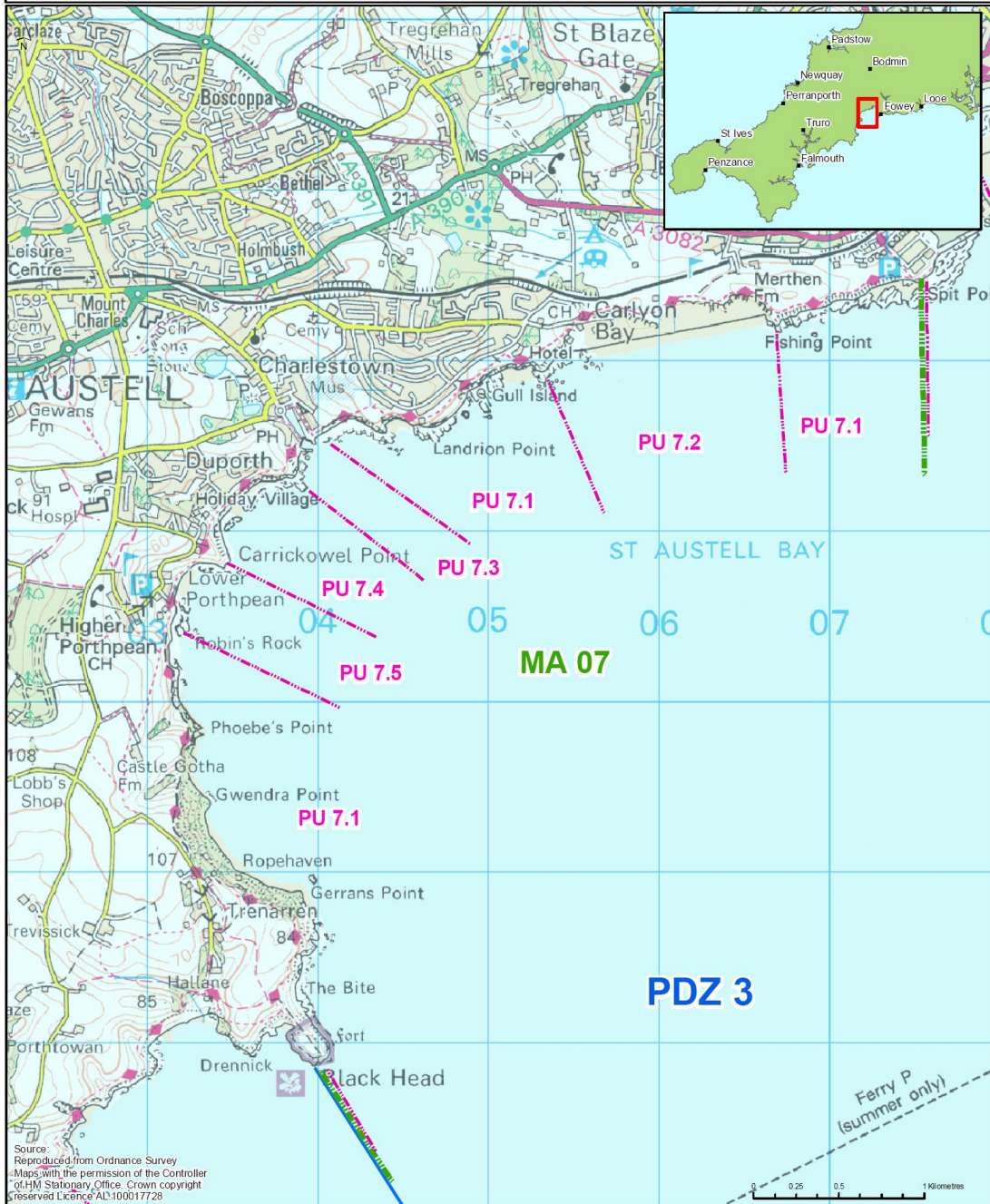


Location reference: Par Docks to Black Head
Management Area reference: MA07
Policy Development Zone: PDZ3

Policy Development Zone 3 - Gribbin Head to Black Head
 Management Area 7 - Par Docks to Black Head

Key
 Policy Development Zone
 Management Areas
 Policy Units



Cornwall & Isles of Scilly
Shoreline Management Plan Review





DISCUSSION AND DETAILED POLICY DEVELOPMENT

This Management Area provides examples of historic human landscapes, undefended, eroding cliff areas, sandy beaches and cliff top communities. It also contains an area of potential large-scale development directly in the active coastal zone (at Carlyon Bay). Several cliff top sections of the SW Coast Path are under threat and along all frontages the potential exists for coastal squeeze and narrowing of intertidal areas to occur under a scenario of rising sea levels.

The undefended sections of cliffs and coves between Par Docks (Spit Point) and Fishing Point and Morrish's Beach and Appletree Point should continue to evolve naturally and slowly under a no active intervention policy. The cliff line fronted by Morrish's Beach, Fanny's Beach, Gull Island, Landrion Point and Appletree Beach is predicted to recede by no more than five to six metres. The residential cliff top areas here are established some 30m back from the cliff edge, including the Grade II listed Gull Rock House, although Sea Road comes within some 15m of the predicted 2105 cliff top position. No active intervention is therefore considered appropriate. There should be limited impacts on the SW Coast Path.

The undefended section of cliff line from **Higher Porthpean** to **Black Head** may undergo some very limited erosion (2-3m) over 100 years. There are no assets at risk. Short sections of the SW Coast Path may be affected but it is unlikely that minor realignment of the path would be constrained, given the very rural nature of the cliff top along this section. Therefore to continue the SMP1 policy of do nothing with a no active intervention approach is appropriate and will meet the AONB objectives and is therefore preferred.

Lying to the west of Par Docks, the **Carlyon Bay** frontage principally comprises three areas with beaches – Polgaver, Shorthorn and Crinnis. All three areas are entirely man made, having been formed over the last 150 years or so from material (known as 'stent') from the inland china clay workings, which was carried to Carlyon Bay by the Sandy River since its diversion in about 1842. This 1.3 km frontage is relatively sheltered from the dominant westerly Atlantic swell and storm systems however it is still subject to high wave energy from the south and south-east periodically.

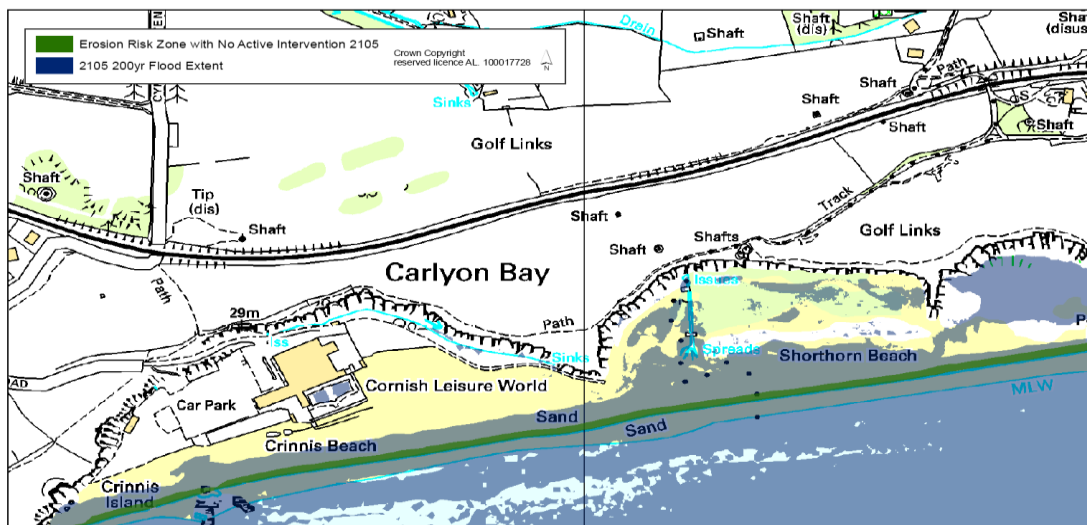
The mapping of erosion risks has indicated that there is unlikely to be significant horizontal movement of the high water position over the next 100 years (partly due to steepness of the current beach profile). Landward movement of MHW by up to 10m is possible due to sea level rise, but this tends to indicate that the shoreline position is relatively stable in the longer term. Flood mapping has however shown that areas of Polgaver, and to a lesser extent Shorthorn, are at risk during a 1:200 year tidal flooding event in 2105 (see inset map below).

An important consideration for the development of policy at Carlyon Bay is the extant planning



Temporary shoreline defences at Crinnis Beach (2010)

permission which exists on Crinnis and Shorthorn. This dictates that the area may be subject to significant development pressures, immediately above the mean high water position. A large part of the area above MHW is effectively already brownfield at Crinnis Beach, given that it is the site of the now closed and un-maintained Cornwall Coliseum (Cornish Leisure World) and has a history of leisure development. However the extant permission would have a significantly larger footprint than the existing development, particularly when considering development above the mean high water position at Shorthorn Beach.



It is noted that Cornwall Council is in discussion with the landowner over aspirations of a revised development proposal reducing the footprint from the extant consent. Temporary defence (steel piles and rock armour) of the development site has been constructed along some 600m of Crinnis Beach (see inset photo above). A suitable position for any permanent defensive line (which would need to be established to protect any development) would be critical to the long term overall sustainability of the foreshore. Ensuring that any structures are set far enough back from the predicted mean high water position in 2105 would be critical.

As the outcome of the final planning decision relating to the development proposals are unlikely to be known in time to inform the draft version of the SMP, at present it is difficult to either fully consider or discount the presence of development.

Whether a new development takes place or not the preferred plan and policy for Carlyon Bay is no active intervention across the three epochs. NAI represents an intention to implement a policy which will not adversely affect natural coastal processes. Because the beach form and present-day shoreline is seen as fairly sustainable under natural conditions, there would be no requirement or justification for implementing a managed realignment policy. Hold the line is also deemed unsuitable for the frontage (and would have no justification), as there are currently no assets at risk.

Given that it is anticipated that unlike the extant permission scheme, a condition of the planning permission for a revised scheme would be that the site owners and

managers remain responsible for any defences for the life of the development, the no active intervention policy therefore also reflects the position of the coast protection and flood defence authorities, in that they would not become default maintainers of the defences at Carlyon Bay in the future. Importantly this avoids any future risk or obligation to be placed on the public purse.

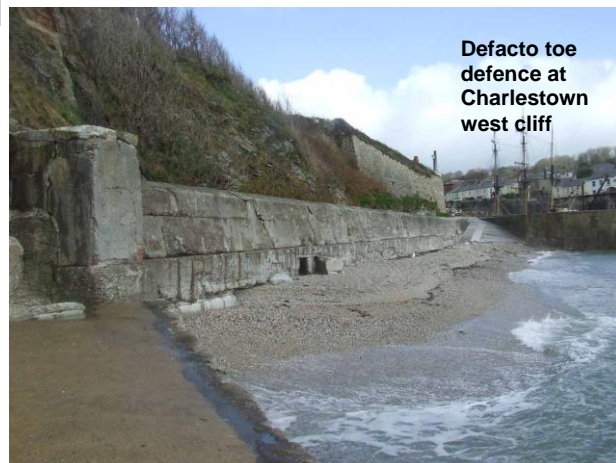
Charlestown is an important part of the network of coastal settlements in the St Austell area and has significant historical interest, with World Heritage Site status principally attached to its Grade II listed harbour and its historical connections to the mining industry and tall ships. Options which include an outer marina and/or offshore breakwater structures have been proposed at Charlestown and the SMP



should take this into account. It is unlikely that such an advance the line policy would meet landscape and nature conservation objectives however. The assessment of flood and erosion risks has indicated that there is no property or infrastructure at risk in Charlestown, within the SMP timescale, other than the harbour structures themselves. The harbour is known to suffer significant damage from storms and regularly requires emergency repairs. Under a policy of hold the line, regular maintenance of the harbour breakwaters and quay walls would sustain the current shoreline position.

There is likely to be some minor erosion of the west Charlestown cliff from the western breakwater around past Polmear Island and

on to Duporth, but this is unlikely to exceed 10m in any one place over 100 years. Some continued management of the masonry retaining wall and the concrete outfall housing (see inset photo below) which currently provides some protection to the toe of the west cliff is in very poor condition and is unlikely to be maintained, which could, potentially enhance current erosion rates (but not beyond the 10m shown under the no active intervention scenario).



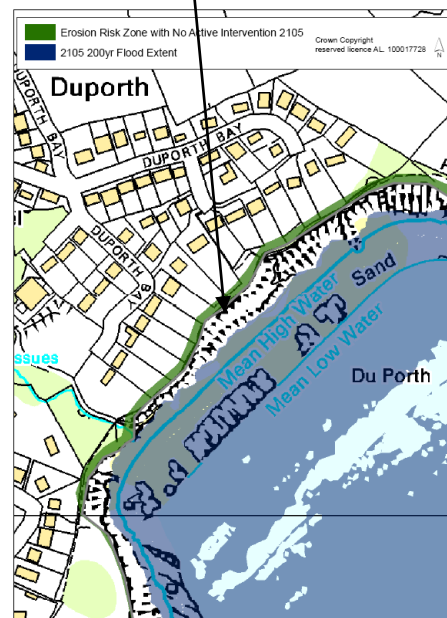
The eastern cliff is expected to erode more slowly than the west, but will continue to be an actively eroding coastal slope. There are no features at risk along the eastern cliff section. There is a very likely risk to the SW Coast Path along the western cliff, through similar cliff behaviour as seen at Duporth to the west, although the Charlestown frontage has a lesser exposure to the pre-dominant wave climate.

It is preferred to put in place a hold the line / managed realignment policy at Charlestown, which gives scope for either landward or seaward 'adjustment' of the currently defended line, dependent upon more detailed options appraisal, rather than a more restrictive single hold the line, or possibly inappropriate advance the line, policy. This could facilitate maintenance of the existing harbour structure and masonry wall, whilst managing the removal of outfall housing and investigating options for a potential offshore breakwater or submerged reef. It would also not prematurely close the door on other development proposals which represent an advancement of the line but would provide flood and erosion risk management benefits.

The current policy at **Duporth** is to do nothing and it is suggested that although there is some significant erosion of the cliff line (in the form of discrete slips and failures) that a policy of no active intervention be continued.



There are issues at Duporth relating to the recent loss of sections of the **South West Coast Path**. This has required re-routing of the path away from the coast through the adjacent urban settlement area of Duporth. This is clearly not an ideal situation but the property boundaries which run down as far as the cliff top for most of the length of Duporth Beach make re-routing of the path problematic and are subject by up to an estimated 10m of erosion by 2105 (see inset photo and map, right).



As previously mentioned, sections of the path at Charlestown may also be at risk (see inset photo, above left).

At **Porthpean** significant defences defend a small amount of infrastructure at the rear of the beach. Although erosion by 2105 may encroach upon some gardens and property boundaries, including the listed Porthpean House and Porthpean Sailing

club, there appears to be little justification for perpetuating the current defensive line. Much of the defence only protects the cliff toe. Directly to the north of the defences there is erosion and instability of the cliffs with periodic small slips occurring.



At the southern end of the beach, a high, vertical masonry wall retains the slipway (see inset photo, left) and general access to the beach. Although access of this nature (i.e. suitable for launching and recovering small sailing craft) will be a continued requirement, the position of the slipway may require realigning as part of a managed realignment strategy during epoch 2. Holding the line permanently in position will lead to both excessively increased cost of maintaining defences

plus the risk of beach narrowing and potential loss of the beach in the long term due to sea level rise.

At Porthpean therefore it is preferred to employ a period of realignment (of the slipway) and removal (of by then failing defences). This approach should allow the beach to respond more naturally to sea level rise and to introduce width into the intertidal area and sediment inputs from the presently defended cliffs. Employment of a no active intervention policy during 2055 – 2105 may necessitate the realignment of the SW coast path from its current route, however there are less constraints to doing this at Porthpean than at Duporth (PU 7.4) and it is anticipated that the path could retain a cliff top route.

For all sections of the coastline, it is anticipated that the South West Regional Coastal Monitoring Programme will continue to collect both directly and remotely sensed data for the beaches, cliffs, nearshore sea bed and hydrodynamic climate (waves and tides).

SUMMARY OF PREFERRED PLAN RECOMMENDATIONS AND JUSTIFICATION PLAN:

Location reference:	Par Docks to Black Head
Management Area reference:	MA07
Policy Development Zone:	PDZ3

PREFERRED POLICY TO IMPLEMENT PLAN:	
From present day (0-20 years)	NAI between Par Docks and Charlestown. HTL/MR to allow adjustment to current defence approach at Charlestown. NAI at Duporth. HTL at Porthpean.
Medium term (20-50 years)	NAI between Par Docks and Charlestown. HTL/MR to allow adjustment to current defence approach at Charlestown. NAI at Duporth. MR at Porthpean to move back from unsustainable position.
Long term (50 -100 years)	NAI between Par Docks and Charlestown. HTL/MR to allow adjustment to current defence approach at Charlestown. NAI at Duporth. NAI at Porthpean to maintain sustainability of realigned shoreline position.

SUMMARY OF SPECIFIC POLICIES

Policy Unit		Policy Plan			Comment
		2025	2055	2105	
7.1	Undefended cliffs	NAI	NAI	NAI	Continuation of existing policy from SMP1. Meets landscape objectives relating to the AONB and Heritage coast designations.
7.2	Carlyon Bay	NAI	NAI	NAI	Current shoreline position indicated as relatively stable over 100 years. NAI preferred as the policy which will have no adverse impacts on beach and foreshore. NAI also represents position of coast protection authorities and flood defence authorities.
7.3	Charlestown (harbour & west beach)	HTL/MR	HTL/MR	HTL/MR	Some realignment of defensive line seaward proposed. MR would accommodate consideration of solutions other than straightforward hold of existing defensive position.
7.4	Duporth	NAI	NAI	NAI	Some erosion of cliff line accepted, issues relate to SW Coast Path. No justification for cliff stabilization / intervention.
7.5	Porthpean	MR	MR	NAI	MR during epochs 1 / 2 to allow retreat from current defensive line and more sustainable shoreline position to become established. NAI is objective in longer term.
Key: HTL - Hold the Line, A - Advance the Line, NAI – No Active Intervention MR – Managed Realignment					

ENVIRONMENTAL ASSESSMENT

Strategic Environmental Assessment (SEA):

Between Par Docks to Black Head, the overall long-term policy plan of NAI will ensure geological interests are maintained through promoting natural processes essential for maintaining the condition of the various RIGS along this section of the coastline. The policy along with HTL/MR will also ensure the continued protection of residential and commercial properties and assets and the following key features: Carlyon Municipal Golf Course; Carlyon and Crinnis Beaches; Carlyon Bay Camping Park; Charlestown Beach; and Cornish Shipwreck Centre.

The policy of NAI along Carlyon Bay allows for the continued protection of infrastructure and development at this location in response to the requirement of developers to maintain defences in perpetuity and along with relatively stable position of the coastline at this location the policy of NAI will have minimal impact. However, the NAI policy along Duporth and Porthpean will impact upon such features including the South West Coastal Path and Duporth Chalet Park and thus monitoring should be undertaken.

Habitats Regulation Assessment

HTL policies are proposed at Par Docks, Charlestown, and Porthpean, with MR proposed at Polkerris, Charlestown, and Porthpean. These policy locations are an extensive distance (at least 6km) from all Sites 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)	0.0	0.0	0.0	0.0
	Preferred Plan Damages (£k PV)	0.0	0.0	0.0	0.0
	Benefits of preferred plan (£k PV)	0.0	0.0	0.0	0.0
	Costs of Implementing plan (£k PV)	895	443	402	1740
				Benefit/Cost ratio of preferred plan	N/A

Notes

Works would probably require private/ non government funding as assets unlikely to attract purely flood/coastal risk funding.

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