

APPENDIX C5 - PDZ5 ZONE POINT TO NARE POINT (FAL AND HELFORD) - EFFECT ON NATURA 2000 SITES (QUALIFYING FEATURES IN BLUE FONT)

Primary Qualifying feature	Supporting Habitat	Attribute	Conservation Objectives	Potential effect of policy	In-combination effect	Preventative measures	Mitigation measures	Implications for the integrity of the Site
<b>Fal &amp; Helford SAC</b>								
Sandbanks	NA	Habitat extent, species and physical characteristics	<p>To maintain the subtidal sandbanks in 'favourable condition', taking account of natural change, with particular reference to:</p> <ul style="list-style-type: none"> <li>Eelgrass bed communities;</li> <li>Maerl bed communities;</li> <li>Gravel and sand communities;</li> <li>Mixed sediment communities.</li> </ul>	<p>HTL at St Mawes would take place for the most outside the Site boundary, with the exception of the western section past Castle Point. The defence line outside the site would not directly or indirectly effect subtidal sandbanks, and the HTL past Castle Point is an area which is not expected to erode significantly, consequently limited if any work would be expected, and as there are no subtidal sandbank features present, no effect would arise.</p> <p>HTL in St Just-in-Roseland would occur outside the Site boundary and would result in highly localised hydrodynamic effects only evident during storm events, which would not extend into or affect the Site features, particularly subtidal sandbanks as these are not present close to the policy area.</p> <p>MR at Devoran in all Epochs occurs 3km from the Site boundary and no direct or indirect effects on designated subtidal sandbanks would occur.</p> <p>HTL and MR in Mylor Quay would occur outside or adjacent to the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated subtidal sandbanks.</p> <p>HTL in Epochs 1 and 2 for Flushing would occur outside or alongside the Site boundary where existing defences would be maintained. These defences result in highly localised hydrodynamic effects predominantly evident during storm events, as they are intended to prevent flooding. These localised hydrodynamic effects would not alter the physical characteristics of the Site features, particularly designated subtidal sandbanks which are some distance away. MR in Epoch 3 would extend away from the Site boundary, and would not affect subtidal sandbank features.</p> <p>HTL at Penryn would result in the maintenance or upgrade of flood defences at least 1km upstream of the Site boundary and no direct or indirect effects on designated subtidal sandbanks would occur.</p> <p>HTL for Falmouth would occur outside or alongside the Site boundary where existing defences would be maintained. These defences result in highly localised hydrodynamic effects predominantly evident during storm flood events, as they are intended to prevent flooding. These localised hydrodynamic effects would not alter the physical characteristics of the Site features, particularly designated subtidal sandbanks which are some distance away.</p> <p>HTL and MR for Tresillian occur a significant distance from the designated subtidal sandbank features and as such no direct or indirect effects would arise.</p> <p>HTL and MR for Truro (Boscawen Park, Town Quay, Tidal Barrier, Lighterage Quay, and Calenick Quay) occur a significant distance from the designated subtidal sandbank features, and consequently no direct or indirect effects would arise.</p> <p>HTL at Castle Beach (Falmouth) and Gyllyngvase would occur (30m to 80m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated subtidal sandbanks.</p> <p>HTL in Epoch 1 at Swanpool would occur (30m to 130m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated subtidal sandbanks. MR in Epochs 2 and 3 would similarly retreat landward away from the</p>	<p>Coastal squeeze will also take place through the 3 Epochs as a result of sea level rise and the constraint of hard or high ground on the boundary of the Site. The quantity of loss of subtidal sandbank habitats is not known, and no specific modelling has yet been carried out that identifies the loss within the Fal and Helford Estuaries. However, no adverse effect or synergy effects on the subtidal sandbanks have been identified from the HTL and MR policies within this PDZ.</p>	None identified	None identified	<b>Conclude no adverse effect on integrity</b>

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Sandbanks	NA	Habitat extent, species and physical characteristics	<p>To maintain the subtidal sandbanks in 'favourable condition', taking account of natural change, with particular reference to:</p> <ul style="list-style-type: none"> <li>• Eelgrass bed communities;</li> <li>• Maerl bed communities;</li> <li>• Gravel and sand communities;</li> <li>• Mixed sediment communities.</li> </ul>	<p>Site and also result in no direct or indirect effects on subtidal sandbank features.</p> <p>HTL in Epoch 1 at Maenporth would occur (110m to 210m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated subtidal sandbanks. MR in Epochs 2 and 3 would similarly retreat landward away from the Site and also result in no direct or indirect effects on subtidal sandbank features.</p> <p>HTL for Gweek Quays would occur outside or alongside the Site boundary where existing defences would be maintained. These defences result in highly localised hydrodynamic effects predominantly evident during storm flood events, as they are intended to prevent flooding. These localised hydrodynamic effects would not alter the physical characteristics of the Site features, particularly designated subtidal sandbanks which are a significant distance away.</p>				

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Mudflats and sandflats	NA	Habitat extent and physical characteristics	<p>To maintain the intertidal sand and mudflats in 'favourable condition', taking account of natural change, with particular reference to:</p> <ul style="list-style-type: none"> <li>• Intertidal sand and gravel communities;</li> <li>• Intertidal muddy sand communities;</li> <li>• Intertidal mud communities;</li> <li>• Intertidal mixed muddy sediment communities.</li> </ul>	<p>HTL at St Mawes would take place for the most outside the Site boundary, with the exception of the western section past Castle Point. The defence line outside the site would not directly or indirectly effect designated intertidal sand and mudflats, and the HTL past Castle Point is an area which is not expected to erode significantly, consequently limited if any work would be expected. Existing sand beaches would remain though they are not designated.</p> <p>HTL in St Just-in-Roseland would occur outside the Site boundary and would result in highly localised hydrodynamic effects only evident during storm events, which would not extend into or affect the Site features, particularly the intertidal sand and gravel communities that are not present close the policy area.</p> <p>MR at Devoran in all Epochs occurs 3km from the Site boundary and no direct or indirect effects on designated mudflats or sandflats would occur.</p> <p>HTL and MR in Mylor Quay would occur outside or adjacent to the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly those of designated mudflat and sandflat features.</p> <p>HTL in Epoch 1 for Flushing would occur outside or alongside the Site boundary where existing defences would be maintained. These defences result in highly localised hydrodynamic effects predominantly evident during storm events, as they are intended to prevent flooding. These localised hydrodynamic effects would not alter the physical characteristics of the Site features, particularly designated mudflats and sandflats which are some distance away. MR in Epochs 2 and 3 would extend away from the Site boundary, and would not affect mudflat and sandflat features.</p> <p>HTL at Penryn in epoch 1 would result in the maintenance or upgrade of flood defences at least 1km upstream of the Site boundary and no direct or indirect effects on designated mudflats and sandflats would occur, future provision of space for migration would occur during MR in epochs 2 and 3.</p> <p>HTL for Falmouth would occur outside or alongside the Site boundary where existing defences would be maintained. These defences result in highly localised hydrodynamic effects predominantly evident during storm flood events, as they are intended to prevent flooding. These localised hydrodynamic effects would not alter the physical characteristics of the Site features, particularly designated mudflats and sandflats which are some distance away.</p> <p>HTL for Tresillian in Epoch 1, and MR in Epochs 2 and 3 is not expected to result in constraint to the intertidal mudflat and sandflat features within this upper estuary area. Constraint would have occurred in Epochs 2 and 3 if HTL was retained which could have resulted in the loss of up to <b>1.7ha</b> of intertidal habitat (see <b>Figure C5.1</b>), however policy selection of MR was selected to ensure that no constraint to the intertidal habitats. The policy allows for the expansion of intertidal mudflat as a response to sea level rise, where future accretion may not keep pace. The policy of MR on the right bank adjacent to this mudflat allows for up to <b>2.45ha</b> of area for intertidal habitat to develop in the Epochs 2 and 3, which exceeds the potential loss if HTL policy had been kept.</p> <p>HTL/MR is proposed for the Truro – Upper Basin policy unit. HTL is proposed at Lighterage Quay and within the Tidal Basin, whilst MR is proposed at Garras Wharf, Boscawen Park, and south of Lighterage Quay near the mouth of Calenicj Crrek. The policy of MR at Garras Wharf (<b>2.5ha</b>), Boscawen Park (<b>4.8ha</b>), and to the south of Lighterage Quay could result in the creation of <b>7.3ha</b> or more of intertidal habitat. Detailed examination of Lidar data and site visit to Lighterage</p>	<p>No coastal squeeze maytake place as a result of sea level rise and HTL or MR policies on the boundary of the Site. Although coastal squeeze may arise as a result of natural topographic constraintpotential , given the MR intopolicies in the upper and lower Fal, these provide additional intertidal habitat and as such there would be no overall loss (and potentially an increase), as a result of SMP policies.</p>	<p>No specific preventative measures are required.</p>	<p>No mitigation measures are required, though potentially and with further detailed analysis, operation of the Tidal Barrier could be undertaken in a way that enhances the intertidal mudflats within the Tidal Basin.</p>	<p><b>Conclude no adverse effect on integrity</b></p>

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Mudflats and sandflats	NA	Habitat extent and physical characteristics	<p>To maintain the intertidal sand and mudflats in 'favourable condition', taking account of natural change, with particular reference to:</p> <ul style="list-style-type: none"> <li>• Intertidal sand and gravel communities;</li> <li>• Intertidal muddy sand communities;</li> <li>• Intertidal mud communities;</li> <li>• Intertidal mixed muddy sediment communities.</li> </ul>	<p>Quay and Boscawen Park with Natural England and Environment Agency representatives identified that due to the bathymetry of the low water channel and the mudflat, sea level rise would not be expected to reduce the area of intertidal habitat nor the amount of time the intertidal habitat is exposed. However, this does not take into account of accretion of intertidal habitat in this area (and within the Tidal Basin). However, the MR proposal at Boscawen would further provide both additional habitat and relief from any potential constraint. Within the Truro Tidal Basin (covering Newham and Town Quay) the same elevation of the intertidal habitats occurs as at Lighterage Quay and Boscawen Park, in that the predicted increase in sea level rise would not result in a decrease in the area of intertidal habitat, furthermore given the elevation of the mudflat, no expected reduction in the duration of exposure of intertidal habitat would occur. In addition, the management of the Tidal Barrier provides a controlling function for sediments within the Tidal Basin, and based on examination of historic bathymetry with recent bathymetry (courtesy of the Truro Harbourmaster) the basin is known to be an accreting system, and is therefore expected to accrete in line with sea level rise if topography of the intertidal habitat needs to maintain an equilibrium. Overall therefore, for the Truro – Upper Basin,, there would be no change to the area of intertidal mudflat, and no noticeable alteration to the mudflat characteristics, based on current information available, and therefore the favourable condition of this element of the mudflats and sandflats conservation objectives would be maintained, and it can be concluded that there will be no adverse effect on integrity of the Site</p> <p>In Calenick Creek, the MR policy is only intended along the existing culvert within the creek, whereas the intent is for NAI along the vast majority of the creek. Overall, the policies would enable the intertidal mudflat habitat to migrate up to the natural topographic extent, and therefore no loss of intertidal mudflat resulting from policy would arise, and the favourable condition of this element of the mudflats and sandflats conservation objectives would be maintained. Furthermore, the intent of MR would not constrain the development of intertidal habitat (through accretion) around the location of the culvert (which is for fluvial water).</p> <p>HTL at Castle Beach (Falmouth) and Gyllyngvase would occur (30m to 80m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated mudflats and sandflats.</p> <p>HTL in Epoch 1 at Swanpool would occur (30m to 130m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated mudflats and sandflats. MR in Epochs 2 and 3 would similarly retreat landward away from the Site and also result in no direct or indirect effects on designated mudflats and sandflats.</p> <p>HTL in Epoch 1 at Maenporth would occur (110m to 210m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated mudflats and sandflats. MR in Epochs 2 and 3 would similarly retreat landward away from the Site and also result in no direct or indirect effects on designated mudflats and sandflats.</p> <p>MR is proposed for Gweek with HTL at Gweek Quays. HTL at the quay could result in constraints to the expansion of intertidal mudflat as a response to sea</p>				

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Mudflats and sandflats	NA	Habitat extent and physical characteristics	<p>To maintain the intertidal sand and mudflats in 'favourable condition', taking account of natural change, with particular reference to:</p> <ul style="list-style-type: none"> <li>• Intertidal sand and gravel communities;</li> <li>• Intertidal muddy sand communities;</li> <li>• Intertidal mud communities;</li> <li>• Intertidal mixed muddy sediment communities.</li> </ul>	<p>level rise and resulting coastal squeeze. The amount of intertidal mudflat that would be lost in this stretch of the estuary is not currently known due to a number of factors, not least the estuary wide response to sea level rise in the form of intertidal habitat accretion rates. As HTL only occurs along the existing quay which is outside the Site, erosion of <b>0.05ha</b> (see <b>Figure C5.3</b>) of land would occur immediately downstream of the quay, which would not be constrained by the quay or the policy. There is also a potential for reduced exposure of intertidal mudflat as a result of sea level rise, however, in the area of HTL, natural topography would provide the same constraint as the existing quay edge, such that no noticeable loss of migration space would occur to the naturally constrained intertidal mudflats that is affected by coastal squeeze, furthermore, intertidal mudflat migration will also be able to occur outside the Site within the estuary. Consequently, the policy along the quay results in the same effect as that with natural change, and does not prevent intertidal expansion elsewhere within the estuary or adjacent to the Site, therefore no decline in favourable condition of this element of the mudflats and sandflats conservation objectives would arise, and no adverse effect on integrity of the Site is expected.</p>				

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Large shallow inlets and bays	NA	Habitat extent, distribution, salinity and water quality	<p>To maintain the large shallow inlet and bay in 'favourable condition', taking account of natural change, with particular reference to:</p> <ul style="list-style-type: none"> <li>Rocky shore communities;</li> <li>Subtidal rock and boulder communities;</li> <li>Subtidal sandbank communities;</li> <li>Kelp forest communities;</li> <li>Intertidal mudflats;</li> <li>Saltmarsh.</li> </ul>	<p>HTL at St Mawes would take place for the most outside the Site boundary, with the exception of the western section past Castle Point. The defence line outside the site would not directly or indirectly effect rocky shore communities, and the HTL past Castle Point is an area which is not expected to erode significantly, consequently limited if any work would be expected, with little or no disturbance to the rocky shore communities expected.</p> <p>HTL in St Just-in-Roseland would occur outside the Site boundary and would result in highly localised hydrodynamic effects only evident during storm events, which would not extend into or affect the Site features, particularly the rocky shore communities which are at least 200m away.</p> <p>MR at Devoran in all Epochs occurs 3km from the Site boundary and no direct or indirect effects on designated shallow inlet and bay features would occur.</p> <p>HTL and MR in Mylor Quay would occur outside or adjacent to the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly those of designated shallow inlet and bay features.</p> <p>HTL in Epoch 1 for Flushing would occur outside or alongside the Site boundary where existing defences would be maintained. These defences result in highly localised hydrodynamic effects predominantly evident during storm events, as they are intended to prevent flooding. These localised hydrodynamic effects would not alter the physical characteristics of the Site features, particularly designated rocky shore communities and may even provide substrate for the colonisation of rocky shore communities. MR in Epochs 2 and 3 would extend away from the Site boundary, and would not affect shallow inlet and bay features.</p> <p>HTL at Penryn in epoch 1 would result in the maintenance or upgrade of flood defences at least 1km upstream of the Site boundary and no direct or indirect effects on designated shallow inlets and bays would occur. MR in the later epochs would provide additional intertidal mudflats and saltmarsh habitat.</p> <p>HTL for Falmouth would occur outside or alongside the Site boundary where existing defences would be maintained. These defences result in highly localised hydrodynamic effects predominantly evident during storm flood events, as they are intended to prevent flooding. These localised hydrodynamic effects would not alter the physical characteristics of the Site features, particularly designated rocky shore communities and may even provide substrate for the colonisation of rocky shore communities.</p> <p>HTL for Tresillian in Epoch 1, and MR in Epochs 2 and 3 is not expected to result in constraint to the shallow inlet and bay features within this upper estuary area. Constraint would have occurred in Epochs 2 and 3 if HTL was retained which could have resulted in the loss of up to <b>1.7ha</b> of intertidal and saltmarsh habitat (see <b>Figure C5.1</b>), however policy selection of MR was selected to ensure that no constraint to the intertidal habitats. The policy allows for the expansion of shallow inlet and bay features as a response to sea level rise, where future accretion may not keep pace. The policy of MR on the right allows for up to <b>2.45ha</b> of area for intertidal habitat (and hence shallow inlet and bay feature) to develop in the Epochs 2 and 3, which exceeds the potential loss if HTL policy had been kept, and would ensure the favourable condition of this element of the shallow inlet and bay conservation objectives.</p> <p>HTL/MR is proposed for the Truro – Upper Basin policy unit. HTL is proposed at Lighterage Quay and within the Tidal Basin, whilst MR is proposed at Garras Wharf, Boscawen Park, and south of Lighterage Quay near the mouth of Calenicj</p>	<p>No coastal squeeze maytake place as a result of sea level rise and HTL or MR policies on the boundary of the Site. Although coastal squeeze may arise as a result of natural topographic constraintpotential , given the MR thus preventing any significant effect intopolicies in the upper and lower Fal, these provide additional intertidal habitat and as such there would be no overall loss (and potentially an increase), as a result of SMP policies.</p>	<p>No specific preventative measures are required.</p>	<p>No mitigation measures are required, though potentially and with further detailed analysis, operation of the Tidal Barrier could be undertaken in a way that enhances the intertidal mudflats within the Tidal Basin.</p>	<p><b>Conclude no adverse effect on integrity</b></p>

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Large shallow inlets and bays	NA	Habitat extent, distribution, salinity and water quality	<p>To maintain the large shallow inlet and bay in 'favourable condition', taking account of natural change, with particular reference to:</p> <ul style="list-style-type: none"> <li>• Rocky shore communities;</li> <li>• Subtidal rock and boulder communities;</li> <li>• Subtidal sandbank communities;</li> <li>• Kelp forest communities;</li> <li>• Intertidal mudflats;</li> <li>• Saltmarsh.</li> </ul>	<p>Crrek. The policy of MR at Garras Wharf (2.5ha), Boscawen Park (4.8ha), and to the south of Lighterage Quay could result in the creation of 7.3ha or more of intertidal mudflat (a conservation objective of the shallow inlets and bays qualifying feature for the Site). Detailed examination of Lidar data and site visit to Lighterage Quay and Boscawen Park with Natural England and Environment Agency representatives identified that due to the bathymetry of the low water channel and the mudflat, sea level rise would not be expected to reduce the area of intertidal mudflat nor the amount of time the intertidal mudflat is exposed. However, this does not take into account of accretion of intertidal mudflat in this area (and within the Tidal Basin). However, the MR proposal at Boscawen would further provide both additional habitat and relief from any potential constraint. Within the Truro Tidal Basin (covering Newham and Town Quay) the same elevation of the intertidal mudflat occurs as at Lighterage Quay and Boscawen Park, in that the predicted increase in sea level rise would not result in a decrease in the area of intertidal mudflat, furthermore given the elevation of the mudflat, no expected reduction in the duration of exposure of intertidal mudflat would occur. In addition, the management of the Tidal Barrier provides a controlling function for sediments within the Tidal Basin, and based on examination of historic bathymetry with recent bathymetry (courtesy of the Truro Harbourmaster) the basin is known to be an accreting system, and is therefore expected to accrete in line with sea level rise if topography of the intertidal mudflat needs to maintain an equilibrium. Overall therefore, for the Truro – Upper Basin,, there would be no change to the area of intertidal mudflat, and no noticeable alteration to the mudflat characteristics, based on current information available, and therefore the favourable condition of this element of shallow inlets and bays conservation objectives would be maintained, and it can be concluded that there will be no adverse effect on integrity of the Site</p> <p>In Calenick Creek, the MR policy is only intended along the existing culvert within the creek, whereas the intent is for NAI along the vast majority of the creek. Overall, policies enable the intertidal mudflat habitat (an objective of the shallow inlets and bays features) to migrate up to the natural topographic extent, and therefore no loss of intertidal mudflat resulting from policy would arise, and the favourable condition of this element of the shallow inlets and bays conservation objectives would be maintained. Furthermore, the intent of MR would not constrain the development of intertidal habitat (through accretion) around the location of the culvert (which is for fluvial water).</p> <p>HTL at Castle Beach (Falmouth) and Gyllyngvase would occur (30m to 80m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated rocky shore habitats in the shallow inlet and bay primary qualifying features.</p> <p>HTL in Epoch 1 at Swanpool would occur (30m to 130m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated rocky shore habitats in the shallow inlet and bay primary qualifying features. MR in Epochs 2 and 3 would similarly retreat landward away from the Site and also result in no direct or indirect effects on designated rocky shore communities.</p> <p>HTL in Epoch 1 at Maenporth would occur (110m to 210m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated rocky shore habitats in the shallow inlet and bay primary qualifying features. MR in Epochs 2 and 3 would similarly retreat landward away from the Site and also result in no</p>				

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Large shallow inlets and bays	NA	Habitat extent, distribution, salinity and water quality	<p>To maintain the large shallow inlet and bay in 'favourable condition', taking account of natural change, with particular reference to:</p> <ul style="list-style-type: none"> <li>Rocky shore communities;</li> <li>Subtidal rock and boulder communities;</li> <li>Subtidal sandbank communities;</li> <li>Kelp forest communities;</li> <li>Intertidal mudflats;</li> <li>Saltmarsh.</li> </ul>	<p>direct or indirect effects on designated rocky shore communities.</p> <p>MR is proposed for Gweek with HTL at Gweek Quays. HTL at the quay could result in constraints to the expansion of intertidal mudflat as a response to sea level rise and resulting coastal squeeze. The amount of intertidal mudflat that would be lost in this stretch of the estuary is not currently known due to a number of factors, not least the estuary wide response to sea level rise in the form of intertidal habitat accretion rates. As HTL only occurs along the existing quay which is outside the Site, erosion of <b>0.05ha</b> (see <b>Figure C5.3</b>) of land would occur immediately downstream of the quay, which would not be constrained by the quay or the policy. There is also a potential for reduced exposure of intertidal mudflat as a result of sea level rise, however, in the area of HTL, natural topography would provide the same constraint as the existing quay edge, such that no noticeable loss of migration space would occur to the naturally constrained intertidal mudflats that is affected by coastal squeeze, furthermore, intertidal mudflat migration will also be able to occur outside the Site within the estuary. Consequently, the policy along the quay results in the same effect as that with natural change, and does not prevent intertidal mudflat expansion elsewhere within the estuary or adjacent to the Site, therefore no decline in favourable condition of this element of the shallow inlet and bay conservation objectives would arise, and no adverse effect on integrity of the Site is expected.</p>				



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Primary Qualifying feature	Supporting Habitat	Attribute	Conservation Objectives	Potential effect of policy	In-combination effect	Preventative measures	Mitigation measures	Implications for the integrity of the Site
Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritima</i> )	NA	Habitat extent, species and physical characteristics	To maintain the saltmarsh (Atlantic salt meadow) in 'favourable condition', taking account of natural change, with particular reference to: <ul style="list-style-type: none"> <li>Low and low-mid marsh communities;</li> <li>Mid and mid-upper marsh communities.</li> </ul>	<p>HTL at St Mawes would take place for the most outside the Site boundary, with the exception of the western section past Castle Point. The defence line outside the site would not directly or indirectly effect saltmarsh habitat, and the HTL past Castle Point is an area which is not expected to erode significantly, consequently limited if any work would be expected, and as there is no saltmarsh habitat present, no effect would arise.</p> <p>HTL in St Just-in-Roseland would occur outside the Site boundary and would result in highly localised hydrodynamic effects only evident during storm events, which would not extend into or affect the Site features, particularly saltmarsh habitat which is not present near the policy area.</p> <p>MR at Devoran in all Epochs occurs 3km from the Site boundary and no direct or indirect effects on designated saltmarsh habitat would occur.</p> <p>HTL and MR in Mylor Quay would occur outside or adjacent to the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly those of designated saltmarsh features which are located some distance from the policy location.</p> <p>HTL in Epoch 1 for Flushing would occur outside or alongside the Site boundary where existing defences would be maintained. These defences result in highly localised hydrodynamic effects predominantly evident during storm events, as they are intended to prevent flooding. These localised hydrodynamic effects would not alter the physical characteristics of the Site features, particularly designated saltmarsh habitat which is some distance away. MR in Epochs 2 and 3 would extend away from the Site boundary, and would not affect saltmarsh features, but would provide additional potential habitat.</p> <p>HTL at Penryn in epoch 1 would result in the maintenance or upgrade of flood defences at least 1km upstream of the Site boundary and no direct or indirect effects on designated saltmarsh habitats would occur. MR in epochs 2 and 3 would provide additional habitat for saltmarsh development.</p> <p>HTL for Falmouth would occur outside or alongside the Site boundary where existing defences would be maintained. These defences result in highly localised hydrodynamic effects predominantly evident during storm flood events, as they are intended to prevent flooding. These localised hydrodynamic effects would not alter the physical characteristics of the Site features, particularly designated saltmarsh habitats which are some distance away.</p> <p>HTL for Tresillian in Epoch 1, and MR in Epochs 2 and 3 is not expected to result in constraint to the Atlantic salt meadows features within this upper estuary area. However, from aerial photograph examination, the saltmarsh habitats in this stretch of river lie outside the designated Site boundary, and as such the extent of habitat within the Site will not change. The policy allows for the expansion of intertidal habitat as a response to sea level rise, where future accretion may not keep pace, and this may create additional habitat suitable for Atlantic salt meadows outside the SAC boundary. Overall, the favourable condition of this element of the Atlantic salt meadows conservation objectives would not be affected.</p> <p>HTL/MR for Truro- Upper Basin (covering Boscawen Park, Lighterage Quay, Newham, and Town Quay and the Tidal Barrier) for all Epochs were developed to avoid constraint to the development of the intertidal habitats within the unit, working within the form, topography/bathymetry and geomorphological development of the unit. However, there is no saltmarsh within the unit, and the nearest is located in excess of 500m outside the unit (south of Lighterage Quay).</p>	No coastal squeeze may take place as a result of sea level rise and HTL or MR policies on the boundary of the Site. Although coastal squeeze may arise as a result of natural topographic constraint potential, given the MR policies in the upper and lower Fal, these provide additional saltmarsh habitat and as such there would be no overall loss (and potentially an increase), as a result of SMP policies.	No specific preventative measures are required.	No mitigation measures are required, though potentially and with further detailed analysis, operation of the Tidal Barrier could be undertaken in a way that enhances the saltmarsh habitat within the Tidal Basin.	Conclude no adverse effect on integrity

APPENDIX C5 - PDZ5 ZONE POINT TO NARE POINT (FAL AND HELFORD) - EFFECT ON NATURA 2000 SITES (QUALIFYING FEATURES IN BLUE FONT)

Primary Qualifying feature	Supporting Habitat	Attribute	Conservation Objectives	Potential effect of policy	In-combination effect	Preventative measures	Mitigation measures	Implications for the integrity of the Site
Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> )	NA	Habitat extent, species and physical characteristics	<p>To maintain the saltmarsh (Atlantic salt meadow) in 'favourable condition', taking account of natural change, with particular reference to:</p> <ul style="list-style-type: none"> <li>• Low and low-mid marsh communities;</li> <li>• Mid and mid-upper marsh communities.</li> </ul>	<p>Coupled with the limited changes to bathymetry as a result of sea level rise given the responsiveness of the Tidal Basin and the accretion within it, and the lack of saltmarsh habitat, no direct or indirect effects would arise and no change to the conservation objectives.</p> <p>In Calenick Creek, the MR policy is only intended along the existing culvert within the creek, whereas the intent is for NAI along the vast majority of the creek. Overall, the policies would enable the saltmarsh habitat to migrate up to the natural topographic extent, and therefore no loss of saltmarsh as a result of constraint due to SMP policy would arise, and the favourable condition of saltmarsh the saltmarsh conservation objectives would be maintained. Furthermore, the intent of MR would not constrain the development of saltmarsh habitat (through accretion or natural movement) around the location of the culvert (which is for fluvial water).</p> <p>HTL at Castle Beach (Falmouth) and Gyllyngvase would occur (30m to 80m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated saltmarsh habitats which are over 5km away.</p> <p>HTL in Epoch 1 at Swanpool would occur (30m to 130m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly saltmarsh habitats which are over 5km away. MR in Epochs 2 and 3 would similarly retreat landward away from the Site and also result in no direct or indirect effects on designated saltmarsh habitats.</p> <p>HTL in Epoch 1 at Maenporth would occur (110m to 210m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly saltmarsh habitats which are over 5.5km away. MR in Epochs 2 and 3 would similarly retreat landward away from the Site and also result in no direct or indirect effects on designated saltmarsh habitats.</p> <p>HTL for Gweek Quays would occur outside or alongside the Site boundary where existing defences would be maintained. These defences result in highly localised hydrodynamic effects predominantly evident during storm flood events, as they are intended to prevent flooding. These localised hydrodynamic effects would not alter the physical characteristics of the Site features, particularly designated saltmarsh habitat which is a significant distance away from the policy location.</p>				

APPENDIX C5 - PDZ5 ZONE POINT TO NARE POINT (FAL AND HELFORD) - EFFECT ON NATURA 2000 SITES (QUALIFYING FEATURES IN BLUE FONT)

Primary Qualifying feature	Supporting Habitat	Attribute	Conservation Objectives	Potential effect of policy	In-combination effect	Preventative measures	Mitigation measures	Implications for the integrity of the Site
Estuaries	NA	Habitat extent, distribution, salinity and water quality	<p>To maintain the estuaries in 'favourable condition', taking account of natural change, with particular reference to:</p> <ul style="list-style-type: none"> <li>• Intertidal mud communities;</li> <li>• Subtidal mud communities;</li> <li>• Intertidal mixed muddy sediment communities;</li> <li>• Subtidal mixed muddy sediment communities;</li> <li>• Estuarine bedrock, boulder and cobble communities;</li> <li>• Subtidal sandbank communities;</li> <li>• Saltmarsh communities;</li> <li>• Reedbed communities.</li> </ul>	<p>HTL at St Mawes would take place for the most outside the Site boundary, with the exception of the western section past Castle Point. The defence line outside the site would not directly or indirectly effect estuarine habitats, and the HTL past Castle Point is an area which is not expected to erode significantly, consequently limited if any work would be expected, and as there are no estuarine (being rocky shore) communities and features present, no effect would arise.</p> <p>HTL in St Just-in-Roseland would occur outside the Site boundary and would result in highly localised hydrodynamic effects only evident during storm events, which would not extend into or affect the Site features, particularly the subtidal estuarine communities which are located at least 30m away.</p> <p>MR at Devoran in all Epochs occurs 3km from the Site boundary and no direct or indirect effects on designated estuary features would occur.</p> <p>HTL and MR in Mylor Quay would occur outside or adjacent to the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly those of designated estuary features.</p> <p>HTL in Epoch 1 for Flushing would occur outside or alongside the Site boundary where existing defences would be maintained. These defences result in highly localised hydrodynamic effects predominantly evident during storm events, as they are intended to prevent flooding. These localised hydrodynamic effects would not alter the physical characteristics of the Site features, particularly designated subtidal communities, though the HTL policies would prevent these communities colonising new areas as a result of sea level rise, though it would not affect the existing communities within the Site. MR in Epochs 2 and 3 would extend away from the Site boundary, and would provide new areas of colonisation by subtidal estuary communities.</p> <p>HTL at Penryn in epoch 1 would result in the maintenance or upgrade of flood defences at least 1km upstream of the Site boundary and no direct or indirect effects on designated estuary features would occur. MR in Epochs 2 and 3 would extend away from the Site boundary, and would provide new areas of colonisation by subtidal estuary communities.</p> <p>HTL for Falmouth would occur outside or alongside the Site boundary where existing defences would be maintained. These defences result in highly localised hydrodynamic effects predominantly evident during storm flood events, as they are intended to prevent flooding. These localised hydrodynamic effects would not alter the physical characteristics of the Site features, particularly designated subtidal communities, though the HTL policies would prevent these communities colonising new areas as a result of sea level rise, though it would not affect the existing communities within the Site.</p> <p>HTL for Tresillian in Epoch 1, and MR in Epochs 2 and 3 is not expected to result in constraint to the estuary features (intertidal communities and saltmarsh communities) within this upper estuary area. Constraint would have occurred in Epochs 2 and 3 if HTL was retained which could have resulted in the loss of up to <b>1.7ha</b> of intertidal and saltmarsh communities (see <b>Figure C5.1</b>), however policy selection of MR was selected to ensure that no constraint to the intertidal habitats. The policy allows for the expansion of estuary features as a response to sea level rise, where future accretion may not keep pace. The policy of MR on the right allows for up to <b>2.45ha</b> of area for intertidal habitat (and hence the estuary feature) to develop in the Epochs 2 and 3, which exceeds the potential loss if HTL policy had been kept, and would ensure the favourable condition of this element of the</p>	<p>No coastal squeeze maytake place as a result of sea level rise and HTL or MR policies on the boundary of the Site. Although coastal squeeze may arise as a result of natural topographic constraintpotential , given the MR policies in the upper and lower Fal, these provide additional intertidal estuarine intohabitat and as such there would be no overall loss (and potentially an increase), as a result of SMP policies.</p>	<p>No specific preventative measures are required.</p>	<p>No mitigation measures are required, though potentially and with further detailed analysis, operation of the Tidal Barrier could be undertaken in a way that enhances the intertidal estuarine habitats within the Tidal Basin.</p>	<p>Conclude no adverse effect on integrity</p>

APPENDIX C5 - PDZ5 ZONE POINT TO NARE POINT (FAL AND HELFORD) - EFFECT ON NATURA 2000 SITES (QUALIFYING FEATURES IN BLUE FONT)

Primary Qualifying feature	Supporting Habitat	Attribute	Conservation Objectives	Potential effect of policy	In-combination effect	Preventative measures	Mitigation measures	Implications for the integrity of the Site
Estuaries	NA	Habitat extent, distribution, salinity and water quality	<p>To maintain the estuaries in 'favourable condition', taking account of natural change, with particular reference to:</p> <ul style="list-style-type: none"> <li>• Intertidal mud communities;</li> <li>• Subtidal mud communities;</li> <li>• Intertidal mixed muddy sediment communities;</li> <li>• Subtidal mixed muddy sediment communities;</li> <li>• Estuarine bedrock, boulder and cobble communities;</li> <li>• Subtidal sandbank communities;</li> <li>• Saltmarsh communities;</li> <li>• Reedbed communities.</li> </ul>	<p>estuaries conservation objectives.</p> <p>HTL/MR is proposed for the Truro – Upper Basin policy unit. HTL is proposed at Lighterage Quay and within the Tidal Basin, whilst MR is proposed at Garras Wharf, Boscawen Park, and south of Lighterage Quay near the mouth of Calenicj Crrek. The policy of MR at Garras Wharf (2.5ha), Boscawen Park (4.8ha), and to the south of Lighterage Quay could result in the creation of 7.3ha or more of intertidal habitats (intertidal and subtidal mixed substrate and mud communities being conservation objective of the estuaries qualifying feature for the Site). Detailed examination of Lidar data and site visit to Lighterage Quay and Boscawen Park with Natural England and Environment Agency representatives identified that due to the bathymetry of the low water channel and the intertidal habitat, sea level rise would not be expected to reduce the area of intertidal habitats nor the amount of time the intertidal habitat is exposed and hence would not be expected to result in an alteration of the intertidal communities. However, this does not take into account of accretion of intertidal habitat in this area (and within the Tidal Basin). However, the MR proposal at Boscawen would further provide both additional habitat and relief from any potential constraint. Within the Truro Tidal Basin (covering Newham and Town Quay) the same elevation of the intertidal habitat occurs as at Lighterage Quay and Boscawen Park, in that the predicted increase in sea level rise would not result in a decrease in the area of intertidal habitat, furthermore given the elevation of the habitat, no expected reduction in the duration of exposure of intertidal habitat would occur and hence would not be expected to result in an alteration of the intertidal communities. In addition, the management of the Tidal Barrier provides a controlling function for sediments within the Tidal Basin, and based on examination of historic bathymetry with recent bathymetry (courtesy of the Truro Harbourmaster) the basin is known to be an accreting system, and is therefore expected to accrete in line with sea level rise if topography of the intertidal habitat needs to maintain an equilibrium, and hence result in no alteration to the intertidal or subtidal communities. Overall, for the Truro – Upper Basin, there would be no change to the area of intertidal or subtidal habitat, and no noticeable alteration to the intertidal and subtidal communities, based on current information available, and therefore the favourable condition of this element of estuaries conservation objectives would be maintained, and it can be concluded that there will be no adverse effect on integrity of the Site</p> <p>In Calenick Creek, the MR policy is only intended along the existing culvert within the creek, whereas the intent is for NAI along the vast majority of the creek. Overall, the policies would enable the intertidal communities and saltmarsh communities (an objective of the estuaries feature) to migrate up to the natural topographic extent, and therefore no loss of intertidal and saltmarsh habitat resulting from policy would arise, and the favourable condition of this element of the estuaries conservation objectives would be maintained. Furthermore, the intent of MR would not constrain the development of intertidal and saltmarsh habitat (through accretion) around the location of the culvert (which is for fluvial water).</p> <p>HTL at Castle Beach (Falmouth) and Gyllyngvase would occur (30m to 80m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated estuary features (intertidal and subtidal communities).</p> <p>HTL in Epoch 1 at Swanpool would occur (30m to 130m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated estuary</p>				

APPENDIX C5 - PDZ5 ZONE POINT TO NARE POINT (FAL AND HELFORD) - EFFECT ON NATURA 2000 SITES (QUALIFYING FEATURES IN BLUE FONT)

Primary Qualifying feature	Supporting Habitat	Attribute	Conservation Objectives	Potential effect of policy	In-combination effect	Preventative measures	Mitigation measures	Implications for the integrity of the Site
Estuaries	NA	Habitat extent, distribution, salinity and water quality	<p>To maintain the estuaries in 'favourable condition', taking account of natural change, with particular reference to:</p> <ul style="list-style-type: none"> <li>• Intertidal mud communities;</li> <li>• Subtidal mud communities;</li> <li>• Intertidal mixed muddy sediment communities;</li> <li>• Subtidal mixed muddy sediment communities;</li> <li>• Estuarine bedrock, boulder and cobble communities;</li> <li>• Subtidal sandbank communities;</li> <li>• Saltmarsh communities;</li> <li>• Reedbed communities.</li> </ul>	<p>features (intertidal and subtidal communities). MR in Epochs 2 and 3 would similarly retreat landward away from the Site and also result in no direct or indirect effects on designated intertidal and subtidal communities.</p> <p>HTL in Epoch 1 at Maenporth would occur (110m to 210m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated estuary features (intertidal and subtidal communities). MR in Epochs 2 and 3 would similarly retreat landward away from the Site and also result in no direct or indirect effects on designated intertidal and subtidal communities.</p> <p>MR is proposed for Gweek with HTL at Gweek Quays. HTL at the quay could result in constraints to the expansion of intertidal habitat as a response to sea level rise and resulting coastal squeeze. The amount of intertidal habitat that would be lost in this stretch of the estuary is not currently known due to a number of factors, not least the estuary wide response to sea level rise in the form of intertidal habitat accretion rates. As HTL only occurs along the existing quay which is outside the Site, erosion of <b>0.05ha</b> (see <b>Figure C5.3</b>) of land would occur immediately downstream of the quay, which would not be constrained by the quay or the policy. There is also a potential for reduced exposure of intertidal habitat as a result of sea level rise, however, in the area of HTL, natural topography would provide the same constraint as the existing quay edge, such that no noticeable loss of migration space would occur to the naturally constrained intertidal habitats that are affected by coastal squeeze, furthermore, intertidal habitat migration will also be able to occur outside the Site within the estuary. Consequently, the policy along the quay results in the same effect as that with natural change, and does not prevent intertidal habitat expansion elsewhere within the estuary or adjacent to the Site, therefore no decline in favourable condition of this element of the estuary conservation objectives would arise, and no adverse effect on integrity of the Site is expected.</p>				

APPENDIX C5 - PDZ5 ZONE POINT TO NARE POINT (FAL AND HELFORD) - EFFECT ON NATURA 2000 SITES (QUALIFYING FEATURES IN BLUE FONT)

Primary Qualifying feature	Supporting Habitat	Attribute	Conservation Objectives	Potential effect of policy	In-combination effect	Preventative measures	Mitigation measures	Implications for the integrity of the Site
Reefs	NA	Habitat extent, species and physical characteristics	<p>To maintain the reefs in 'favourable condition', taking account of natural change, with particular reference to:</p> <ul style="list-style-type: none"> <li>Rocky shore communities;</li> <li>Kelp forest communities;</li> <li>Subtidal rock and boulder communities;</li> <li>Estuarine bedrock, boulder and cobble communities.</li> </ul>	<p>HTL at St Mawes would take place for the most outside the Site boundary, with the exception of the western section past Castle Point. The defence line outside the site would not directly or indirectly effect reef communities, and the HTL past Castle Point is an area which is not expected to erode significantly, consequently limited if any work would be expected, and as there are no offshore reef features present, no effect would arise.</p> <p>HTL in St Just-in-Roseland would occur outside the Site boundary and would result in highly localised hydrodynamic effects only evident during storm events, which would not extend into or affect the Site features, particularly the reef features which are not present in the policy area.</p> <p>MR at Devoran in all Epochs occurs 3km from the Site boundary and no direct or indirect effects on designated reef habitat would occur.</p> <p>HTL and MR in Mylor Quay would occur outside or adjacent to the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly those of designated reef features.</p> <p>HTL in Epoch 1 for Flushing would occur outside or alongside the Site boundary where existing defences would be maintained. These defences result in highly localised hydrodynamic effects predominantly evident during storm events, as they are intended to prevent flooding. These localised hydrodynamic effects would not alter the physical characteristics of the Site features, particularly designated reef habitat which is some distance away. MR in Epochs 2 and 3 would extend away from the Site boundary, and would not affect reef features.</p> <p>HTL at Penryn in epoch 1 would result in the maintenance or upgrade of flood defences at least 1km upstream of the Site boundary and no direct or indirect effects on designated reef habitat would occur. MR in Epochs 2 and 3 would extend away from the Site boundary, and would not affect reef features.</p> <p>HTL for Falmouth would occur outside or alongside the Site boundary where existing defences would be maintained. These defences result in highly localised hydrodynamic effects predominantly evident during storm flood events, as they are intended to prevent flooding. These localised hydrodynamic effects would not alter the physical characteristics of the Site features, particularly designated reef habitats which are some distance away.</p> <p>HTL and MR for Tresillian occur a significant distance from the designated reef features and as such no direct or indirect effects would arise.</p> <p>HTL/MR for Truro – Upper Basin (Boscawen Park, Town Quay, Tidal Barrier, Lighterage Quay, Garras Wharf) occur a significant distance from the designated reef features, and consequently no direct or indirect effects would arise.</p> <p>MR for Calenick Creek occurs a significant distance from the designated reef features, and consequently no direct or indirect effects would arise.</p> <p>HTL at Castle Beach (Falmouth) and Gyllyngvase would occur (30m to 80m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated reef communities and features.</p> <p>HTL in Epoch 1 at Swanpool would occur (30m to 130m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated reef</p>	<p>No coastal squeeze maytake place as a result of sea level rise and HTL or MR policies on the boundary of the Site.</p>	None identified	None identified	Conclude no adverse effect on integrity

APPENDIX C5 - PDZ5 ZONE POINT TO NARE POINT (FAL AND HELFORD) - EFFECT ON NATURA 2000 SITES (QUALIFYING FEATURES IN BLUE FONT)

Primary Qualifying feature	Supporting Habitat	Attribute	Conservation Objectives	Potential effect of policy	In-combination effect	Preventative measures	Mitigation measures	Implications for the integrity of the Site
Reefs	NA	Habitat extent, species and physical characteristics	<p>To maintain the reefs in 'favourable condition', taking account of natural change, with particular reference to:</p> <ul style="list-style-type: none"> <li>Rocky shore communities;</li> <li>Kelp forest communities;</li> <li>Subtidal rock and boulder communities;</li> <li>Estuarine bedrock, boulder and cobble communities.</li> </ul>	<p>communities and features. MR in Epochs 2 and 3 would similarly retreat landward away from the Site and also result in no direct or indirect effects on designated reef communities.</p> <p>HTL in Epoch 1 at Maenporth would occur (110m to 210m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features, particularly designated reef communities and features. MR in Epochs 2 and 3 would similarly retreat landward away from the Site and also result in no direct or indirect effects on designated reef communities.</p> <p>HTL for Gweek Quays would occur outside or alongside the Site boundary where existing defences would be maintained. These defences result in highly localised hydrodynamic effects predominantly evident during storm flood events, as they are intended to prevent flooding. These localised hydrodynamic effects would not alter the physical characteristics of the Site features, particularly designated reef features which are a significant distance away from this policy location.</p>				

APPENDIX C5 - PDZ5 ZONE POINT TO NARE POINT (FAL AND HELFORD) - EFFECT ON NATURA 2000 SITES (QUALIFYING FEATURES IN BLUE FONT)

Primary Qualifying feature	Supporting Habitat	Attribute	Conservation Objectives	Potential effect of policy	In-combination effect	Preventative measures	Mitigation measures	Implications for the integrity of the Site
Shore Dock	Supralittoral Sediment /Rock	Habitat extent and population, disturbance, hydrology, water quality	To maintain the designated species in favourable condition, which is defined in part in relation to their population attributes.	<p>The HTL at St Mawes does not affect any habitat that would support Shore Dock communities, and as such would have no effect on the population.</p> <p>HTL in St Just-in-Roseland would comprise only localised works that would not result in significant reduction in natural erosion and subsequent supporting habitat for Shore Dock. This statement is based on the indications that erosion along this frontage will not be significant, and that only very small works may be needed with the exception of the Bar but there is no suitable habitat on the bar as it is a manmade feature.</p> <p>MR at Devoran in all Epochs occurs 3km from the Site boundary and no direct or indirect effects supporting habitat for Shore Dock population would occur.</p> <p>HTL and MR in Mylor Quay would occur outside or adjacent to the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site or alter the physical characteristics of the Site features. However, the HTL policy would dominate the quay area which is unsuitable Shore Dock habitat, and MR policy would occur in areas that could potentially provide supporting habitat for Shore Dock if it were allowed to erode naturally with management.</p> <p>HTL and MR in Flushing would occur outside or adjacent to the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm flood events, which would not extend into the Site or alter the physical characteristics of the Site features. The HTL policy would not significantly alter the erosion regime and further the urban area is not ideal Shore Dock habitat, consequently, no alteration to populations would occur.</p> <p>HTL and MR for Penryn would occur outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm flood events, which would not extend into the Site or alter the physical characteristics of the Site features. The HTL policy would not significantly alter the erosion regime and further the urban area is not ideal Shore Dock habitat, consequently, no alteration to populations would occur.</p> <p>HTL for Falmouth would occur outside or alongside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm flood events, which would not extend into the Site or alter the physical characteristics of the Site features. The HTL policy would not significantly alter the erosion regime and further the urban area is not ideal Shore Dock habitat, consequently, no alteration to populations would occur.</p> <p>HTL and MR for Tresillian occur a significant distance from the supporting habitat for Shore Dock and as such no direct or indirect effects would arise.</p> <p>HTL/MR for Truro – Upper Basin (Boscawen Park, Town Quay, Tidal Barrier, Lighterage Quay, and Garras Wharf) occur a significant distance from the supporting habitat for Shore Dock and as such no direct or indirect effects would arise.</p> <p>MR at Calenick Creek is located a significant distance from the supporting habitat for Shore Dock and as such no direct or indirect effects would arise.</p> <p>HTL at Castle Beach (Falmouth) and Gyllyngvase would occur (30m to 80m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site. The HTL policy would not significantly alter the erosion regime and further the urban area is not ideal Shore Dock habitat, consequently, no alteration to</p>	No coastal squeeze maytake place as a result of sea level rise and HTL or MR policies on the boundary of the Site.	None identified	None identified	Conclude no adverse effect on integrity



APPENDIX C5 - PDZ5 ZONE POINT TO NARE POINT (FAL AND HELFORD) - EFFECT ON NATURA 2000 SITES (QUALIFYING FEATURES IN BLUE FONT)

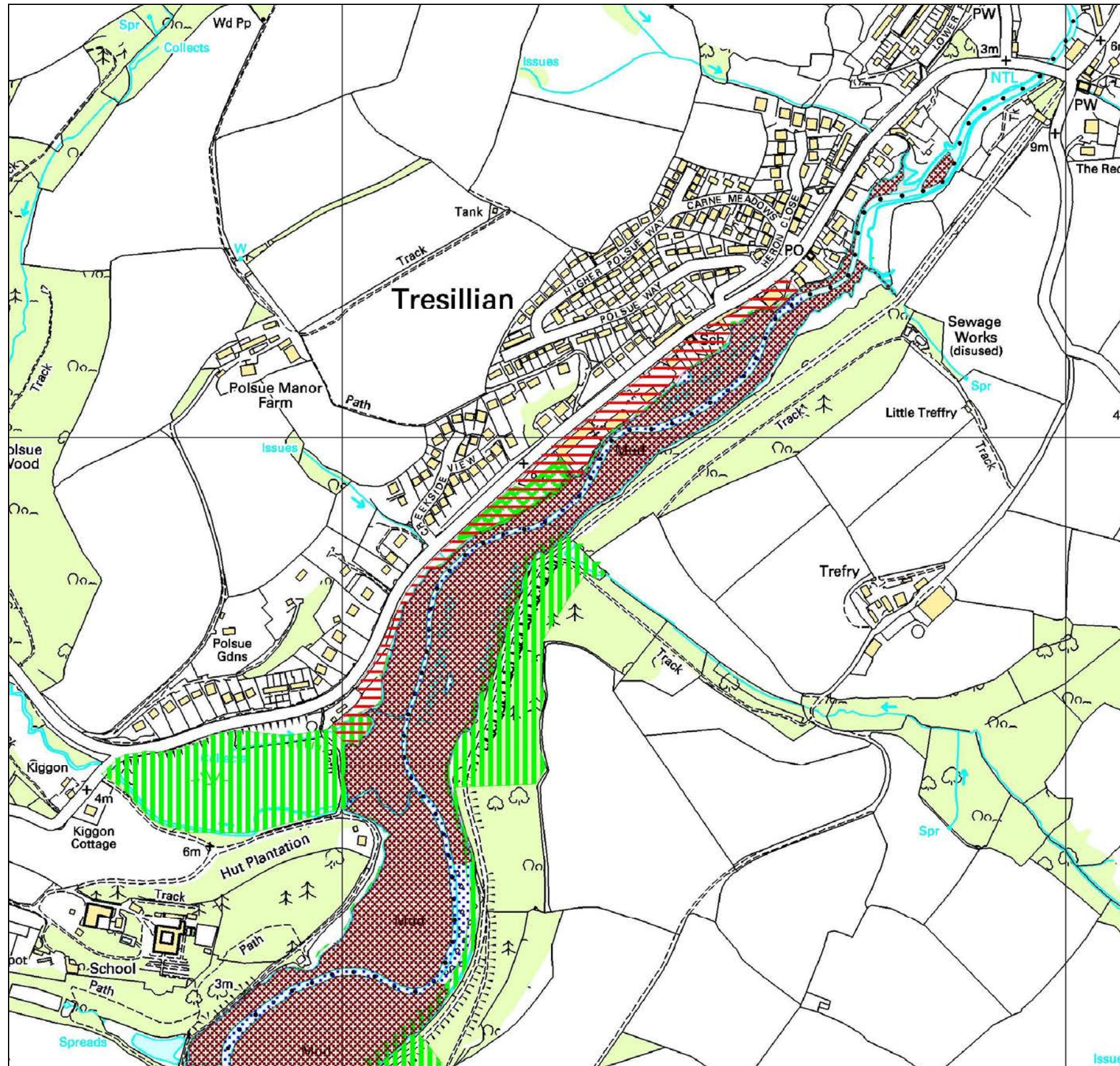
Primary Qualifying feature	Supporting Habitat	Attribute	Conservation Objectives	Potential effect of policy	In-combination effect	Preventative measures	Mitigation measures	Implications for the integrity of the Site
Shore Dock	Supralittoral Sediment /Rock	Habitat extent and population, disturbance, hydrology, water quality	To maintain the designated species in favourable condition, which is defined in part in relation to their population attributes.	<p>populations would occur.</p> <p>HTL in Epoch 1 at Swanpool would occur (30m to 130m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site. The HTL policy would not significantly alter the erosion regime and further the urban area is not ideal Shore Dock habitat, consequently, no alteration to populations would occur. MR in Epochs 2 and 3 would similarly retreat landward away from the Site and also result in no direct or indirect effects on Shore Dock populations due to the landward habitats being unsuitable.</p> <p>HTL in Epoch 1 at Maenporth would occur (110m to 210m) outside the Site boundary and would result in highly localised hydrodynamic effects predominantly evident during storm events, which would not extend into the Site. The HTL policy would not significantly alter the erosion regime and further the backing road is not ideal Shore Dock habitat, consequently, no alteration to populations would occur. MR in Epochs 2 and 3 would similarly retreat landward away from the Site and also result in no direct or indirect effects on Shore Dock populations due to the landward habitats being unsuitable.</p> <p>HTL for Gweek Quays occurs a significant distance from the supporting habitat for Shore Dock and as such no direct or indirect effects would arise.</p>				

APPENDIX C5 - PDZ5 ZONE POINT TO NARE POINT (FAL AND HELFORD) - EFFECT ON NATURA 2000 SITES (QUALIFYING FEATURES IN BLUE FONT)

Primary Qualifying feature	Supporting Habitat	Attribute	Conservation Objectives	Potential effect of policy	In-combination effect	Preventative measures	Mitigation measures	Implications for the integrity of the Site
<b>The Lizard SAC (Draft Inshore)</b>								
Reefs	N/A	Extent Biotope composition Distribution of biotopes Species population	Subject to natural change, maintain the Reefs in favourable condition, in particular: <ul style="list-style-type: none"> <li>Offshore upstanding reefs;</li> <li>Inshore upstanding reefs;</li> <li>Flat bedrock reef.</li> </ul>	In excess of 6km distance from the Site, and no source of impact from HTL or MR policies within this PDZ would be of sufficient scale or magnitude to extend this distance.	No in-combination effect and no synergy effects from policies, and no other activities identified as acting or potentially acting in-combination.	Not applicable	Not applicable	<b>Conclude no adverse effect</b>
<b>The Lizard SAC</b>								
Vegetated sea cliffs of the Atlantic and Baltic coasts	NA	Habitat extent and vegetation communities	To maintain the vegetated sea cliffs in 'favourable condition', taking account of natural change, with particular reference to maritime grassland communities.	In excess of 6km distance from the Site, and no source of impact from HTL or MR policies within this PDZ would be of sufficient scale or magnitude to extend this distance.	No in-combination effect and no synergy effects from policies, and no other activities identified as acting or potentially acting in-combination.	Not applicable	Not applicable	<b>Conclude no adverse effect</b>
Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara spp.</i>	NA	Habitat extent, vegetation composition, water and morphology characteristics	To maintain the Hard oligo-mesotrophic waters in 'favourable condition', taking account of natural change.					
Mediterranean temporary ponds	NA	Habitat extent, vegetation composition, water and morphology characteristics	To maintain the Mediterranean temporary ponds in 'favourable condition', taking account of natural change.					
Northern Atlantic wet heaths with <i>Erica tetralix</i>	NA	Habitat extent and physical characteristics	To maintain the Northern Atlantic wet heath habitat in 'favourable condition', taking account of natural change.					
European dry heaths	NA	Habitat extent and physical characteristics	To maintain the European dry heaths in 'favourable condition', taking account of natural change, with particular reference to dwarf shrub heath.					
Dry Atlantic coastal heaths with <i>Erica vagans</i>	NA	Habitat extent and physical characteristics	To maintain the Dry Atlantic coastal heath habitat in 'favourable condition', taking account of natural change.					

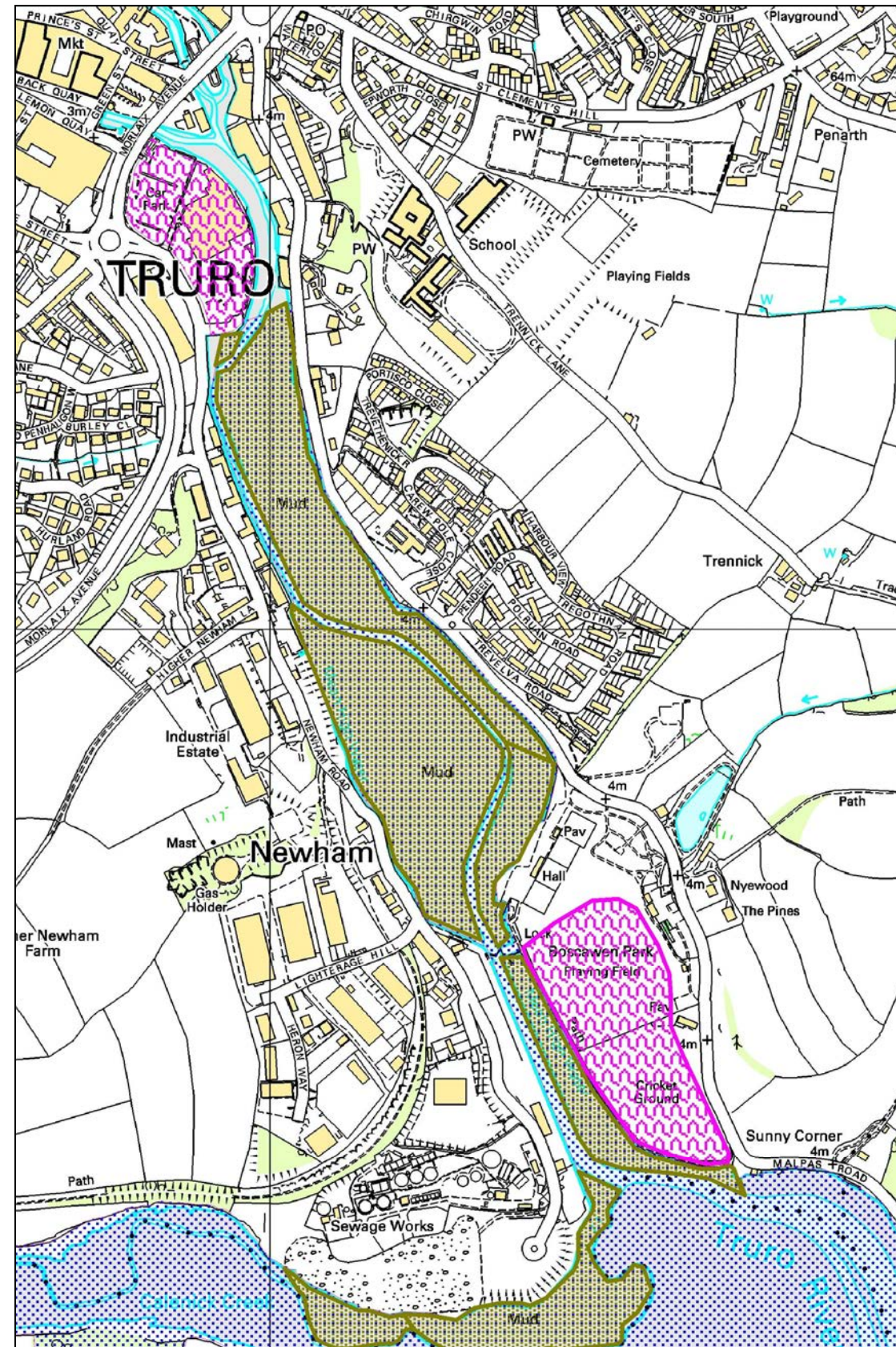
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FIGURE C5.1 Tresillian Policy Unit showing the existing habitat (dark red shading = intertidal mudflat, light green vertical stripes = saltmarsh) and SAC boundary is dark blue shading, with area of potential MR showing extent of allowance of natural movement of intertidal habitats shown in red horizontal stripes



APPENDIX C5 - PDZ5 ZONE POINT TO NARE POINT (FAL AND HELFORD) - EFFECT ON NATURA 2000 SITES (QUALIFYING FEATURES IN BLUE FONT)

FIGURE C5.2 Truro Policy Units showing the areas of intertidal habitat lost (muddy green hatch = intertidal mudflat, dark green hatch = saltmarsh habitat) and areas of potential additional habitat created through MR policies (in maroon hatch) and areas of potential additional habitat created through SAC boundary is dark blue shading



APPENDIX C5 - PDZ5 ZONE POINT TO NARE POINT (FAL AND HELFORD) - EFFECT ON NATURA 2000 SITES (QUALIFYING FEATURES IN **BLUE FONT**)

FIGURE C5.3 Gweek Policy Units showing the SAC boundary is shaded blue; the 2105 NAI erosion line (dark red) and 2105 WPM line is blue (area of intertidal mudflat that would be eroded is shaded in red)

APPENDIX C5 - PDZ5 ZONE POINT TO NARE POINT (FAL AND HELFORD) - EFFECT ON NATURA 2000 SITES (QUALIFYING FEATURES IN **BLUE FONT**)

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