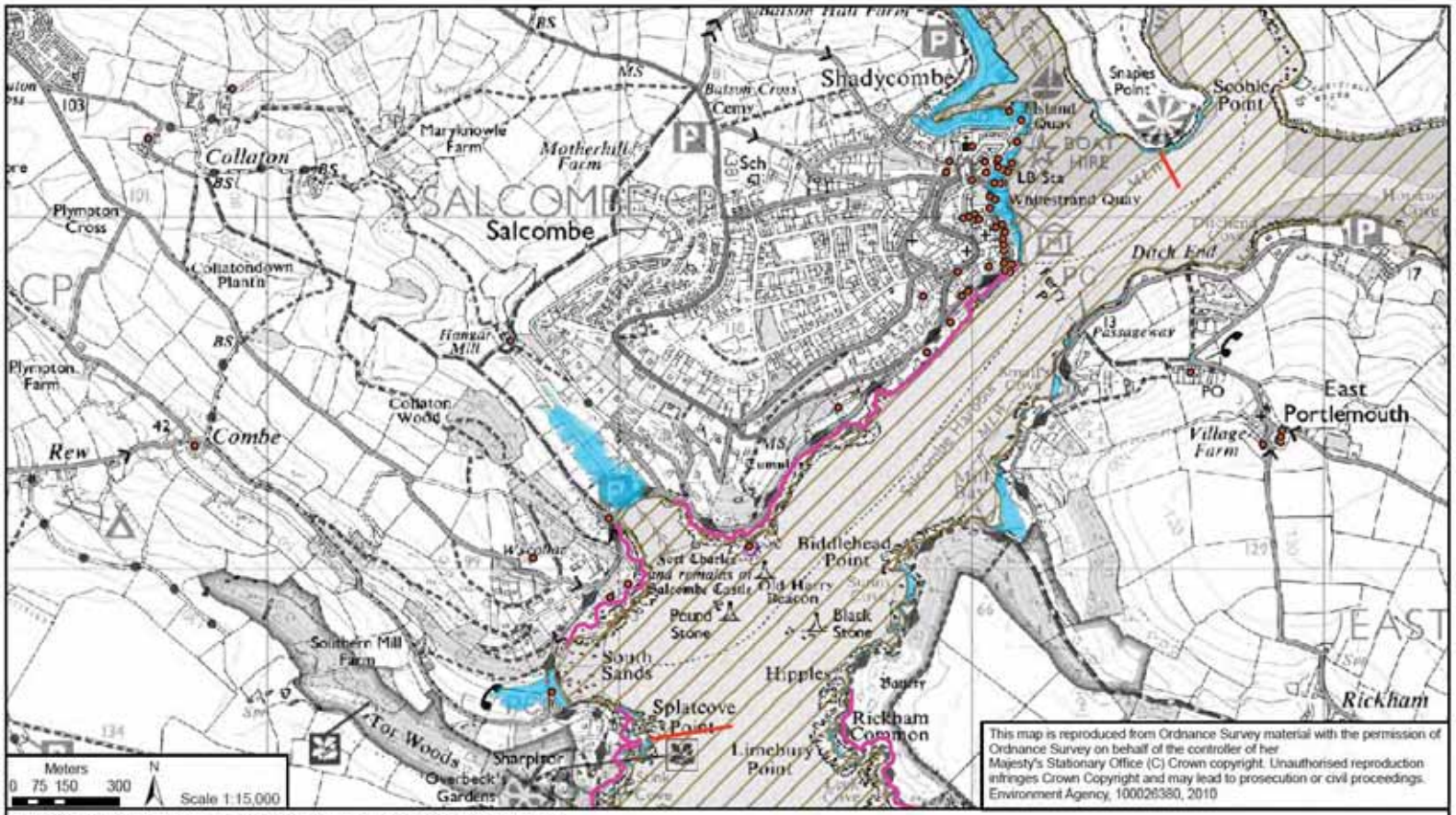

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Location reference:	**Splat Cove Point to Bolt Head**
Policy Unit reference:	**6c08**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term Plan for this section of undefended coast, which is characterised by cliffs of outstanding landscape and geological /geomorphological value, is to allow it to continue to evolve naturally over the next 100 years.

Slow cliffline retreat would continue as a result of infrequent, small scale cliff failure events controlled by the local geology of the hard rock cliffs. Any small pocket beaches along this stretch are likely to become permanently submerged at all tidal states, due to the limited sediment input from cliff erosion in the longer term which would not keep pace with sea level rise.

A Scheduled Monument and Registered Park and Garden, as well as parts of the South West Coast Path located along the cliff top, could also be affected by cliff erosion in the longer term, depending upon the location of future cliff failure events.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention**. The resistant nature of the cliffs has historically resulted in very little cliff recession, although some areas are more erodible than others depending on local geological characteristics. The small pocket beaches fluctuate seasonally but have remained largely unchanged over the long term. These are supplied by erosion of the slightly more erodible cliffs within which they are located. There is little, if any, interaction with adjacent beaches.
Medium term:	The medium term policy is for **No Active Intervention**. The majority of the cliffs would be expected to experience only negligible erosion. Faster rates of cliff recession within the slightly softer cliffs could occur. Sea level rise and lack of sediment supply would lead to the narrowing and possible submergence of the pocket beaches that indent the cliffs along this section.
Longer-term:	The long term policy is for **No Active Intervention**. Total cliff erosion along this shoreline is not expected to exceed 10m by 2105. The small pocket beaches would be expected to narrow further and could disappear in places.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6c08	**Splat Cove Point to Bolt Head**	Allow natural coastal evolution through **No Active Intervention**.	Allow natural coastal evolution through **No Active Intervention**.	Allow natural coastal evolution through **No Active Intervention**.

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Location reference:	Splat Cove Point to Bolt Head
Policy Unit reference:	6c08

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.	No properties at risk of erosion or flooding.	Grade 3 and 4 agricultural land at minor risk of erosion – but very low cliff recession (<10m).	A tiny area of Overbecks Registered Park and Garden and part of a scheduled monument may be affected by erosion.	Little/ no change in landscape character of South Devon AONB and Heritage Coast.	No known impacts on geology or soils.	No known impacts on water quality.	Very minor loss of in net area of cliff top grassland and heathland habitats at Bolt Head to Bolt Tail SSSI – but <10m cliff erosion predicted.
2025 – 2055	Continued cliffline retreat would occur. No management activities.	No properties at risk of erosion or flooding.	Grade 3 and 4 agricultural land at minor risk of erosion – but very low cliff recession (<10m).	A small area of Overbecks Registered Park and Garden, parts of a scheduled monument at potential risk of erosion	Little/ no change in landscape character of South Devon AONB and Heritage Coast.	No known impacts on geology or soils.	No known impacts on water quality.	Very minor loss of in net area of cliff top grassland and heathland habitats at Bolt Head to Bolt Tail SSSI – but <10m cliff erosion predicted.
2055 – 2105	Continued cliffline retreat would occur. No management activities.	No properties at risk of erosion or flooding.	Grade 3 and 4 agricultural land at minor risk of erosion – but very low cliff recession (<10m).	A small area of Overbecks Registered Park and Garden, parts of a scheduled monument at potential risk of erosion	Little/ no change in landscape character of South Devon AONB and Heritage Coast.	No known impacts on geology or soils.	No known impacts on water quality.	Very minor loss of in net area of cliff top grassland and heathland habitats at Bolt Head to Bolt Tail SSSI – but <10m cliff erosion predicted.

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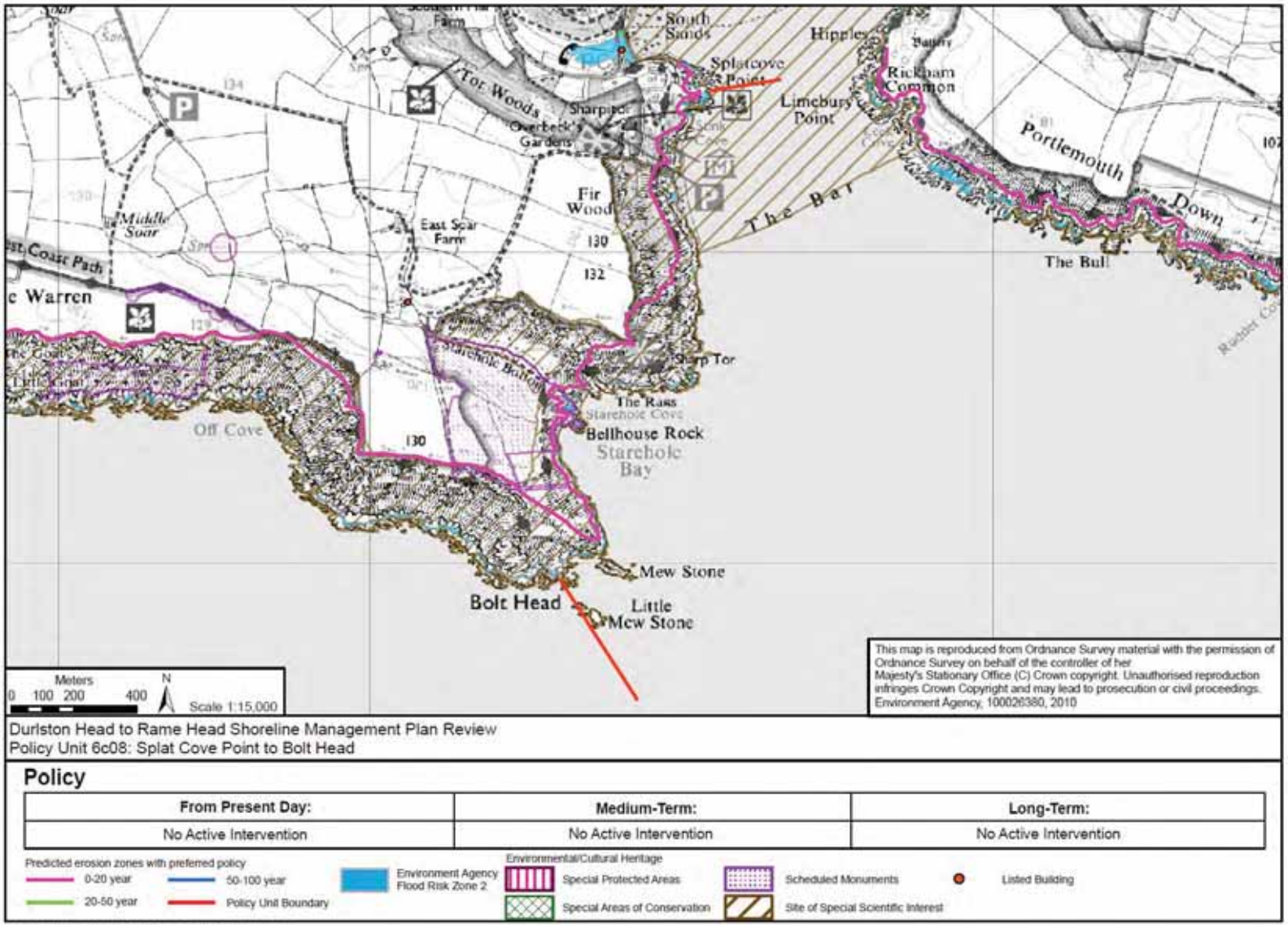

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Location reference:	**Bolt Head to Avon Estuary (East)**
Policy Unit reference:	**6c09 to 6c12**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term Plan for this stretch of coast, which is characterised by hard rock cliffs of outstanding landscape and geological /geomorphological value, is to allow it to continue to evolve naturally over the next 100 years. A number of Scheduled Monuments located along the cliff top, as well as parts of the South West Coast Path could potentially be affected by cliff erosion in the longer term as a result of this policy, depending upon the location of future cliff failure events.

Whilst this section is largely undefended, there are a few very short lengths of defence protecting cliff top roads around Inner Hope and Outer Hope as well as properties at Thurlestone Sands. Although future defence of these areas, some of which are privately owned, would be unlikely to attract public (flood and coastal defence) funding, there are no technical reasons that preclude defences being provided. Consequently, if other alternative funds were available then defences could be retained in order to reduce the risk of erosion to these assets (refer also to Section 5.2.2 'Private Defences'). Such measures are not expected to have a detrimental impact upon the natural character of the area. If this were not undertaken then it would be necessary to undertake measures to relocate these assets further inland away from the area of risk.

There is also a low-lying area behind a small pocket beach at Thurlestone Sands, within which is situated a sewage works and a local road that links the west and east parts of Thurlestone. These assets are not at risk of tidal flooding in the near future and so no intervention along the shoreline is planned here. However, depending on the rate of sea level rise, the future flood risk to the sewage works in particular could increase and this will need to be considered in any future development plans for this asset.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention** along this largely undefended stretch of coast. The cliffs consist of hard, resistant rock that has eroded very little over the long term and this will continue to be the case. There are small pocket beaches at Hope Cove and Thurlestone Sands, but there is little, if any, interaction between either of these and other parts of the coast. There are short lengths of defences in these locations. Whilst retention of these defences is unlikely to have an impact in terms of processes on the wider coastline, future maintenance/improvement of these structures is unlikely to attract public (flood and coastal defence budget) funding. Therefore future defence in this area will depend on the availability of alternative funds. Otherwise, the beaches at Thurlestone would be allowed to migrate inland to higher ground during this period. No beach management would be proposed; this would allow the natural roll-back of the beach in response to rising sea levels and result in more beach material being retained in this area in the long term.
Medium term:	The medium term policy is for **No Active Intervention** along this largely undefended coast, which would continue to evolve naturally as a result. Negligible erosion of the hard rock cliffs that dominate this section is predicted. Small pocket beaches along this stretch are likely to become permanently submerged at all tidal states, due to sea level rise. At Thurlestone Sands the policy will allow the beach to naturally roll back, although localised short lengths of defence could be retained if alternative funds are available. However, if defences do remain they will be increasingly technically difficult to sustain. Sea level rise could also lead to the continued narrowing and possible

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	submergence of the pocket beach at Hope Cove that fronts the cliffs along this section. Maintenance of the short length of defence at Inner and Outer Hope (assuming alternative funds are available) could continue to reduce cliff recession without impacting on the long term evolution of this area. However, larger defences may be required to provide adequate levels of protection; therefore it may not be sustainable to retain defences in this area. If this were the case, then measures would need to be put in place to manage and mitigate potential losses here.
Longer-term:	The long term policy is for **No Active Intervention** along this largely undefended coast, which would continue to evolve naturally as a result. Negligible erosion of the hard rock cliffs that dominate this section is predicted. At Thurlestone Sands, a small embayment would likely develop as the beach rolls back landwards in response to sea level rise. This in turn would allow more beach material to be retained along this section within a naturally functioning beach system. Localised short lengths of defence could be retained if alternative funds are available although if defences do remain they will be increasingly technically difficult to sustain. The pocket beach at Hope Cove that fronts the resistant cliffs will have disappeared by the end of this period, due to increases in sea level, which will mean the defences, if they remain, would need to be much larger than at present to cope with the greater wave exposure that would result. It is therefore uncertain if it will be sustainable to even maintain the short length of defence at Inner and Outer Hope.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6c09	**Bolt Head to Bolt Tail**	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**.
6c10	**Bolt Tail to Thurlestone 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**.
6c11	**Thurlestone Rock to Warren Point**	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**	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**	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**

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Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
		Active Intervention.	**Active Intervention.**	**Active Intervention.**
6c12	**Warren Point to Avon Estuary (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.**

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Location reference:	Bolt Head to Avon Estuary (East)
Policy Unit reference:	6c09 to 6c12

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 shoreline retreat along the majority of this section. Maintenance of the short lengths of defences at Inner and Outer Hope and Thurlestone (if private funds available).	Small risk of erosion & flooding to a hotel near Southdown and Thurlestone Rock and properties at Outer and Inner Hope Potential risk to the South West Coast Path from erosion, though risk is small and depends when and where future cliff erosion occurs. Protection of Golf Course and Coast Path at Thurlestone.	Grades 3, 4 and 5 Agricultural land at risk of flooding/erosion.	Grade 1, 2 and 3 listed buildings potentially at risk from erosion at Inner Hope and Outer Hope Up to 5 Scheduled Monument (SMs) at potential risk of erosion: - Field Systems, Hut Circles and Four Beacons SM, Medieval Farmstead & Field System at Warren Barn SM, Five Round Barrows SM, Iron Age Cliff Castle SM and Roman Settlement Site SM at Bantham Ham. NAI may affect Thurlestone organic deposits and pillboxes, though this would not be a direct result of SMP policy – *neutral impact*	Change in landscape character of South Devon AONB.	No known impacts on geology and soils.	No known impacts on water quality.	Change in net area of cliff top grassland, heathland and scrub habitats at Bolt Head to Bolt Tail SSSI Potential loss of the net area of some of the freshwater habitat at South Milton Ley SSSI due to flooding and erosion and associated change in flora and fauna that the reedbed supports. A short term maintenance plan is required with medium term roll back allocation. Potential for loss of reedbed habitat at South Milton Ley SSSI due to coastal flooding
2025 – 2055	Continued shoreline retreat along the majority of this section. Maintenance of the short lengths of defences at Inner and Outer Hope and Thurlestone (if private funds available).	Small risk of erosion & flooding to a hotel near Southdown and Thurlestone Rock and properties at Outer and Inner Hope Potential risk to the South West Coast Path from erosion, though risk is small and depends when and where future cliff erosion occurs. Potential net loss of Golf Course and Coast Path at Thurlestone due to erosion, dependent on location of Managed Realignment. Potential loss of access to isolated coves and loss of parking/ tourist amenities.	Grades 3, 4 and 5 Agricultural land at risk of flooding/erosion. Potential flood risk to South Milton Sewage Works depending on rate of sea level rise.	Grade 1, 2 and 3 listed buildings potentially at risk from erosion at Inner Hope and Outer Hope – Up to 5 Scheduled Monument (SMs) at potential risk of erosion: - Field Systems, Hut Circles and Four Beacons SM, Medieval Farmstead & Field System at Warren Barn SM, Five Round Barrows SM, Iron Age Cliff Castle SM and Roman Settlement Site SM at Bantham Ham. NAI may affect Thurlestone organic deposits and pillboxes, though this would not be a direct result of SMP policy – *neutral impact*	Change in landscape character of South Devon AONB.	No known impacts on geology and soils.	No known impacts on water quality.	Change in net area of cliff top grassland, heathland and scrub habitats at Bolt Head to Bolt Tail SSSI Potential loss of the net area of some of the freshwater habitat at South Milton Ley SSSI due to flooding and erosion and associated change in flora and fauna that the reedbed supports. Potential for loss of reedbed habitat at South Milton Ley SSSI due to coastal flooding
2055 – 2105	Continued shoreline retreat along the majority of this section. Maintenance of the short lengths of defences at Inner and Outer Hope and Thurlestone if required	Small risk of erosion & flooding to a hotel near Southdown and Thurlestone Rock and properties at Outer and Inner Hope Potential risk to the South West Coast Path from	Grades 3, 4 and 5 Agricultural land at risk of flooding/erosion. Potential flood risk to South Milton Sewage Works depending on rate of sea level rise.	Grade 1, 2 and 3 listed buildings potentially at risk from erosion at Inner Hope and Outer Hope Up to 5 Scheduled Monument (SMs) at potential risk of erosion: - Field Systems, Hut	Change in landscape character of South Devon AONB.	No known impacts on geology and soils.	No known impacts on water quality.	Change in net area of cliff top grassland, heathland and scrub habitats at Bolt Head to Bolt Tail SSSI Potential loss of the net area of some of the freshwater habitat at South Milton Ley

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Location reference:	Bolt Head to Avon Estuary (East)						
Policy Unit reference:	6c09 to 6c12						
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**
	(if private funds available).	erosion, though risk is small and depends when and where future cliff erosion occurs. Potential net loss of Golf Course and Coast Path at Thurlestone due to erosion Potential loss of access to isolated coves and loss of parking/ tourist amenities.		Circles and Four Beacons SM, Medieval Farmstead & Field System at Warren Barn SM, Five Round Barrows SM, Iron Age Cliff Castle SM and Roman Settlement Site SM at Bantham Ham. NAI may affect Thurlestone organic deposits and pillboxes, though this would not be a direct result of SMP policy – *neutral impact*				SSSI due to flooding and erosion and associated change in flora and fauna that the reedbed supports. Potential for loss of reedbed habitat at South Milton Ley SSSI due to coastal flooding

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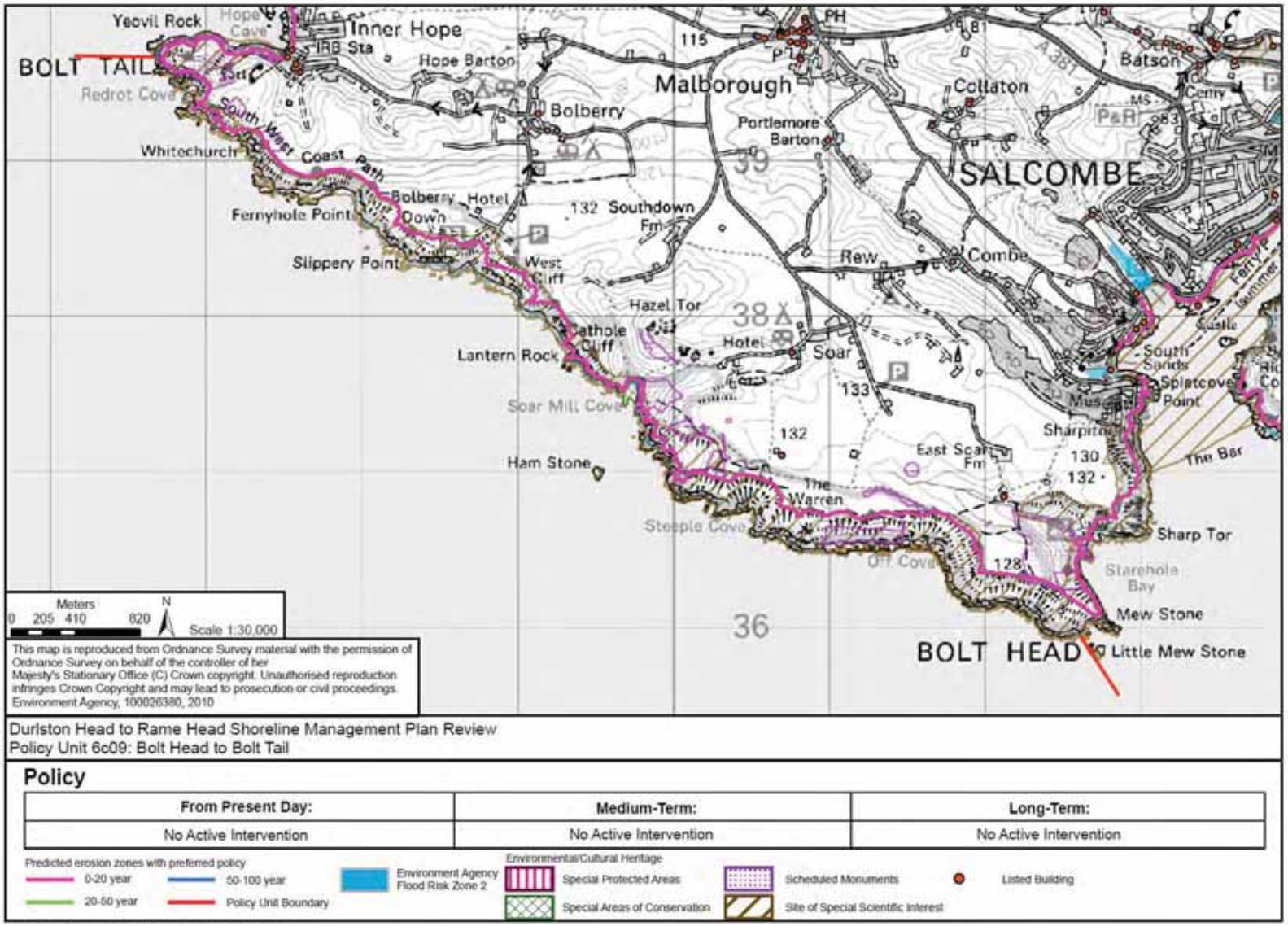

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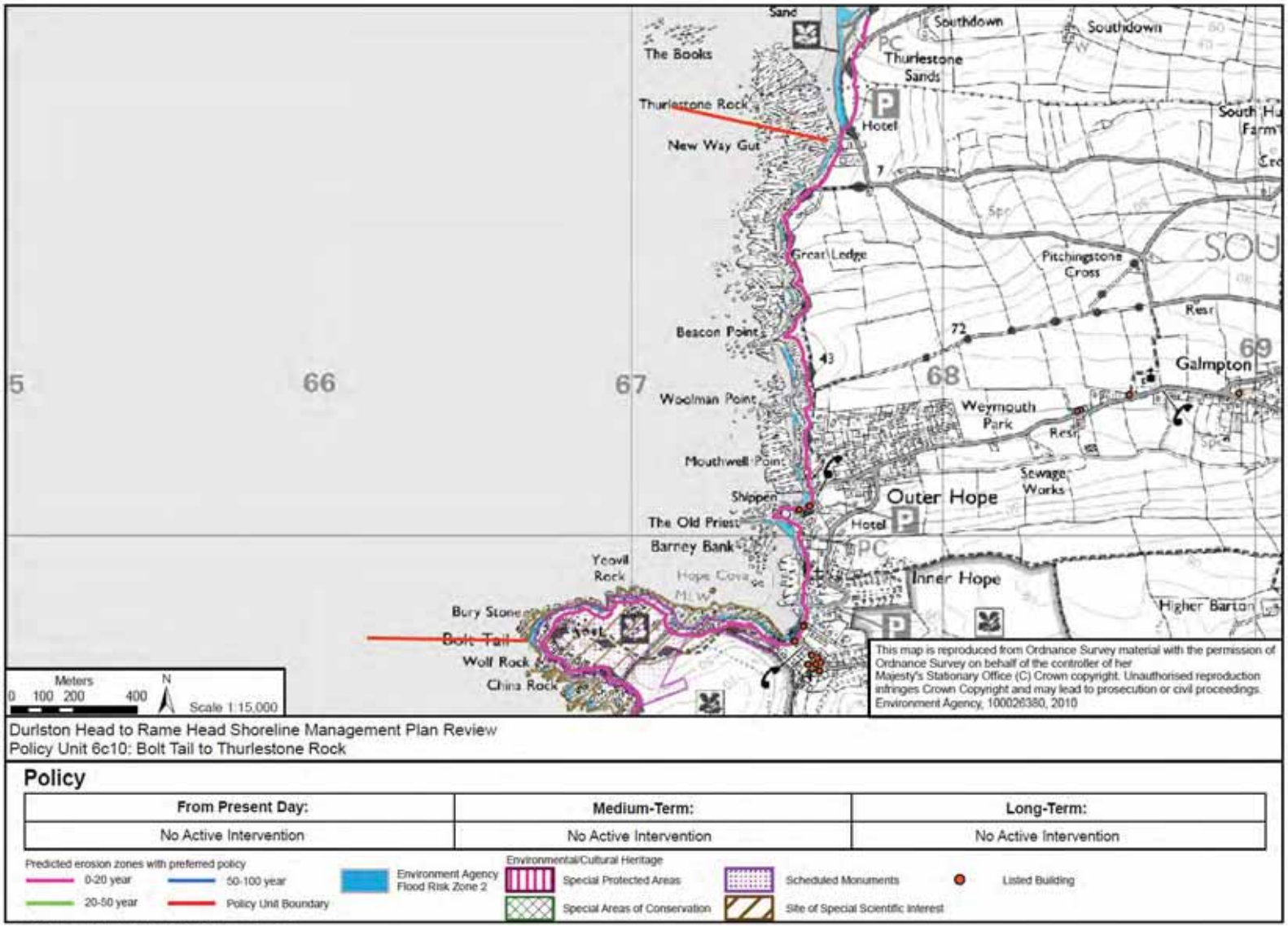

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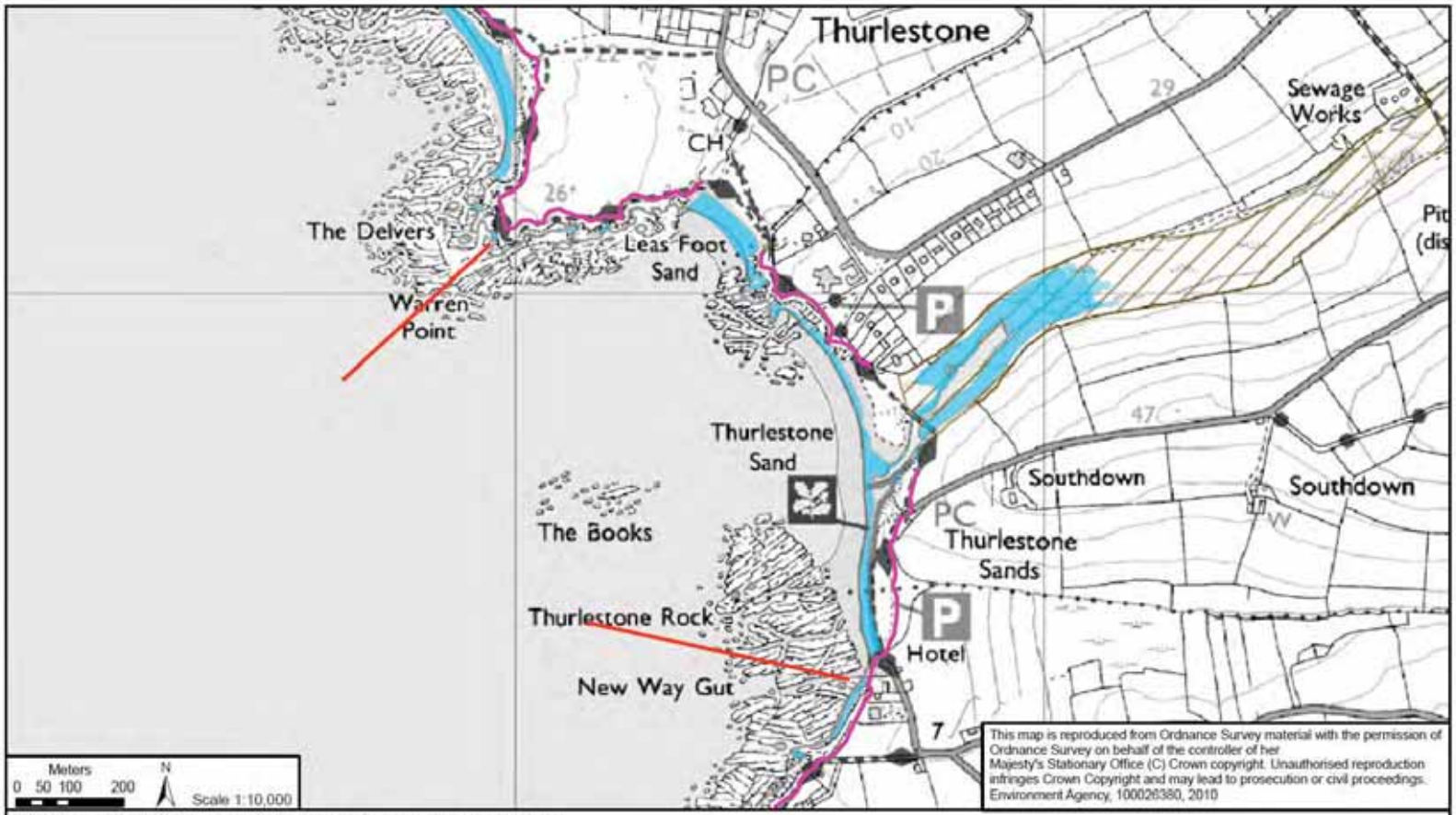

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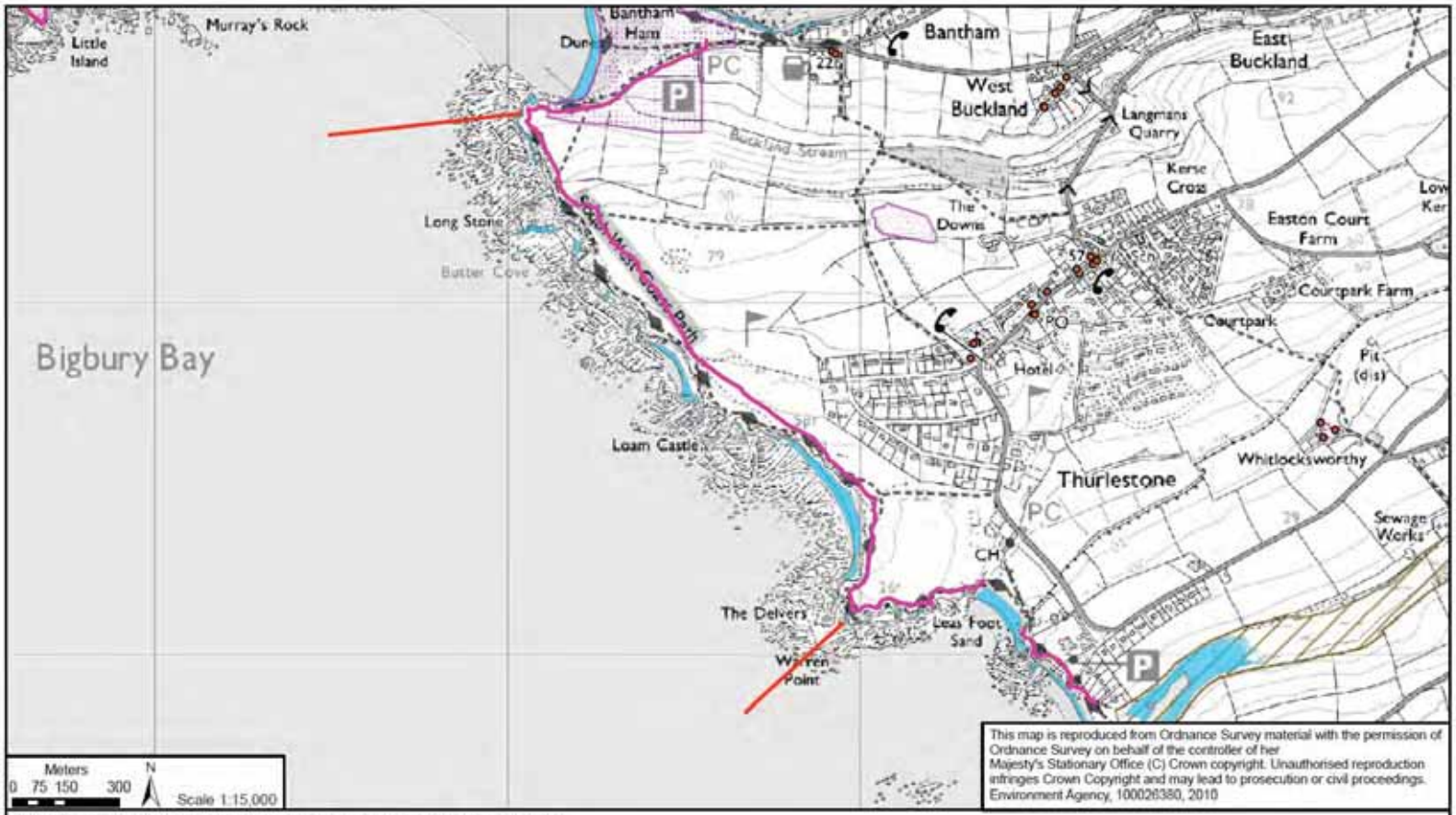

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Location reference:	**Avon Estuary**
Policy Unit reference:	**6c13 to 6c15**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term Plan for the Avon Estuary is to allow it to evolve naturally, as far as possible, whilst continuing to minimise flood risk to key assets. Achievement of this will need to be through a range of measures which include No Active Intervention in some areas and Managed Realignment in others.

Along its outer reaches, the Estuary will be allowed to evolve and adapt naturally as sea levels rise. This could, however, result in an increased risk of flooding to some presently defended areas as defences deteriorate and fail.

On the western side of the mouth of the Estuary there would be a small risk of erosion that could impact upon cliff top property and infrastructure if cliff failures occur in these areas. Therefore adaptation measures may be required to manage this risk.

In the upper part of the estuary, along both the east and west banks, there are several defences around the developed area of Aveton Gifford as well as individual properties, a sewage works, low grade farmland and a number of roads that are at risk of flooding. The long term Plan here is to undertake Managed Realignment in strategic locations to provide a reduction in flood risk to other parts of the estuary. This policy would also provide opportunities for habitat creation and would likely involve construction of set back defences or regulated tidal exchange, which would be determined by more detailed studies.

Under this policy it is not intended to increase the risk of flooding to developed areas in the upper part of the estuary, and so consideration of this would be an important element in further detailed implementation studies. Maintenance of existing defences in the upper estuary would be undertaken, if funds are available, but it is not intended that new defences would be built along currently undefended sections.

Defences currently protect a short length of highway providing the only access into Bigbury-on-Sea, a car park and tourism facilities from erosion. There is also a short length of defence on Burgh Island that protects the hotel. The erosion risk to these areas is slight and therefore future defence of these areas would be unlikely to attract public (flood and coastal defence budget) funding. However, there are no technical reasons, i.e. impacts upon sediment processes, that preclude defences being provided. Consequently, if other funds were available then defences could be retained in order to reduce the risk of erosion to these assets.

Preferred policies to implement Plan:

From present day (short term):

The short term policy is for **No Active Intervention** in the outer parts of the Avon Estuary. There are very few defences present here and those that are will gradually deteriorate and fail due to lack of maintenance. This may affect one or two properties located along the estuary shoreline at Bantham, however much of this outer part of the Estuary is backed by higher ground, so flood risk is not significantly altered.

Maintenance of the short length of defences at Bigbury-on-Sea and Burgh Island would be unlikely to attract public (flood and coastal defence budget) funds. However, if other funds were available to maintain the defences in this area then these could be maintained, without having a detrimental impact on coastal evolution.

The possibility for **Managed Realignment** within the upper estuary would be investigated and, if viable, implemented during this period. This could help to reconnect the estuary to the floodplain whilst also providing habitat and reducing flood risk to other parts of the estuary. Along other stretches and in particular Aveton Gifford, existing defences would be maintained, to ensure no increase in flood risk to people, property and infrastructure, but no new defences would be constructed. These defences would constrain the estuary locally, although it is unlikely to have a significant impact on the estuary as a

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	whole, which is largely natural and unconstrained and would be expected to adjust to rising sea levels to maintain its current form.
Medium term:	The medium term policy is to continue **No Active Intervention** along the outer parts of the Avon Estuary, with any remaining defences gradually deteriorating and failing, including the short sections of defence at Bigbury-on-Sea and Burgh Island (unless maintained through alternative funding). However, if other funds were used to retain the defences in this area then this risk would continue to be reduced, although maintaining adequate protection is likely to require larger defences than at present. In the upper estuary **Managed Realignment** would continue in strategic locations, involving maintenance of any realignment undertaken in the short term, and further realignments if feasible. Along Aveton Gifford and over currently defended stretches existing defences would be maintained, although maintaining an adequate level of protection is likely to require larger defences by this period. No new defences would be constructed.
Longer-term:	The long term policy is to continue **No Active Intervention** along the outer parts of the Avon Estuary. By this period most defences would have failed, including those at Bigbury-on-Sea and Burgh Island if they have not been maintained in the short and medium term. There is a risk that rising sea levels could result in submergence of the tombolo during this period, which would leave Burgh Island permanently detached from the mainland. Within the upper estuary, the policy would remain one of **Managed Realignment**. Further realignments may be feasible during this period, otherwise there will be maintenance of existing realignments and existing defences. Although retention of existing defences in the upper part of the estuary would continue to constrain the estuary locally, it is unlikely to have a significant impact on the estuary as a whole; this is largely natural and unconstrained and would be expected to adjust to rising sea levels to maintain its current form.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6c13	**Avon Estuary (East Bank – Mouth to Stadbury Farm)**	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**.
6c14	**Avon Estuary (Upstream section – Stadbury Farm to Stakes Hill)**	Investigate and implement **Managed Realignment** along parts of this section, whilst maintaining other existing defences, with **No Active Intervention** along the currently undefended sections.	Continue the policy of **Managed Realignment** along parts of this section whilst maintaining other existing defences, with **No Active Intervention** along the currently undefended sections.	Continue the policy of **Managed Realignment** along parts of this section whilst maintaining other existing defences, with **No Active Intervention** along the currently undefended sections.
6c15	**Avon Estuary (West Bank –**	Continue to allow existing localised defences to be	Continue to allow existing localised defences to be	Continue to allow existing localised defences to be

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Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
	Stakes Hill to Warren Point (Bigbury-on-Sea))	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**.	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**.	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**.

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Location reference:	Avon Estuary
Policy Unit reference:	6c13 to 6c15

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 implementation of Managed Realignment, along with maintenance of existing defences in the upper part of the estuary. Allow defences at mouth to fail unless maintained by alternative funds.	Risk of flooding to people and properties at Aveton Gifford, Bridge end in the Avon Estuary minimised by maintaining existing defences and introducing realignment to provide flood storage. Potential risk to the South West Coast Path from erosion.	Risk of flooding to the A379 at Aveton Gifford. Grades 3, 4 and 5 Agricultural land at risk of flooding/ erosion.	Grade 1, 2 and 3 listed buildings potentially at risk from flooding at Aveton Gifford. Iron Age Cliff Castle Scheduled Monument and Roman Settlement Site Scheduled Monument at Bantham Ham at potential risk of erosion.	Change in landscape character of South Devon AONB due to Managed Realignment. Deteriorating defences at mouth may be an eyesore.	No known impacts on geology or soils.	No known impacts on water quality. 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.	Managed Realignment would increase habitat areas within the Avon Estuary
2025 – 2055	Maintenance of existing and realigned defences, and possibly further realignment in the upper part of the estuary. Allow defences at mouth to fail unless maintained by alternative funds.	Potential risk to people, properties at Bigbury-on-Sea and Burgh island from localised erosion. Risk of flooding to people and properties at Aveton Gifford, Bridge end in the Avon Estuary minimised by maintaining existing defences and introducing realignment to provide flood storage. Potential risk to the South West Coast Path from erosion. Potential loss of parking/ tourist facilities.	Risk of flooding to the A379 at Aveton Gifford. Grades 3, 4 and 5 Agricultural land at risk of flooding/ erosion.	Grade 1, 2 and 3 listed buildings potentially at risk from flooding at Aveton Gifford. Iron Age Cliff Castle Scheduled Monument and Roman Settlement Site Scheduled Monument at Bantham Ham at potential risk of erosion.	Change in landscape character of South Devon AONB due to Managed Realignment. Deteriorating defences at mouth may be an eyesore.	No known impacts on geology or soils.	No known impacts on water quality. 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.	Managed Realignment would increase habitat areas within the Avon Estuary
2055 – 2105	Maintenance of existing and realigned defences, and possibly further realignment in the upper part of the estuary. No management activities at the mouth unless maintained by alternative funds.	Potential risk to people, properties at Bigbury-on-Sea and Burgh island from localised erosion. Risk of flooding to people and properties at Aveton Gifford, Bridge end in the Avon Estuary minimised by maintaining existing defences and introducing realignment to provide flood storage. Potential risk to the South West Coast Path from erosion. Potential loss of parking/ tourist facilities.	Risk of flooding to the A379 at Aveton Gifford. Grades 3, 4 and 5 Agricultural land at risk of flooding/ erosion.	Grade 1, 2 and 3 listed buildings potentially at risk from flooding at Aveton Gifford. Iron Age Cliff Castle Scheduled Monument and Roman Settlement Site Scheduled Monument at Bantham Ham at potential risk of erosion.	Change in landscape character of South Devon AONB due to Managed Realignment.	No known impacts on geology or soils.	No known impacts on water quality. 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.	Managed Realignment would increase habitat areas within the Avon Estuary

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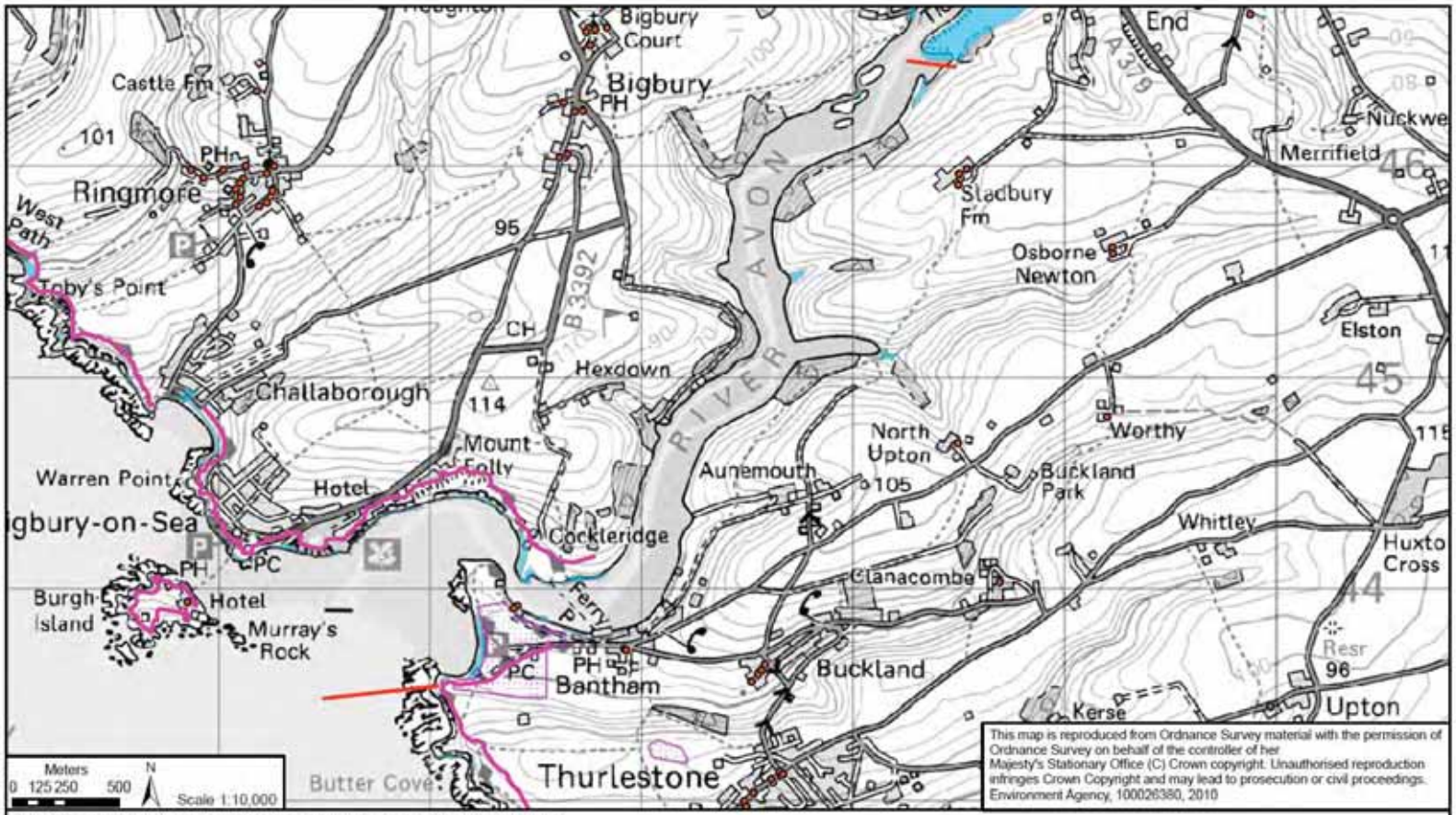

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6c13: Avon Estuary (East Bank – Mouth to Stadbury Farm)

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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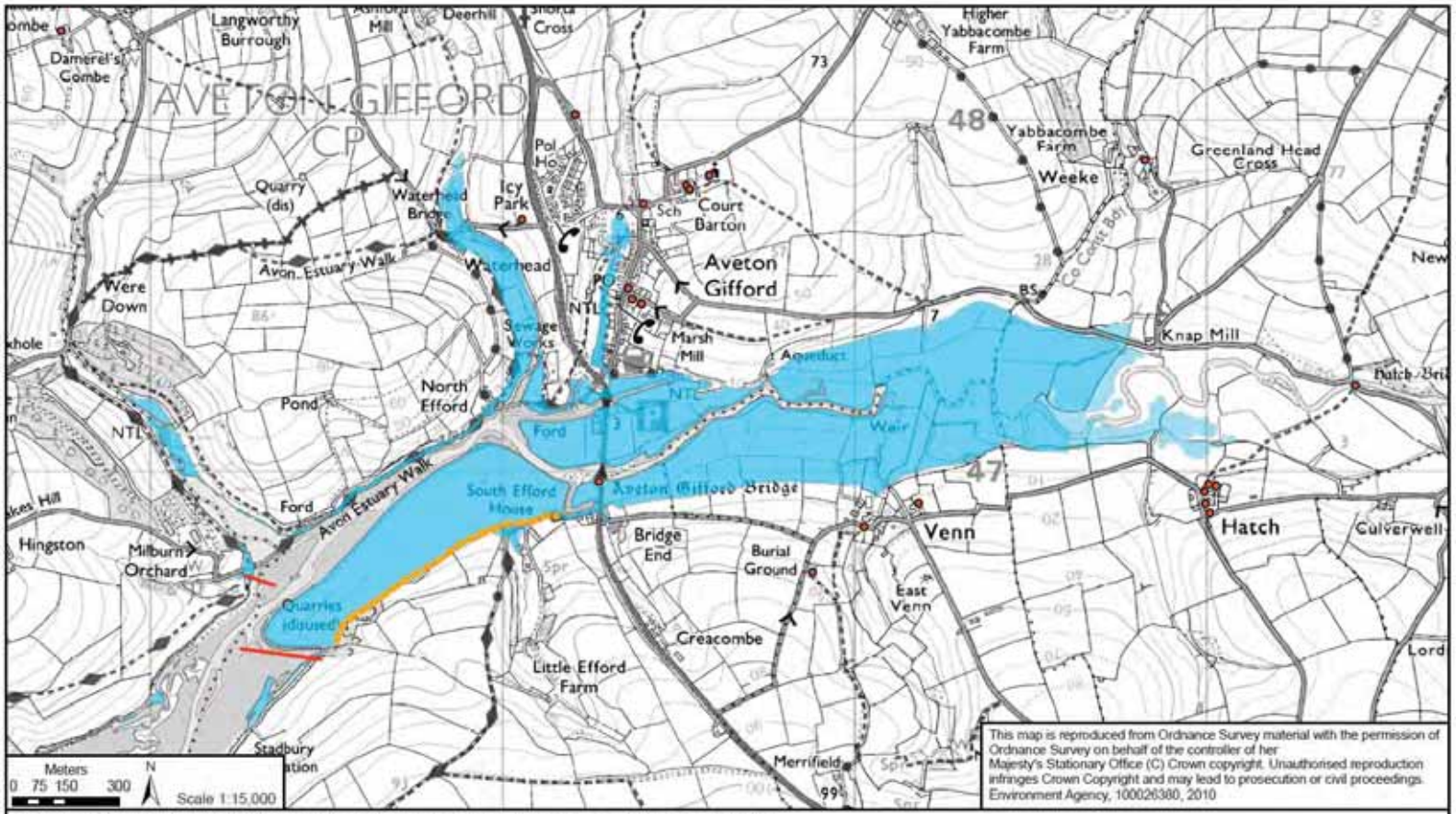

Avon Estuary (Upstream section – Stadbury Farm to Stakes Hill) Shoreline Managment Plan
Policy Unit 6c14: Avon Estuary (Upstream section – Stadbury Farm to Stakes Hill)

Policy

From Present Day:	Medium-Term:	Long-Term:
Managed Realignment	Managed Realignment	Managed Realignment

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building
Indicative Potential Managed Realignment (Subject to more detailed study)

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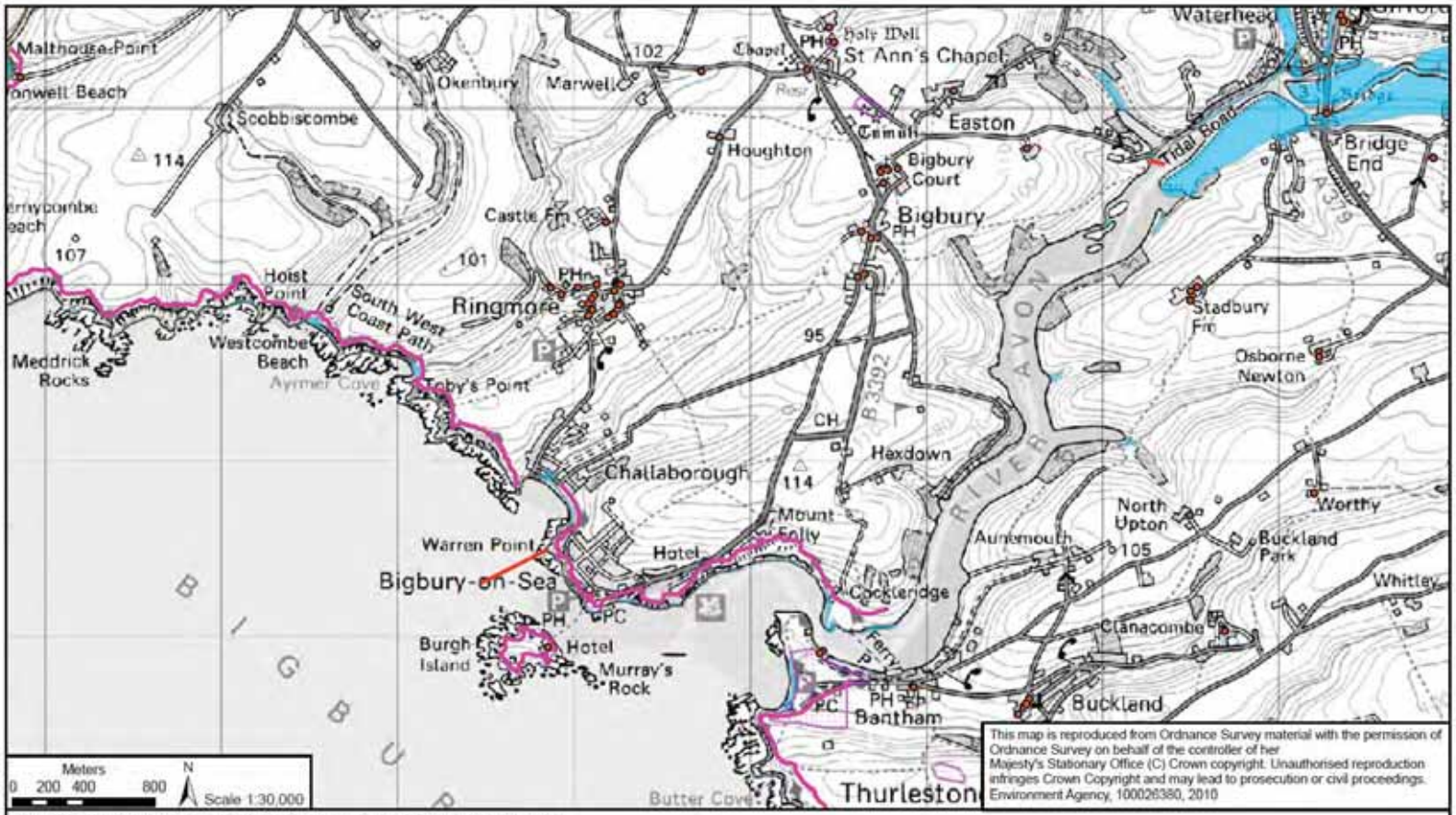

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6c15: Avon Estuary (West Bank – Stakes Hill to Warren Point (Bigbury-on-Sea))

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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Location reference:	**Warren Point (Bigbury-on-Sea) to Challaborough (West)**
Policy Unit reference:	**6c16**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section encompasses the small pocket embayment at Challaborough, at the back of which is a short length of seawall and rock armour defence that protects low-lying land, and a range of tourism facilities, private properties and infrastructure, from the risk of flooding.

The long term Plan is to allow undefended areas to continue to evolve naturally whilst continuing to allow intervention as necessary to ensure visitor access is maintained and to minimise flood risk. Due to the limited sediment interlinkages along this coast any interventions would not significantly affect adjacent stretches of coast nor compromise the future natural evolution of these shorelines. However, continued intervention in these areas will not satisfy national criteria for economic justification and therefore be unlikely to attract public (flood and coastal defence budget) funding, so would be dependent upon alternative funding being sourced (refer also to Section 5.2.2 'Private Defences').

Implementation of this policy could consider the relocation of a number of assets, in particular the more seaward positioned caravans within the holiday park in this area. This might be either inland or to higher ground on either side of the small valley that reaches the sea in this area, so that the beach is allowed to roll back landwards as sea levels rise. This would allow a small beach to remain here in the future. However, if continued defence occurs along the existing line then it is likely that no beach will exist in the long term due to coastal squeeze.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is one of **No Active Intervention**. The undefended hard rock cliffs located along the eastern and western parts of this section have eroded very little over the long term, and this is expected to continue in the future, with negligible recession of these predicted by 2025. The existing small length of defence located at the back of Challaborough Beach that protects low-lying land from flooding could however be retained, although this would depend on the availability funds as future works here are unlikely to attract public (flood and coastal defence budget) funding. If alternative funds area available then maintenance of defences during this period would likely be required. Challaborough Beach fluctuates seasonally but has been stable over the long term. This situation is expected to continue to 2025, although coastal squeeze as a result of sea level rise could become increasingly important during this period if defences are retained, resulting in an increased risk of flooding during storm events by 2025. If defences here are not maintained, then adaptation measures will need to be developed during this period.
Medium term:	The medium term policy is to continue **No Active Intervention**. Negligible erosion of the rock cliffs is predicted over this period. Maintenance of the existing defence at Challaborough Beach could continue during this period if funds are available although this will increasingly become unsustainable as sea levels rise and beach narrowing occurs. If continued defence here is sought, then consideration should be given to moving the line of defence landwards rather than upgrading defences in their current position. This would allow the beach to migrate landwards in response to sea level rise and allow a more naturally functioning beach to be retained at Challaborough. This will also benefit the amenity value of the area and so support the

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	continued viability of the holiday park. This approach would involve loss of parts of the holiday park land, so assets would need to be relocated landwards. If defences are not realigned then the beach would narrow during this period. If defences here are not maintained, then adaptation measures developed in the short term may need to be implemented during this period.
Longer-term:	The long term policy is to continue **No Active Intervention**. The undefended hard rock cliffs at either end of this section would continue to erode only very slowly, with negligible recession predicted. If defences have not been maintained the beach at Challaborough would roll back as sea levels rise and that any effects of current defences here would be removed. However, if funds are available to continue defending this area then the impact upon the beach will depend on whether defences are moved landwards or improved along existing alignments during the medium term. If defences are retained along existing alignments then the beach would likely be lost due to coastal squeeze.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6c16	Warren Point (Bigbury-on-Sea) to Challaborough (West)	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, 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, 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**.

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Location reference:	Warren Point (Bigbury-on-Sea) to Challaborough (West)
Policy Unit reference:	6c16

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 defence line could occur if funds are available. Else defences will remain but deteriorate.	Continued protection of people, property and tourism facilities if defences retained.	Local roads protected against flood and erosion risk if defences retained.	Possible loss of pillbox at Challaborough Beach – *adverse impact*	Potential change in landscape character of South Devon AONB.	No known impacts on geology or soils.	No known impacts on water quality.	No known impacts on designated biodiversity, flora or fauna.
2025 – 2055	Maintenance and improvement of defence line along existing or realigned position could occur if funds are available. Else defences would deteriorate and fail.	Continued protection of majority of property and tourism facilities, although some of these may be lost or relocated depending if Managed Realignment implemented.	Potential impact on local road depending if Managed Realignment implemented or if no defence is provided in this period.	Possible loss of pillbox at Challaborough Beach – *adverse impact*	Potential change in landscape character of South Devon AONB.	No known impacts on geology or soils.	No known impacts on water quality. If Managed Realignment occurs 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.	No known impacts on designated biodiversity, flora or fauna.
2055 – 2105	Maintenance and improvement of defence line along existing or realigned position could occur if funds are available. If defences have not been maintained then there will be no defence impact during this period.	Continued protection of majority of property and tourism facilities if defences retained either along existing or realigned position.	Potential impact on local road depending if Managed Realignment implemented or if no defence is provided in this period.	Possible loss of pillbox at Challaborough Beach – *adverse impact*	Potential change in landscape character of South Devon AONB.	No known impacts on geology or soils.	No known impacts on water quality. If Managed Realignment occurs 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.	No known impacts on designated biodiversity, flora or fauna.

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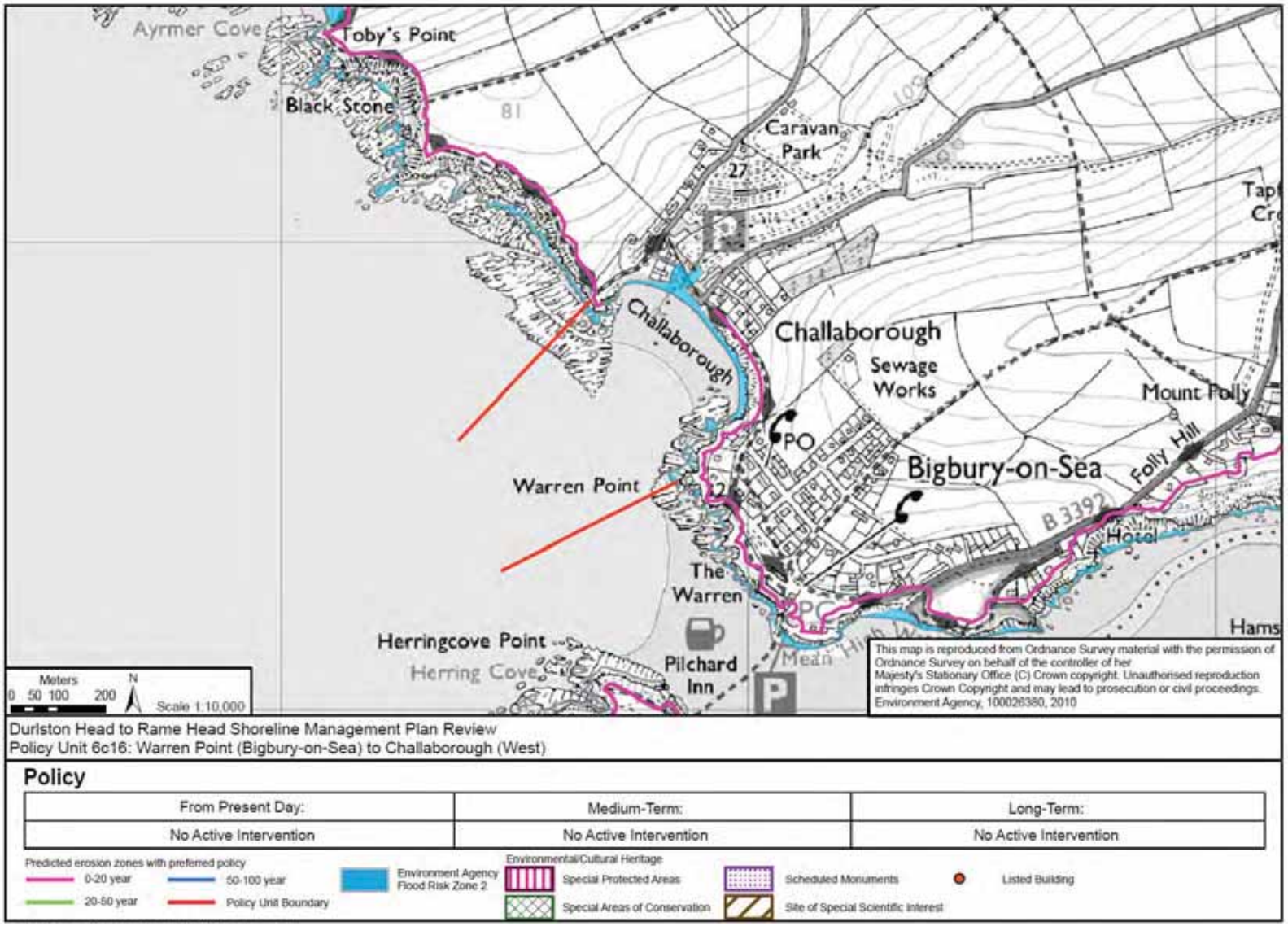

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Location reference:	**Challaborough (West) to Erme Estuary (East)**
Policy Unit reference:	**6c17**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term Plan for this section of undefended stretch of coast, which is characterised by cliffs of outstanding landscape, geological and geomorphological value, is for the shoreline to evolve naturally, with slow erosion of the hard rock cliffs occurring as a result of infrequent, small scale cliff failures.

No built assets will be placed at risk from this approach, whilst natural value will be retained.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention** along this undefended section of coast, which would be allowed to continue to evolve naturally.
Medium term:	The medium term policy is a continuation of **No Active Intervention**. Cliff erosion would be limited to localised areas of slightly more erodible cliffs. Sea level rise could lead to the narrowing and possible submergence of the small pocket beaches that indent the cliffs along this section, as there is insufficient supply of sediment from localised cliff erosion and where beaches front resistant cliffs. Where beaches are not present the still water level will simply be higher up the cliff face.
Longer-term:	The long term policy is for continued **No Active Intervention**. Cliff erosion would be limited to localised areas of slightly more erodible cliffs, with total erosion in these areas of up to 10m predicted by 2105, but in places there will be no change in cliff top position, depending on the occurrence of small scale cliff failures. As sea levels rise, most of the small pocket beaches that indent the cliffs along this section would be expected to have disappeared.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6c17	**Challaborough (West) to Erme Estuary (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**.

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Location reference:	Challaborough (West) to Erme Estuary (East)
Policy Unit reference:	6c17

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.	No assets at risk.	Little/ no loss of Grades 3 , 4 and 5 agricultural land.	No known impacts on archaeological features.	Little/ no change in landscape character of South Devon AONB.	No known impacts on geology or soils.	No known impacts on water quality.	No known impacts on designated biodiversity, flora or fauna.
2025 – 2055	Continued cliffline retreat would occur. No management activities.	Potential, very localised risk to the South West Coast Path from erosion – but cliff retreat minimal, therefore potential for relocation.	Grades 3 , 4 and 5 Agricultural land at risk of minimal (<10m) erosion.	No known impacts on archaeological features.	Little/ no change in landscape character of South Devon AONB.	No known impacts on geology or soils.	No known impacts on water quality.	No known impacts on designated biodiversity, flora or fauna.
2055 – 2105	Continued cliffline retreat would occur. No management activities.	Potential risk to the South West Coast Path from erosion – but cliff retreat minimal, therefore potential for relocation.	Grades 3 , 4 and 5 Agricultural land at risk of minimal (<10m) erosion.	No known impacts on archaeological features.	Little/ no change in landscape character of South Devon AONB.	No known impacts on geology or soils.	No known impacts on water quality.	No known impacts on designated biodiversity, flora or fauna.

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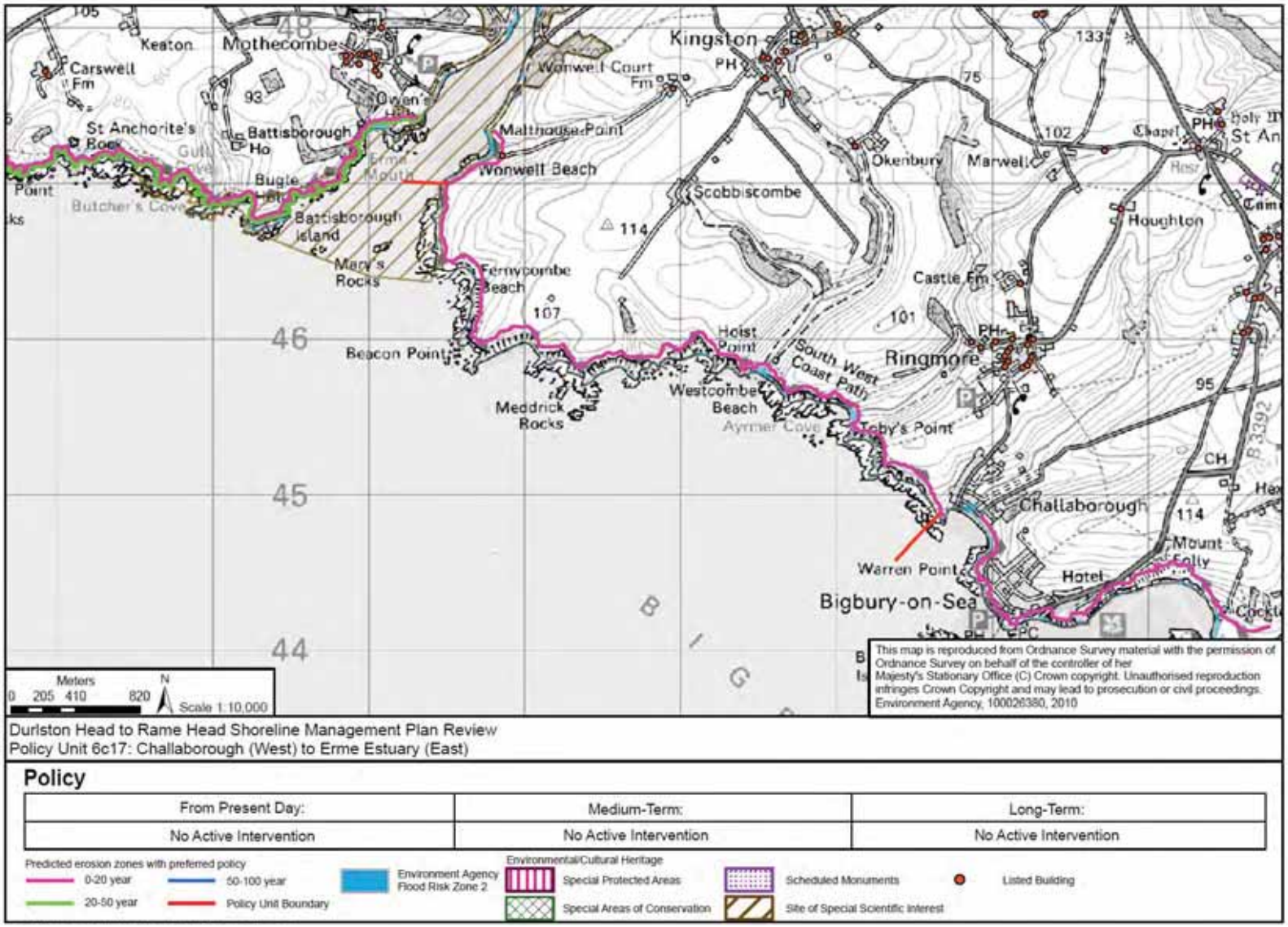

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Location reference:	**Erme Estuary**
Policy Unit reference:	**6c18 to 6c20**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The Erme Estuary is a ria-type estuary largely constrained by steeply sloping ground. The long term Plan for this area is to allow the estuary to naturally adapt to sea level rise. There are no flood alleviation schemes within this estuary, although there are a number of properties at risk of flooding with regular frequency within this primarily rural area.

Under this policy, extreme flood events would continue to pose a flood risk to properties, but this would be managed through flood warnings rather than constructing flood defences along this section. As sea level rise and other climate change impacts occur in the longer term, the frequency of flooding to these areas is likely to increase compared to present day, and so it may become unsustainable for the properties affected to remain habitable over this period.

Preferred policies to implement Plan:

From present day (short term):	The recommended short term policy is for **No Active Intervention** other than the provision of flood warning schemes.
Medium term:	The recommended medium term policy is for **No Active Intervention** other than the continued provision of flood warning scheme for so long as properties at risk of flooding remain habitable. This could change as the frequency of flood events increases due to sea level rise and other climate change impacts. No change in the form of the Erme Estuary is expected as it is natural and unconstrained; therefore the estuary should be able to adapt naturally to rising sea levels.
Longer-term:	The recommended long term policy is for **No Active Intervention** other than the continued provision of flood warning scheme, for so long as properties at risk of flooding remain habitable. This could change as the frequency of flood events increases due to sea level rise and other climate change impacts. No change in the form of the Erme Estuary is expected as it is natural and unconstrained; therefore the estuary should be able to adapt naturally to rising sea levels.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6c18	**Erme Estuary (East Bank – Mouth to Orcheton Wood)**	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**.
6c19	**Erme Estuary (Upstream section –Orcheton Wood to Pamflete Wood)**	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**.
6c20	**Erme Estuary**	Allow natural coastal	Allow natural coastal	Allow natural coastal

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Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
	(West Bank – Pamflete Wood to Mouth)	evolution to continue through **No Active Intervention**.	evolution to continue through **No Active Intervention**.	evolution to continue through **No Active Intervention**.

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Location reference:	Erme Estuary
Policy Unit reference:	6c18 to 6c20

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	Natural evolution of the estuary would occur. No management activities apart from implementation of a flood warning scheme.	Risk of flooding to people and properties at Clying Mill, , properties near the junction of the A379 and A3121, and Goutsford BR, and a single property Efford Ho on the Erme Estuary Potential risk to the South West Coast Path from erosion	Risk of flooding to the A379 and A3121 along the Erme Estuary. Grades 3 , 4 and 5 agricultural land at risk of flooding/ erosion	Register Park and Garden at Flete at risk of flooding. Continued erosion of early medieval settlement at Meadowsfoot Beach as a result of NAI, though this would be as a result of SMP policy.	Minimal change in landscape character of South Devon AONB.	No known impacts on geology or soils.	No known impacts on water quality.	Potential loss of the net area of some of the terrestrial interest features of Erme Estuary SSSI due to flooding and erosion though potential increase in estuarine and intertidal habitats.
2025 – 2055	Natural evolution of the estuary would occur. No management activities apart from implementation of a flood warning scheme.	Risk of flooding to people and properties at Clying Mill, , properties near the junction of the A379 and A3121, and Goutsford BR, and a single property Efford Ho on the Erme Estuary Potential risk to the South West Coast Path from erosion	Risk of flooding to the A379 and A3121 along the Erme Estuary. Grades 3 , 4 and 5 agricultural land at risk of flooding/ erosion	Register Park and Garden at Flete at risk of flooding. Continued erosion of early medieval settlement at Meadowsfoot Beach as a result of NAI, though this would be as a result of SMP policy.	Minimal change in landscape character of South Devon AONB.	No known impacts on geology or soils.	No known impacts on water quality.	Potential loss of the net area of some of the terrestrial interest features of Erme Estuary SSSI due to flooding and erosion though potential increase in estuarine and intertidal habitats.
2055 – 2105	Natural evolution of the estuary would occur. No management activities apart from implementation of a flood warning scheme.	Risk of flooding to people and properties at Clying Mill, , properties near the junction of the A379 and A3121, and Goutsford BR, and a single property Efford Ho on the Erme Estuary Potential risk to the South West Coast Path from erosion	Risk of flooding to the A379 and A3121 along the Erme Estuary Grades 3 , 4 and 5 agricultural land at risk of flooding/ erosion	Register Park and Garden at Flete at risk of flooding. Continued erosion of early medieval settlement at Meadowsfoot Beach as a result of NAI, though this would be as a result of SMP policy.	Minimal change in landscape character of South Devon AONB.	No known impacts on geology or soils.	No known impacts on water quality.	Potential loss of the net area of some of the terrestrial interest features of Erme Estuary SSSI due to flooding and erosion though potential increase in estuarine and intertidal habitats.

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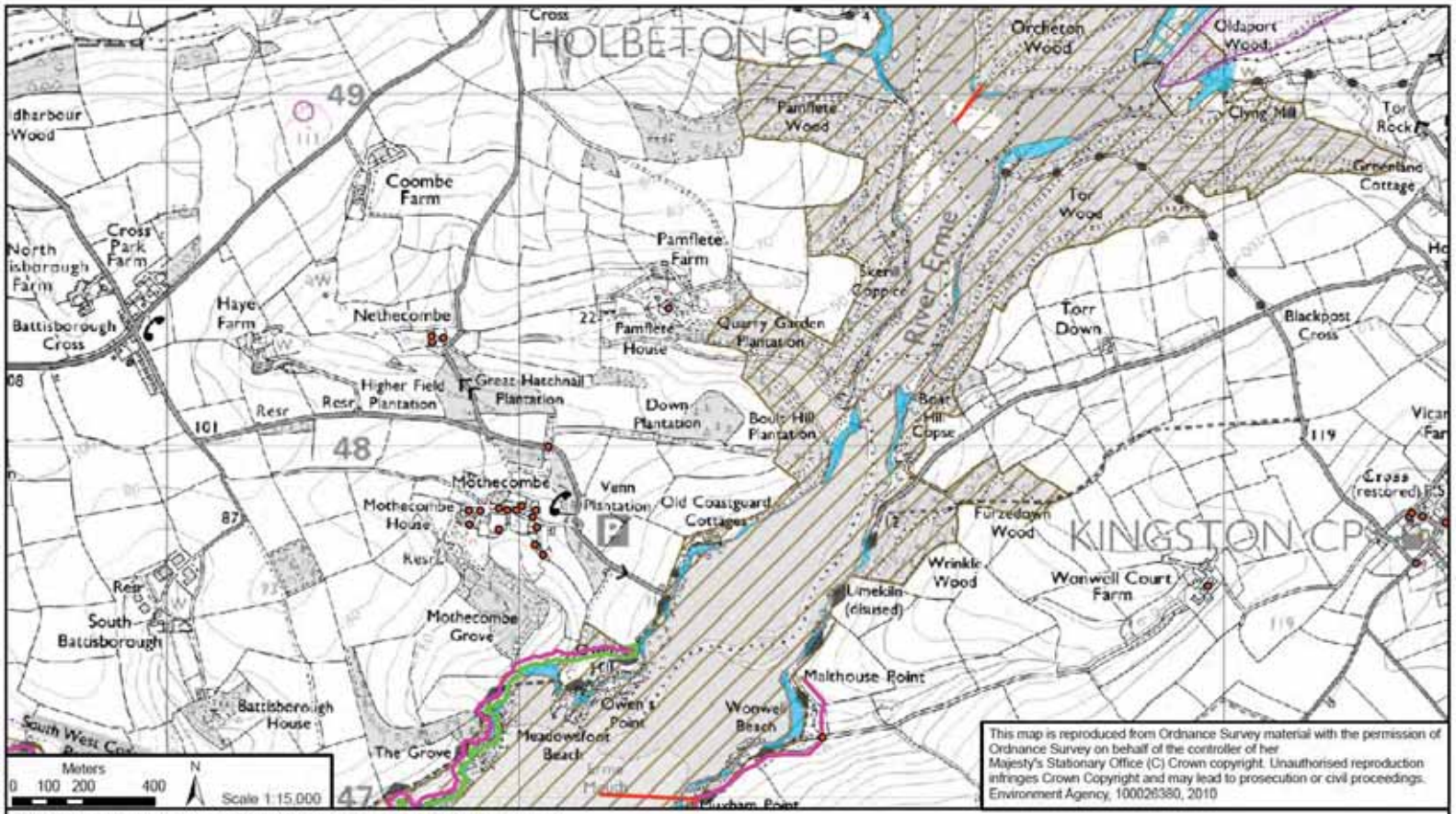


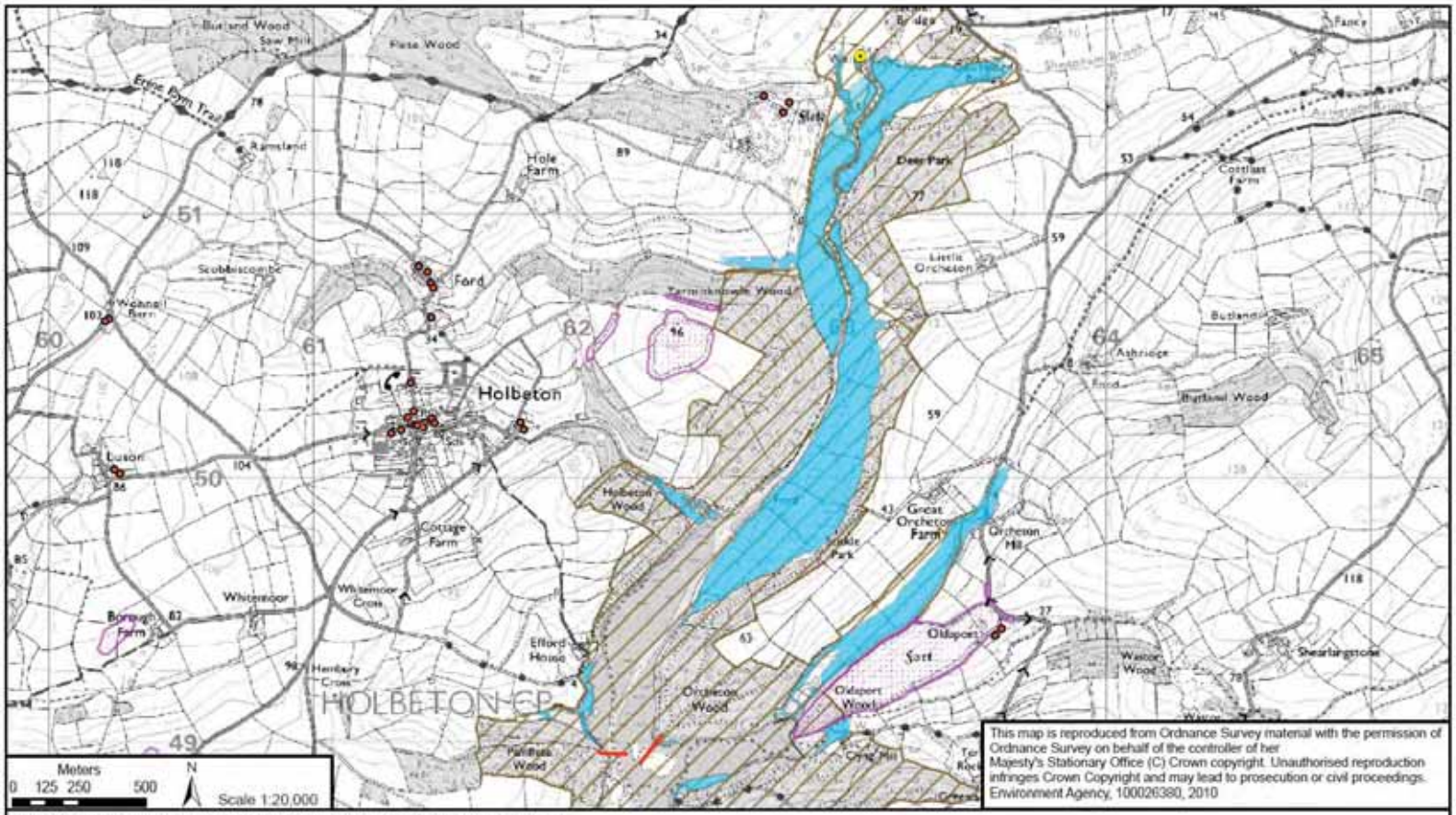
Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6c18: Erme Estuary (East Bank – Mouth to Orcheton Wood)

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
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.



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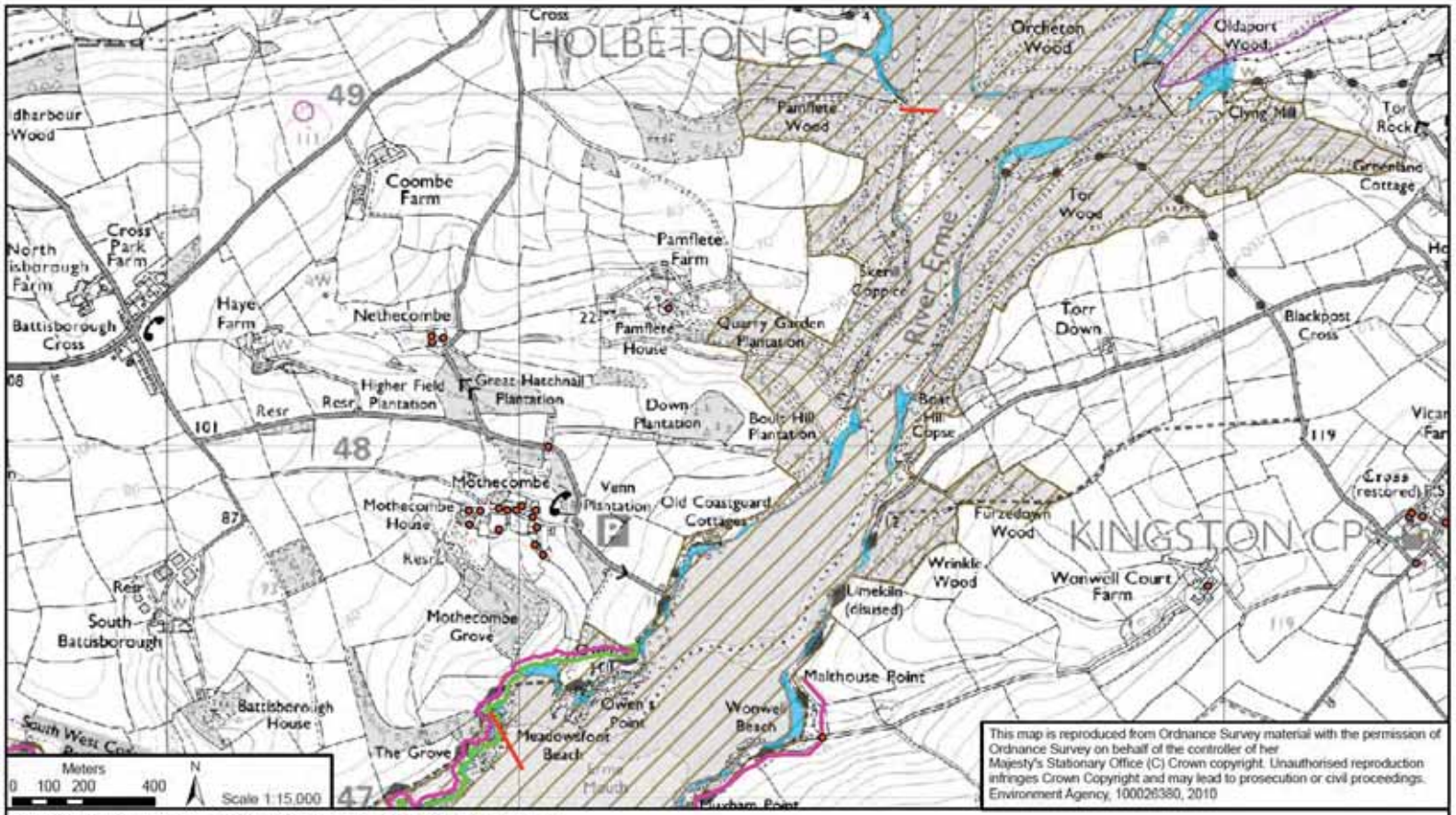

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6c20: Erme Estuary (West Bank – Pamflete Wood to Mouth)

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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Location reference:	**Erme Estuary (West) to Yealm Estuary (East)**
Policy Unit reference:	**6c21**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term Plan for this section of coast, which is characterised by cliffs of outstanding landscape and geological and geomorphological value, is for the shoreline to continue to evolve naturally.

The slow erosion of the hard rock cliffs occurring as a result of infrequent, small scale cliff failures could result in the potential loss of a number of listed buildings and parts of the South West Coast Path in the longer term, depending upon where future cliff failures occur.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention**. The majority of this section consists of hard rock cliffs that have eroded very little over the long term, although there are localised areas that are slightly more erodible: this trend would continue.
Medium term:	The medium term policy is **No Active Intervention**. Cliff erosion would be limited to localised areas of slightly more erodible cliffs, with the occurrence of small scale cliff failures. The cliffs along this section are indented with small pocket beaches that are supplied with sediment from local cliff erosion only; there is no interaction between adjacent beaches. These beaches have historically been stable over the long term although sea level rise could become increasingly important. This would lead to the narrowing and possible submergence of the pocket beaches that indent the cliffs along this section. Where beaches are no longer present the still water level will simply be higher up the cliff face.
Longer-term:	The long term policy is for **No Active Intervention**. Cliff erosion would be limited to localised areas of slightly more erodible cliffs, with total erosion in these areas of up to 10m predicted by 2105 depending on the occurrence of small scale cliff failures. As sea levels rise most of the small pocket beaches that indent the cliffs along this section would disappear without sufficient sediment supply from the cliffs.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6c21	**Erme Estuary (West) to Yealm Estuary (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**.

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Location reference:	Erme Estuary (West) to Yealm Estuary (East)
Policy Unit reference:	6c21

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.	No risk to people and, properties at Stoke Beach due to erosion in the short term. Potential risk to the South West Coast Path from erosion, though risk is small due to low rates of recession, and depends upon location of future cliff fall events.	Grades 3 , 4 and 5 Agricultural land at risk of erosion	There is unlikely to be any erosion to listed buildings at Stoke.	Little or no change in landscape character of South Devon AONB.	No known impacts on geology or soils.	No known impacts on water quality.	Continuation of natural processes is key to the integrity of Blackstone Point SAC and SSSI, therefore NAI would continue to maintain these features
2025 – 2055	Continued slow cliffline retreat would occur. No management activities.	Risk to people, properties at Stoke Beach from erosion Potential risk to the South West Coast Path from erosion, though risk is small due to low rates of recession, and depends upon location of future cliff fall events. Potential loss of access to isolated coves.	Grades 3 , 4 and 5 Agricultural land at risk of erosion	Listed buildings potentially at risk from erosion at	Little or no change in landscape character of South Devon AONB.	No known impacts on geology or soils.	No known impacts on water quality.	Continuation of natural processes is key to the integrity of Blackstone Point SAC and SSSI, therefore NAI would continue to maintain these features
2055 – 2105	Continued slow cliffline retreat would occur. No management activities.	Risk to people, properties at Stoke Beach from erosion Potential risk to the South West Coast Path from erosion, though risk is small due to low rates of recession, and depends upon location of future cliff fall events. Potential loss of access to isolated coves.	Grades 3 , 4 and 5 Agricultural land at risk of erosion	Listed buildings potentially at risk from erosion at Stoke	Little or no change in landscape character of South Devon AONB.	No known impacts on geology or soils.	No known impacts on water quality.	Continuation of natural processes is key to the integrity of Blackstone Point SAC and SSSI, therefore NAI would continue to maintain these features

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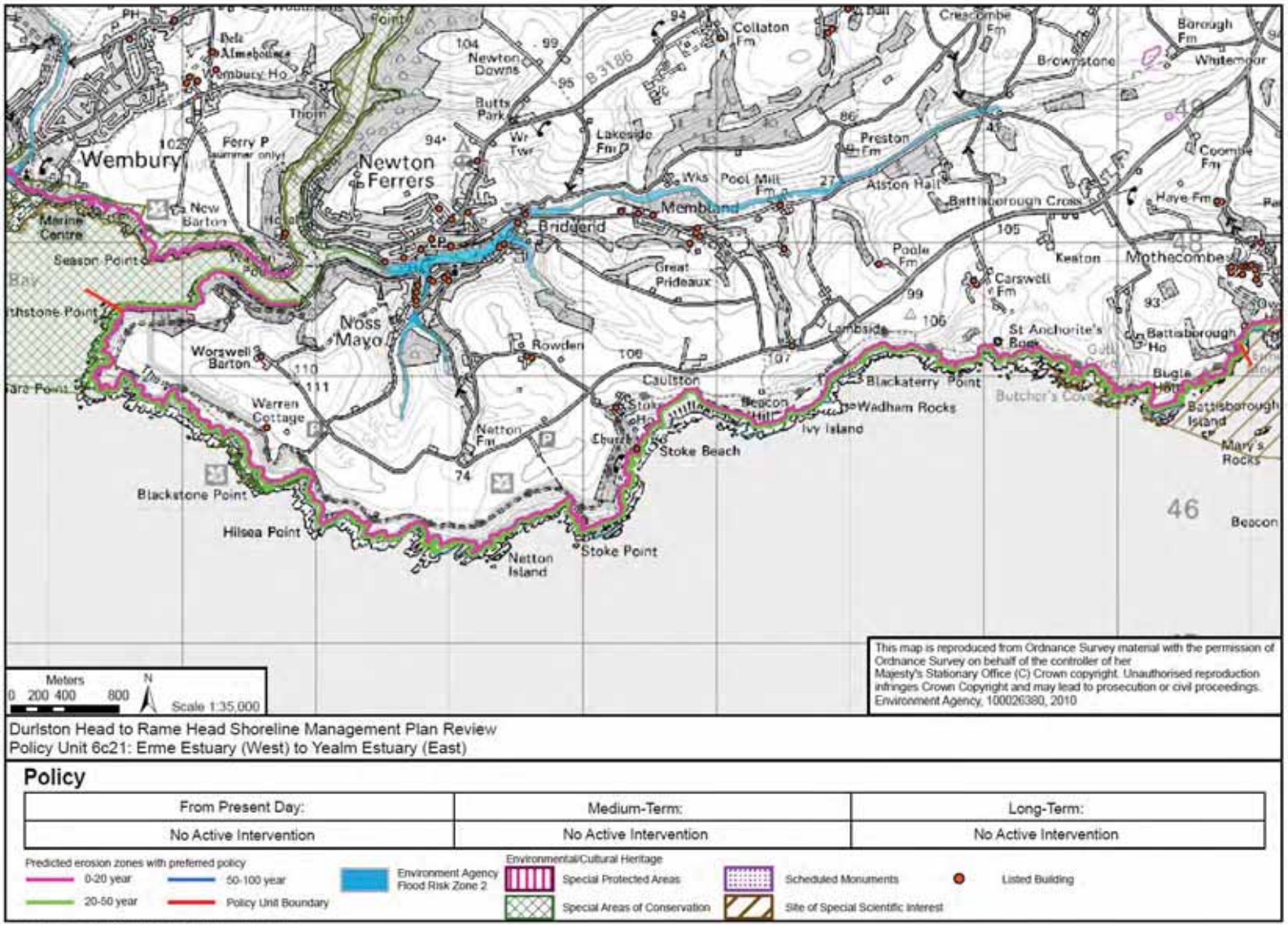

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6c21: Erme Estuary (West) to Yealm Estuary (East)

Policy

From Present Day:	Medium-Term:	Long-Term:
No Active Intervention	No Active Intervention	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:	**Yealm Estuary**
Policy Unit reference:	**6c22 to 6c25**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The Yealm Estuary is a ria-type estuary physically constrained by steeply sloping ground. The estuary is largely undefended and the long term Plan is to allow it to continue to naturally evolve, whilst maintaining protection to property and infrastructure, where defences already exist. This includes the frontages of Newton Ferrers and Noss Mayo. In these areas the Plan is to continue to defend through public works or intervention by respective landowners. This would also serve to protect a number of listed buildings in this area.

It is not intended that new defences would be constructed along any areas where that are currently undefended.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention** along the undefended sections of the Yealm Estuary, which will allow natural processes to continue in these areas. Along the Noss Mayo and Newton Ferrers part of the estuary, the short term policy is to **Hold the Line** through maintaining and improving existing defences in order to minimise flood risk.
Medium term:	The medium term policy is for **No Active Intervention** along the undefended sections of the Yealm Estuary. No change in the form of the Yealm Estuary is expected. Along the Noss Mayo and Newton Ferrers part of the estuary, the medium term policy is to continue to **Hold the Line** of existing defences. With rising sea levels, maintaining adequate levels of protection is likely to require the construction of larger defences than at present.
Longer-term:	The long term policy is for **No Active Intervention** along the undefended sections of the Yealm Estuary, which will allow natural processes to continue to occur in these areas. No change in the form of the Yealm Estuary is expected as it is natural and unconstrained; therefore the estuary should be able to adapt naturally to rising sea levels. Along the Noss Mayo and Newton Ferrers part of the estuary, the long term policy is to continue to **Hold the Line** of existing defences. Maintaining adequate levels of protection will require the construction of larger defences unless undertaken in previous epochs.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6c22	**Yealm Estuary (East Bank – Mouth to Passage House)**	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 occur through **No Active Intervention**.
6c23	**Yealm Estuary (East Bank – Passage House to**	Continue to **Hold the Line** of existing defences.	Continue to **Hold the Line** of existing defences.	Continue to **Hold the Line** of existing defences.

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Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
	Newton Ferrers North)			
6c24	Yealm Estuary (East Bank – Newton Ferrers North to Fish House Plantation)	Allow natural coastal evolution through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.	Allow natural coastal evolution to continue through **No Active Intervention**.
6c25	Yealm Estuary (West Bank – Fish House Plantation to Season Point)	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**.

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Location reference:	Yealm Estuary
Policy Unit reference:	6c22 to 6c25

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	Natural evolution of the undefended parts of the estuary. Maintenance and improvement of existing defences at Noss Mayo and Newton Ferrers.	Risk of flooding to people and properties at Yealmpton and along the waterfront at Newton Ferrers will be minimised where defences are maintained. Potential risk to the South West Coast Path from erosion.	Potential risk of flooding to the A379 at Yealmpton and Brixton. Potential risk of flooding to hotel south of A379 near Brixton. Grades 3, 4 and 5 agricultural land at risk of flooding/erosion.	Grade 1, 2 and 3 listed buildings potentially at risk from flooding particularly in Yealmpton and Newton Ferrers, though risk will be minimised where defences are maintained.	Little or no change in landscape character of South Devon AONB.	Continuation of natural processes is key to the integrity of Wheal Emily SSSI and Wembury Point SSSI (geological), NAI would continue to maintain these features	No known impacts on water quality.	HTL in 6c23 may result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC due to coastal squeeze and direct loss of habitat within the footprint of any scheme. An adverse effect is anticipated. Potential loss of the net area of some of the terrestrial interest features of Yealm Estuary SSSI due to flooding and erosion (except between Noss Mayo and Newton Ferrers). Potential for intertidal habitat creation in many areas including on the Yealm Estuary SSSI and adjacent to the Plymouth Sound and Estuaries SAC.
2025 – 2055	Natural evolution of the undefended parts of the estuary. Maintenance/ rebuild of existing defences at Noss Mayo and Newton Ferrers.	Risk of flooding to people and properties at Yealmpton and along the waterfront at Newton Ferrers will be minimised where defences are maintained. Potential risk to the South West Coast Path from erosion	Potential risk of flooding to the A379 at Yealmpton and Brixton. Potential risk of flooding to hotel south of A379 near Brixton. Grades 3, 4 and 5 agricultural land at risk of flooding/erosion.	Grade 1, 2 and 3 listed buildings potentially at risk from flooding particularly in Yealmpton and Newton Ferrers, though risk will be minimised where defences are maintained.	Little or no change in landscape character of South Devon AONB.	Continuation of natural processes is key to the integrity of Wheal Emily SSSI and Wembury Point SSSI (geological), NAI would continue to maintain these features	No known impacts on water quality.	HTL in 6c23 may result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC due to coastal squeeze and direct loss of habitat within the footprint of the scheme. An adverse effect is anticipated. Potential loss of the net area of some of the terrestrial interest features of Yealm Estuary SSSI due to flooding and erosion (except between Noss Mayo and Newton Ferrers). Potential for intertidal habitat creation in many areas including on the Yealm Estuary SSSI and adjacent to the Plymouth Sound and Estuaries SAC.
2055 – 2105	Natural evolution of the undefended parts of the estuary. Maintenance/ rebuild of existing defences at	Risk of flooding to people and properties at Yealmpton and along the waterfront at Newton Ferrers will be minimised where defences are	Potential risk of flooding to the A379 at Yealmpton and Brixton Potential risk of flooding to	Grade 1, 2 and 3 listed buildings potentially at risk from flooding particularly in Yealmpton and Newton Ferrers, though risk will be	Little or no change in landscape character of South Devon AONB.	Continuation of natural processes is key to the integrity of Wheal Emily SSSI and Wembury Point SSSI (geological), NAI would	No known impacts on water quality.	HTL in 6c23 may result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC due to coastal squeeze and direct

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Location reference:	Yealm Estuary
Policy Unit reference:	6c22 to 6c25

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
	Noss Mayo and Newton Ferrers.	maintained. Potential risk to the South West Coast Path from erosion along undefended stretches.	hotel south of A379 near Brixton. Grades 3, 4 and 5 agricultural land at risk of flooding/erosion.	minimised where defences are maintained.		continue to maintain these features		loss of habitat within the footprint of the scheme. An adverse effect is anticipated. Potential loss of the net area of some of the terrestrial interest features of Yealm Estuary SSSI due to flooding and erosion (except between Noss Mayo and Newton Ferrers). Potential for intertidal habitat creation in many areas including on the Yealm Estuary SSSI and adjacent to the Plymouth Sound and Estuaries SAC.

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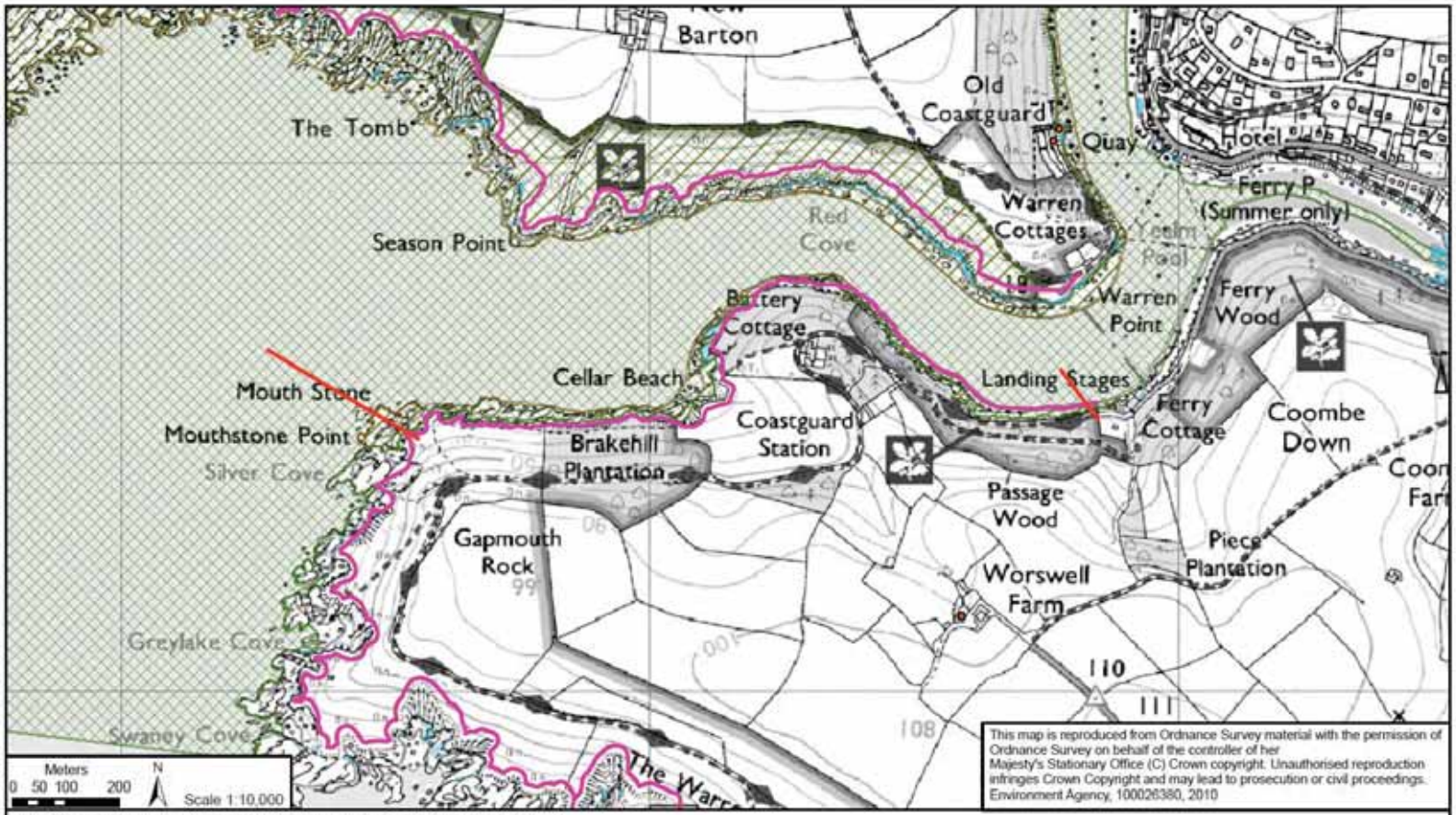

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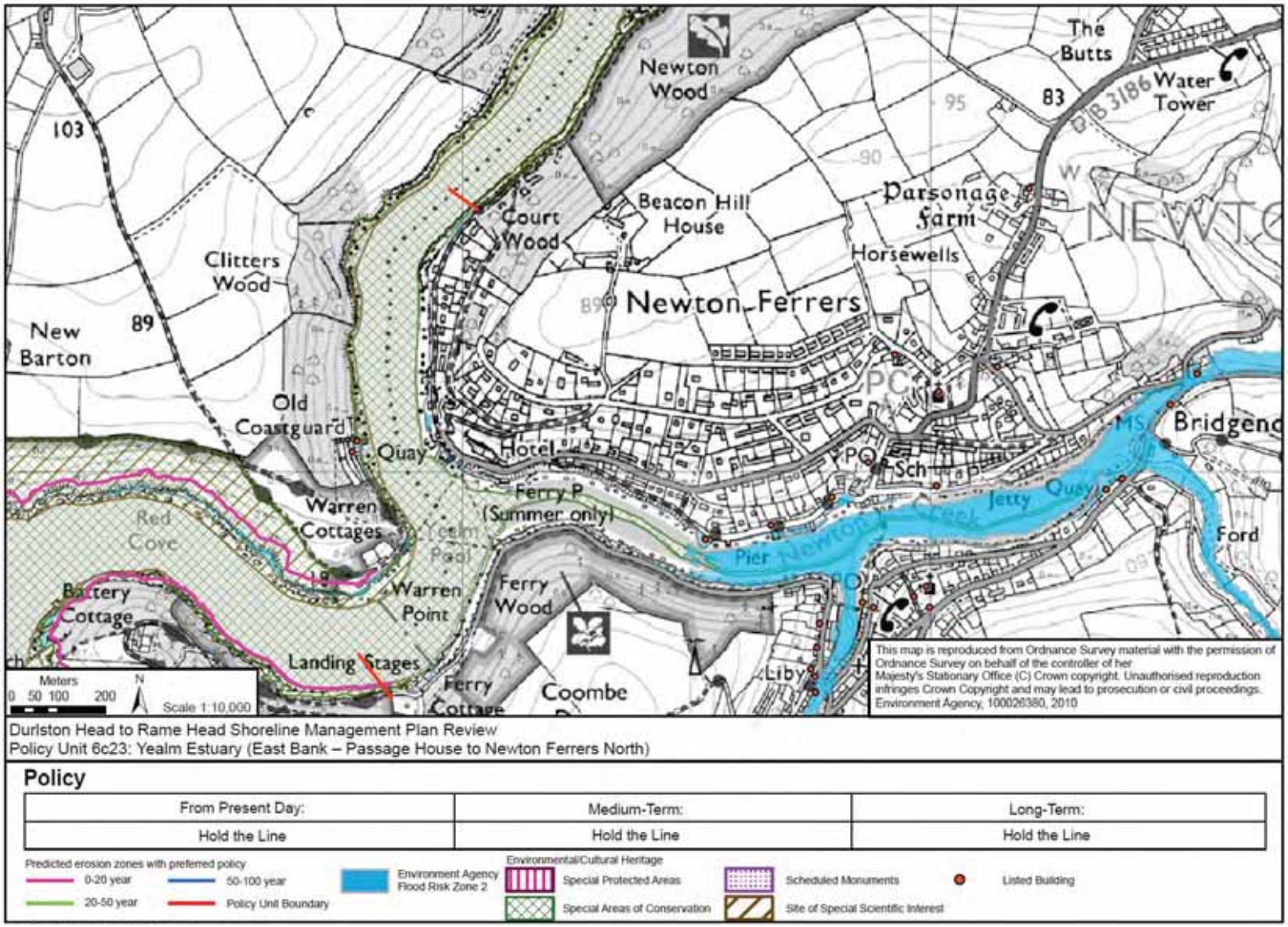

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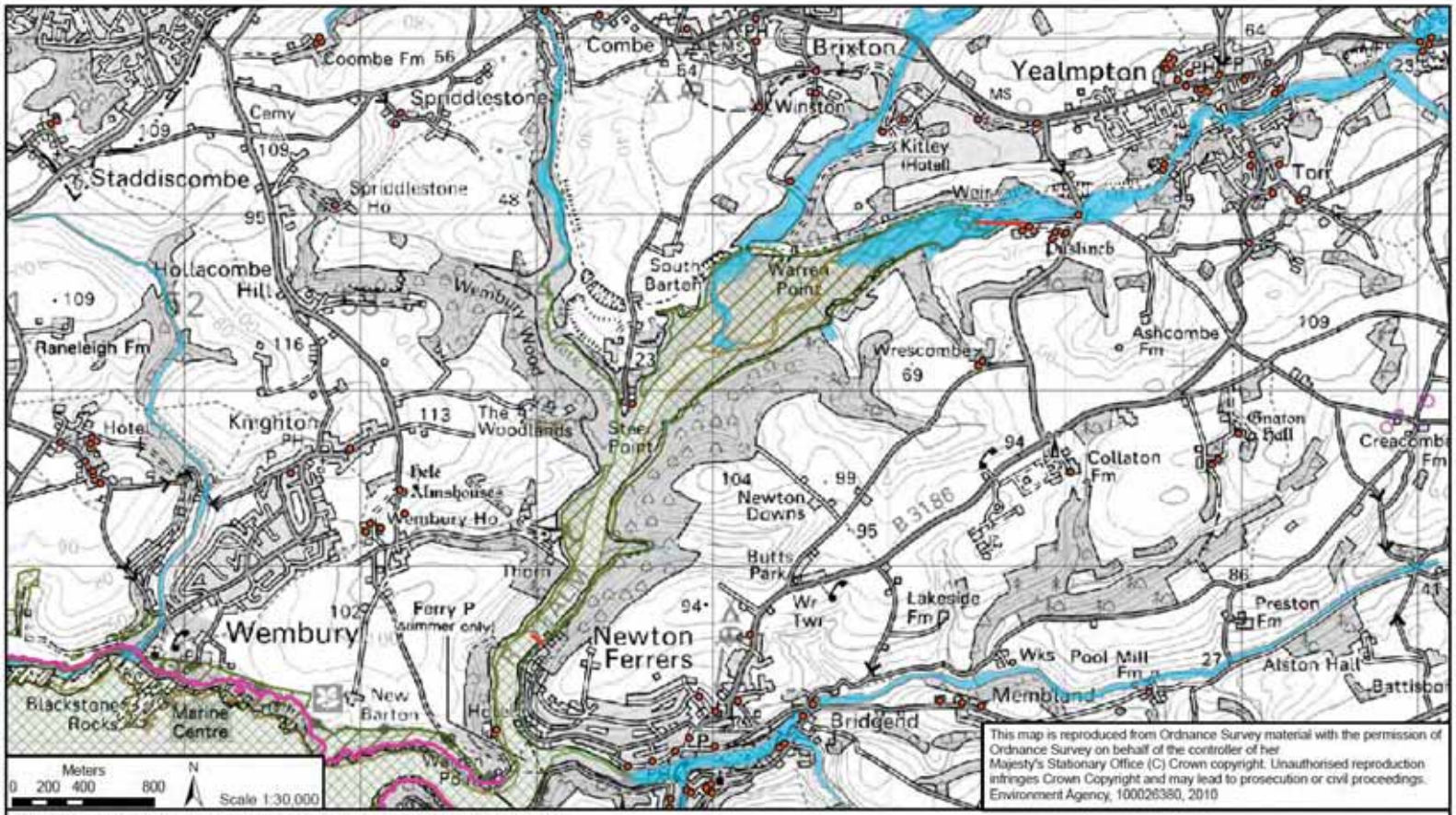

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6c24: Yealm Estuary (East Bank – Newton Ferrers North to Fish House Plantation)

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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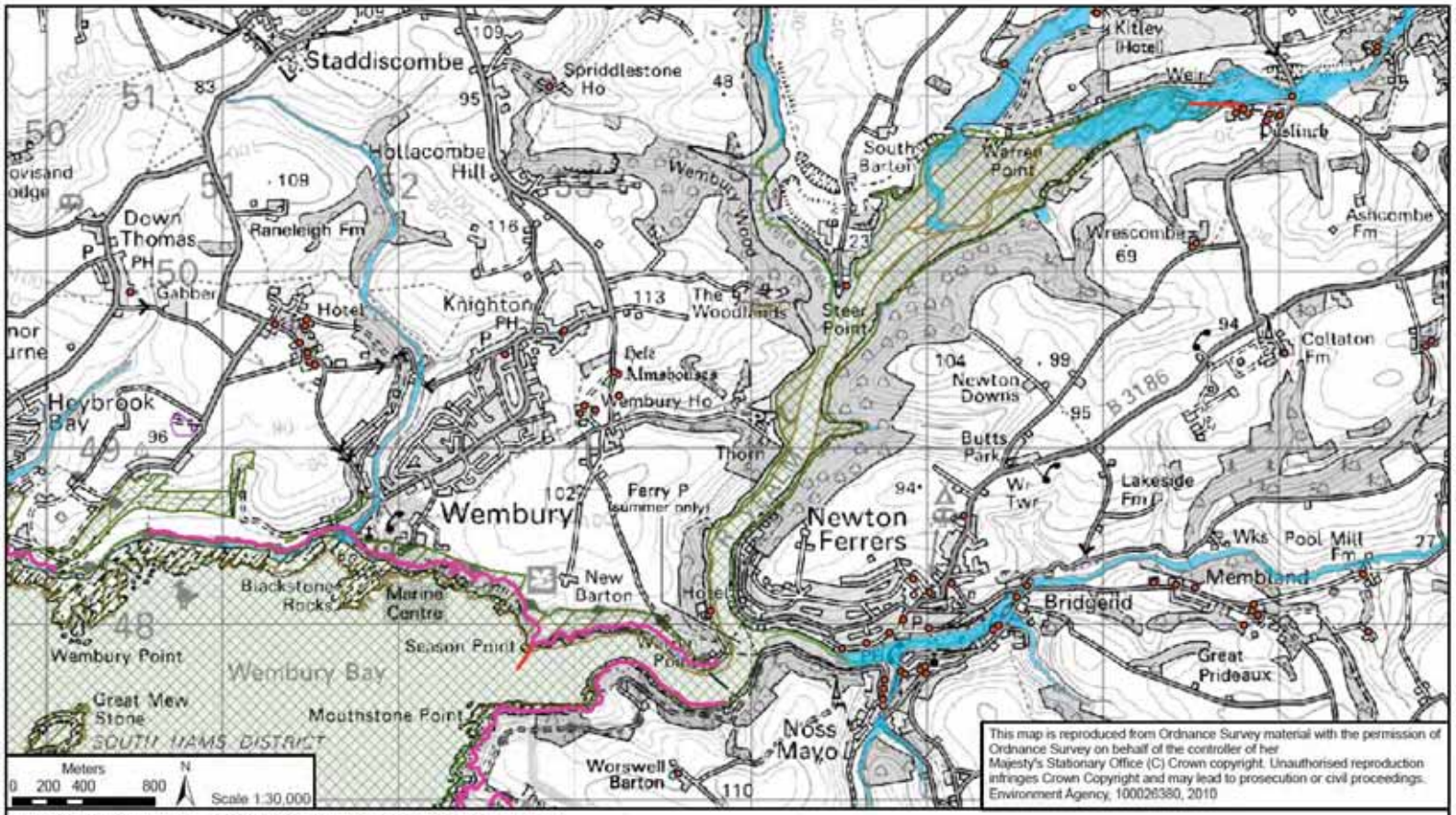

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6c25: Yealm Estuary (West Bank – Fish House Plantation to Season Point)

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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Location reference:	**Season Point to Wembury Point**
Policy Unit reference:	**6c26**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term Plan for this coastline, which is characterised by cliffs of outstanding landscape and geological and geomorphological value, is to allow it to continue to evolve naturally.

There are presently small sections of masonry/stone wall defence at Wembury that provide local protection against flooding and erosion. Although future defence of this area would be unlikely to attract public funding, there are no technical reasons, i.e. impacts upon sediment processes, that preclude defences being provided. Consequently, if other funds were available then defences could be retained in order to reduce the risk of flooding and erosion to these assets. Such measures are not considered to have a detrimental impact upon the natural character of the area. If this is not undertaken then it will be necessary to develop measures to mitigate losses or look to relocate assets away from the area of risk.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention**. Cliff erosion would be negligible. The small section of defence at Wembury is unlikely to attract public funding but these could be maintained if other funds were available without significantly impacting on the natural coastal evolution of the area.
Medium term:	The medium term policy is to continue **No Active Intervention** along this predominantly undefended section of coast. The small pocket beaches along this stretch may start to narrow due to sea level rise. The short section of defence at Wembury would fail by the end of this period if it were not maintained, resulting in increased flood risk to currently protected areas. However, if other funds were available to maintain the defences in this area this risk would continue to be reduced, although maintaining adequate defences is likely to require larger defences than at present.
Longer-term:	The long term policy is to continue **No Active Intervention** along this predominantly undefended section of coast. Cliff erosion would be limited to localised areas of slightly more erodible cliffs, with total erosion in these areas of up to 10m predicted by 2105 depending on the occurrence of small scale cliff failures. As sea levels rise, most of the small pocket beaches that indent the cliffs along this section would be expected to have disappeared, unless there is sufficient sediment supply from the local cliffs. If other funds were available to maintain the defences at Wembury the flood and erosion risk would continue to be reduced, although maintaining adequate defences is likely to require larger defences than at present as wave exposure would increase due to 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.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6c26	Season Point to Wembury Point	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:	Season Point to Wembury Point
Policy Unit reference:	6c26

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. Possible maintenance of the short length of defence at Wembury if funds available.	Potential localised risk to the South West Coast Path from erosion. Sailing club and isolated properties at Wembury risk of flooding (unless defences maintained).	Grades 3, 4 and 5 agricultural land at risk from limited erosion.	Registered Park and Garden at Langdon Court Hotel at risk of flooding/erosion.	Little or no change in landscape character of South Devon AONB.	Continuation of natural processes is key to the integrity of Wembury Point SSSI (geological), therefore NAI would continue to maintain these	No known impacts on water quality.	Potential for a small increase in intertidal habitat within the Plymouth Sound and Estuaries SAC at the base of the cliffs at Wembury if the defences are not maintained. Potential for the net loss of one or more features of the Wembury Voluntary Marine Conservation area due to erosion
2025 – 2055	Continued cliffline retreat would occur. Possible maintenance/ rebuild of the short length of defence at Wembury if funds available.	Potential localised risk to the South West Coast Path from erosion. Potential loss of access to isolated coves and loss of parking/ tourist amenities at Wembury Sailing club and isolated properties at Wembury risk of flooding (unless defences maintained).	Grades 3, 4 and 5 agricultural land at risk from limited erosion.	Registered Park and Garden at Langdon Court Hotel at risk of flooding/erosion.	Little or no change in landscape character of South Devon AONB.	Continuation of natural processes is key to the integrity of Wembury Point SSSI (geological), therefore NAI would continue to maintain these features	No known impacts on water quality.	No adverse effects on Plymouth Sound and Estuaries SAC are anticipated. Potential for the net loss of one or more features of the Wembury Voluntary Marine Conservation area due to erosion
2055 – 2105	Continued cliffline retreat would occur. Possible maintenance/ rebuild of the short length of defence at Wembury if funds available.	Potential localised risk to the South West Coast Path from erosion. Potential loss of access to isolated coves and loss of parking/ tourist amenities at Wembury Sailing club and isolated properties at Wembury risk of flooding (unless defences maintained).	Grades 3, 4 and 5 agricultural land at risk from limited erosion.	Registered Park and Garden at Langdon Court Hotel at risk of flooding/erosion.	Little or no change in landscape character of South Devon AONB.	Continuation of natural processes is key to the integrity of Wembury Point SSSI (geological), therefore NAI would continue to maintain these features	No known impacts on water quality.	No adverse effects on Plymouth Sound and Estuaries SAC are anticipated. Potential for the net loss of one or more features of the Wembury Voluntary Marine Conservation area due to erosion

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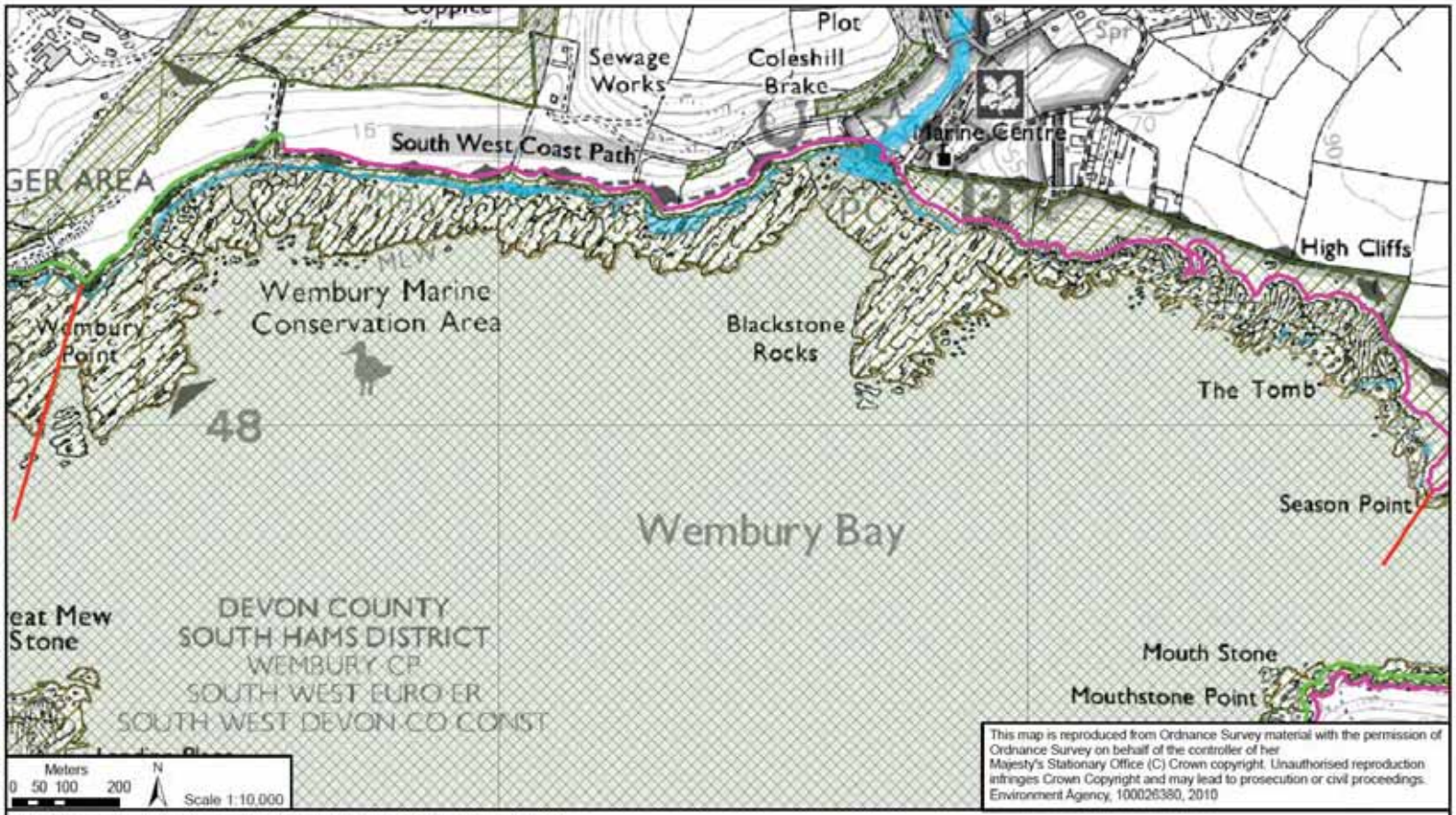

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6c26: Season Point to Wembury Point

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
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:	**Wembury Point to Mount Batten Breakwater**
Policy Unit reference:	**6c27**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This shoreline consists of hard, resistant rock cliffs, which are of outstanding landscape and geological and geomorphological value. The long term Plan is to maintain its natural character and functioning. Erosion would continue in places as a result of infrequent, small scale cliff failure events.

There are short lengths of defences that locally prevent erosion at Bovisand and immediately south of the Mount Batten Breakwater. Although future defence of these areas would be unlikely to attract public (flood and coastal defence) funding, there are no technical reasons, i.e. impacts upon sediment processes, that would preclude defences being provided. Consequently, if other alternative, e.g. private, funds were available then defences could be retained in order to reduce the risk of erosion to these assets. Such measures are not considered to have a significant detrimental impact upon the natural character of the area (refer also to Section 5.2.2 'Private Defences').

If this is not undertaken then there would be an erosion risk to cliff top assets, including historic heritage features (including up to three Scheduled Monuments), and part of the access road to Mount Batten, depending upon where future cliff failures occur. Measures may therefore need to be put in place to mitigate this loss.

The most significant structure present along this section is Mount Batten Breakwater, although its main effect is on wave climate around the mouth of the Plym estuary. This structure is assumed to be maintained over the next 100 years as part of the 'Hold the Line' policy in the adjacent section (refer to Policy Unit 6c28).

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention** along this predominantly undefended section of coast, which would continue to evolve naturally as a result. The short lengths of localised defences that prevent erosion at Bovisand and immediately south of the Mount Batten Breakwater could be maintained to provide local protection from erosion if alternative funding is available without impacting on the natural coastal evolution of the area.
Medium term:	The medium term policy is a continuation of **No Active Intervention**. Negligible erosion of the hard rock cliffs that dominate this section is predicted. The small pocket beaches located along this section will gradually become drowned as sea level rise and shore platforms become submerged. The short lengths of defence that occur at Bovisand and immediately south of the breakwater along the access road to Mount Batten would most likely fail by the end of this period if they have not been maintained in the short to medium term. However, if other funds are used to retain these defences, then the risk of erosion causing loss of cliff top assets would continue to be reduced, although maintaining an adequate defence is likely to require larger defences than at present.
Longer-term:	The long term policy is to continue **No Active Intervention**. Negligible erosion of the hard rock cliffs that dominate this section is expected, with total erosion of less than 10m by 2105, depending on the occurrence of small scale cliff failures. Many of the small pocket beaches located along this section would have been lost during this period as a result of sea level rise. There could be no defences along this stretch if they have not been maintained

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in the preceding epochs. If this were the case, these areas would continue to evolve naturally along with the rest of this section of coast.

However, if other funds are used to retain defences along this then the risk of localised erosion causing loss of cliff top assets would continue to be reduced. Maintaining adequate protection is likely to require the construction of larger defences than currently exist.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6c27	Wembury Point to Mount Batten Breakwater	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**.

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Location reference:	Wembury Point to Mount Batten Breakwater
Policy Unit reference:	6c27

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. Possible maintenance of the short lengths of defences (if funds available).	Properties at Wembury Point, Bovisand Bay and Staddon Point at risk from erosion (if defences not maintained) Potential loss of short sections of South West Coast Path – but potential for relocation.	Potential loss of cliff top roads to localised cliff erosion if future cliff falls occur in these areas (tough overall cliff recession rate is low). Grades 2, 3 and 4 agricultural land at risk from erosion	Potential loss of Grade 1, 2 and 3 listed buildings from erosion. Potential loss of parts of Mount Batten and Fort Bovisand Scheduled Monuments to erosion if future cliff falls occur in these areas (tough overall cliff recession rate is low).	Minimal change in landscape character of South Devon AONB	Continuation of natural processes is key to the integrity of the Wembury point SSSI (geological); NAI between Wembury Point to Mount Batten Breakwater would continue to maintain these features	No known impacts on water quality.	Potential loss of intertidal habitat in the Plymouth Sound and Estuaries SAC/Plymouth Sound Shores and Cliffs SSSI (biological) due to coastal squeeze against the cliff as sea levels rise; this is not a result of SMP policy and therefore no adverse effects are anticipated.
2025 – 2055	Continued slow cliffline retreat would occur. Possible maintenance or rebuild of the short lengths of defences (if funds available).	Properties at Wembury Point, Bovisand Bay and Staddon Point at risk from erosion (if defences not maintained) Potential loss of short sections of South West Coast Path – but potential for relocation.	Potential loss of cliff top roads to localised cliff erosion if future cliff falls occur in these areas (tough overall cliff recession rate is low). Grades 2, 3 and 4 agricultural land at risk from erosion	Potential loss of Grade 1, 2 and 3 listed buildings from erosion. Potential loss of parts of Mount Batten and Fort Bovisand Scheduled Monuments to erosion if future cliff falls occur in these areas (tough overall cliff recession rate is low).	Minimal change in landscape character of South Devon AONB	Continuation of natural processes is key to the integrity of the Wembury point SSSI (geological); NAI between Wembury Point to Mount Batten Breakwater would continue to maintain these features	No known impacts on water quality.	Potential loss of intertidal habitat in the Plymouth Sound and Estuaries SAC/Plymouth Sound Shores and Cliffs SSSI (biological) due to coastal squeeze against the cliff as sea levels rise; this is not a result of SMP policy and therefore no adverse effects are anticipated.
2055 – 2105	Continued slow cliffline retreat would occur. Possible maintenance or rebuild of the short lengths of defences (if funds available).	Properties at Wembury Point, Bovisand Bay and Staddon Point at risk from erosion (if defences not maintained) Potential loss of short sections of South West Coast Path – but potential for relocation.	Potential loss of cliff top roads to localised cliff erosion if future cliff falls occur in these areas (tough overall cliff recession rate is low). Grades 2, 3 and 4 agricultural land at risk from erosion	Potential loss of Grade 1, 2 and 3 listed buildings from erosion. Potential loss of parts of Mount Batten and Fort Bovisand Scheduled Monuments to erosion if future cliff falls occur in these areas (tough overall cliff recession rate is low).	Minimal change in landscape character of South Devon AONB	Continuation of natural processes is key to the integrity of the Wembury point SSSI (geological); NAI between Wembury Point to Mount Batten Breakwater would continue to maintain these features	No known impacts on water quality.	Potential loss of intertidal habitat in the Plymouth Sound and Estuaries SAC/Plymouth Sound Shores and Cliffs SSSI (biological) due to coastal squeeze against the cliff as sea levels rise; this is not a result of SMP policy and therefore no adverse effects are anticipated.

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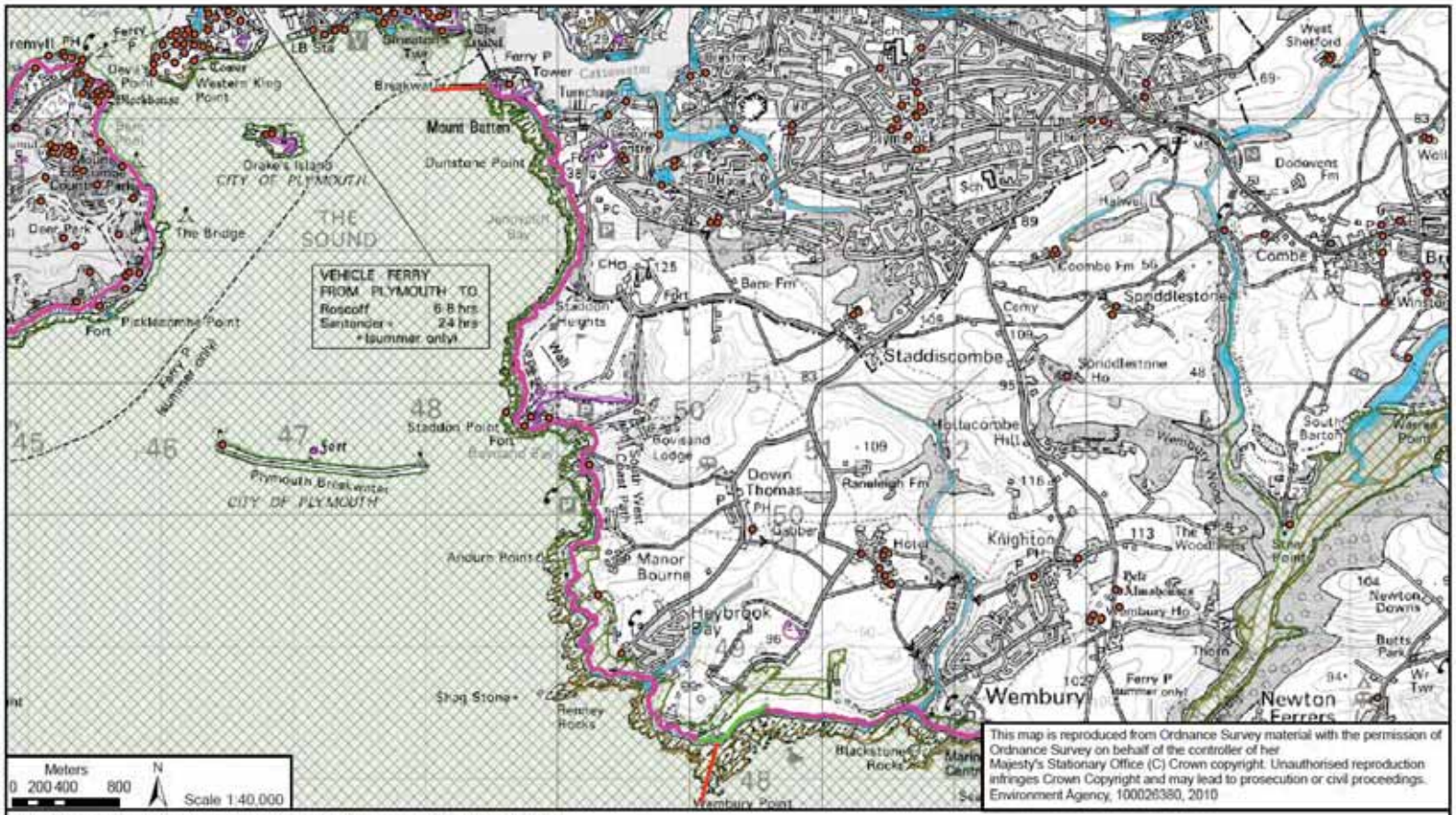

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6c27: Wembury Point to Mount Batten Breakwater

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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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Location reference:	**Mount Batten Breakwater to Devil's Point (including Plym Estuary)**
Policy Unit reference:	**6c28 to 6c30**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This area encompasses both the Plym Estuary and the Plymouth Sound frontage of the city of Plymouth, the continued protection of which is a key policy driver. Additional consideration along this stretch is the need to protect areas of active/former landfill and potentially contaminated land, as well as protection of part of the mainline railway, which is of importance to the wider South West region, in the upper part of the Plym Estuary. The long term Plan is to continue to hold the existing line of defence over the next century and protect these developments against flooding and erosion. This area also covers Drake's Island, where private defences would continue to be permitted subject to availability of private funding to maintain them (refer also to Section 5.2.2 'Private Defences').

As sea levels rise in the future, this is expected to cause the narrowing and even loss of intertidal areas in the upper part of the Plym Estuary as it is prevented from adapting naturally. However, continued defence would protect a large number of properties and infrastructure, as well as listed buildings, scheduled monuments and a registered park and garden, from the risk of flooding.

Along the Plymouth Sound frontage there are a wide range of defences that protect the toe of the cliff from wave action, although a number of the defences form part of amenity features including a lido. There are also defences associated with the commercial port of Millbay and the fishing port at Sutton Harbour.

Some of this area also benefits from the sheltering effect of the Plymouth Breakwater within Plymouth Sound. This provides a large area of calmer water which limits wave action thus reducing the effects of erosion along the coastline and to a lesser extent up the Rivers Plym and Tamar. It also provides significant economic benefits in allowing the use of Plymouth Sound, and the Rivers Plym and Tamar, to be used for leisure, commercial, transport, port and dockyard facilities.

The assumption of the policies for this stretch is that the breakwater will remain and be maintained. If this situation changes in the future then defences along the shoreline may need to be much more substantial, although the policy would remain one of continued defence where the policy is to Hold the Line.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** of the existing defences to ensure that flood and erosion risk to the city of Plymouth continues to be reduced. Subject to private funding, defences on Drake's Island could also be maintained under this policy. There is a mixture of defence types of varying standards along the Plym Estuary that protect low lying areas from flooding. Along the Plymouth Sound frontage, there is also a wide range of defences that protect the toe of the cliff from wave action. Along with ongoing maintenance, it is likely that some of these defences would need to be improved during this period to maintain adequate levels of protection, either by raising defence heights if possible, or, if necessary, re-building larger defences. Investigation of future management and maintenance requirements for the Plymouth Sound Breakwater should also be carried out in this period as retention of this structure has important implications for both coastal defence and other uses of the area. Continued defence along the Plym Estuary would provide ongoing flood protection to areas of low lying heavily developed land. Sea level rise could begin to cause narrowing of intertidal areas in the upper part of the estuary towards 2025, though it is unlikely that a significant area would be lost.

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Medium term:	The medium term policy is to continue to **Hold the Line**. Subject to private funding, defences on Drake's Island could also be maintained under this policy. Rising sea levels due to climate change would lead to an increased risk of flooding to low-lying land as a result of wave overtopping along the Plymouth Sound frontage. Therefore some defences may need to be re-constructed to a higher standard to provide adequate protection, if not already carried out in the short term.
Longer-term:	The long term policy is to continue to **Hold the Line** of the existing defences to ensure that flood and erosion risk to the city of Plymouth continues to be reduced. Subject to private funding, defences on Drake's Island could also be maintained under this policy. Rising sea levels would lead to an increased risk of flooding to low-lying land as a result of wave overtopping along the Plymouth Sound frontage; therefore further defence works may be required to address this. Continued defence along the Plym Estuary would provide ongoing flood protection to areas of low lying land. As sea levels rise further, more significant narrowing and even loss of intertidal areas in the upper part of the estuary is likely to occur towards 2105 as they are prevented from adapting naturally by the defences. Along the Plymouth Sound frontage, implementation of this policy could require some defences to be rebuilt during this period to continue to prevent cliff erosion.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6c28	**Plym Estuary - Mount Batten Breakwater to Marsh Mills**	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.
6c29	**Plym Estuary - Marsh Mills to Coxside**	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.
6c30	**Coxside to Devil's Point**	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.

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Location reference:	Mount Batten Breakwater to Devil's Point (including Plym Estuary)
Policy Unit reference:	6c28 to 6c30

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 improvement of existing defences.	Continued protection to people and properties in Plymouth, Cattedown, along the A347 adjacent to the River Plym, Industrial area near Crabtree and along the Plymouth Road in Plympton.	The A347 and A38 protected from flooding Grade 2 agricultural land protected against risk from flooding.	Protection of Grade 1, 2 and 3 listed buildings from flooding or erosion. Protection of Registered Parks and Gardens and five Scheduled Monuments.	No impacts on landscape character.	Protection of landfill site in the upper Plym Estuary against the risk of flooding. Potential impact on Western King SSSI (geological) by continuing to provide defences in this area.	No known impacts on water quality as landfill site protected against flood risk (refer to geology and soils).	HTL in 6c30 may result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC due to coastal squeeze and direct loss of habitat within the footprint of any scheme. An adverse effect is anticipated. Loss of intertidal habitat within Plymouth Sound Shores and Cliffs SSSI (biological) due to coastal squeeze to the west of Mount Batten Breakwater
2025 – 2055	Maintenance and improvement of existing defences.	Continued protection to people and properties in Plymouth, Cattedown, along the A347 adjacent to the River Plym, Industrial area near Crabtree and along the Plymouth Road in Plympton.	The A347 and A38 protected from flooding Grade 2 agricultural land protected against risk from flooding.	Protection of Grade 1, 2 and 3 listed buildings from flooding or erosion. Protection of Registered Parks and Gardens and five Scheduled Monuments.	No impacts on landscape character.	Protection of landfill site in the upper Plym Estuary against the risk of flooding Potential impact on Western King SSSI (geological) by continuing to provide defences in this area.	No known impacts on water quality as landfill site protected against flood risk (refer to geology and soils).	HTL in 6c30 may result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC due to coastal squeeze and direct loss of habitat within the footprint of the scheme. An adverse effect is anticipated. Loss of intertidal habitat within Plymouth Sound Shores and Cliffs SSSI (biological) due to coastal squeeze to the west of Mount Batten Breakwater
2055 – 2105	Maintenance and improvement of existing defences.	Continued protection to people and properties in Plymouth, Cattedown, along the A347 adjacent to the River Plym, Industrial area near Crabtree and along the Plymouth Road in Plympton.	The A347 and A38 protected from flooding Grade 2 agricultural land protected against risk from flooding.	Protection of Grade 1, 2 and 3 listed buildings from flooding or erosion. Protection of Registered Parks and Gardens and five Scheduled Monuments.	No impacts on landscape character.	Protection of landfill site in the upper Plym Estuary against the risk of flooding. Potential impact on Western King SSSI (geological) by continuing to provide defences in this area.	No known impacts on water quality as landfill site protected against flood risk (refer to geology and soils). HTL will prevent contamination of the Plym Estuary but in the long term, will lead to narrowing and loss of intertidal areas in the upper part of the estuary, as they are prevented from adapting naturally, leading to failure of WFD objectives 2 and 3.	HTL in 6c30 may result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC due to coastal squeeze and direct loss of habitat within the footprint of the scheme. An adverse effect is anticipated. Loss of intertidal habitat within Plymouth Sound Shores and Cliffs SSSI (biological) due to coastal squeeze to the west of Mount Batten Breakwater

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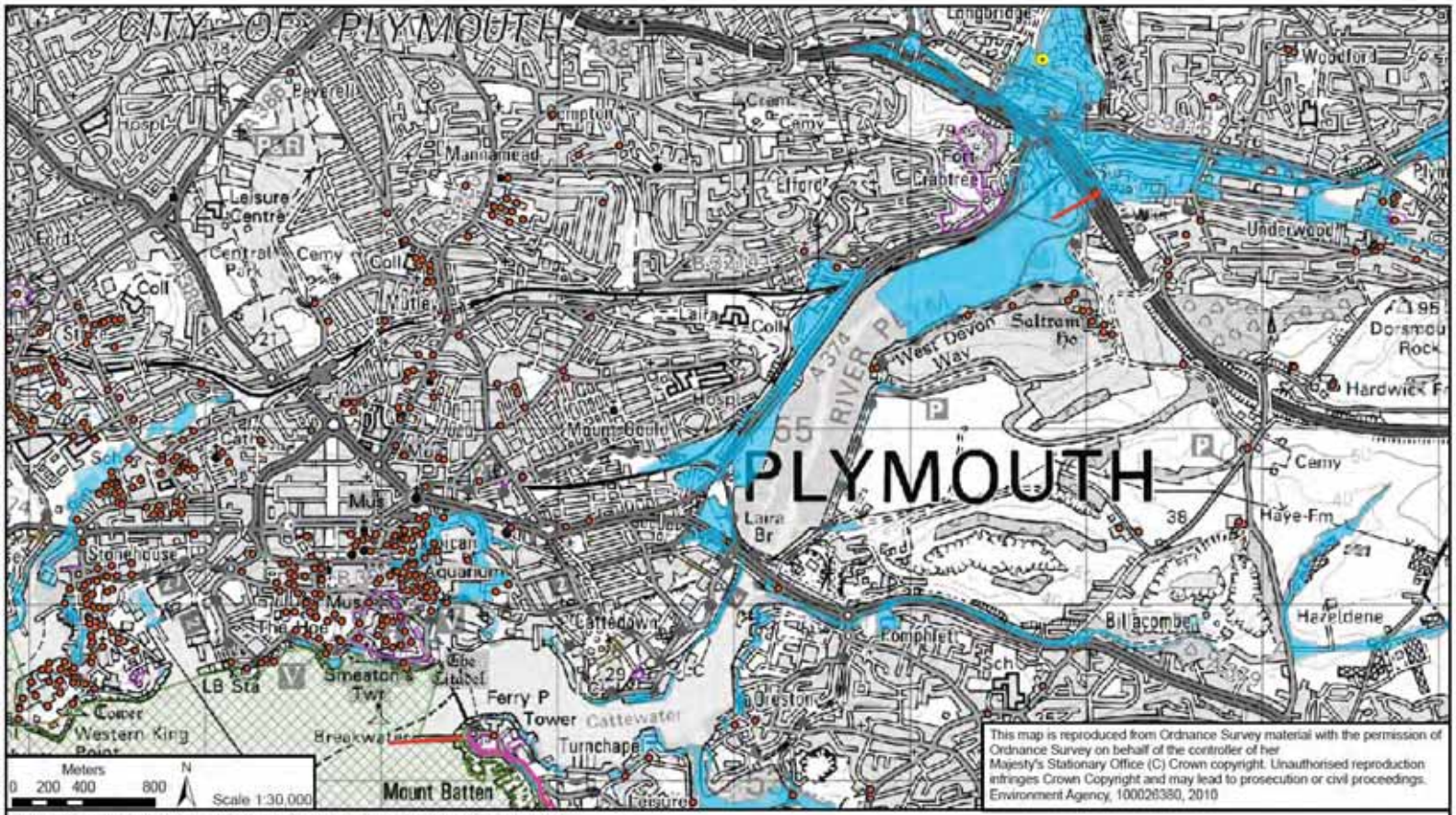

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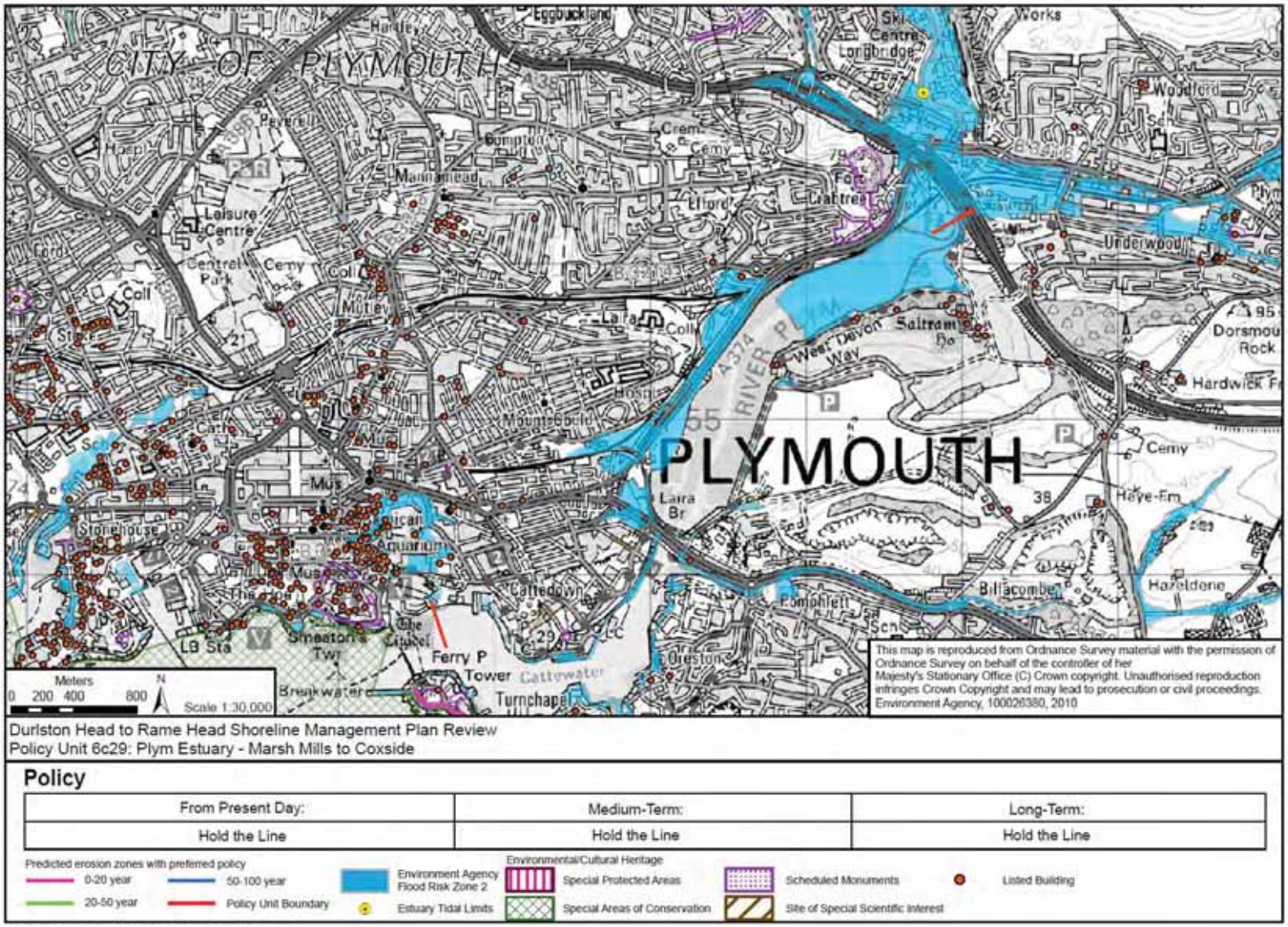

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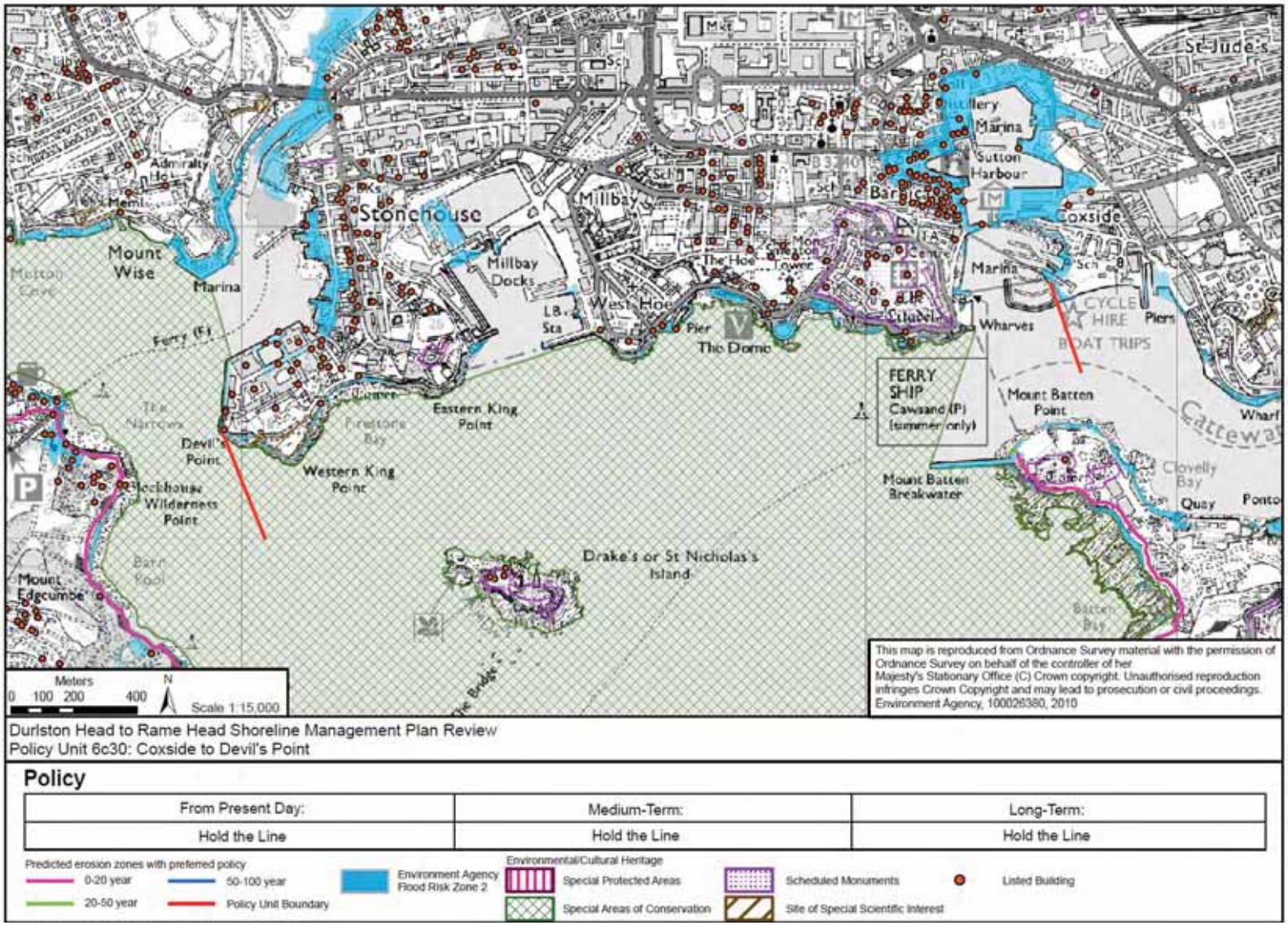

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Location reference:	**Tamar Estuary (East Bank)**
Policy Unit reference:	**6c31**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section covers the eastern shore of the outer Tamar Estuary where it discharges into Plymouth Sound. This forms the extensively defended and developed western shore of the city of Plymouth, and most notably Devonport Dockyard, which is an important military and economic centre for the city and wider region. Due to the extent of development along this section, the long term Plan in this area is to continue to Hold the Line of existing defences over the next 100 years.

The defences and other structures along this section are associated with the development of the port and naval dockyard at Plymouth, which has also seen the estuary heavily modified in this area by dredging activity. The ongoing management of this section under this policy, and the associated impacts upon the lower estuary, would continue as a result.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** of existing defences that are located along the majority of this eastern side of the estuary. These defences and other structures include quay walls and embankments, and are associated with the development of the port and naval dockyard at Plymouth, which has also seen the estuary heavily modified in this area by dredging activity. The defences along this eastern side of the estuary protect small areas of low-lying land between the estuary and higher ground to the east from flooding. These defences would be maintained during this period.
Medium term:	The medium term policy is to continue to **Hold the Line** of the existing defences through continued maintenance of existing defences during this period. The effect of rising sea levels, particularly on the part of this section north of the Tamar bridge, may result in the gradual loss of inter-tidal areas as these are restricted from adapting by the ongoing presence of defences at Plymouth.
Longer-term:	The long term policy is to continue to **Hold the Line** of the existing defences along this section. This may require defences to be improved or rebuilt to a higher standard, as sea levels rise, in order to continue to provide an adequate level of protection. The effect of rising sea levels, particularly on the part of this section north of the Tamar bridge, would be likely to result in the further loss of inter-tidal areas as they are restricted from adapting by the ongoing presence of defences at Plymouth.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	**Medium term**	**Long term**
6c31	**Tamar Estuary - Devil's Point to Tamerton Lake**	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.

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Location reference:	Tamar Estuary (East Bank)
Policy Unit reference:	6c31

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.	Limited impacts on isolated properties. People and properties protected from flooding in Plymouth Dockyards. People and properties around the Tamar Bridge and along the edge of the town's limits at Burraton Coombe protected from flooding.	A38 near the junction with New Road protected from flooding. A347 and A38 protected from flooding. Some areas of Grade 2, 3 and 4 agricultural land at risk from flooding.	Grade 1, 2 and 3 listed buildings protected from flooding. Scheduled Monuments protected from flooding including No 1 Basin And No 1 Dock, South Yard, Devonport Dockyard at risk of flooding; and Slip No 1 (The Covered Slip), South Yard, Devonport Dockyard at risk from flooding	Change in landscape character of South Devon/Cornwall and Tamar Valley AONB and Heritage Coast	All historic landfill sites protected from flooding.	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. HTL will result in the gradual loss of intertidal areas in the Tamar Estuary as they are restricted from adapting by the ongoing presence of defences at Plymouth, thus potentially failing WFD objectives 2 and 3.	HTL may result the progressive loss of intertidal habitat within the Tamar Estuaries Complex SPA (and Tamar-Tavy Estuary SSSI) due to coastal squeeze with associated impacts on qualifying birds. An adverse effect is anticipated. HTL may result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC (including Plymouth Sound Shores and Cliffs SSSI) due to coastal squeeze and direct loss of habitat within the footprint of the scheme. An adverse effect is anticipated.
2025 – 2055	Maintenance of existing defences.	Limited impacts on isolated properties. People and properties protected from flooding in Plymouth Dockyards, People and properties around the Tamar Bridge and along the edge of the town's limits at Burraton Coombe protected from flooding.	A38 near the junction with New Road protected from flooding. A347 and A38 protected from flooding. Some areas of Grade 2, 3 and 4 agricultural land at risk from flooding.	Grade 1, 2 and 3 listed buildings protected from flooding. Scheduled Monuments protected from flooding including No 1 Basin And No 1 Dock, South Yard, Devonport Dockyard at risk of flooding; and Slip No 1 (The Covered Slip), South Yard, Devonport Dockyard at risk from flooding	Change in landscape character of South Devon/Cornwall and Tamar Valley AONB and Heritage Coast	All historic landfill sites protected from flooding.	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. HTL will result in the gradual loss of intertidal areas in the Tamar Estuary as they are restricted from adapting by the ongoing presence of defences at Plymouth, thus potentially failing WFD objectives 2 and 3.	HTL may result the progressive loss of intertidal habitat within the Tamar Estuaries Complex SPA (and Tamar-Tavy Estuary SSSI) due to coastal squeeze with associated impacts on qualifying bird species. An adverse effect is anticipated. HTL may result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC (including Plymouth Sound Shores and Cliffs SSSI) due to coastal squeeze and direct loss of habitat within the footprint of any scheme. An adverse effect is anticipated.
2055 – 2105	Maintenance and possible improvement/rebuild of existing defences.	Limited impacts on isolated properties. People and properties protected from flooding in Plymouth Dockyards, People and properties around the Tamar Bridge and along	A38 near the junction with New Road protected from flooding. A374 and A38 protected from flooding. Some areas of Grade 2, 3 and 4 agricultural land at risk from flooding.	Grade 1, 2 and 3 listed buildings protected from flooding. Scheduled Monuments protected from flooding including No 1 Basin And No 1 Dock, South Yard, Devonport Dockyard at risk of flooding;	Change in landscape character of South Devon/Cornwall and Tamar Valley AONB and Heritage Coast	All historic landfill sites protected from flooding.	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. HTL will result in the gradual loss of intertidal areas in the	HTL may result in the progressive loss of intertidal habitat within the Tamar Estuaries Complex SPA (and Tamar-Tavy Estuary SSSI) due to coastal squeeze with associated impacts on qualifying bird species. An adverse effect is anticipated.

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Location reference:	Tamar Estuary (East Bank)							
Policy Unit reference:	6c31							
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 edge of the town's limits at Burraton Coombe protected from flooding.		and Slip No 1 (The Covered Slip), South Yard, Devonport Dockyard at risk from flooding			Tamar Estuary as they are restricted from adapting by the ongoing presence of defences at Plymouth, thus potentially failing WFD objectives 2 and 3.	HTL may result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC (including Plymouth Sound Shores and Cliffs SSSI) due to coastal squeeze and direct loss of habitat within the footprint of the scheme. An adverse effect is anticipated.

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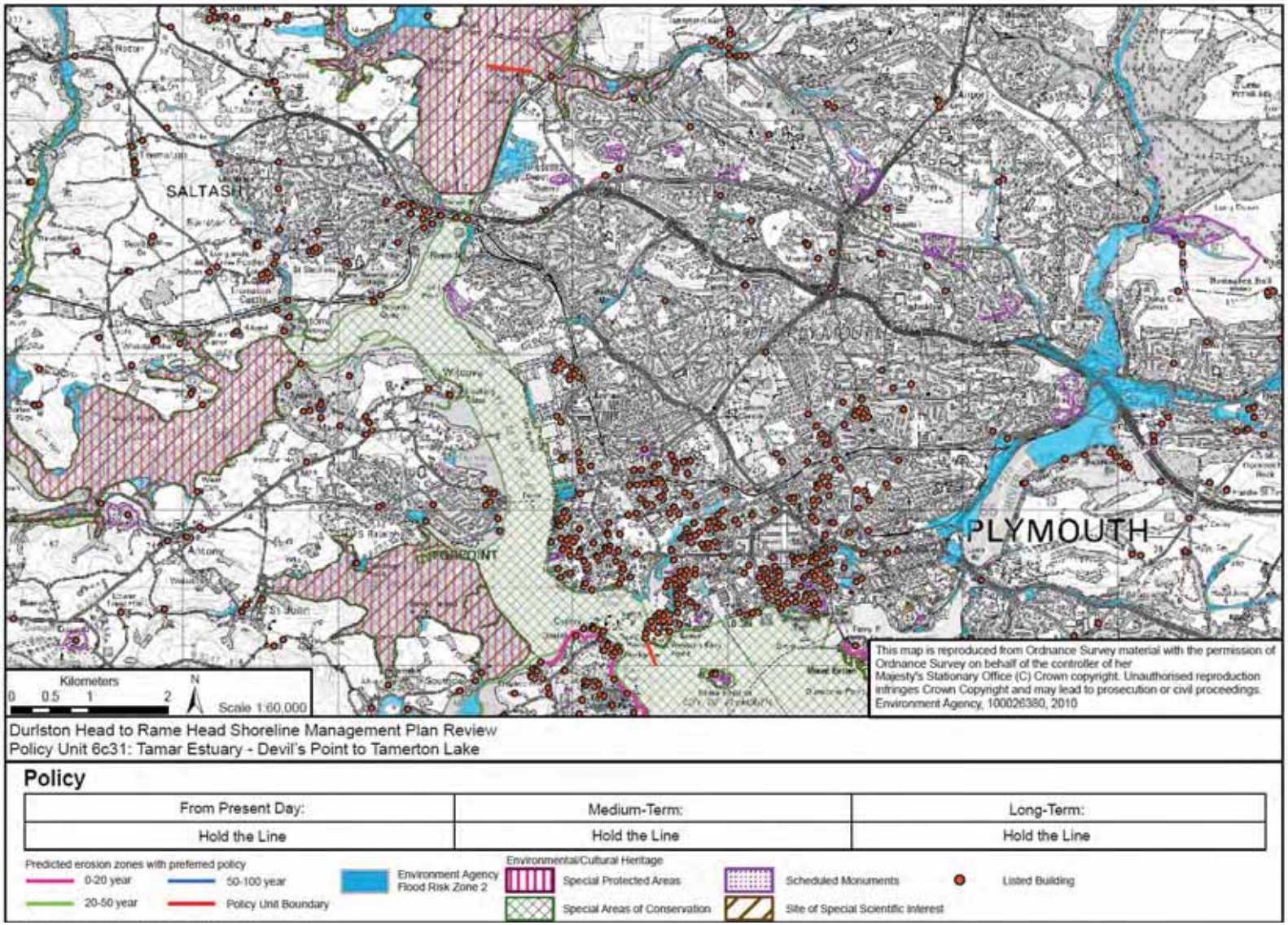

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Location reference:	**Upper Tamar Estuary**
Policy Unit reference:	**6c32 and 6c33**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

The long term Plan in this largely undefended area is to encourage the natural development of the estuary whilst ensuring the risk of flooding to people, property and infrastructure continues to be reduced in those areas where defence is currently provided. Both maintaining the line and/or Managed Realignment of current defences would be considered, to continue to provide an overall reduction in flood risk in the upper part of the estuary. However, further information gathering and assessment is necessary to determine exactly where defences should be held and where they should be realigned.

Areas where Managed Realignment takes place would provide opportunities for both habitat creation and the expansion of existing wetland areas to be explored through targeting environmental schemes such as stewardship. This would likely involve construction of set back defences or regulated tidal exchange, which would be determined by more detailed studies.

There should be no increase in the risk of flooding to developed areas, so consideration of this would be an important element in further detailed implementation studies. Maintenance of existing short lengths defence would also be permitted, if funds are available to achieve this, although it is not intended to allow new defences to be built along currently undefended parts of the estuary which would be allowed to continue to evolve naturally.

Preferred policies to implement Plan:

From present day (short term):	This part of the Tamar Estuary is largely undefended, although there are short isolated lengths of defence that protect local flooding. It is not planned for new defences to be built along currently undefended sections, and these would be allowed to continue to evolve naturally under a policy of **No Active Intervention**. Where defences presently exist, the short term policy is for **Managed Realignment** to be explored and implemented in strategic areas within parts of the upper Tamar Estuary, to provide flood risk reduction and habitat creation benefits. This would require further detailed studies to determine the most appropriate locations and methods to implement this policy. In areas where it is not possible for existing defences to be realigned, then these existing defences would be maintained or improved by raising defences heights or, if necessary, re-building larger defences. The majority of the remaining estuary is largely natural, with extensive areas of intertidal mudflats constrained by steeply rising ground. Areas where natural realignment along these undefended areas occurs could aid conservation of inter-tidal areas and also help to reduce flood risk to the smaller defended areas.
Medium term:	The medium term policy is for **Managed Realignment** in strategic areas of the upper Tamar Estuary where defences currently exist, in order to provide flood risk reduction benefits to other parts of the estuary. Areas of existing defences where detailed investigation shows it is not possible to undertake realignment would need to be maintained under a continued policy of **Hold the Line**. Under this policy existing defences would be maintained or even re-built to ensure adequate levels of protection are provided in the longer term as sea levels rise. It is not intended that new defences would be built along currently undefended

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	sections, which would be allowed to continue to evolve naturally under a policy of **No Active Intervention**. The effect of rising sea levels on the Tamar estuary would be likely to result in the gradual loss of some inter-tidal areas where small lengths of defence restrict it from adapting.
Longer-term:	The long term policy is for a continuation of **Managed Realignment** in strategic areas within parts of the upper Tamar Estuary, to provide flood risk reduction benefits in other parts of the estuary. Areas of existing defences where detailed investigation shows it is not possible to undertake realignment would continue to be maintained under a policy of **Hold the Line**. Existing defences would be maintained or, if not undertaken earlier, re-built, to ensure adequate levels of protection are provided in the longer term as sea levels rise. It is not intended that new defences would be built along currently undefended sections, where **No Active Intervention** would apply. There would be continued gradual loss of inter-tidal areas where they are restricted from adapting to rising sea levels by the presence of small lengths of defence or steeply rising ground.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6c32	**Tamar Estuary - Tamerton Lake to Gunnislake (upper Tamar Estuary East)**	**No Active Intervention** along the undefended frontages. Investigate and implement **Managed Realignment** in strategic locations, whilst continuing to **Hold the Line** of existing defences where realignment is not feasible.	**No Active Intervention** along the undefended frontages. If necessary, implement further **Managed Realignment** in strategic locations, whilst continuing to **Hold the Line** of existing defences where realignment is not feasible.	**No Active Intervention** along the undefended frontages. If necessary, implement further **Managed Realignment** in strategic locations, whilst continuing to **Hold the Line** of existing defences where realignment is not feasible.
6c33	**Tamar Estuary - Gunnislake to Saltash North (upper Tamar Estuary West)**	**No Active Intervention** along the undefended frontages. Investigate and implement **Managed Realignment** in strategic locations, whilst continuing to **Hold the Line** of existing defences where realignment is not feasible.	**No Active Intervention** along the undefended frontages. If necessary, implement further **Managed Realignment** in strategic locations, whilst continuing to **Hold the Line** of existing defences where realignment is not feasible.	**No Active Intervention** along the undefended frontages. If necessary, implement further **Managed Realignment** in strategic locations, whilst continuing to **Hold the Line** of existing defences where realignment is not feasible.

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Location reference:	Upper Tamar Estuary
Policy Unit reference:	6c32 and 6c33

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 implementation of Managed Realignment in strategic areas, to be determined by further detailed studies. Maintenance of existing short lengths of defence.	Limited impacts on isolated properties. People and properties protected from flooding where they are presently defended. South West Coast Path potentially at risk, depending on Managed Realignment undertaken.	Some areas of Grade 2, 3 and 4 agricultural land potentially at risk from flooding or erosion, where currently unprotected or where Managed Realignment is carried out. Continued protection of railway and infrastructure (e.g. at Morwellham Quay) from flood risk.	Cornwall and West Devon mining World Heritage Site adjacent to the River Tamar protected from flooding. Most Grade 1, 2 and 3 listed buildings protected from flooding. Registered Parks and Gardens (e.g. Cotehele) protected from flooding. Scheduled Monuments protected from flooding include Bohetherick Lime Kiln With Adjacent Quay And Ancillary Buildings, 140m South East Of Cotehele Bridge; Gawton Arsenic Mine And Flue; and Okeltor 19th Century Arsenic, Copper And Tin Mine.	Change in landscape character of South Devon/Cornwall and Tamar Valley AONB and Heritage Coast	All historic landfill sites protected from flooding.	No known impacts on water quality. Works in areas selected for holding the line or 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.	Where a policy of HTL is implemented, it may result the progressive loss of intertidal habitat within the Tamar Estuaries Complex SPA (and Tamar-Tavy Estuary SSSI) due to coastal squeeze with associated impacts on feeding/roosting birds. An adverse effect is anticipated. Managed Realignment between Tamerton Lake and Saltash North (upper Tamar Estuary West) is likely to increase the extent of wetland habitat adjacent to the River Tavy and River Tamar Where a policy of HTL is implemented, it may result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC (including Plymouth Sound Shores and Cliffs SSSI) due to coastal squeeze and direct loss of habitat within the footprint of the scheme. An adverse effect is anticipated.
2025 – 2055	Implementation of Managed Realignment in strategic areas, to be determined by further detailed studies. Maintenance and improvement of existing short lengths of defence.	Limited impacts on isolated properties. People and properties protected from flooding where they are presently defended. South West Coast Path potentially at risk, depending on Managed Realignment undertaken.	Some areas of Grade 2, 3 and 4 agricultural land potentially at risk from flooding or erosion, where currently unprotected or where Managed Realignment is carried out. Continued protection of railway and infrastructure (e.g. at Morwellham Quay) from flood risk.	Cornwall and West Devon mining World Heritage Site adjacent to the River Tamar protected from flooding. Most Grade 1, 2 and 3 listed buildings protected from flooding. Registered Parks and Gardens (e.g. Cotehele) protected from flooding. Scheduled Monuments protected against risk of flooding include Bohetherick Lime Kiln With Adjacent Quay And Ancillary Buildings, 140m South East Of Cotehele Bridge at risk from flooding; Gawton Arsenic Mine And Flue and	Change in landscape character of South Devon/Cornwall and Tamar Valley AONB and Heritage Coast	All historic landfill sites protected from flooding.	No known impacts on water quality. Works in areas selected for holding the line or 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.	Where a policy of HTL is implemented, it may result in the progressive loss of intertidal habitat within the Tamar Estuaries Complex SPA (and Tamar-Tavy Estuary SSSI) due to coastal squeeze with associated impacts on feeding/roosting birds. An adverse effect is anticipated. Managed Realignment between Tamerton Lake and Saltash North (upper Tamar Estuary West) is likely to increase the extent of wetland habitat adjacent to the River Tavy and River Tamar Where a policy of HTL is implemented, it may result in

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Location reference:	Upper Tamar Estuary
Policy Unit reference:	6c32 and 6c33

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
				Okeltor 19th Century Arsenic, Copper And Tin Mine				the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC (including Plymouth Sound Shores and Cliffs SSSI) due to coastal squeeze and direct loss of habitat within the footprint of the scheme. An adverse effect is anticipated.
2055 – 2105	Implementation of Managed Realignment in strategic areas, to be determined by further detailed studies. Maintenance and improvement of existing short lengths of defence.	Limited impacts on isolated properties. People and properties protected from flooding where they are presently defended. South West Coast Path potentially at risk, depending on Managed Realignment undertaken.	Some areas of Grade 2, 3 and 4 agricultural land potentially at risk from flooding or erosion, where currently unprotected or where Managed Realignment is carried out. Continued protection of railway and infrastructure (e.g. at Morwellham Quay) from flood risk.	Cornwall and West Devon mining World Heritage Site adjacent to the River Tamar protected from flooding. Most Grade 1, 2 and 3 listed buildings protected from flooding. Registered Parks and Gardens (e.g. Cotehele) protected from flooding. Scheduled Monuments protected against risk of flooding include Bohetherick Lime Kiln With Adjacent Quay And Ancillary Buildings, 140m South East Of Cotehele Bridge; Gawton Arsenic Mine And Flue; and Okeltor 19th Century Arsenic, Copper And Tin Mine.	Change in landscape character of South Devon/Cornwall and Tamar Valley AONB and Heritage Coast	All historic landfill sites protected from flooding.	No known impacts on water quality. Works in areas selected for holding the line or 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.	Where a policy of HTL is implemented, it may result in the progressive loss of intertidal habitat within the Tamar Estuaries Complex SPA (and Tamar-Tavy Estuary SSSI) due to coastal squeeze with associated impacts on feeding/roosting birds. An adverse effect is anticipated. Managed Realignment between Tamerton Lake and Saltash North (upper Tamar Estuary West) is likely to increase the extent of wetland habitat adjacent to the River Tavy and River Tamar Where a policy of HTL is implemented, it may result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC (including Plymouth Sound Shores and Cliffs SSSI) due to coastal squeeze and direct loss of habitat within the footprint of the scheme. An adverse effect is anticipated.

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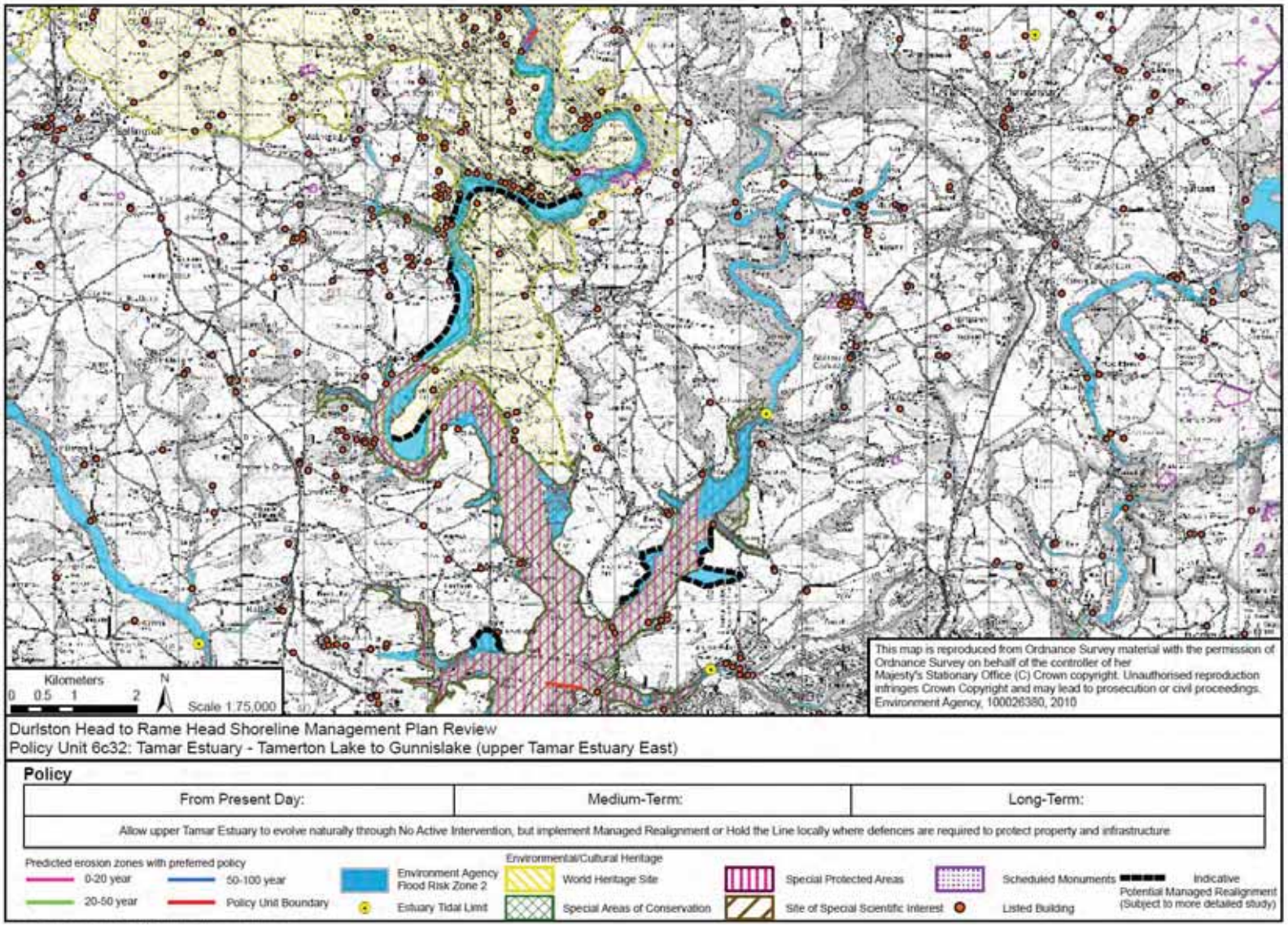

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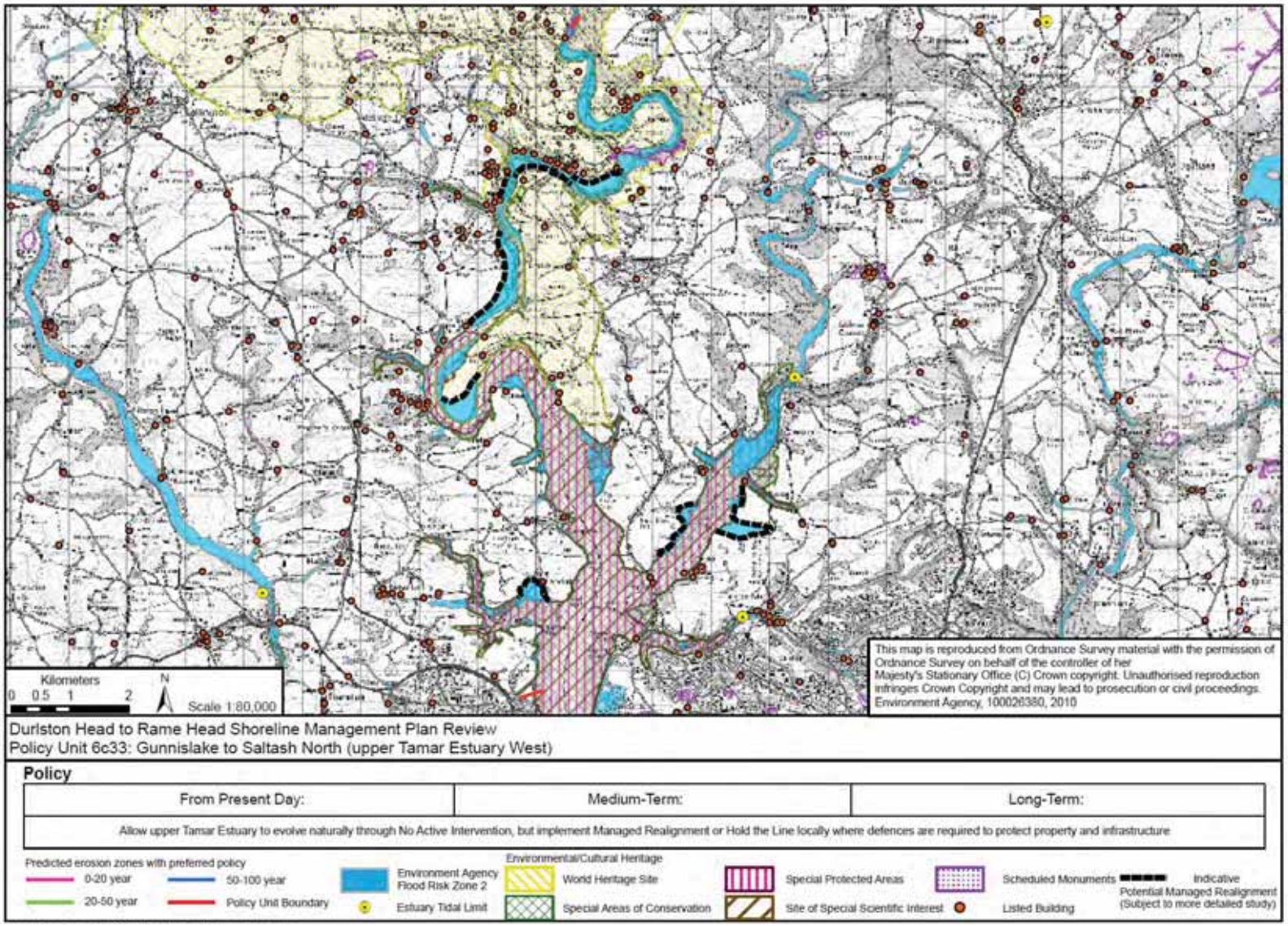

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Location reference:	**Tamar Estuary (West Bank)**
Policy Unit reference:	**6c34 to 6c40**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This section lies on the opposite bank to the port at Plymouth, and is influenced by the human intervention which has heavily modified the estuary in this area. Defences along this western shore of the Tamar Estuary protect low lying areas of large settlements from flooding, including the towns of Saltash and Torpoint. Defences of a much smaller scale also reduce the risk of flooding to localised areas in other parts of the Tamar Estuary, such as those located within the River Lynher and at Millbrook.

The long term Plan in this area is to encourage the natural development of the estuary whilst minimising the risk of flooding to people, property and infrastructure. This will be implemented through maintaining the existing defences in their current locations, and undertaking Managed Realignment where it provides a benefit in terms of either reducing flood risk in other parts of the estuary or habitat creation. Decisions regarding the appropriate locations for Managed Realignment requires further detailed study to appraise the full impacts.

It is not intended that new defences would be constructed along stretches that are presently undefended, which would be allowed to develop naturally.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is to **Hold the Line** of the existing defences and other structures along this western part of the Tamar Estuary so that they continue to protect low lying areas from the risk of flooding. This would involve continued maintenance and possibly improvement of existing defences which include flood walls, quay walls, embankments and slipways. Improvements may be either raising defence heights or, if necessary, re-building defences to be higher than at present to provide adequate levels of protection in the longer term as sea levels rise. In some places, it may also be appropriate to consider Managed Realignment rather than re-building defences, and this should be investigated as part of detailed studies prior to any scheme implementation. The majority of this part of the Tamar Estuary is largely natural, with extensive areas of intertidal mudflats. Under this policy, new defences would not be built along currently undefended sections, where **No Active Intervention** would apply.
Medium term:	The medium term policy is to continue to **Hold the Line** of the existing defences This would involve continued maintenance and improvement of existing defences. If not undertaken in the short term, improvements may involve re-building defences to provide adequate levels of protection in the longer term as sea levels rise. It may also be appropriate to consider Managed Realignment rather than re-building defences in some places, subject to more detailed studies. New defences would not be built along currently undefended sections, where **No Active Intervention** would apply. The effect of rising sea levels could result in the gradual loss of inter-tidal areas in areas restricted from adapting by the presence of defences. However, this process would also occur naturally in undefended parts of the estuary where it is restricted from adapting by the steeply rising ground that surrounds it.
Longer-term:	Where there are defences, the long term policy is to continue to **Hold the Line**. In some places, it may increasingly become appropriate to consider

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Managed Realignment rather than re-building defences, and this should be investigated as part of detailed studies prior to any scheme implementation.

Rising sea levels may result in the loss of inter-tidal areas where they are further restricted from adapting by the presence of defences. However, this process would also occur naturally in undefended parts of the estuary where it is restricted from adapting by the steeply rising ground that surrounds it.

The majority of this part of the Tamar Estuary is largely natural, with extensive areas of intertidal mudflats; here the proposed policy is **No Active Intervention** and no new defences would be built.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6c34	**Tamar Estuary - Saltash**	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.
6c35	**Tamar Estuary - River Lynher (Saltash South to Torpoint North (Jupiter Point))**	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.
6c36	**Tamar Estuary - Torpoint North (Jupiter Point) to Torpoint South (Landing Stage)**	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.
6c37	**Tamar Estuary - St John's Lake (Torpoint South (Landing Stage) to Millbrook (Mill Farm))**	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.
6c38	**Tamar Estuary - St John's Lake (Millbrook (Mill Farm) to Millbrook (Hancock's Lake))**	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.
6c39	**Tamar Estuary - St John's Lake (Millbrook (Hancock's Lake) to Palmer Point**	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.	**No Active Intervention** along the undefended frontages. Continue to **Hold the Line** where there are existing defences.
6c40	**Tamar Estuary - Palmer Point to Mount Edgcumbe (Cremyll))**	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.	Continue to **Hold the Line** where there are existing defences, with **No Active Intervention** along the undefended frontages.

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Location reference:	Tamar Estuary (West Bank)
Policy Unit reference:	6c34 to 6c40

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 existing defences. Undefended parts of the estuary would continue to evolve naturally.	Limited impacts on isolated properties. People and properties protected from flooding in Saltash, Torpoint and other settlements. South West Coast Path at risk from flooding in some currently undefended areas.	A387 and A38 protected from flooding. Some areas of Grade 2, 3 and 4 agricultural land at risk from flooding or erosion.	Most Grade 1, 2 and 3 listed buildings protected from flooding. Registered Parks and Gardens (e.g. Antony pleasure grounds) protected from flooding.	Change in landscape character of South Devon/Cornwall and Tamar Valley AONB and Heritage Coast	All historic landfill sites protected from flooding.	HTL will result in the gradual loss of intertidal areas in the Tamar Estuary as they are restricted from adapting by the ongoing presence of defences at Plymouth, thus potentially failing WFD objectives 2 and 3. Works in areas selected for holding the line or 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.	Where a policy of HTL is implemented, it may result the progressive loss of intertidal habitat within the Tamar Estuaries Complex SPA (and Tamar-Tavy Estuary SSSI) due to coastal squeeze with associated impacts on feeding/roosting birds. An adverse effect is anticipated. Where a policy of HTL is implemented, it may result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC (including Plymouth Sound Shores and Cliffs SSSI) due to coastal squeeze and direct loss of habitat within the footprint of the scheme. An adverse effect is anticipated. Potential loss of the net area of intertidal habitat at St John's Lake SSSI through coastal squeeze due to holding the line
2025 – 2055	Maintenance and possible improvement of existing defences. Undefended parts of the estuary would continue to evolve naturally.	Limited impacts on isolated properties. People and properties protected from flooding in Saltash, Torpoint and other settlements. South West Coast Path at risk from flooding in some currently undefended areas.	A387 and A38 protected from flooding. Some areas of Grade 2, 3 and 4 agricultural land at risk from flooding or erosion.	Most Grade 1, 2 and 3 listed buildings protected from flooding. Registered Parks and Gardens (e.g. Antony pleasure grounds) protected from flooding.	Change in landscape character of South Devon/Cornwall and Tamar Valley AONB and Heritage Coast	All historic landfill sites protected from flooding.	HTL will result in the gradual loss of intertidal areas in the Tamar Estuary as they are restricted from adapting by the ongoing presence of defences at Plymouth, thus potentially failing WFD objectives 2 and 3. Works in areas selected for holding the line or 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.	Where a policy of HTL is implemented, it may result in the progressive loss of intertidal habitat within the Tamar Estuaries Complex SPA (and Tamar-Tavy Estuary SSSI) due to coastal squeeze with associated impacts on feeding/roosting birds. An adverse effect is anticipated. Where a policy of HTL is implemented, it may result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC (including Plymouth Sound Shores and Cliffs SSSI) due to coastal squeeze and direct loss of habitat within the footprint of the scheme. An adverse effect is anticipated. Potential loss of the net area

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Location reference:	Tamar Estuary (West Bank)
Policy Unit reference:	6c34 to 6c40

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 intertidal habitat at St John's Lake SSSI through coastal squeeze due to holding the line
2055 – 2105	Maintenance and possible improvement of existing defences. Undefended parts of the estuary would continue to evolve naturally.	Limited impacts on isolated properties. People and properties protected from flooding in Saltash, Torpoint and other settlements. South West Coast Path at risk from flooding in some currently undefended areas.	A387 and A38 protected from flooding. Some areas of Grade 2, 3 and 4 agricultural land at risk from flooding or erosion.	Most Grade 1, 2 and 3 listed buildings protected from flooding. Registered Parks and Gardens (e.g. Antony pleasure grounds) protected from flooding.	Change in landscape character of South Devon/Cornwall and Tamar Valley AONB and Heritage Coast	All historic landfill sites protected from flooding.	HTL will result in the gradual loss of intertidal areas in the Tamar Estuary as they are restricted from adapting by the ongoing presence of defences at Plymouth, thus potentially failing WFD objectives 2 and 3. Works in areas selected for holding the line or 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.	Where a policy of HTL is implemented, it may result in the progressive loss of intertidal habitat within the Tamar Estuaries Complex SPA (and Tamar-Tavy Estuary SSSI) due to coastal squeeze with associated impacts on feeding/roosting birds. An adverse effect is anticipated. Where a policy of HTL is implemented, it may result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC (including Plymouth Sound Shores and Cliffs SSSI) due to coastal squeeze and direct loss of habitat within the footprint of the scheme. An adverse effect is anticipated. Potential loss of the net area of intertidal habitat at St John's Lake SSSI through coastal squeeze due to holding the line

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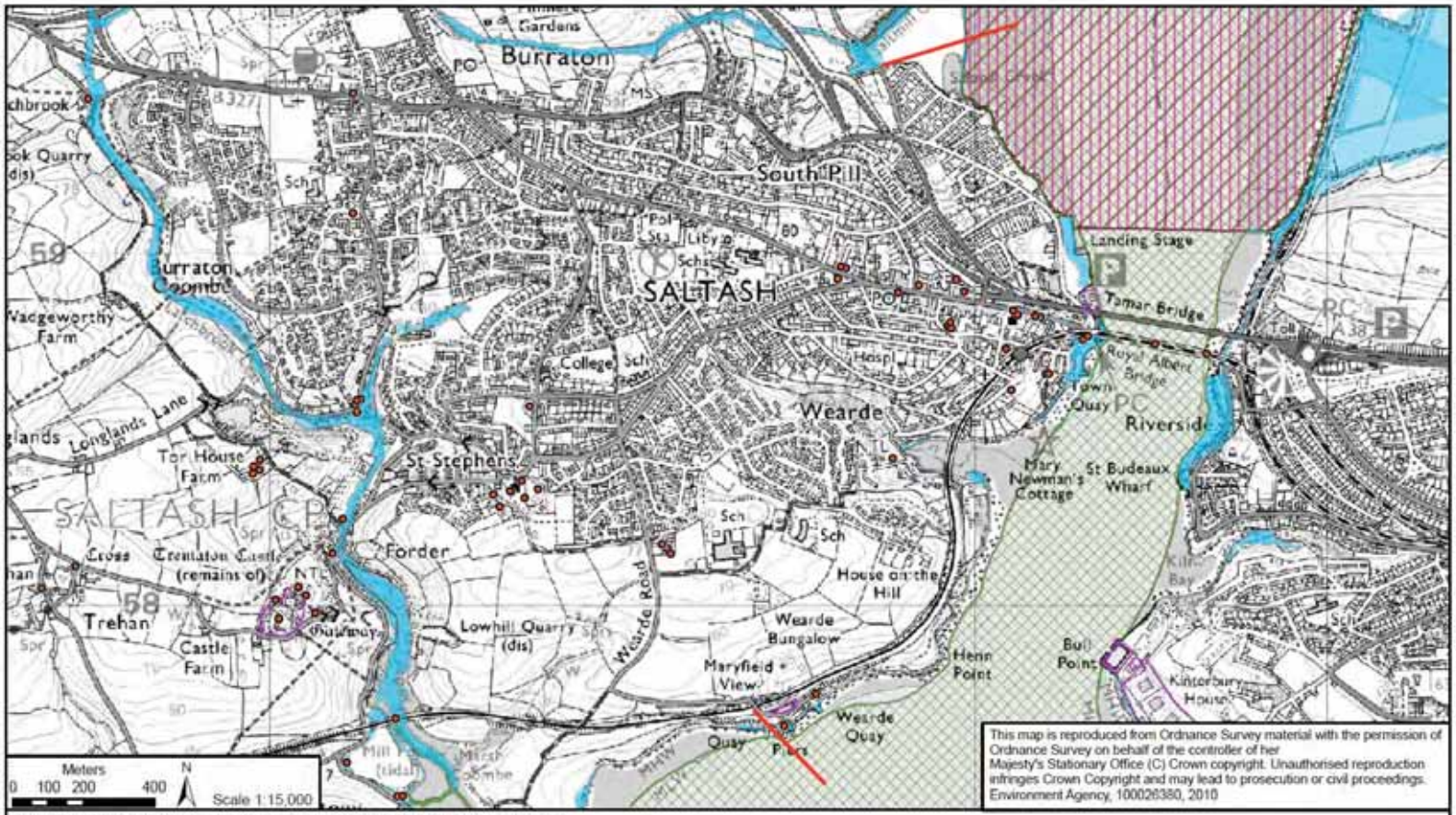

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6c34: Tamar Estuary - Saltash

Policy

From Present Day:	Medium-Term:	Long-Term:
Hold the Line of existing defences only, otherwise No Active Intervention	Hold the Line of existing defences only, otherwise No Active Intervention	Hold the Line of existing defences only, otherwise 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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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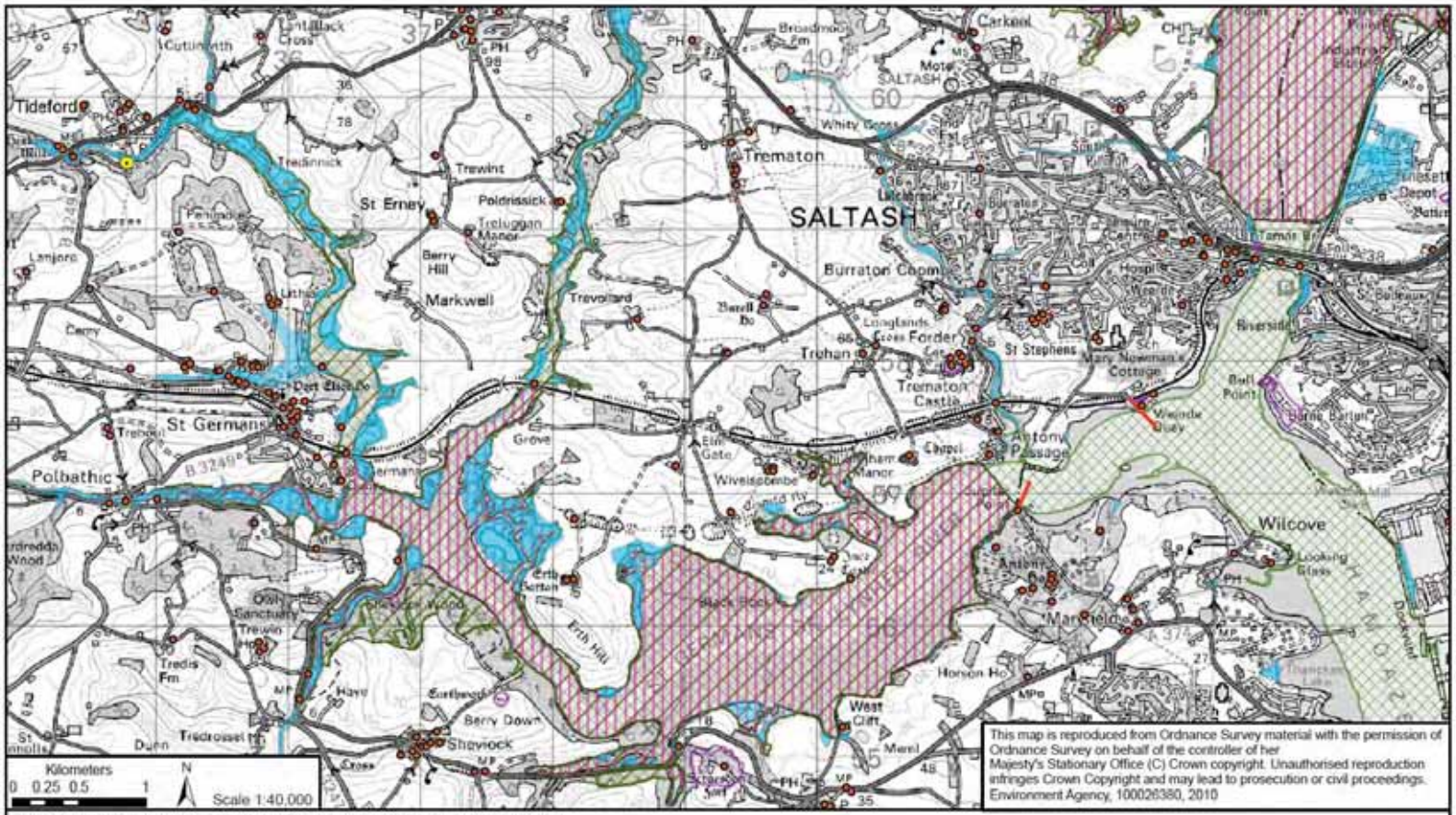

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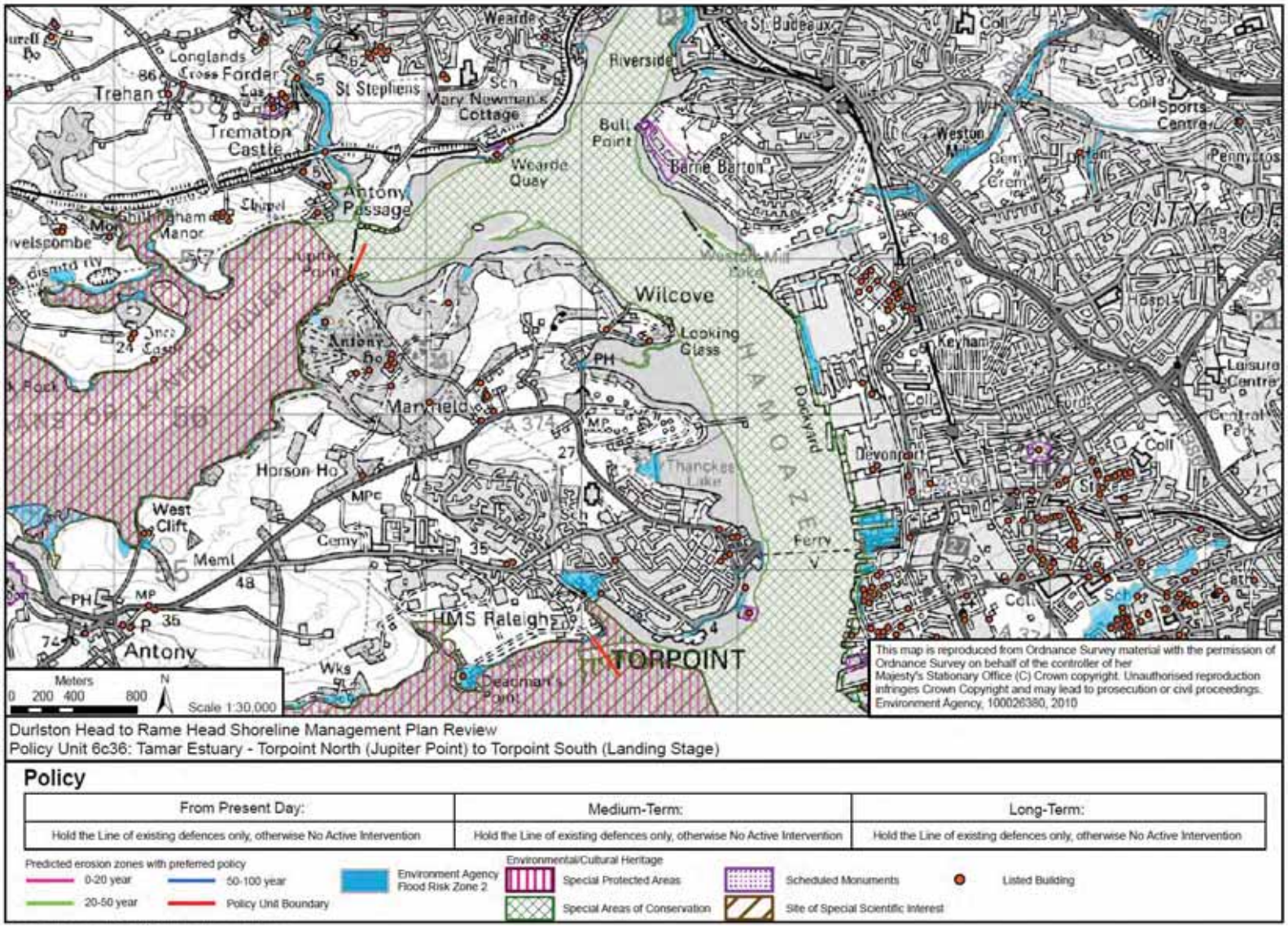

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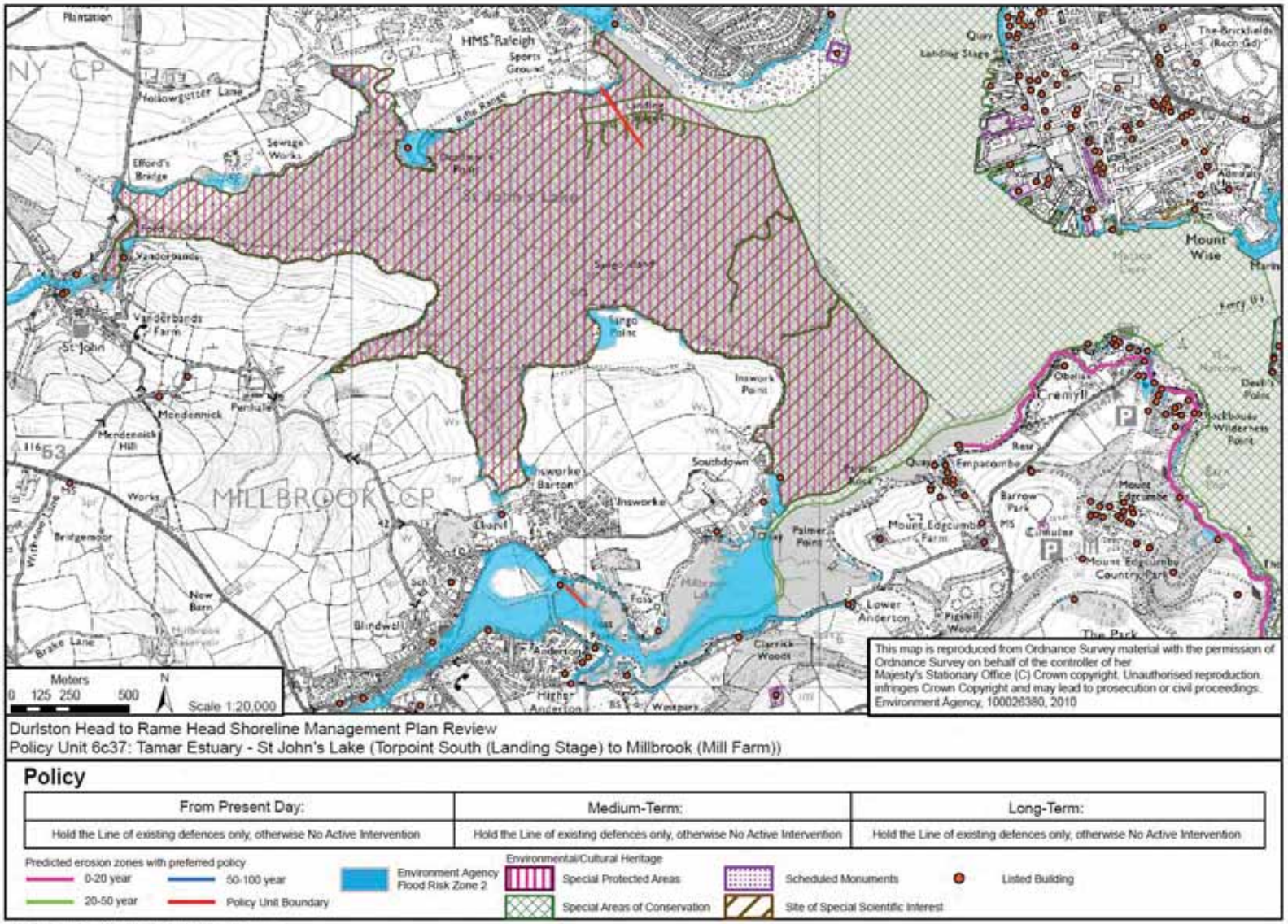

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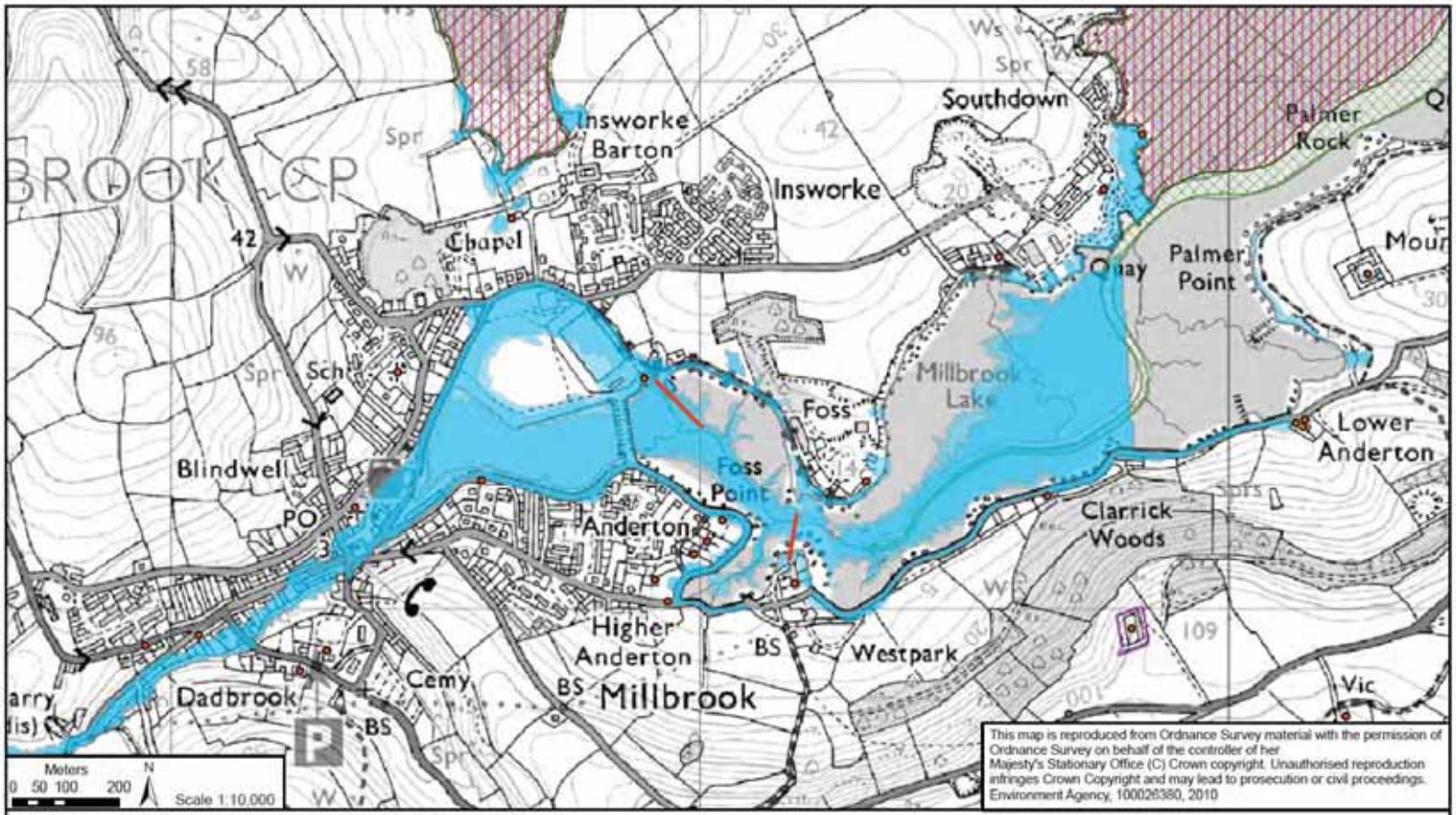

Durlston Head to Rame Head Shoreline Management Plan Review
Policy Unit 6c38: Tamar Estuary - St John's Lake (Millbrook (Mill Farm) to Millbrook (Hancock's Lake))

Policy

From Present Day:	Medium-Term:	Long-Term:
Hold the Line of existing defences only, otherwise No Active Intervention	Hold the Line of existing defences only, otherwise No Active Intervention	Hold the Line of existing defences only, otherwise 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
Special Protected Areas
Special Areas of Conservation
Scheduled Monuments
Site of Special Scientific Interest
Listed Building

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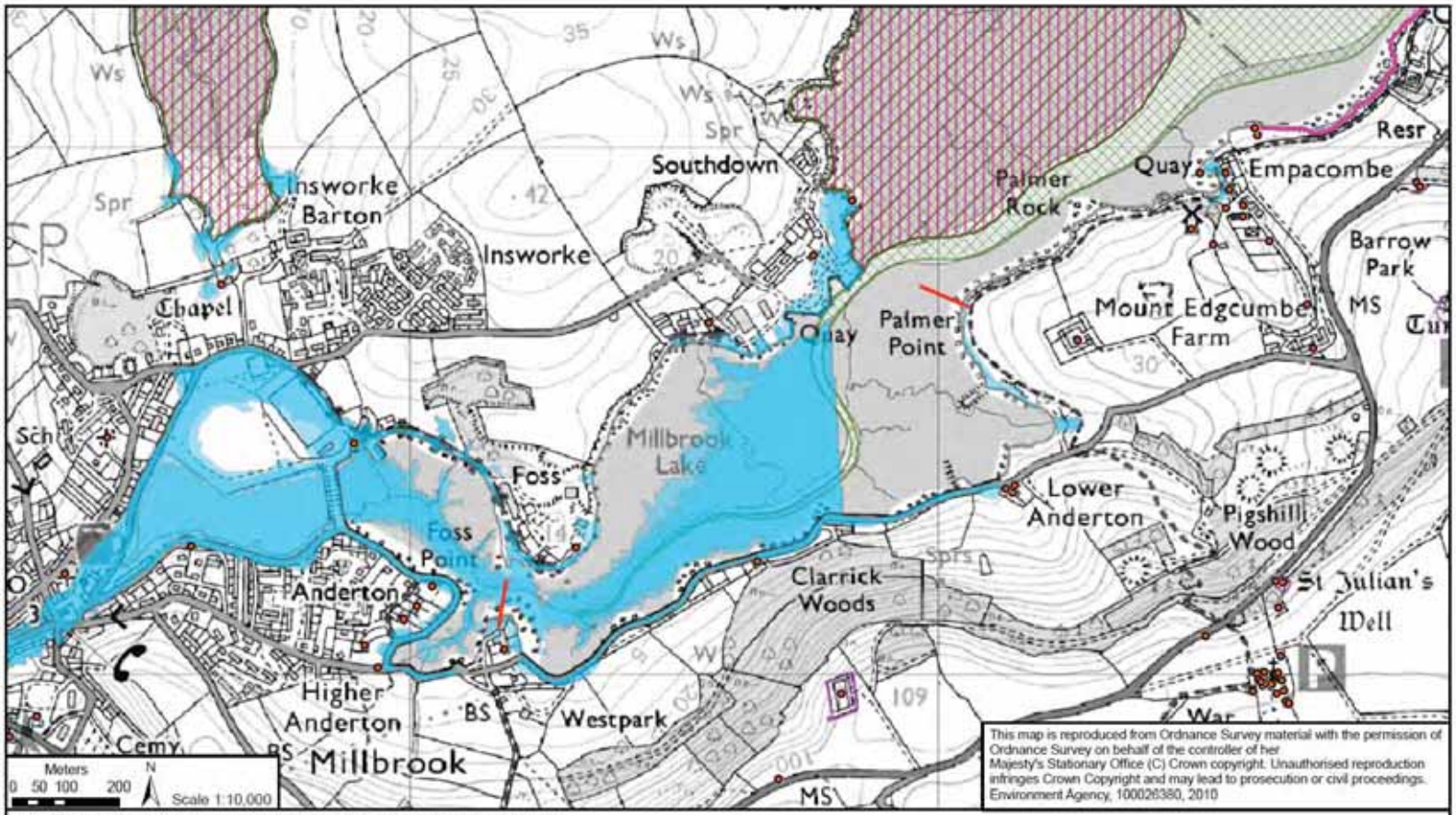

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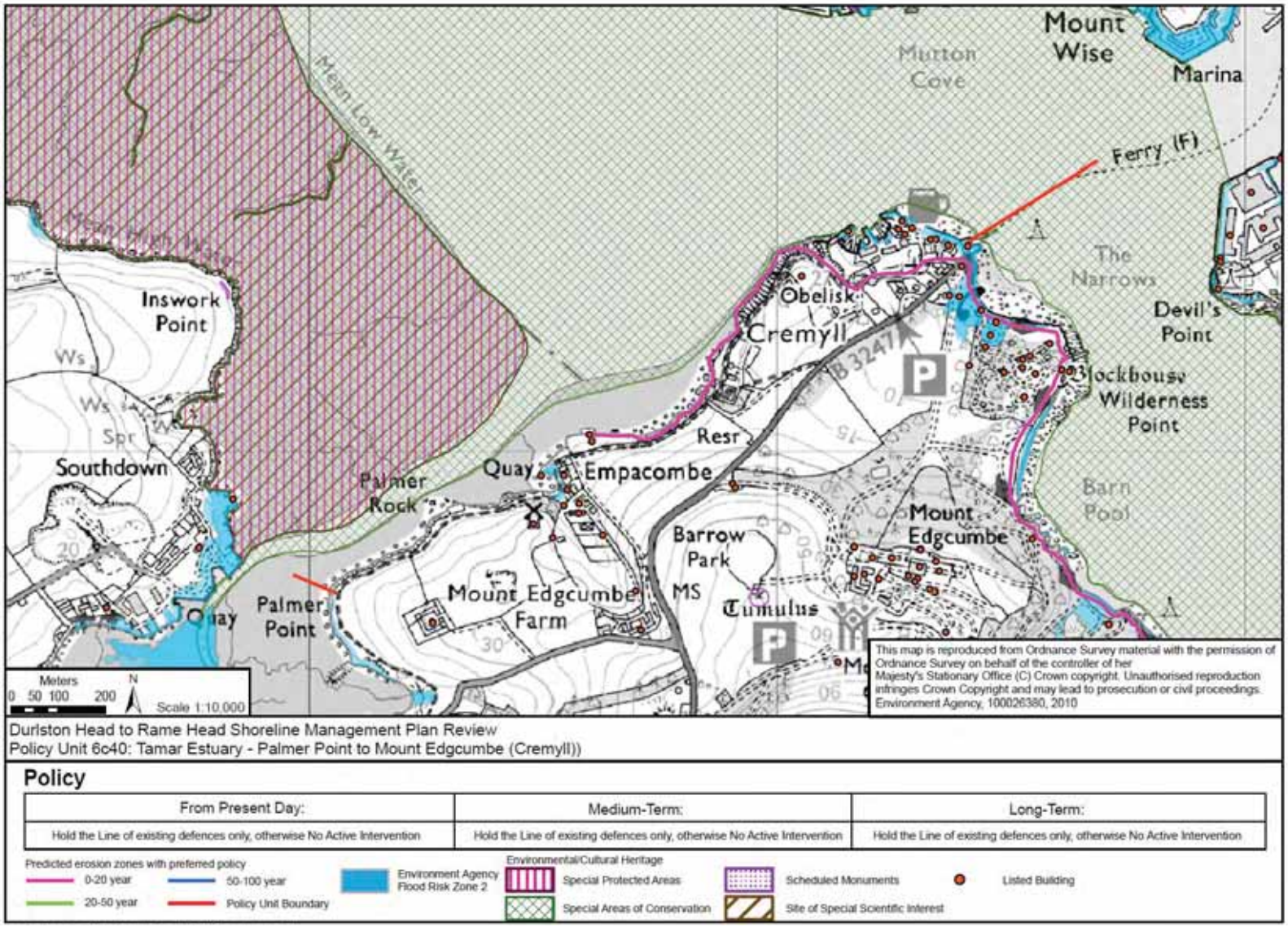

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Location reference:	**Mount Edgcumbe to Rame Head**
Policy Unit reference:	**6c41 to 6c45**

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

Plan:

This stretch is comprised mostly of long lengths of undefended, slowly eroding hard-rock coastline, interrupted by stretches of defence at Fort Picklecombe and the settlements of Kingsand and Cawsand. The long term Plan is to allow the undefended lengths of coast to continue to evolve naturally whilst continuing to reduce the risk of flooding and erosion to property and people.

This policy would have a beneficial impact on nature conservation through maintaining natural processes and through a potential increase in intertidal habitat adjacent to an internationally designated conservation site (Plymouth Sound and Estuaries SAC). Despite the slow rate of erosion along this coastline, due to the small, infrequent rock fall events, some assets could be at risk from erosion, including: parts of the Mount Edgcumbe Registered Park and Garden, the South West Coast Path, the Scheduled Monument at Rame Head, and a number of listed buildings.

The small length of defence along the cliff toe that protects Fort Picklecombe against flooding and erosion fronts hard rock cliffs that would retreat very little even if this length of defence was not present. Maintaining defences here will not have a significantly detrimental impact upon the coastal processes and would allow Fort Picklecombe, which is a listed building, to remain protected against flood risk in the future. It is unlikely, however, that continuation of this protection would attract public flood and coastal defence funding, therefore alternative funding would need to be sought.

Defences that protect the developed areas of Kingsand and Cawsand from flooding and erosion are situated at the back of small pocket beaches. The long term Plan for these is to continue to minimise the risk of flooding and erosion, which will also ensure that the many listed buildings, scheduled monument and conservation area would remain protected.

Part of this section also benefits from the sheltering effect of the Plymouth Breakwater within Plymouth Sound. The shoreline could therefore be affected by any change in the Plymouth Sound Breakwater. The assumption of the policies for this stretch is that the breakwater will remain and be maintained. If this was to not be the case then it could result in defences along the shoreline, particularly at Fort Picklecombe, needing to be more substantial.

Preferred policies to implement Plan:

From present day (short term):	The short term policy is for **No Active Intervention** along the undefended sections of cliffed coast, allowing the coast to continue to evolve naturally in these areas. The unprotected hard rock cliffs that form this section have eroded very little over the long term, and negligible erosion of these cliffs is predicted. At Fort Picklecombe (should funds be available) and along the Kingsand/Cawsand frontage, the short term policy is to **Hold the Line**, through the maintenance of the existing defences. The small pocket beaches at Cawsand and Kingsand have been stable over the long term, although they do fluctuate as a result of storm events. In the short term this trend is likely to continue although the beach width could start to reduce due to rising sea levels.
Medium term:	The medium term policy is to continue **No Active Intervention** along the undefended sections of cliffed coast, allowing the coast to continue to evolve naturally in these areas. The hard rock cliffs along this section would be expected to experience only negligible erosion. The small pocket beaches, such as Edgcumbe Beach would

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	narrow due to rising sea levels and the lack of sediment input and at Edgcumbe there could be a risk of localised flooding. There would be continued maintenance and likely improvements to the defences along this stretch at Fort Picklecombe (subject to funding) and Kingsand/Cawsand under the continued policy to **Hold the Line** in these areas. This could involve building larger defences at these locations, particularly at Cawsand and Kingsand, where narrowing beaches, due to both limited sediment input and the resistant geology of the backing cliffs will increase exposure of the defences.
Longer-term:	The long term policy is to continue **No Active Intervention** along the undefended sections of cliffed coast, allowing the coast to continue to evolve naturally. The hard rock cliffs along this section would be expected to experience only negligible erosion with total erosion of less than 10m predicted by 2105, depending locally on the occurrence of small scale cliff failures. Some pocket beaches could disappear due to rising sea levels and there could be an increased risk of localised flooding at Edgcumbe. No change from **Hold the Line** is proposed at Fort Picklecombe (depending on funding availability) and Kingsand/Cawsand. In order to maintain current levels of protection, improvements to defences including possible reconstruction may be required. During this period, at Cawsand and Kingsand the beaches may disappear altogether or only a very narrow beach be retained. This could have potential implications for tourism.

Summary of Specific Policies

Policy Unit		Preferred Policies		
		Short term	Medium term	Long term
6c41	**Mount Edgcumbe to Picklecombe 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**.
6c42	**Fort Picklecombe**	Continue to maintain the existing defences under a **Hold the Line** policy (assuming funds are available).	Continue to maintain the existing defences under a **Hold the Line** policy (assuming funds are available).	Continue to maintain the existing defences under a **Hold the Line** policy (assuming funds are available).
6c43	**Picklecombe Point to Kingsand**	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**.
6c44	**Kingsand/ Cawsand**	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.	Continue to maintain the existing defences under a **Hold the Line** policy.
6c45	**Cawsand to Rame 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**.

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Location reference:	Mount Edgcumbe to Rame Head
Policy Unit reference:	6c41 to 6c45

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. There would be continued cliffline retreat along the undefended stretches.	Isolated properties, farmsteads and coastal hamlets at risk from erosion between Mount Edgcumbe and Kingsand, though risk is small due to low rates of recession and depends upon where future cliff falls occur. Holding the line will sustain assets at Kingsand and protect people and properties from erosion at Cawsand on sea front Potential loss of a small area of Mount Edgcumbe Country Park. South West Coast Path at risk from erosion and potential loss between Mount Edgcumbe and Picklecombe Point, Picklecombe Point and Kingsand and between Cawsand and Rame Head.	Protection of Plymouth Ferry Dock facilities from flooding Some areas of Grades 2, 3 and 4 agricultural land at potential localised risk from flooding or erosion, though areas at risk are very small due to low rates of recession and small flood risk areas. Penlee Point Fog Signal Station at risk from erosion	Some Grade 1, 2 and 3 listed buildings at risk from flooding or erosion including clusters of listed buildings located in around Mount Edgcumbe Country Park Potential loss of parts of Mount Edgcumbe Registered Parks and Gardens from erosion Potential loss of Promontory Fort and St Michael's Chapel, Rame Head SM due to erosion	Change in landscape character of Cornwall and Tamar Valley Areas of Outstanding Natural Beauty and Heritage Coasts – this is unlikely to be considered detrimental as the coast will be allowed to evolve naturally.	Continuation of natural processes is key to the integrity of the Kingsand to Sandway Point SSSI; NAI in the northern section of this SSSI would continue to maintain the exposures. Holding the line in the southern section of the SSSI between Kingsand and Cawsand has the potential to adversely impact this feature. Continuation of natural processes is key to the integrity of Rame Head and Whitsand Bay SSSI; the preferred policy would continue to maintain the interest features of the SSSI.	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.	Potential increase in intertidal habitat in areas of NAI, adjacent to Plymouth Sound and Estuaries SAC (including Plymouth Sound Shores and Cliffs SSSI) Where a policy of HTL is implemented in 6c42 and 6c44, it may result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC due to coastal squeeze and direct loss of habitat within the footprint of the scheme. An adverse effect is anticipated.
2025 – 2055	Continued maintenance and possible improvements of the existing defences. There would be continued cliffline retreat along the undefended stretches.	Isolated properties, farmsteads and coastal hamlets at risk from erosion between Mount Edgcumbe and Kingsand, though risk is small due to low rates of recession and depends upon where future cliff falls occur. Holding the line will sustain assets at Kingsand and protect people and properties from erosion at Cawsand on sea front Potential loss of a small area of Mount Edgcumbe Country Park. South West Coast Path at risk from erosion and potential loss between Mount Edgcumbe and Picklecombe Point, Picklecombe Point and Kingsand and between	Protection of Plymouth Ferry Dock facilities from flooding Some areas of Grades 2, 3 and 4 agricultural land at potential localised risk from flooding or erosion, though areas at risk are very small due to low rates of recession and small flood risk areas. Penlee Point Fog Signal Station at risk from	Some Grade 1, 2 and 3 listed buildings at risk from flooding or erosion in the short, medium and long term including clusters of listed buildings located in around Mount Edgcumbe Country Park Potential loss of parts of Mount Edgcumbe Registered Parks and Gardens from erosion Potential loss of Promontory Fort and St Michael's Chapel, Rame Head SM due to erosion Protection of Cawsand Fort Scheduled Monument	Change in landscape character of Cornwall and Tamar Valley Areas of Outstanding Natural Beauty and Heritage Coasts – this is unlikely to be considered detrimental as the coast will be allowed to evolve naturally.	Continuation of natural processes is key to the integrity of the Kingsand to Sandway Point SSSI; NAI in the northern section of this SSSI would continue to maintain the exposures Holding the line in the southern section of the SSSI between Kingsand and Cawsand has the potential to adversely impact this feature. Continuation of natural processes is key to the integrity of Rame Head and Whitsand Bay SSSI; the preferred policy would continue to maintain the interest features of the SSSI.	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.	Potential increase in intertidal habitat in areas of NAI, adjacent to Plymouth Sound and Estuaries SAC (including Plymouth Sound Shores and Cliffs SSSI) Where a policy of HTL is implemented in 6c42 and 6c44, it is likely to result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC due to coastal squeeze and direct loss of habitat within the footprint of the scheme. An adverse effect is anticipated.

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Location reference:	Mount Edgcumbe to Rame Head
Policy Unit reference:	6c41 to 6c45

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
		Cawsand and Rame Head.						
2055 – 2105	Continued maintenance and possible improvements of the existing defences. There would be continued cliffline retreat along the undefended stretches.	Isolated properties, farmsteads and coastal hamlets at risk from erosion between Mount Edgcumbe and Kingsand, though risk is small due to low rates of recession and depends upon where future cliff falls occur. Holding the line will sustain features at Kingsand and protect people and properties from erosion at Cawsand on sea front Potential loss of a small area of Mount Edgcumbe Country Park. South West Coast Path at risk from erosion and potential loss between Mount Edgcumbe and Picklecombe Point, Picklecombe Point and Kingsand and between Cawsand and Rame Head.	Protection of Plymouth Ferry Dock facilities from flooding Some areas of Grades 2, 3 and 4 agricultural land at potential localised risk from flooding or erosion, though areas at risk are very small due to low rates of recession and small flood risk areas. Penlee Point Fog Signal Station at risk from erosion	Some Grade 1, 2 and 3 listed buildings at risk from flooding or erosion in the short, medium and long term including clusters of listed buildings located in around Mount Edgcumbe Country Park Potential loss of parts of Mount Edgcumbe Registered Parks and Gardens from erosion Potential loss of Promontory Fort and St Michael's Chapel, Rame Head SM due to erosion Protection of Cawsand Fort Scheduled Monument	Change in landscape character of Cornwall and Tamar Valley Areas of Outstanding Natural Beauty and Heritage Coasts – this is unlikely to be considered detrimental as the coast will be allowed to evolve naturally.	Continuation of natural processes is key to the integrity of the Kingsand to Sandway Point SSSI; NAI in the northern section of this SSSI would continue to maintain the exposures (*beneficial impact).* Holding the line in the southern section of the SSSI between Kingsand and Cawsand has the potential to adversely impact this feature. Continuation of natural processes is key to the integrity of Rame Head and Whitsand Bay SSSI; the preferred policy would continue to maintain the interest features of the SSSI.	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.	Potential increase in intertidal habitat in areas of NAI, adjacent to Plymouth Sound and Estuaries SAC (including Plymouth Sound Shores and Cliffs SSSI) Where a policy of HTL is implemented in 6c42 and 6c44, it is likely to result in the progressive loss of estuarine habitat within the Plymouth Sound and Estuaries SAC due to coastal squeeze and direct loss of habitat within the footprint of the scheme. An adverse effect is anticipated.

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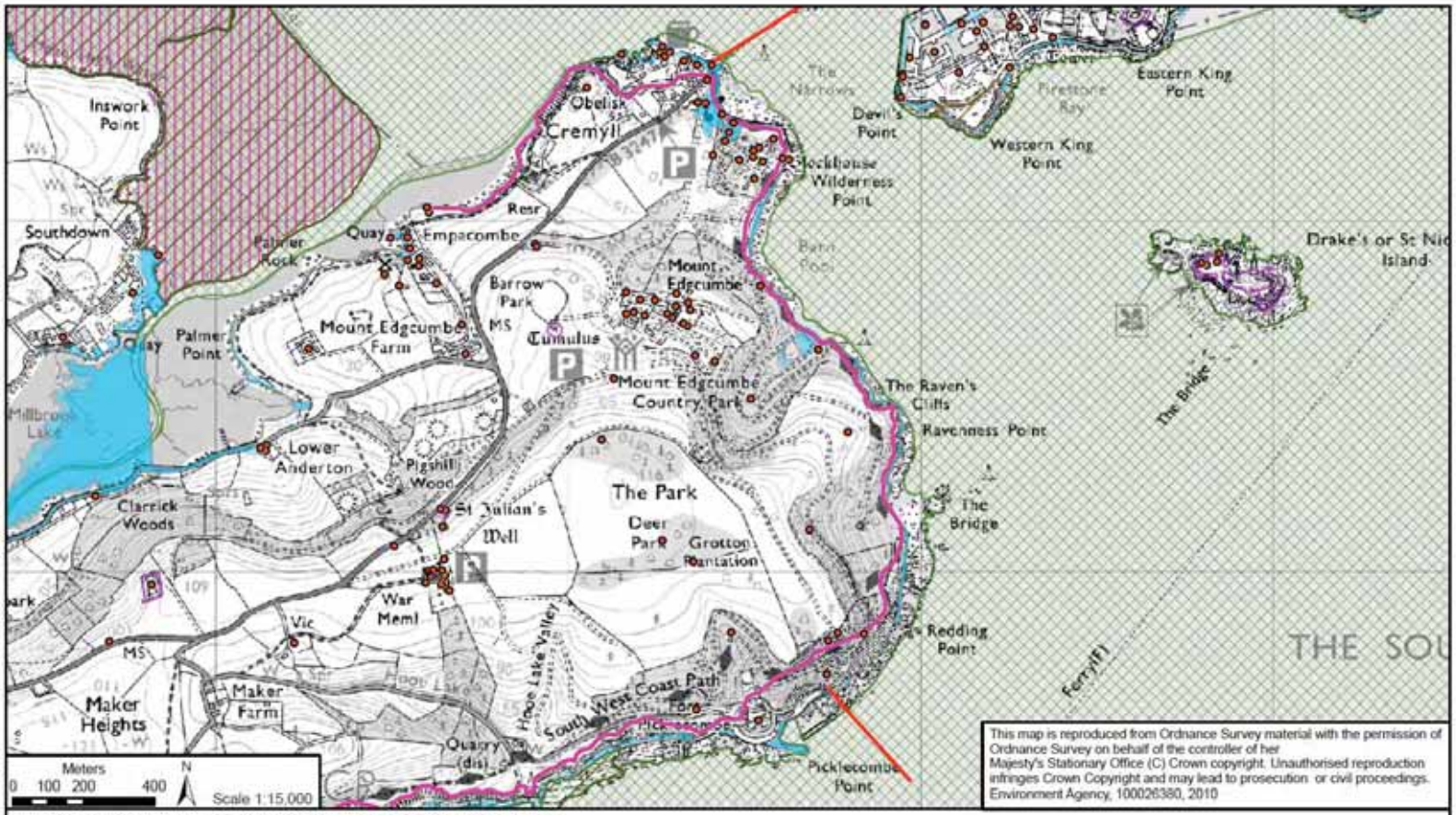

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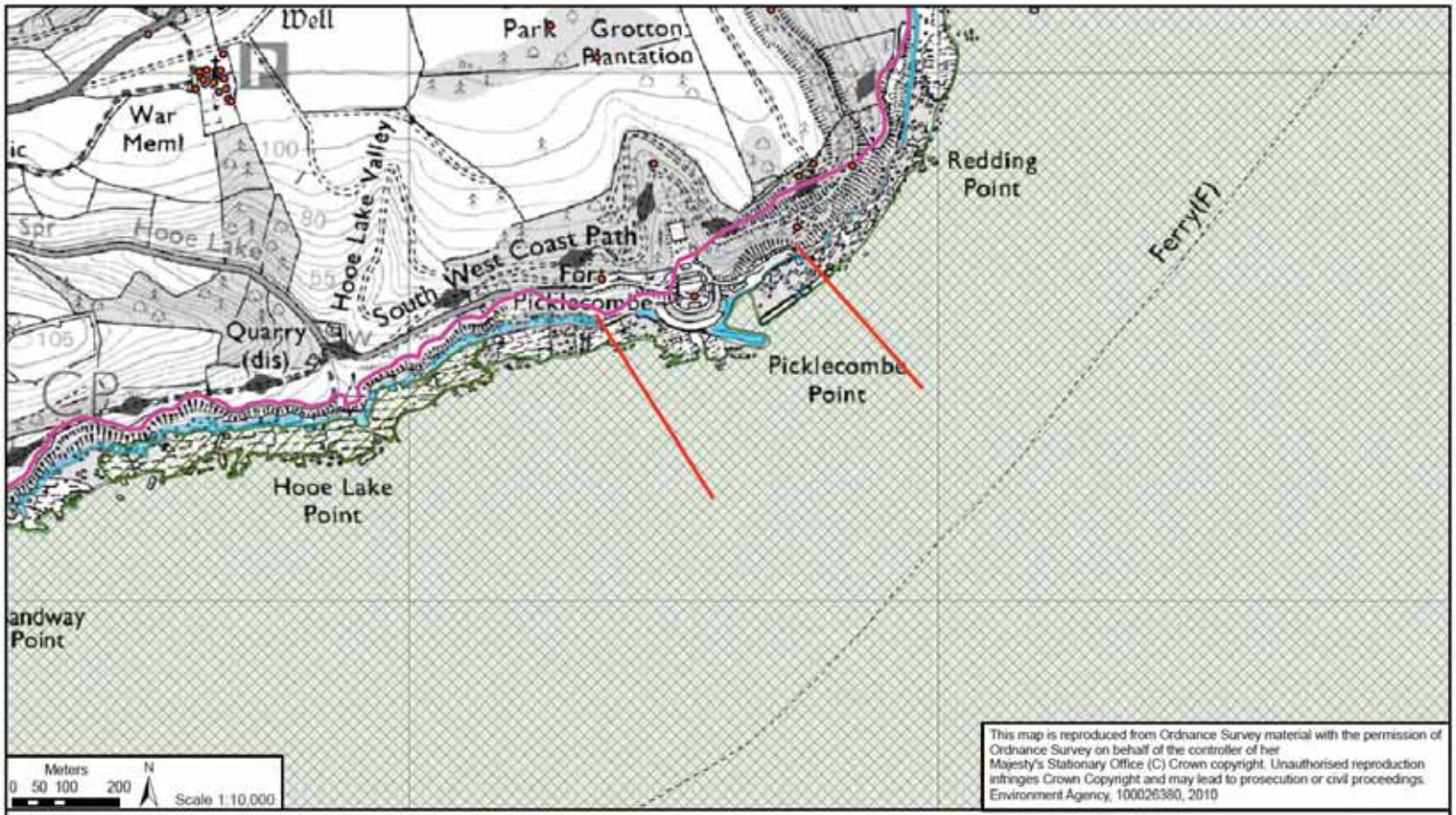

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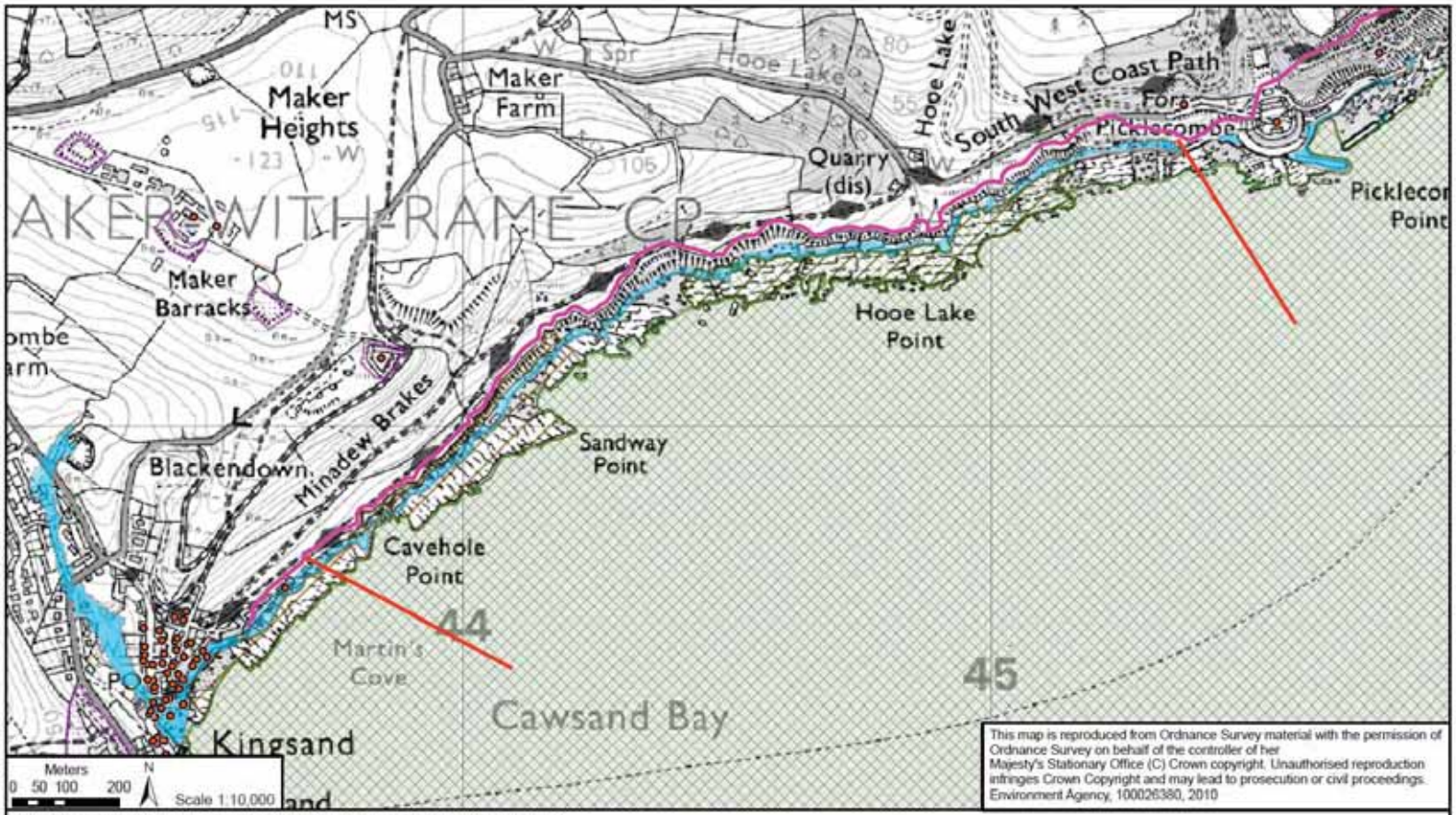

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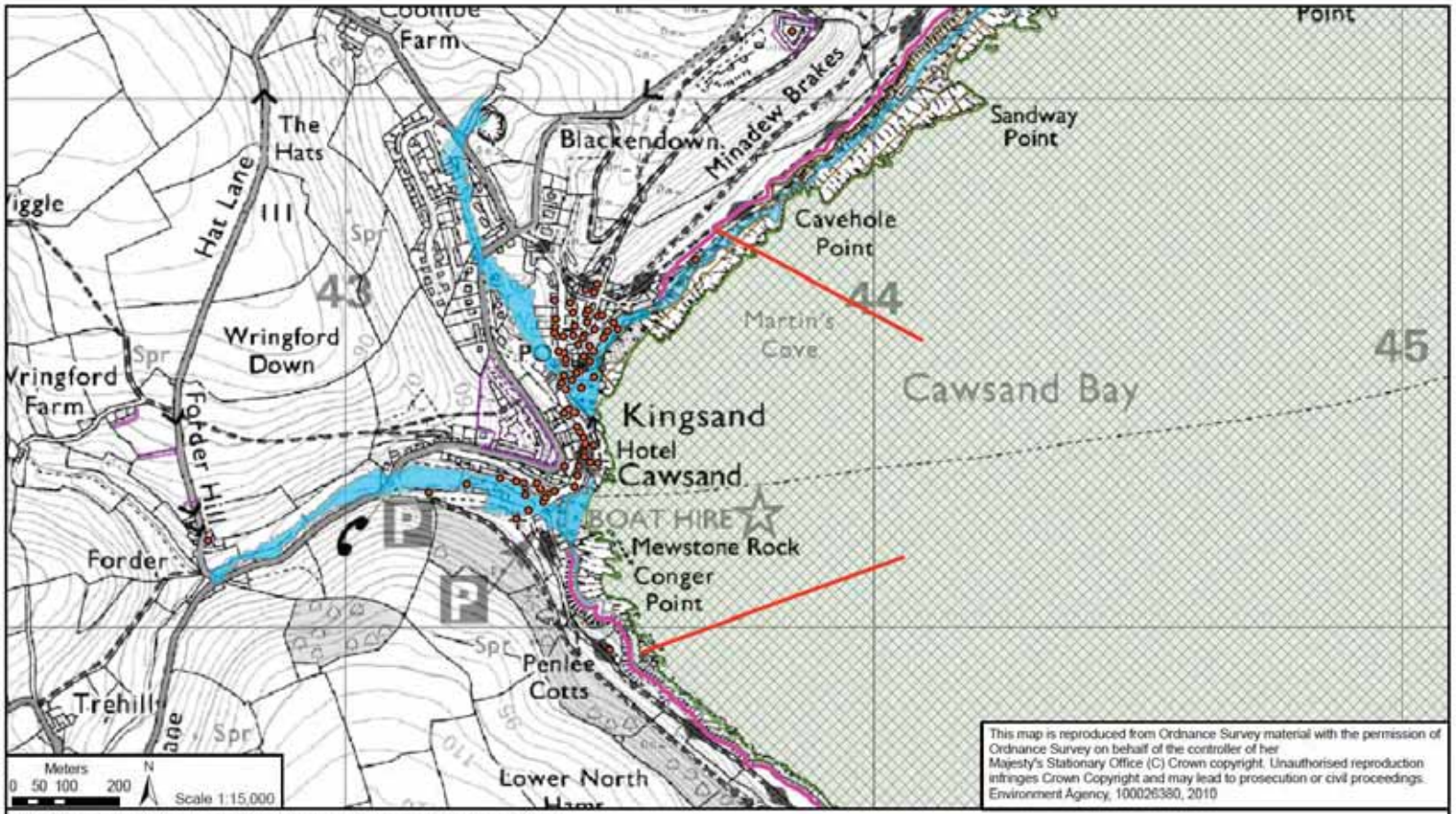

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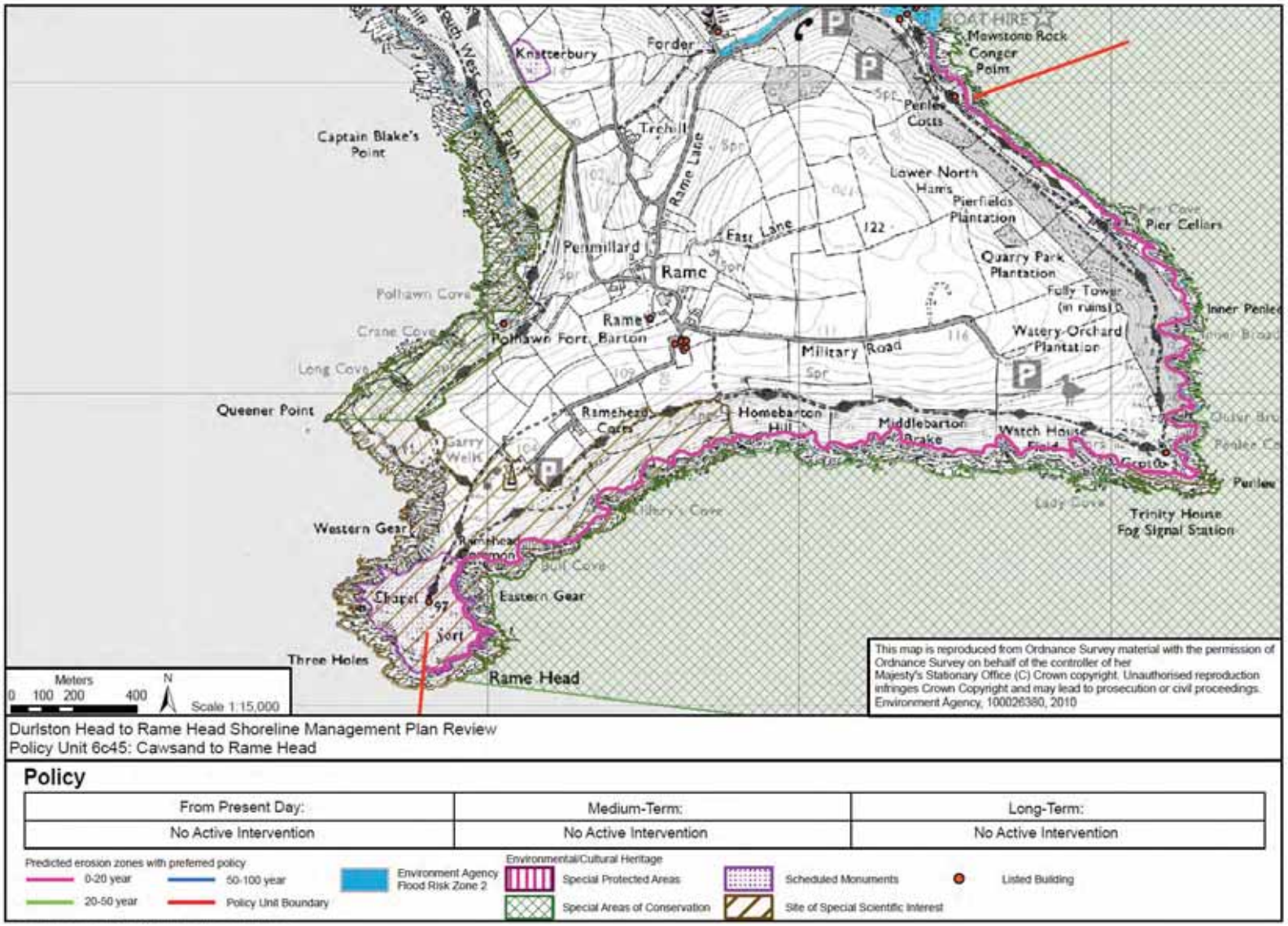

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