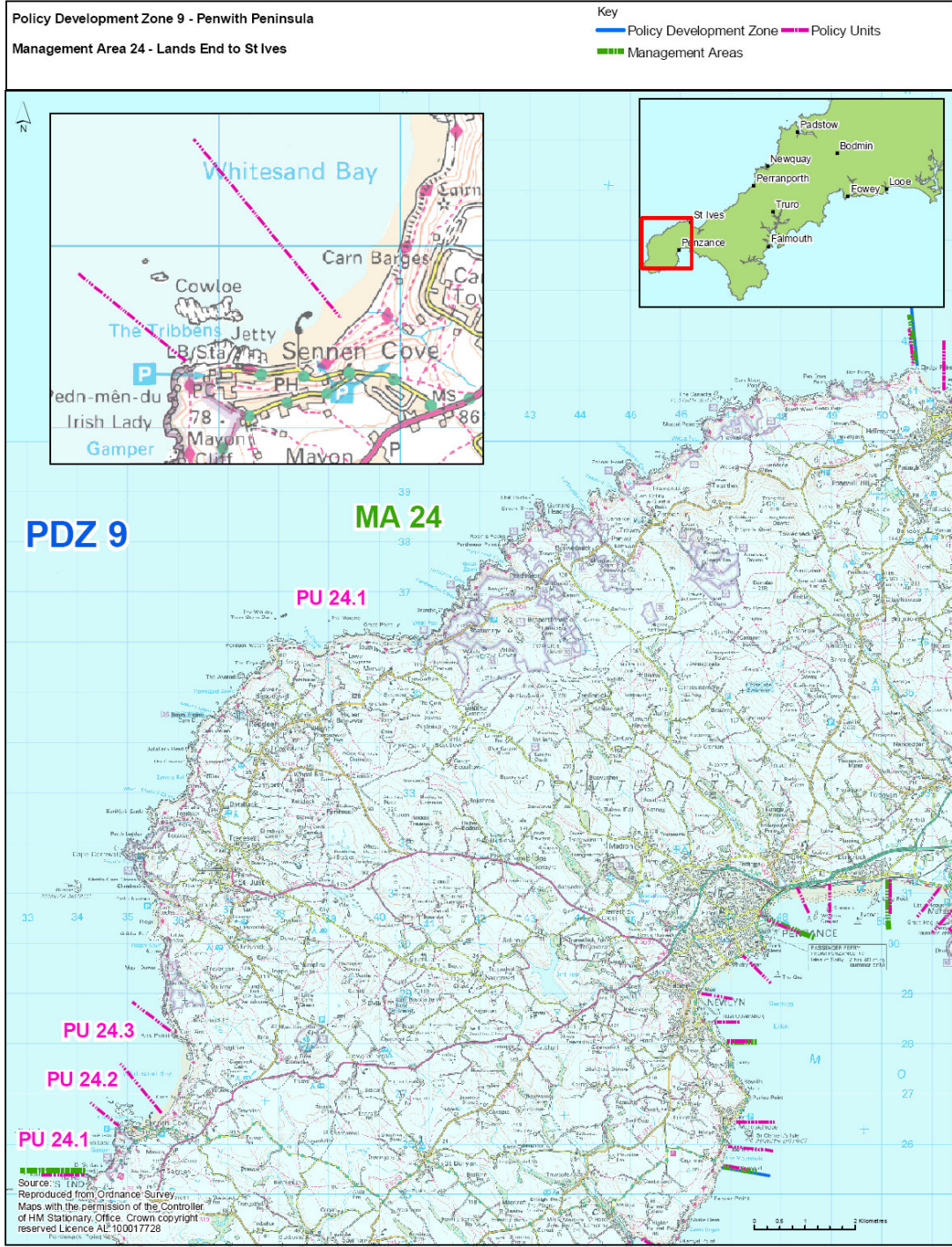


**Location reference:** Land's End to Clodgy Point (St Ives)  
**Management Area reference:** MA24  
**Policy Development Zone:** PDZ9



Cornwall & Isles of Scilly  
Shoreline Management Plan Review

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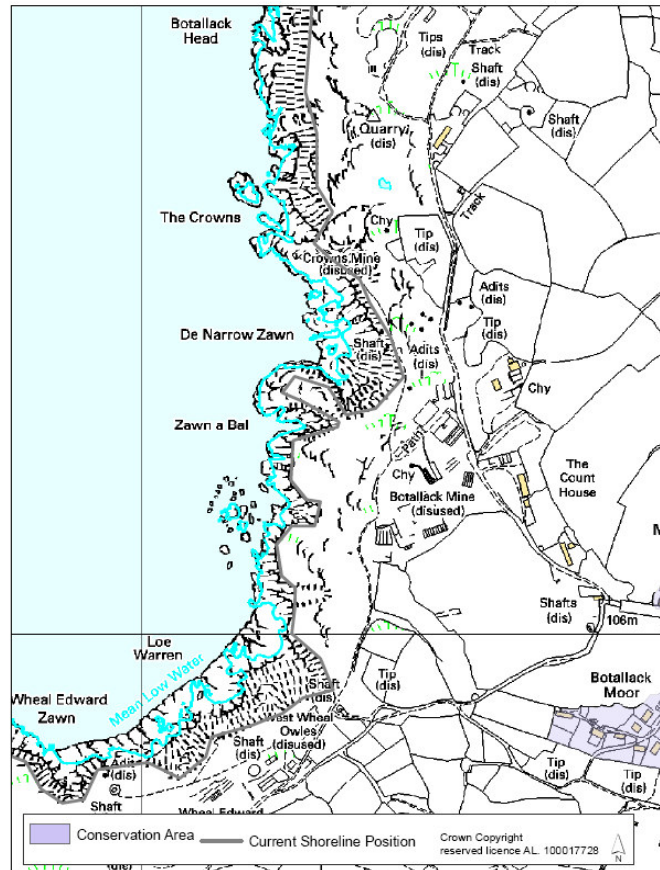
## DISCUSSION AND DETAILED POLICY DEVELOPMENT

Management Area 24 runs from Lands End, the north-western part of the Penwith / Lands End Peninsula. Again, the dominant nature of this coastline is hard resistant granite cliffs with some small discrete coves, disconnected from the wider coastline. It also includes the larger

Whitesand Bay containing Sennen Cove and Gwynver Beach. The present form of the Penwith Peninsula coast has been entirely shaped by the natural coastal processes and the intention for all of the undefended areas of cliff, cove and beach would be to continue with a policy of non-intervention on an ongoing basis for the whole of this area.<sup>1</sup> With very minimal erosion expected along the entire frontage, no active intervention satisfies the landscape and environmental objectives associated with the AONB and Heritage coast designations.

The Cornwall and West Devon Historic Mining Landscape World Heritage site occupies in excess of 15km of coastal frontage between Gribba Point and Porthmeor Cove. There are

a number of cliff edge sites, with particularly high number of features in the Botallack area (inset map), as well as at Levant and Pendeen. A continued trend of very minimal erosion along this entire frontage is expected over the next 100 years – generally the maximum extent of the upper estimates for erosion would be 1-2m. The lower estimates indicate that virtually no erosion will occur. A number of the historic structures at Botallack are within 5m of the cliff top and therefore the risk to them has to be acknowledged. However the cliff line is extremely resistant and the granite geology is less prone to isolated or periodic cliff falls when compared with the slate dominated cliffs of the north coast. Overall, only a low risk to the World Heritage site is thought to exist and therefore NAI is thought to remain appropriate. Of course given the huge international significance of the historic interests, the ongoing survey data available through the South West coastal Monitoring Programme should be used to provide surveillance on actual cliff recession rates in the short to medium term. It may be appropriate when considering prioritisation of the second phase of the programme, that monitoring of the cliff line along the Penwith Peninsula be focussed on the WHS coastline and be scaled back for those areas where there are no specific concerns or assets at potential risk.

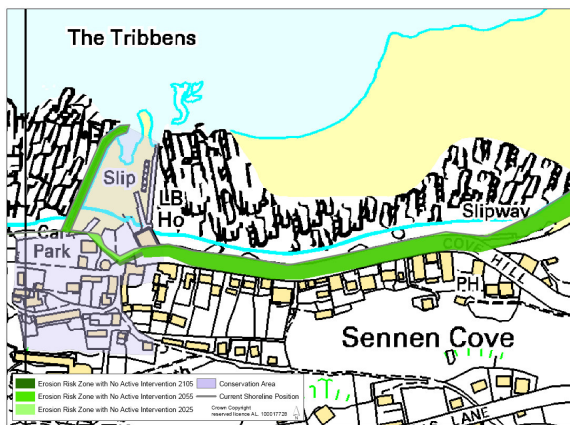




It is not believed that a NAI policy should present a risk to the current route of the SW Coast Path.

Aside from the defences at Sennen Cove, there is no designated coast protection or flood defence structure along this section of coastline. Any small-scale discrete works which may be present are generally associated with access points to the small coves and beaches.

1.5km to the north-east of Lands End is the small settlement of **Sennen Cove**, which sits at the southern end of Whitesand Bay. The assessment of flood and erosion risks indicates that the main seafront road which runs down Cove Hill into the village and provides access to the beach front car park and tourist facilities is at risk of being lost to erosion under the no active intervention scenario, along with the



RNLI lifeboat station, by 2055.

Beyond the loss of the road and the RNLI facilities the mapping does not indicate further recession and losses during epoch 3. There are around 400m of defences (revetment and wall to car park and quay at the Tribbens (south), plus a low breakwater to harbour to south of cove and seawall along the road length (inset photo, below right)).

The main harbour arm provides shelter to a number of assets

including the RNLI lifeboat station, the public slipway and pull out area for fishing boats. It also helps to defend a number of commercial and residential properties and the Sennen Cove conservation area from wave action. Given that the retreat over 100 years would not be expected to exceed 15m or so, holding the current defensive line of the road would appear relatively sustainable and likely to be economically justified based on the benefits it provides to the community and local economy.

The assessment of flood risks at Sennen did not indicate any risk from extreme tide levels, however Sennen is a very wave dominated location and historical instances of flood impacts have been due to wave run-up and overtopping. Maintaining the defences will help to manage this risk, but it should be acknowledged that wave run-up and overtopping risks will increase with time, as sea levels rise and storminess is expected to increase.



The preferred plan at Sennen Cove therefore would be to continue the existing SMP1 policy of hold the line, over the long term. It is felt this approach meets more objectives than NAI or MR. This helps support the Cornwall Council Historic Environment Service aim to maintain the historic waterside structures at Sennen Cove. The high level economic assessment for Management Area 24 provides a very low benefit / cost value of 0.12 (refer to the Economics Summary Table below and Appendix H). Whilst appearing generally unsupportive of the hold the line approach proposed for Sennen Cove, in reality the analysis does not account for all the benefits relating to wave driven storm damage to properties and loss of the road, therefore the benefits are based only upon a very few assets appearing in the still water flood extent and within the limited erosion extent.



To the north of Sennen cove, the Shoreline follows the wide sweep of Whitesand Bay for around 2km as it arcs away to the north (inset map left and photo, right). The beach is divided by a small headland (Escalls Cliff) two thirds of the way up with Gwynver beach located to the north of the headland (inset photo, below). At lower states of the tide the beaches join to form one longer stretch of

sand.



Both Gwynver and Sennen Beaches have active dune areas to the rear



(see inset photos), again these dunes areas are separated by the small headland. It is expected that some recession of the shoreline will occur through natural roll back of the beaches into the dune areas and erosion of the fore-dune line. This would have the effect of making Escalls Cliff more advanced of the mean high water position and would reduce the time when both beaches can be accessed along the waters edge. Given the dominance of natural processes and the lack of assets at risk to the north of Sennen

Cove, the preferred plan for the remainder of Whitesand Bay would be to employ a non-interventional approach, in line with the rest of the undefended coastline.

## SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION

### PLAN:

<b>Location reference:</b>	<b>Land's End to Clodgy Point (St Ives)</b>
<b>Management Area reference:</b>	<b>MA24</b>
<b>Policy Development Zone:</b>	<b>PDZ9</b>

#### PREFERRED POLICY TO IMPLEMENT PLAN:

<b>From present day (0-20 years)</b>	NAI along undefended cliffs and coves, including World Heritage Site (but monitor cliff recession rates in these areas). HTL at Sennen Cove. NAI at Whitesand Bay.
<b>Medium term (20-50 years)</b>	NAI along undefended cliffs and coves, including World Heritage Site (but monitor cliff recession rates in these areas). HTL at Sennen Cove. NAI at Whitesand Bay.
<b>Long term (50 -100 years)</b>	NAI along undefended cliffs and coves, including World Heritage Site (but monitor cliff recession rates in these areas). HTL at Sennen Cove. NAI at Whitesand Bay.

#### SUMMARY OF SPECIFIC POLICIES

Policy Unit		SMP1 Policy	SMP2 Policy Plan			
			50 yrs	2025	2055	2105
24.1	Undefended Cliffs	Do nothing	NAI	NAI	NAI	Meets all environmental and landscape objectives. Satisfies objectives relating to the Cornwall AONB, Heritage Coast.
24.2	Sennen Cove	Hold the line	HTL	HTL	HTL	Relatively sustainable shoreline position. Defence provides flood defence from wave run up.
24.3	Whitesand Bay (Sennen & Gwynver Beaches)	Do nothing	NAI	NAI	NAI	Naturally evolving beach and dunes. Relatively stable. No assets at risk. No requirement for intervention
Key: HTL - Hold the Line, A - Advance the Line, NAI – No Active Intervention MR – Managed Realignment						

#### ENVIRONMENTAL ASSESSMENT

##### Strategic Environmental Assessment (SEA):

The long-term policy plan of NAI across the undefended sections of the coastline for these management areas will provide the continuation of natural processes essential for such key features as the Tater-Du SSSI, Boscawen SSSI, Treen Cliff SSSI, Porthgwarra to Pordenack Point SSSI, Porthgwarra RSPB Nature Reserve and lowland heathland BAP habitat. Although this policy may impact upon residential and commercial properties and assets through continued erosion of the coastline which may result in the impacts to the following key historic sites and Listed Buildings: Cliff Castle on Carn Les Boel (SM); Treryn Dinas Fort (SM); St Levan's Well, Porth Chapel (SM); St Levan Chapel site (SM); Breakwater and Adjoining Slipway (LB); and The Crowns Engine Houses (LB). Monitoring should be undertaken.

##### Habitat Regulations Assessment (HRA):

HTL is proposed at Sennen Cove. This policy location is 25km from all the Sites with the exception of the Lands End to Cape Bank draft marine SAC. HTL policy location is adjacent to this Site, but the localised nature of the continued maintenance of the defence line would not directly or indirectly affect

the marine SAC qualifying features.

#### IMPLICATION WITH RESPECT TO BUILT ENVIRONMENT

Economics Summary		by 2025	by 2055	by 2105	Total £k PV
Property	Potential NAI Damages (£k PV)	0.0	0.0	21.5	21.5
	Preferred Plan Damages (£k PV)	0.0	0.0	0.0	0.0
	Benefits of preferred plan (£k PV)	0.0	0.0	21.5	21.5
	Costs of Implementing plan £k PV	94	47	44	185
				Benefit/Cost ratio of preferred plan	0.12

#### Notes

Relatively high costs of maintaining the sea walls at Sennen and the low erosion and flood damage (road and wave action flood risk excluded from losses) means artificially low B/C ratio is shown. Wider economic analysis required to review benefits; wave dominated flood risk, tourism, heritage, parking revenue, lifeboat access, etc.

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