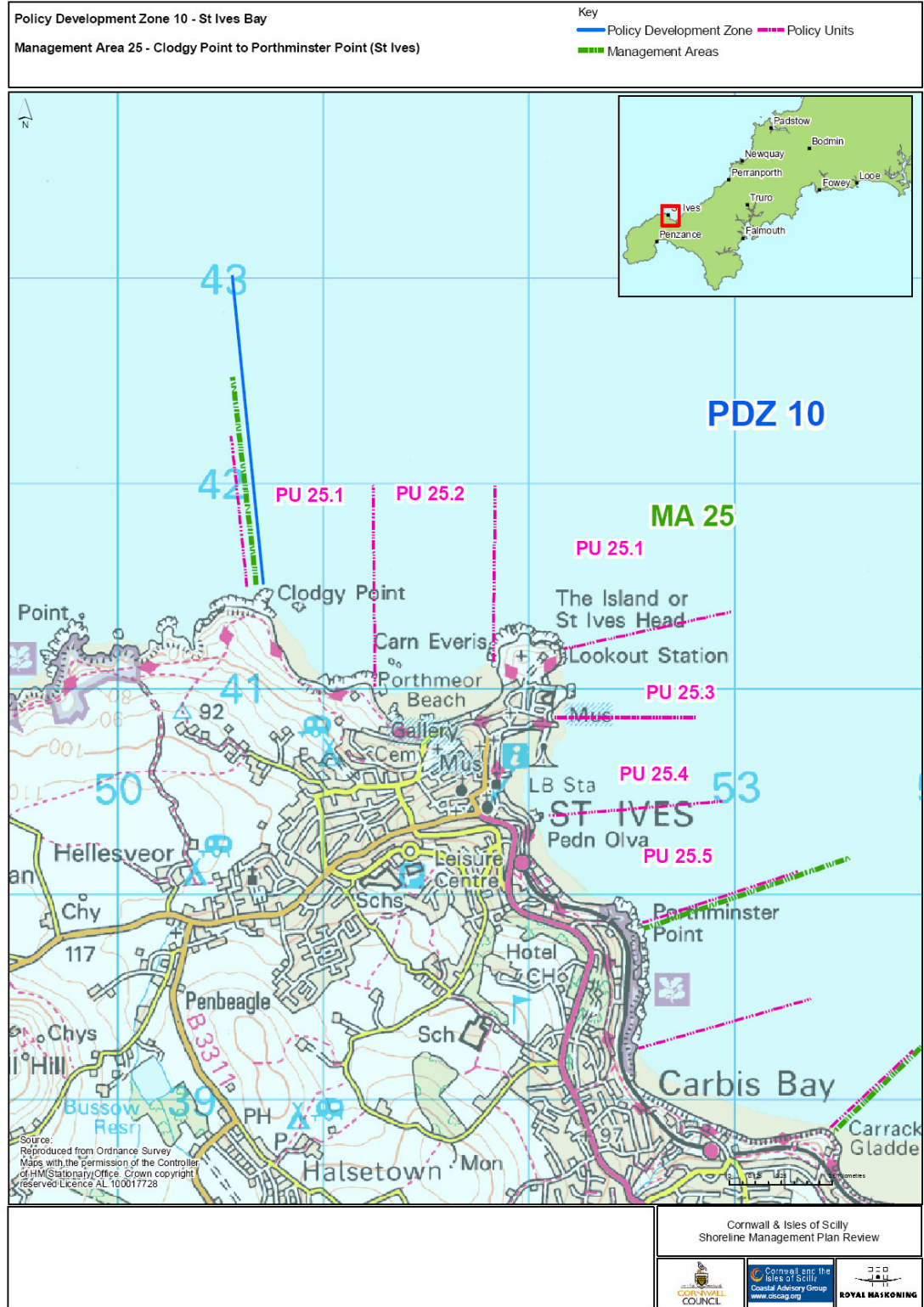


Location reference: Clodgy Point to Porthminster Point
Management Area reference: MA25
Policy Development Zone: PDZ10



DISCUSSION AND DETAILED POLICY DEVELOPMENT

There are low erosion rates along the **undefended cliff** sections which give little reason for any concern over loss of, or damage to features. The preferred no active intervention policy will meet high level objectives of the SMP and will satisfy AONB and Heritage Coast requirements. No other policies are deemed suitable (or required) for the undefended cliff areas.

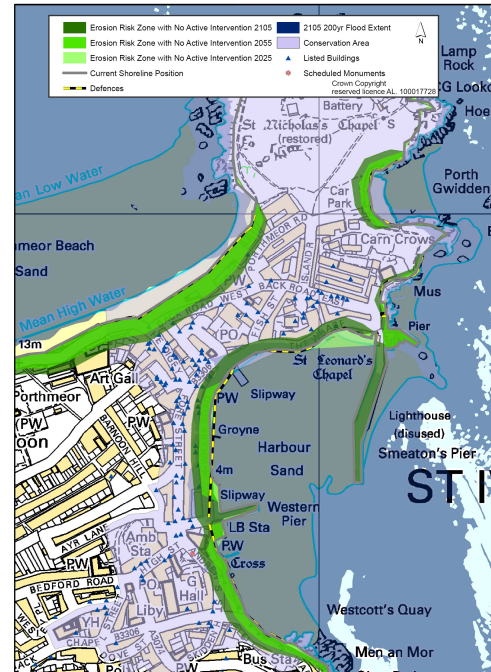
Economic justification for holding the line at **Porthmeor** should remain throughout the three epochs. Some increasing pressure along the frontage may occur in line with sea level rise and residential housing fronting directly onto the beach may be at risk beyond mid-century. Although the Porthmeor shoreline is very constrained it is still a sediment-rich beach with large annual accretions above MHW – this will help to delay onset of climate change induced impacts such as foreshore narrowing and beach lowering. The preference for HTL is not based simply on the presence of residential development but by also acknowledging that there appears little scope for managed realignment. NAI is not seen as acceptable given the assets at potential risk from erosion of up to 35m by 2105, which includes the Tate Gallery and Porthmeor Beach Road (see inset map, below). There are a significant number of properties which front directly on to the beach at Porthmeor (effectively forming the defensive line) and although historically these properties have not been subject to regular flooding or storm damage, the risk of this occurring in the future will increase.

Importantly it must be noted that HTL may lead to some coastal squeeze on the beach at Porthmeor and despite its sediment rich nature, regular monitoring will be essential in informing future revisions of the SMP. If it becomes obvious that a net loss of sediment is occurring year on year, the benefits of maintaining the current defence line and assets must be weighed up against the risk of losing the beach entirely and all of the amenity and defence benefits it provides. Ultimately it may be unsustainable to continue to HTL without some adaption of the community and it would seem likely that introducing increased resilience to flooding will become a priority along the Porthmeor beachfront properties beyond the medium term. The Land Use Planning system in particular needs to consider (and respond to) the risks along this frontage, given a history of conversion of residential beachfront property into commercial outlets.

There is some risk of erosion of up to 20m occurring from **Porthgidden to the Pier** if defences are not maintained. Although holding defences places constraint on the shoreline and may lead to some foreshore narrowing, there is felt to be very little scope for realignment (due to the topography) and no active intervention is not suitable for managing the future risks to assets and the wider community of St Ives. At the southern end of the unit, shoreline recession could compromise the structural integrity of the pier, which provides shelter to the Harbour frontage and is an integral part of the preferred hold the line strategy in policy unit 25.4. As with Porthmeor, this part of the frontage appears to be naturally sediment rich. The configuration of headland, bays and sheltered beaches (together with the manmade structures) are ideally suited to the trapping of sand and sediments. This characteristic helps to support the ongoing HTL policy with the natural tendency for sediment accumulation

to offset the impacts of sea level rise. This makes HTL management of the frontage more sustainable into the future.

Very significant assets are at risk from erosion and flooding under the NAI scenario within **St Ives Harbour** (see inset map, right). These include Wharf Road, Andrew's Street, the RNLI lifeboat station and in excess of 20 listed buildings. In addition are many more non-listed residential and commercial properties. As there is no scope for managed realignment (and MR would still require the employment of engineered defences), it is felt the high level objective to support the core values and viability of coastal communities is most cost-effectively met through a continuing hold the line policy along the existing defence line at St Ives Harbour. As at Porthmeor there are some properties which front directly onto the beach, forming part of the defensive line and the Land Use Planning System must consider these and particularly the employment of flood resilience techniques.



As discussed in the previous Porthgwithden to the Pier policy unit, the natural tendency around this frontage is for the trapping of sediment (assisted by the presence of Smeaton's Pier) and this characteristic helps to support the ongoing HTL policy by offsetting the impacts of sea level rise. This makes HTL management of the frontage more sustainable into the future although it must be acknowledged that HTL is likely to lead to some coastal squeeze effects, particularly in the medium to long term. This could potentially exacerbate current flood risks. Wave action and wave overtopping is the greatest source of risk along this frontage. Management approaches to hold the line will necessarily need to promote flood resilience along the frontline of properties facing the harbour. A very robust benefit / cost ratio of 13.27 indicates Flood Defence Grant in Aid might be applicable but the landscape impacts of raising and strengthening defences would be likely to have negative impacts on outcome measures. Resilience measures for properties, improved drainage to deal with overtopping green water and spray and improvements to the flood warning service (including assessments of risk to life) can all contribute to taking the preferred plan forward. An appraisal of the potential options at St Ives is therefore an important action to take forward (see Chapter 6 – Action Plan).

Some increasing pressures are likely to be experienced along the **Porthminster Beach** frontage in the future. Under the no active intervention scenario, erosion could reach 25m by 2105. Although there is slightly more room for absorption of sea level rise impacts at Porthminster than across the rest of the St Ives frontage, it may be necessary to at least maintain defensive structures where they currently exist to maintain a buffer between the beach and the higher ground which assists access to the beach and supports general recreational value of the area under the SMPs high level objectives. The St Ives – St Erth railway link terminates above Porthminster beach and is an important part of the local sustainable transport strategy. It is also

important historically as the last railway line to be built to Brunel's 'Broad Gauge'. Therefore a hold the line policy is preferred for Porthminster, to either managed realignment (not suitable due to topography) or no active intervention, which would compromise maintaining the railway in its current position.



The high level economic appraisal for Management Area 25 provides an extremely robust benefit cost ratio of 13.27 (refer to Economics Appraisal Summary Table below and Appendix H). This is based upon the high density of valuable assets at risk if coastal protection were not to be maintained. This ratio therefore provides a strong support for the economic sustainability of the preferred policies along this entire frontage.

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION PLAN:

Location reference:	Clodgy Point to Porthminster Point
Management Area reference:	MA25
Policy Development Zone:	PDZ10

PREFERRED POLICY TO IMPLEMENT PLAN:	
From present day (0-20 years)	NAI along undefended cliffs. HTL at Porthmeor. HTL from Porthgwidden to the Pier. HTL along ST Ives Harbour frontage, HTL at Porthminster beach.
Medium term (20-50 years)	NAI along undefended cliffs. HTL at Porthmeor. HTL from Porthgwidden to the Pier. HTL along ST Ives Harbour frontage, HTL at Porthminster beach.
Long term (50 -100 years)	NAI along undefended cliffs. HTL at Porthmeor. HTL from Porthgwidden to the Pier. HTL along ST Ives Harbour frontage, HTL at Porthminster beach.

SUMMARY OF SPECIFIC POLICIES

Policy Unit		SMP1 Policy	SMP2 Policy Plan			
		50 yrs	2025	2055	2105	Comment
25.1	Undefended cliffs	Do nothing	NAI	NAI	NAI	Low erosion rates along undefended cliff sections. NAI will meet high level objectives and satisfy AONB and Heritage Coast requirements.
25.2	Porthmeor	Hold the existing defence line	HTL	HTL	HTL	Economic justification for HTL should remain. Some increasing pressure along the frontage may occur in line with sea level rise and residential housing fronting directly onto the beach may be at risk beyond mid-century.
25.3	Porthgwidden to the Pier	Hold the existing defence line	HTL	HTL	HTL	Some risk of erosion up to 20m if defences are not maintained.
25.4	St Ives Harbour	Hold the existing defence line	HTL	HTL	HTL	Very significant assets at risk from erosion and flooding under the NAI scenario. Continuing HTL policy along the existing defence line at St Ives Harbour is preferred.
25.5	Porthminster beach	Hold the existing defence line	HTL	HTL	HTL	Some increasing pressures are likely to be experienced along the Porthminster frontage in the future. It may be necessary to improve defensive structures to maintain a buffer between the beach and the higher ground.

Key: HTL - Hold the Line, A - Advance the Line, NAI – No Active Intervention
MR – Managed Realignment

ENVIRONMENTAL ASSESSMENT

Strategic Environmental Assessment (SEA):

The management area between Clodgy Point and Porthminster Point will implement a long-term policy of NAI across the undefended cliffs and a policy of HTL. The policy of NAI will continue to allow for natural processes to interact with the interest features of designated sites and thus not impact upon their integrity including the Godrevy Head to St Agnes SSSI and Godreavy – Portreath heritage coast.

The HTL policy will ensure the continued protection of residential and commercial properties and

assets along frontages of Porthmeor, Porthgidden to the Pier, ST Ives Harbour frontage and Porthminster beach and the following key features: Porthmeor beach; St Ives, Porth Gwidden, Bamaluz Cove and Harbour beaches; St Ives Harbour; Lifeboat Station (St Ives); and Various Listed Buildings.

The HTL policy will however impact upon the integrity of designate sites, although to a lesser extent for this management area in comparison to MA 27 – MA 28.

Habitat Regulations Assessment (HRA)

HTL is proposed at Porthmeor, Porthgidden, St Ives Harbour and Porthminster beach. These policy locations are at least 7km from the nearest Natura 2000 Site and, therefore, no direct or indirect effects are expected.

IMPLICATION WITH RESPECT TO BUILT ENVIRONMENT

Economics Summary		by 2025	by 2055	by 2105	Total £k PV
Property	Potential NAI Damages (£k PV)	89.0	8025.7	3451.5	11566.2
	Preferred Plan Damages (£k PV)	0.0	0.0	0.0	0.0
	Benefits of preferred plan (£k PV)	89.0	8025.7	3451.5	11566.2
	Costs of Implementing plan (£k PV)	456	222	194	871
				Benefit/Cost ratio of preferred plan	13.27

Notes

Defence and high value assets provide the robust B/C ratio