

Appendix L

Water Framework Directive Assessment

(As Produced by the Environment Agency)

Poole & Christchurch
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Bays Coastal Group





Appendix L

Water Framework Directive Assessment

Poole and Christchurch Bays SMP2

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Executive Summary

The Water Framework Directive (referred to in this report as the Directive) came into force in 2000 and is the most substantial piece of EC water legislation to date. The Directive will need to be taken into account in the planning of all new activities in the water environment including Shoreline Management Plans.

The methodology devised for this assessment follows the Guidance for the assessment of SMPs under the Water Framework Directive which has been developed by the Environment Agency.

As the draft policy options have already been set for this SMP2, a retrospective assessment of the policies in relation to the Directive has been undertaken and, therefore, it has not been practicable to influence the SMP2 policy development or consider opportunities for delivering mitigation measures from the RBMP.

All the Transitional and Coastal (TraC) and Groundwater Bodies in the Poole and Christchurch Bays SMP2 area were identified and assessed along with the freshwater bodies that are within EA's Tidal Flood Zone 2 (0.5% chance in any one year).

For all TraC and freshwater water bodies in the SMP2 area, the hydromorphological parameters that could be changed by potential SMP2 policies, with potential impact on the BQEs, were identified. Groundwater bodies were also considered.

The preferred SMP2 policies were, for each policy unit and for the short term epoch, assessed against the Environmental Objectives and a summary of the achievement (or otherwise) of the Environmental Objectives at the water body scale was completed .

Where any Environmental Objectives have not be met within a water body a Water Framework Directive Summary Statement was completed for that Waterbody .

If all the Environmental Objectives were met within a water body there was no requirement to complete a Summary Statement.

There are 4 TraC water bodies, 14 River water bodies 1 Lake water body and 4 Groundwater bodies identified in the Poole and Christchurch Bays SMP2 area.

There are no High Status sites in the Poole and Christchurch Bays SMP2 Area.

For all of the Poole and Christchurch Bay SMP2 Management Areas, it is considered unlikely that the proposed policies will affect the current or target Ecological Status (or Potential) of the relevant Water Framework Directive Waterbodies. Therefore, the proposed policies meet the Environmental Objectives set out at the beginning of this report.

There are several recommendations to look into where SMP boundaries could change to match those of the WFD Waterbody boundaries, notably at Christchurch Harbour, Poole Harbour and Hurst Spit. However, SMP Management Area boundaries are based on coastal processes and social and economic reasons and are realistically unlikely to change.

The Programme of Measures from the River Basin Management Plan was not available at the time this assessment was undertaken, therefore mitigation measures have not been included in Assessment Table 2.

1.0 INTRODUCTION

1.1 Purpose of the Report

The Water Framework Directive (referred to in this report as the Directive) came into force in 2000 and is the most substantial piece of EC water legislation to date. The Directive will need to be taken into account in the planning of all new activities in the water environment. Therefore, the Environment Agency (the competent authority in England and Wales responsible for delivering the Directive) has recommended that decisions setting policy, including large-scale plans such as Shoreline Management Plans (SMPs), take account of the requirements of the Directive.

The 'Water Framework Directive Guidance for the Assessment of SMPs' has recently been developed by the Environment Agency and the first pilot assessment has been undertaken on the River Tyne to Flamborough Head SMP2. The guidance describes the methodology for assessing the potential hydromorphological change and consequent ecological impact of SMP policies and ensuring that SMP policy setting takes account of the Directive.

This guidance can now be applied to the assessment of the Poole and Christchurch Bays SMP2 policy options in terms of the requirements of the Directive. The Poole and Christchurch Bays SMP2 draft policy options were completed in August 2009 and, therefore, it is not feasible for the Water Framework Directive assessment to influence the SMP2 policy development or consider opportunities for delivering mitigation measures from the River Basin Management Plan. Consequently, this report provides a retrospective assessment of the policies defined under the Poole and Christchurch Bays SMP2 highlighting future issues for consideration at policy implementation stage.

Assessment Table 3 is the main section of the assessment and contains an assessment of the impact of the proposed policy and some explanation as to whether these support the Water Framework Directive Environmental Objectives.

1.2 Background

The EU Water Framework Directive was transposed into law in England and Wales by the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003. The requirements of the Directive need to be considered at all stages of the river and coastal planning and development process. For the purposes of large-scale plans, such as SMPs, the consideration of the requirements of the Directive when setting and selecting policies must be necessarily high level but sets the framework for future delivery of smaller-scale strategies or schemes. The Directive requires that Environmental Objectives be set for all surface and groundwaters in each EU member state. The default Environmental Objectives of relevance to the SMP2 are shown in Table 1.1.

Specific mitigation measures will be set for each River Basin District (RBD) to achieve the Environmental Objectives of the Directive. These measures are to mitigate impacts that have been or are being caused by human activity. In other words, measures to enhance and restore the quality of the existing environment. These mitigation measures will be delivered through the River Basin Management Plan (RBMP) process and listed in a Programme of Measures within the RBMP. The RBMPs are currently in draft and undergoing public consultation with the final plans due to be produced in December 2009.

Table 1.1 Environmental Objectives in the Directive

Generic Environmental Objectives (based on Article 4.1 of the Water Framework Directive).

Objective	Description
WFD1	No changes affecting high status sites.
WFD2	No changes that will cause failure to meet surface water Good Ecological Status/Potential (delete as appropriate) or result in a deterioration of surface water Ecological Status/Potential (delete as appropriate).
WFD3	No changes which will permanently prevent or compromise the Environmental Objectives being met in other water bodies.
WFD4	No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status.

From EA Guidance doc "Water Framework Directive: step by step process for assessing Shoreline Management Plans (OI 82_09)".

1.2.1 Preventing deterioration in Ecological Status or Potential

As stated in Table 1.1, a default Objective in all water bodies is to prevent deterioration in either the Ecological Status or, for HMWBs or AWBs, the Ecological Potential of the water body. Any activity which has the potential to have an impact on ecology (as defined by the biological, physico-chemical and hydromorphological Quality Elements listed in Annex V of the Directive) will need consideration in terms of whether it could cause deterioration in the Ecological Status or Potential of a water body. It is, therefore, necessary to consider the possible changes associated to baseline policies for each water body within the SMP2 area so that a decision making audit is available should any later failure to meet the Environmental Objectives need to be defended.

1.2.2 Achieving Objectives for EU protected sites

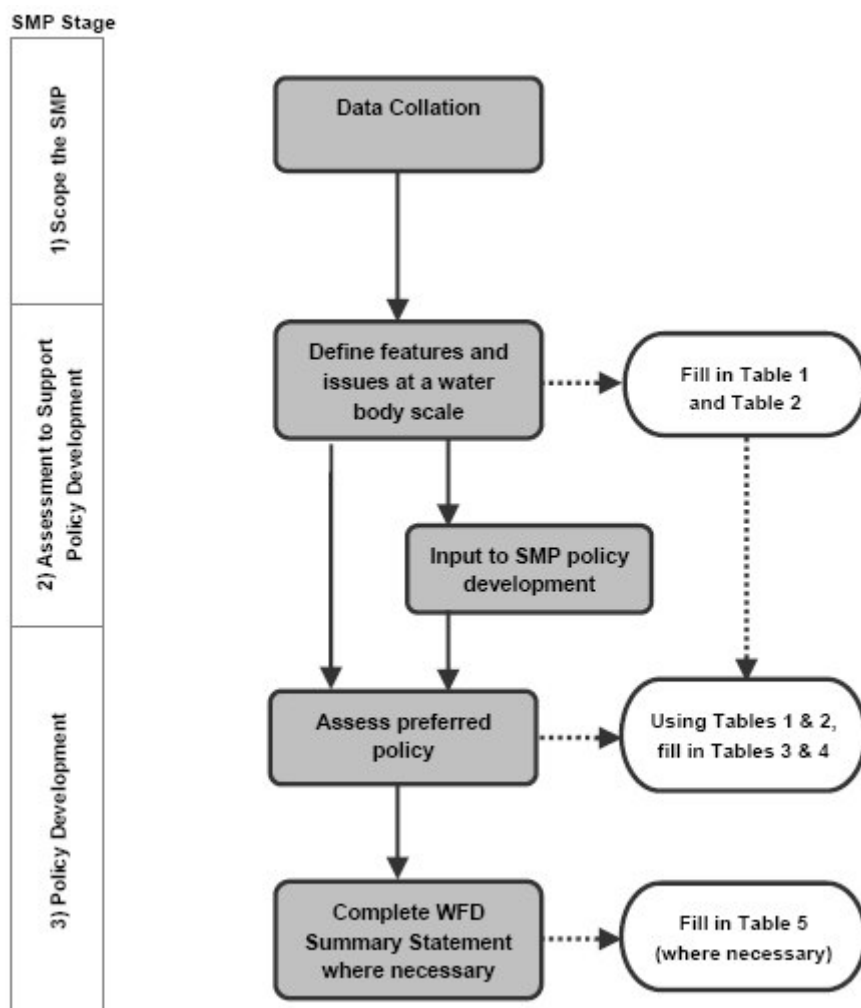
Where there are sites protected under EU legislation (e.g. the Birds or Habitats Directives, Shellfish Waters Directive), the Directive aims for compliance with any relevant standards or objectives for these sites. Therefore, where a site which is water dependent in some way is protected via designation under another EU Directive and the Good Ecological Status or Good Ecological Potential targets set under the Water Framework Directive would be insufficient to meet the objectives of the other relevant environmental Directive, the more stringent targets would apply.

2.0 ASSESSMENT METHODOLOGY

The methodology devised for this assessment follows the Guidance for the assessment of SMPs under the Water Framework Directive which has been developed by the Environment Agency.

As the policy options have already been set for this SMP2, a retrospective assessment of the policies in relation to the Directive has been undertaken and, therefore, it has not been practicable to influence the SMP2 policy development or consider opportunities for delivering mitigation measures from the RBMP.

Figure 2.1. Water Framework Directive Assessment process for SMPs.



2.1 Scoping the SMP2 – Data Collation

All the Transitional and Coastal (TraC) water bodies present within the Poole and Christchurch Bays SMP2 area were identified, and all the landward freshwater water bodies that potentially could be influenced by SMP2 policies using our (Environment Agency) Tidal Flood Zone 3 maps were also identified.

For each of these Waterbodies' its WFD ID number, classification details (including Biological Quality Element (BQE) information and Artificial / Heavily Modified Water Body designation) and its Environmental Objectives was identified, as far as possible from the Draft River Basin Management Plan.

All the Groundwater bodies (GWBs) that could potentially be impacted by SMP policies were identified by reviewing the Water Framework Directive compliance mapping for groundwater risk and the GWBs designated as being '**at risk**', '**probably at risk**' or at

'Poor Status', with regard to saline intrusion, within the SMP2 area. Again for each Waterbody its ID number, classification details (including Biological Quality Element (BQE) information) and Environmental Objectives were identified

The locations of groundwater abstractions with Source Protection Zones (SPZs) within the SMP2 area were also identified.

Any discrepancies between water body boundaries and SMP2 boundaries were examined and any locations where changes of the SMP2 boundary would be recommended to attain consistency with water body boundaries were identified for the next round of SMPs.

2.2 Defining Features and Issues

The next step was to identify the relationships between Biological Quality Elements and their physical dependencies for each of the Water Framework Directive Waterbodies.

The Water Framework Directive features which SMP2 policies may affect are the Biological Quality Elements (BQEs) of water bodies. The issues are the hydromorphological and physical parameters (upon which the BQEs are dependent) that could potentially be changed.

For all TraC and freshwater water bodies in the SMP2 area, the hydromorphological parameters that could be changed by potential SMP2 policies, with potential impact on the BQEs, were identified using Assessment Tables 1a, 1b 1c 1d and 1e.

The key features and issues identified in Assessment Tables 1a – 1e were then transferred into Assessment Table 2 and the water body classification and Environmental Objectives set out in Section 2.1 were used to populate the final column of Assessment Table 2.

2.3 Assess preferred SMP policies against WFD Environmental Objectives

The preferred SMP2 policies were, for each policy unit and for the short term epoch, (0 -20 years) as the lifespan of the WFD is to 2027, confirmed and recorded in Table 3. The policies were then assessed against the Environmental Objectives (Table 1.1). Using the information provided in tables 1a – 1e and table 2, the potential impacts of the short term SMP2 policy for each Management Area was assessed against the Environmental Objectives.

The potential changes to the relevant physical and hydromorphological parameters were identified and noted.

The assessment of the SMP2 policies also considered potential for them to impact upon any landward freshwater bodies. These landward freshwater bodies could potentially be impacted where SMP policy for a policy unit is No Active Intervention (NAI) or Managed Realignment (MR), as these policies could result in saline inundation of a freshwater habitat.

Groundwater bodies were also considered as NAI and MR policies could result in the freshwater – saltwater interface moving landwards, which combined with abstraction pressures could result in saline intrusion and deterioration of the Groundwater body.

For Management Areas where the extent of the total catchment of the groundwater abstraction (identified by zone 3 of Source Protection Zone) extended to the coastline, it

was considered that an SMP2 policy could potentially cause deterioration in the quality of the abstraction due to saline intrusion. Consideration was also given to Transitional and Coastal Waterbodies where SMP2 policies could lead to deterioration in status or potential as a result of groundwater pollution.

Following the assessment of SMP policies for each Policy Unit, a summary of the achievement (or otherwise) of the Environmental Objectives at the water body scale was completed (assessment table 4). This table also considers the cumulative effect of SMP policies on each water body.

Where any Environmental Objectives have not be met for one or more Policy Units within a water body, then in order to document the justification behind the selection of the preferred SMP policy, a Water Framework Directive Summary Statement was completed for that Waterbody (assessment table 5).

If all the Environmental Objectives were met within a water body there was no requirement to complete a Summary Statement.

As this is a retrospective assessment, completed after the preferred policies have been established, the WFD summary statements can be used to make a note of areas where the WFD objectives could be compromised by future delivery of SMP policies, and how the Article 4.7 can or cannot be used to defend this. These issues must be taken into account in subsequent SMP policy delivery stages.

Any recommendations for local management options, further investigations or monitoring requirements that are made in the Water Framework Directive summary statement will also include in the action plan within the SMP report, together with any associated deadlines or suggested timescales.

3.0 RESULTS

3.1 Scoping the SMP2 – Data Collation

3.1.1 Transitional and Coastal water bodies (TraC)

There are 4 TraC water bodies (Tables 1a & 1b) within the Poole and Christchurch Bays SMP2 area (Figure 3.1). Including 2 Transitional water bodies, both of which are designated as Candidate Heavily Modified and 1 of which is not yet designated and 2 Coastal water bodies, both of which are designated as Candidate Heavily Modified and 1 of which is not yet designated in the River Basin Management Plan.

3.1.2 Freshwater bodies (FWBs)

There are 14 River Waterbodies identified (Table 1c) in the Poole and Christchurch Bays SMP2 area and 1 Lake Waterbody (Table 1d). Of these, 3 River Waterbodies are designated as Candidate Heavily Modified.

Freshwater bodies were identified as those that are with Tidal Flood Zone 3 and within the SMP2 area.

It should be noted that some River Waterbodies within the SMP2 area have been ruled out as they are either located on a section of coastline that is not connected to the tidal flood plain (e.g. cliffed section or steeply sloping channel), or they are protected by flood defences and dunes etc. There is little potential flood plain and landward

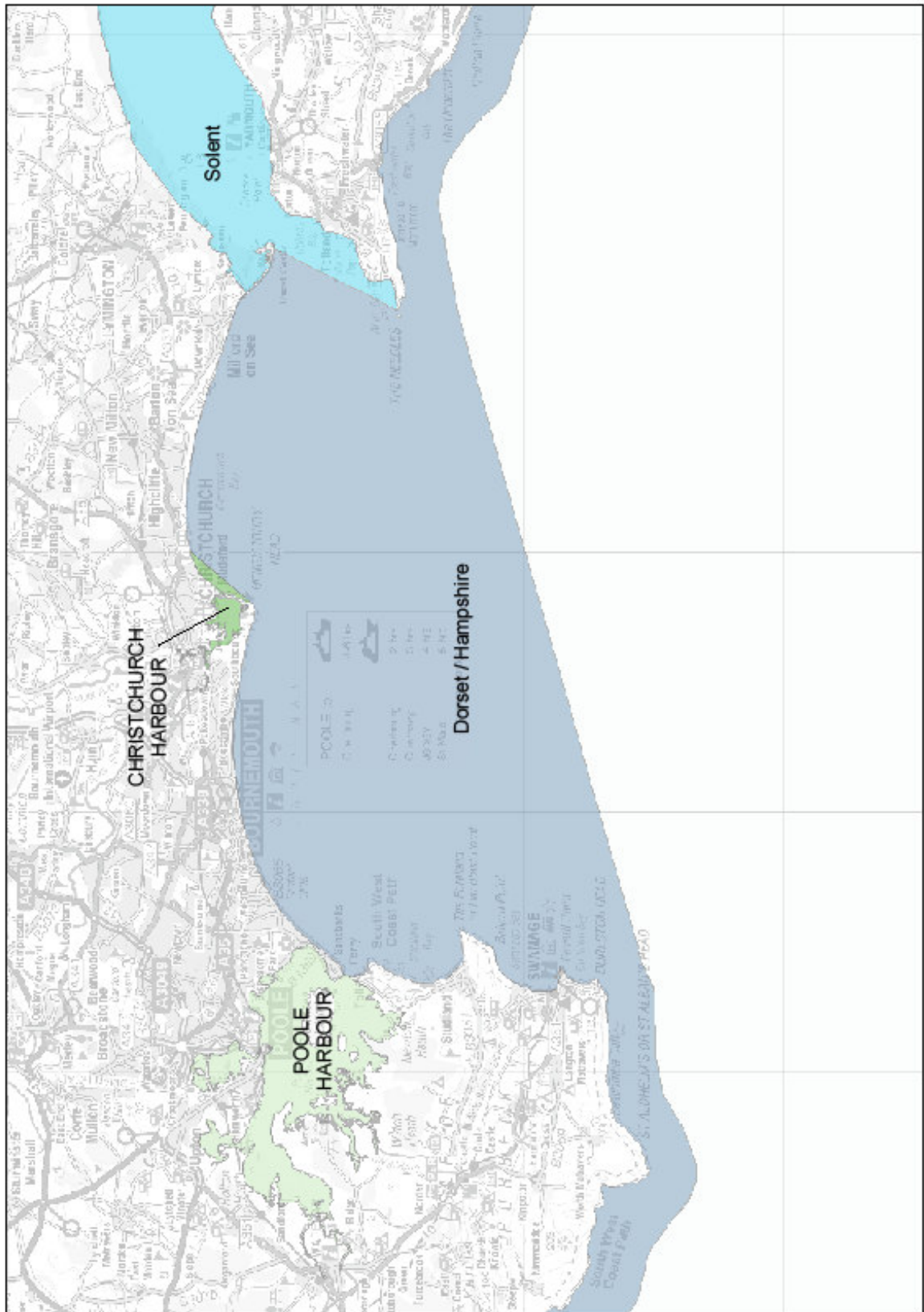
recession of the mouths of these freshwater rivers and is not likely to impact them as Waterbodies.

Any issues or potential impacts of the Poole and Christchurch Bays SMP2 policy that affect landward freshwater bodies have been identified in the table below.

Table 3.1 Landward freshwater bodies that have the potential to be impacted by the Poole and Christchurch Bays SMP2 policies.

Potential Issue identified with respect to Freshwater bodies	Freshwater bodies that may be impacted by SMP2 policies (ID number)
Managed Realignment and No Active Intervention policies in Poole Harbour and Christchurch Harbour has potential to increase saline intrusion into tidally affected rivers such as the River Frome, River Piddle and River Stour.	GB108043011020, GB108043015840, GB108043011040, GB108044009690, GB108044010080

Figure 3.1 TraC Waterbodies within the Poole and Christchurch Bays SMP2 Area.



3.1.3 Groundwater bodies (GWBs)

There are 4 Groundwater bodies identified (Table 1e, Figures 3.2 & 3.3) in the Poole and Christchurch Bays SMP2 area.

Table 3.2 Groundwater Body Issues

Groundwater Body	Issue
Lower Frome and Piddle (GB40802G805600)	Not at risk of saline intrusion with regard to chemical status and at good status – no issues.
Brownsea Island (GB40802G010000)	Not at risk of saline intrusion with regard to chemical status and at good status – no issues.
Lower Dorset Stour and Lower Hampshire Avon (GB40802G805800)	Not at risk of saline intrusion with regard to chemical status and at good status – no issues.
South West Hants Barton Group (GB40702G503500)	Not at risk of saline intrusion with regard to chemical status and at good status – no issues.

3.1.4 Source Protection Zones

The extent of the abstraction zones of the Groundwater bodies were identified through the use of Zone 3 of the Environment Agency's Source Protection Zones.

Where zone 3 of an abstraction extends as far as the coast the SMP2 policy could cause deterioration in the quality and quantity of the abstraction owing to saline intrusion.

There are no areas in the Poole and Christchurch Bays SMP2 where zone 3 of the Source Protection Zone reaches the coastline (see Figure 3.4 Groundwater Body Source Protection Zones within the Poole and Christchurch Bays SMP2 Area). There are no issues regarding where SMP2 Policy could cause the deterioration in the quality of abstractions due to saline intrusions.

Figure 3.2 Groundwater Body Chemical Risk within the Poole and Christchurch Bays SMP2 Area.

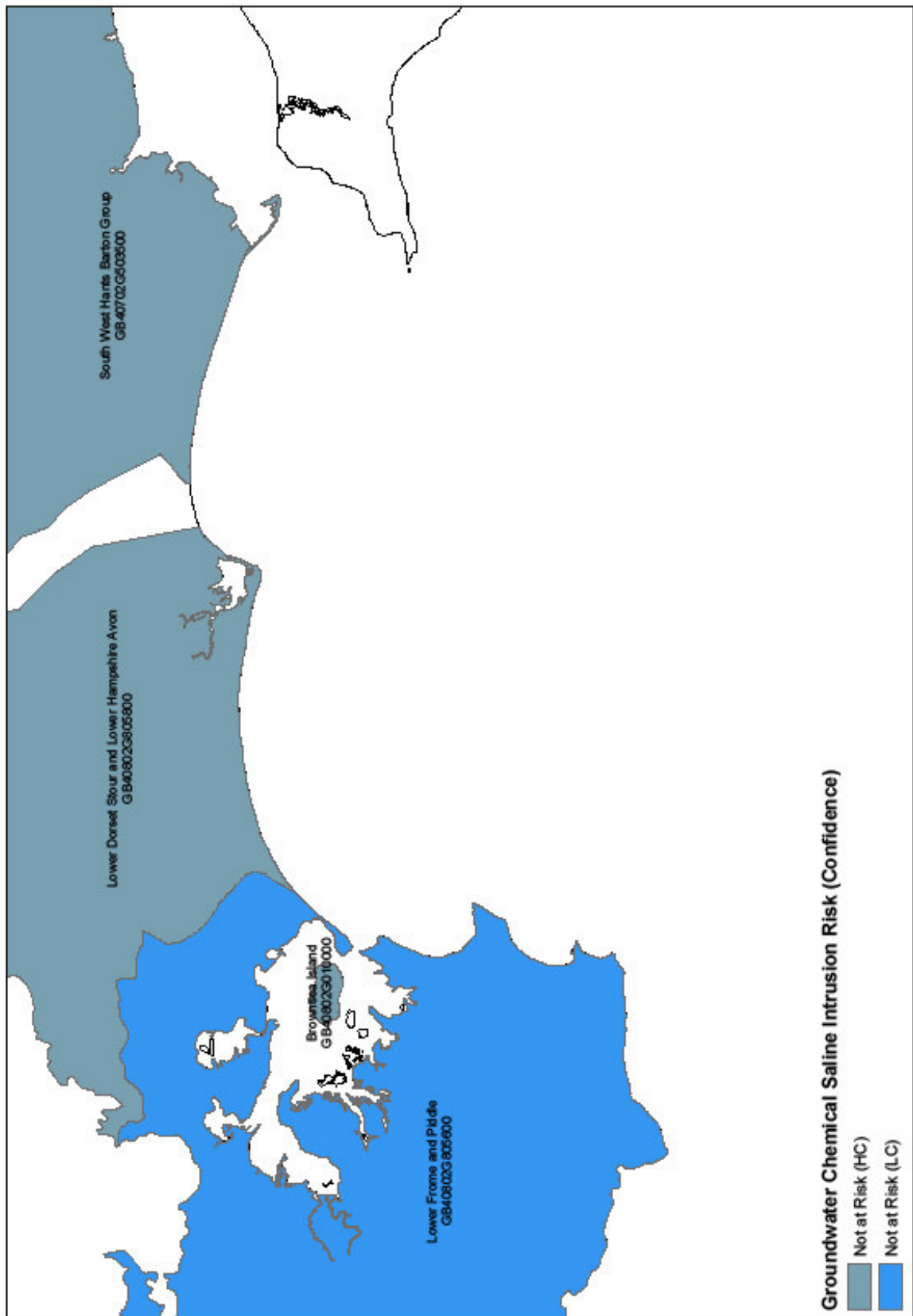


Figure 3.3 Groundwater Body Chemical Status within the Poole and Christchurch Bays SMP2 Area.

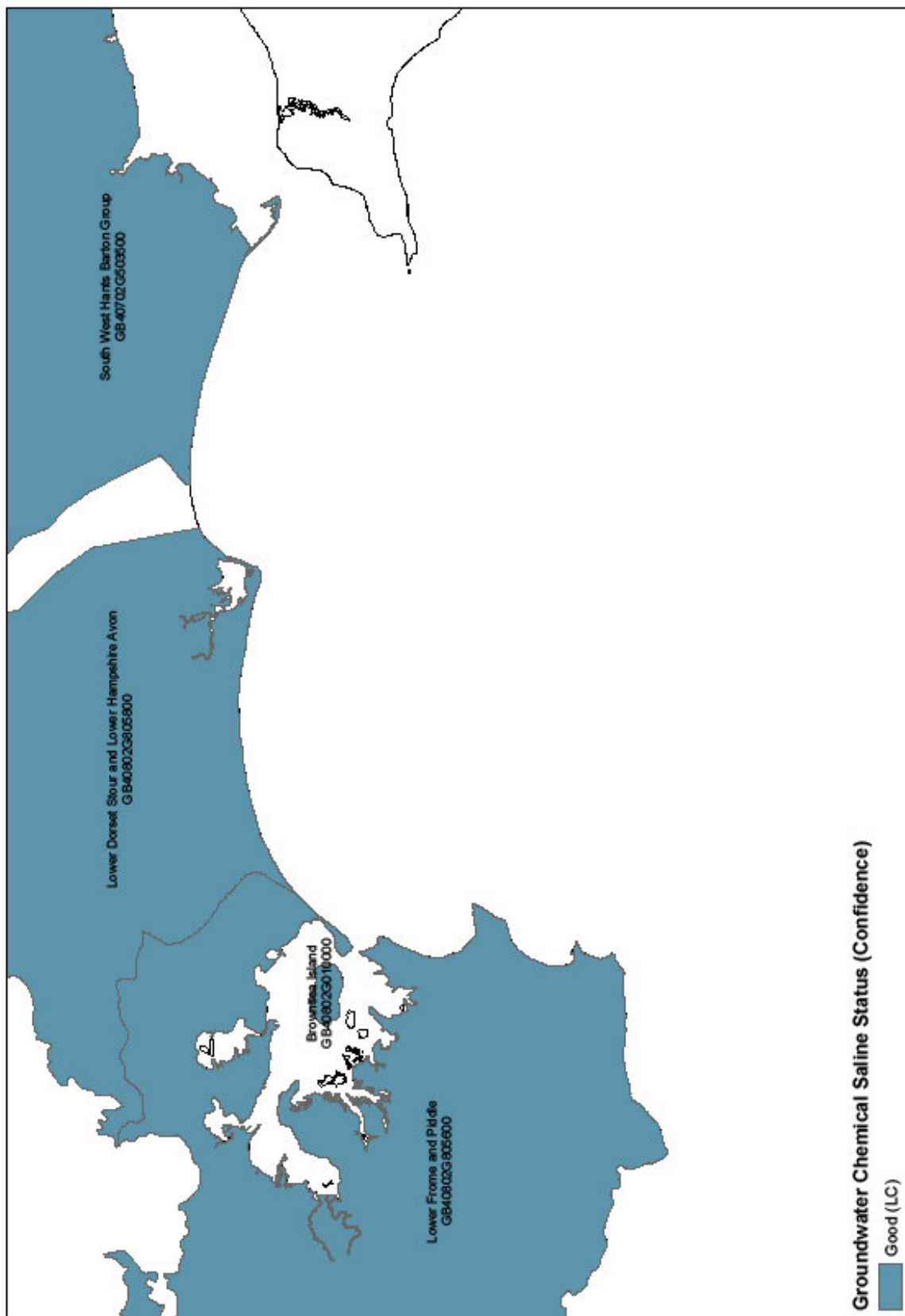
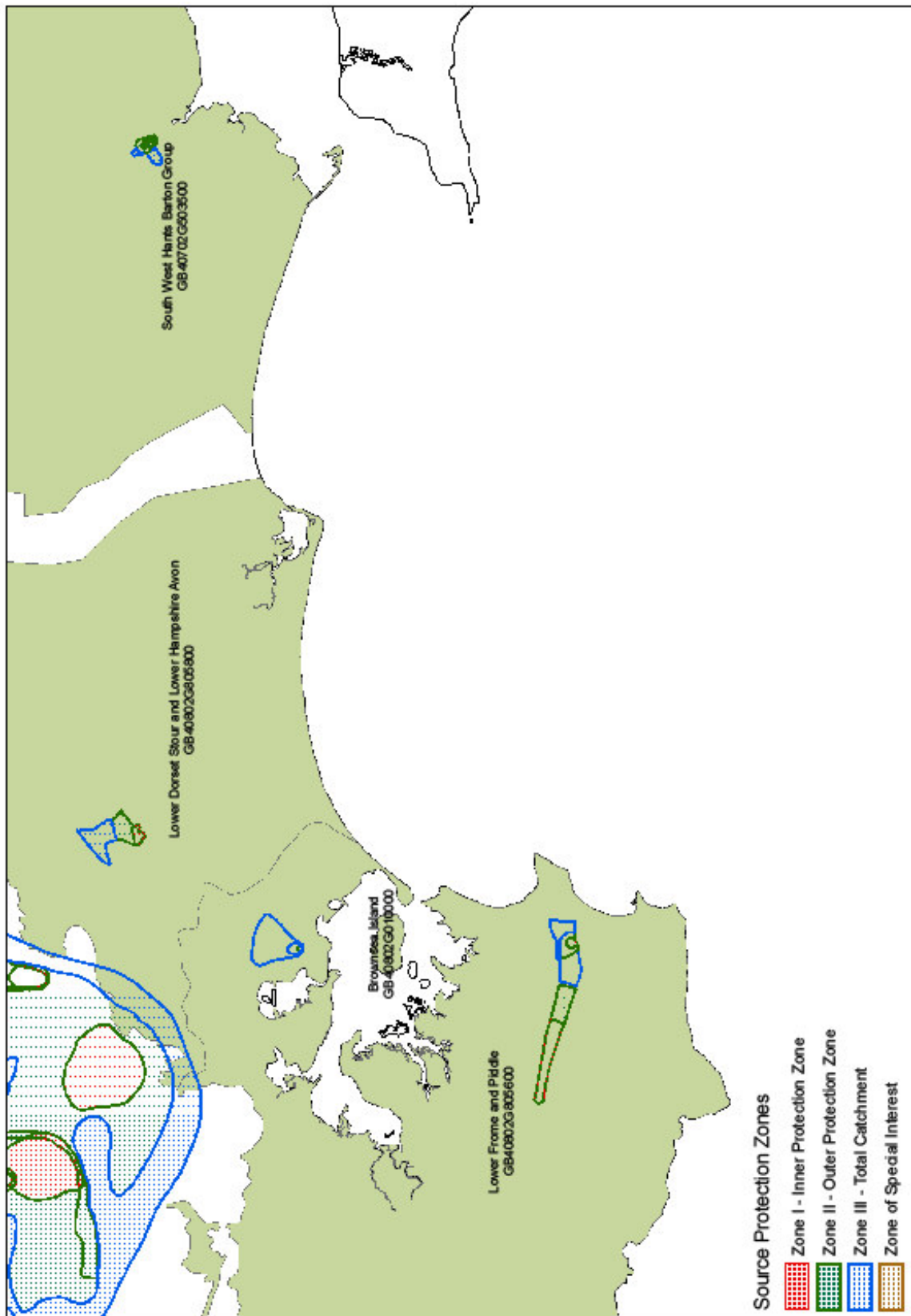


Figure 3.4 Groundwater Body Source Protection Zones within the Poole and Christchurch Bays SMP2 Area.



3.1.4 Boundary Issues

There are several boundary issues within the Poole and Christchurch Bays SMP2 area. All of the Transitional and Coastal Waterbody boundaries are inconsistent with the SMP2 Management Area boundaries.

Although the SMP2 Management Area boundaries are inconsistent with water body boundaries they have been set on the basis of coastal processes and/or socioeconomic reasons and, hence, it is often not appropriate to adjust them. There are, however, a few locations where the changing the SMP boundary could be considered, in the future, to logically align with the WFD water bodies without affecting the SMP policy setting. These areas are:

Consider changing the SMP Management Area boundary at Christchurch Harbour to match the Dorset/Hampshire (coastal) – Christchurch Harbour (transitional) WFD Waterbody boundary (see figure 3.5).

Consider changing the SMP Management Area boundary at Hurst Spit to match the Dorset/Hampshire (coastal) – Solent (coastal) WFD Waterbody boundary (see figure 3.6).

Consider changing the SMP Management Area boundary at Poole Harbour to match the Dorset/Hampshire (coastal) – Poole Harbour (transitional) WFD Waterbody boundary (see figure 3.7).

Figure 3.5 SMP2 Management Area and WFD Waterbody boundaries at Christchurch Harbour.

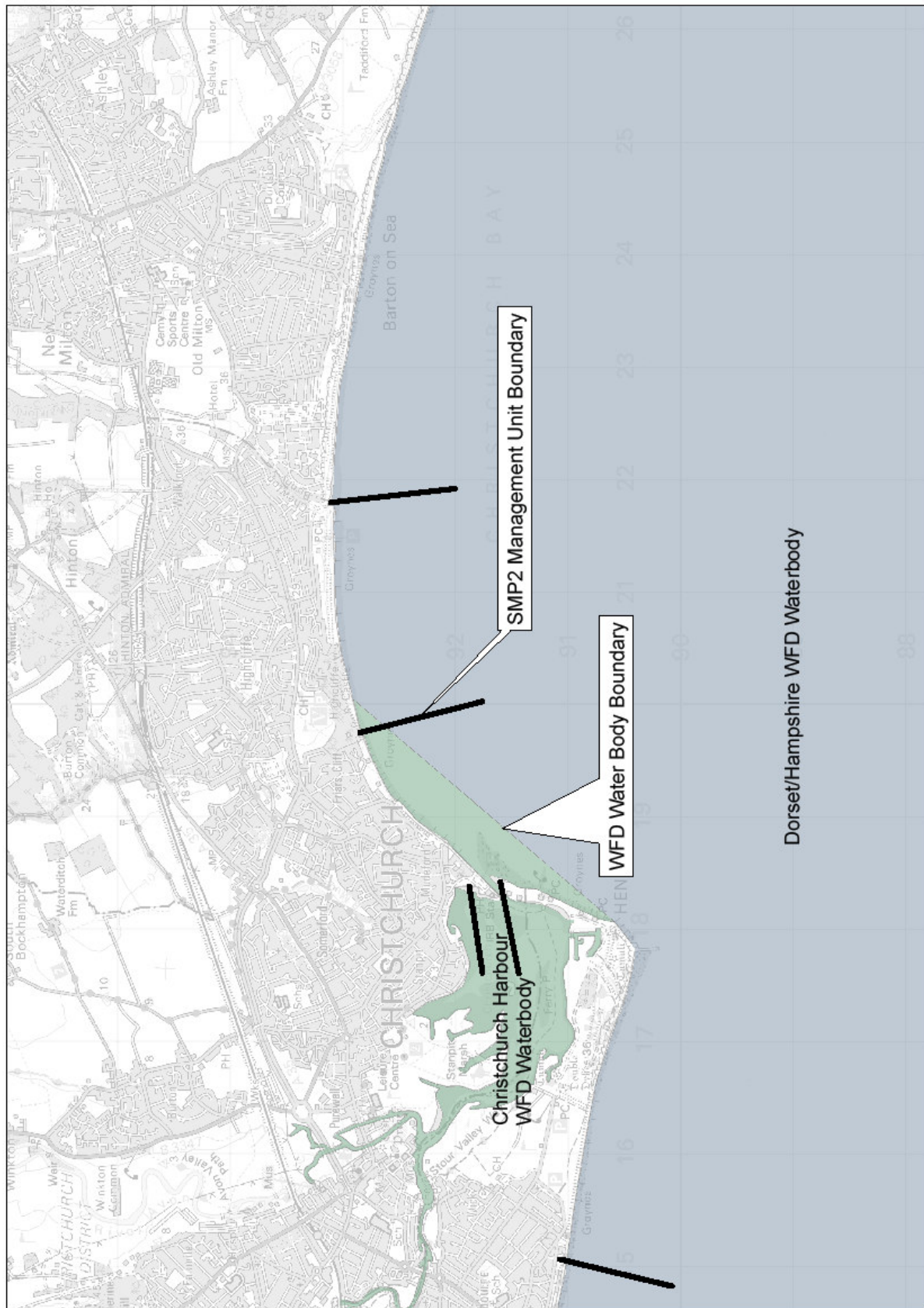


Figure 3.6 SMP2 Management Area and WFD Waterbody boundaries at Hurst Spit.

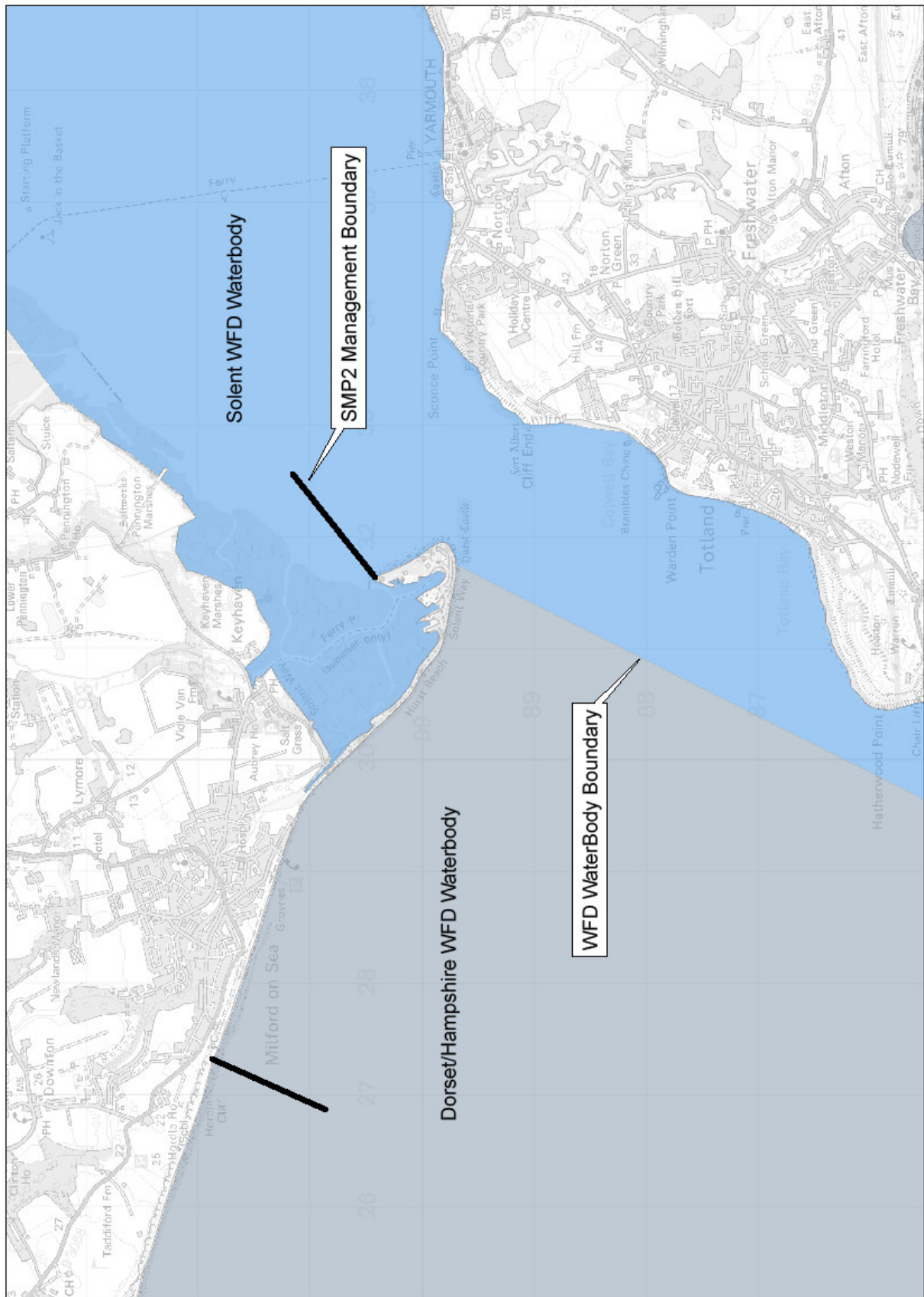
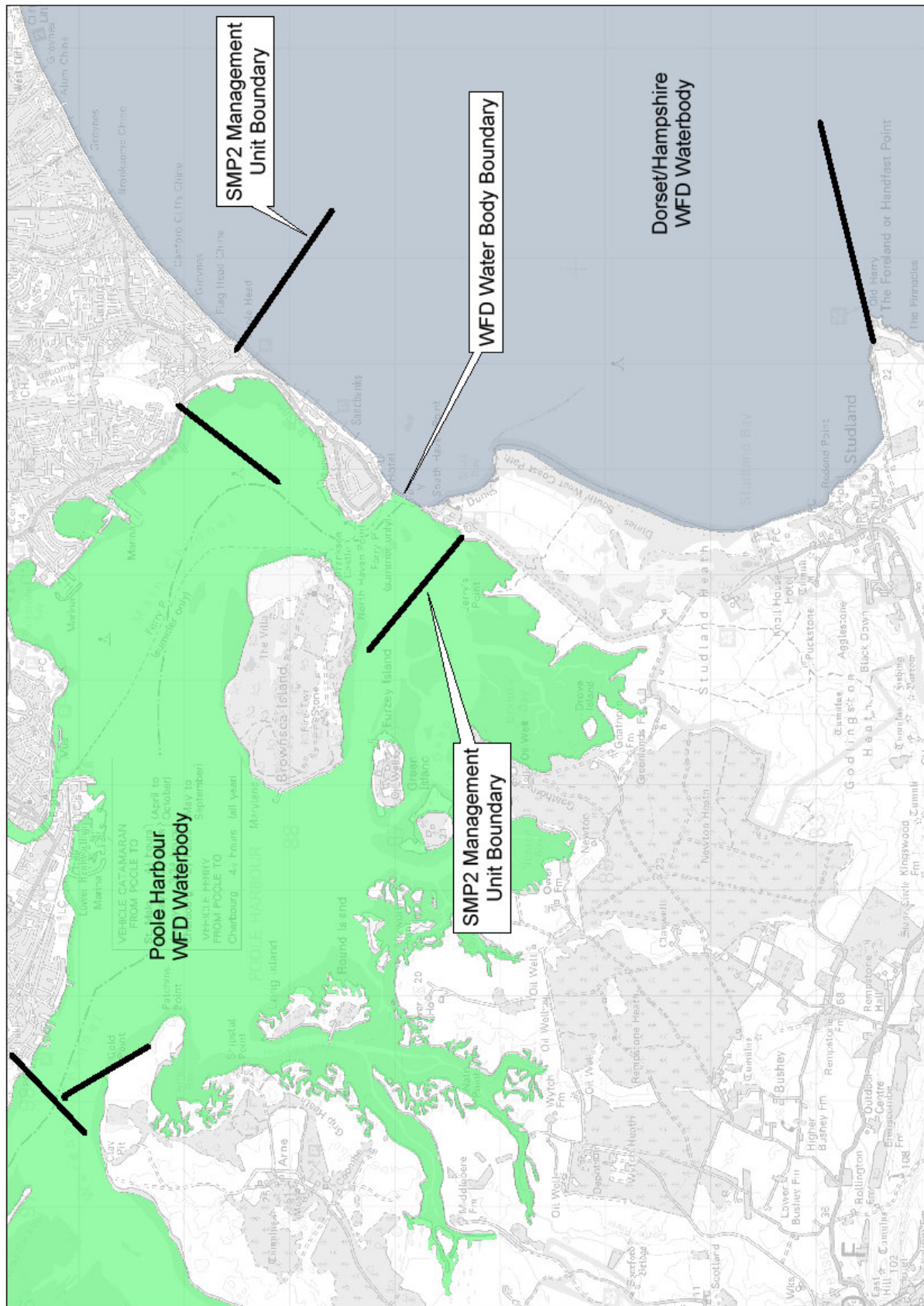


Figure 3.7 SMP2 Management Area and WFD Waterbody boundaries at Poole Harbour.



3.1.5 High Status water bodies.

There are no high status Waterbodies in the South Poole and Christchurch Bays SMP2 area.

3.2 Defining Features and Issues

For the TraC water bodies and the Landward Freshwater Bodies in the Poole and Christchurch Bays SMP2 Area, the hydromorphological parameters that could potentially be affected by the SMP2 policies and the Biological Quality Elements that are dependent upon these are shown in Assessment Table 1. The key features and issues for each water body are then summarised in Assessment Table 2.

Of the River water bodies in the Poole and Christchurch Bays SMP2 Area only those that are considered to be potentially affected by the SMP2 policies have been included in the Assessment Tables.

3.3 Assessment Against the Environmental Objectives

Assessment Table 3 is a more in depth assessment of the SMP2 policies and indicates whether there is potential for the Environmental Objectives to be compromised at a Management Area scale.

Assessment Table 4 assesses the potential failure of Environmental Objectives at the Water body scale.

This allows potential areas of concern to be highlighted and consequently track the decisions that have been made within the SMP2 to meet conditions required to defend any later failure.

ASSESSMENT TABLES

Assessment Table 2. Features and Issues Table.

Feature		Issue	Water body classification and environmental objectives	Opportunity to deliver mitigation measures from the Programme of Measures and/or recommendations on preferred policy
Water body (including policy units that affect it)	Biological Quality Element	Potential for change in hydro-morphological or physical parameter		
Solent (Coastal) - CBY7.1, CBY7.2 & CBY7.3	Phytoplankton	Potential changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.	Classification: Moderate Potential (HMWB) Environmental objectives: <ul style="list-style-type: none"> WFD1: No changes affecting high status sites. WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status. 	Provide local guidance and information to ensure marine licensing and consents take into account diffuse pollution pressures and physical measures and therefore contribute to the delivery of objectives. Outcome: Identify hot spots under pressure from chemical and physico-chemical pollutants. Inform and target harbour and port dredging strategies to reduce the risk from diffuse and point sources. (SE0278)
	Macroalgae	Possibility of potential effects on macroalgae due to changes in abrasion (associated with velocity) as a result of SMP2 policies.		
	Angiosperms	Possibility of potential effects on angiosperms due to changes in abrasion (associated with velocity), inundation (tidal regime) and sediment loading as a result of SMP2 policies.		
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TraC), light as a result of SMP policy.		
Dorset Hampshire (Coastal) - CBY7.3, CBY6.4, CBY6.5, CBY6.7, CBY5.1, CBY4.2, CBY3.3, CBY3.4, CBY2.1, CBY1.2, PBY3.3, PBY2.4, PBY2.5, PBY1.1, PBY1.2, PBY1.3, PBY1.4, SWA5/4	Phytoplankton	Potential changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.	Classification: Good Potential (HMWB) Environmental objectives: <ul style="list-style-type: none"> WFD1: No changes affecting high status sites. WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status. 	
	Macroalgae	Possibility of potential effects on macroalgae due to changes in abrasion (associated with velocity) as a result of SMP2 policies.		
	Angiosperms	Possibility of potential effects on angiosperms due to changes in abrasion (associated with velocity) as a result of SMP2 policies.		
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TraC), light and groundwater connectivity as a result of SMP policy.		
Christchurch Harbour (Transitional) - CBY2.1, CBY2.2, CBY2.3, CBY1.1, CBY5.1, CHB3.2, CHB3.3, CHB2.4, CHB2.5, CHB1.6	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	Classification: Good Potential (HMWB) Environmental objectives: <ul style="list-style-type: none"> WFD1: No changes affecting high status sites. WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status. 	
	Macroalgae	Potential for effects on macroalgae due to possible changes in episodicity (at low end of the velocity spectrum), salinity and abrasion associated to velocity as a result of SMP policy.		
	Angiosperms	Potential for effects on angiosperms due to possible changes in inundations (tidal regime), sediment loading, land elevation, salinity, abrasion (associated with velocity) as a result of SMP policy.		
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TraC), light and groundwater connectivity as a result of SMP policy.		
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.		

Assessment Table 2. Features and Issues Table (cont).

<p>Poole Harbour (Transitional) - PHB17.16/2, PHB15/3, STU4/4, PHB12.13,14/1, PBH11.12/2, PHB10/3, PBH9/4, PBH8/5, PBH8/4, PBH1/2, PBH3/1, PBH2a/2, PHB2b.2a/3, PBH7/1, PBH6/2, PHB5c/3, PBH5/4, PBH4/5</p>	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	<p>Classification: Poor Potential (HMWB) Environmental objectives:</p> <ul style="list-style-type: none"> WFD1: No changes affecting high status sites. WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status. 	<p>Develop and start delivering a habitat creation program to offset losses of important coastal habitats through sea level rise and climate change, focusing on opportunities in the Severn, Exe and Tamar Estuaries and in Poole Harbour in the first instance</p>
	Macroalgae	Potential for effects on macroalgae due to possible changes in episodicity (at low end of the velocity spectrum), salinity and abrasion associated to velocity as a result of SMP policy.		
	Angiosperms	Potential for effects on angiosperms due to possible changes in inundations (tidal regime), sediment loading, land elevation, salinity, abrasion (associated with velocity) as a result of SMP policy.		
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TraC), light and groundwater connectivity as a result of SMP policy.		
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.		
<p>Danes Stream (River) - CBY6.4</p>	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	<p>Classification: Good Status Environmental objectives:</p> <ul style="list-style-type: none"> WFD1: No changes affecting high status sites. WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status. 	
	Macrophytes	Potential for effects on macrophytes due to possible changes in slope, longitudinal position, shoreline complexity or heterogeneity, light quality and quantity (for macroalgae and bryophytes), episodicity of flows and inundations, turbidity, baseflow (chalk streams), riparian shade and structure and substrate conditions as a result of SMP policy.		
	Phytobenthos (diatoms only)	Potential for effects on phytobenthos as a result of SMP policy.		
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TraC), light and groundwater connectivity as a result of SMP policy.		
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.		
<p>River Mude (River) - CBY5.1</p>	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	<p>Classification: Moderate Status Environmental objectives:</p> <ul style="list-style-type: none"> WFD1: No changes affecting high status sites. WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status. 	
	Macrophytes	Potential for effects on macrophytes due to possible changes in slope, longitudinal position, shoreline complexity or heterogeneity, light quality and quantity (for macroalgae and bryophytes), episodicity of flows and inundations, turbidity, baseflow (chalk streams), riparian shade and structure and substrate conditions as a result of SMP policy.		
	Phytobenthos (diatoms only)	Potential for effects on phytobenthos as a result of SMP policy.		
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TraC), light and groundwater connectivity as a result of SMP policy.		
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.		

Assessment Table 2. Features and Issues Table (cont).

Stour (River) - CHB3.3, CHB2.4	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	<p>Classification: Poor Potential (HMWB)</p> <p>Environmental objectives:</p> <ul style="list-style-type: none"> WFD1: No changes affecting high status sites. WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status.
	Macrophytes	Potential for effects on macrophytes due to possible changes in slope, longitudinal position, shoreline complexity or heterogeneity, light quality and quantity (for macroalgae and bryophytes), episodicity of flows and inundations, turbidity, baseflow (chalk streams), riparian shade and structure and substrate conditions as a result of SMP policy.	
	Phytobenthos (diatoms only)	Potential for effects on phytobenthos as a result of SMP policy.	
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TraC), light and groundwater connectivity as a result of SMP policy.	
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.	
River Avon (River) - CHB3.3	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	<p>Classification: Poor Potential (HMWB)</p> <p>Environmental objectives:</p> <ul style="list-style-type: none"> WFD1: No changes affecting high status sites. WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status.
	Macrophytes	Potential for effects on macrophytes due to possible changes in slope, longitudinal position, shoreline complexity or heterogeneity, light quality and quantity (for macroalgae and bryophytes), episodicity of flows and inundations, turbidity, baseflow (chalk streams), riparian shade and structure and substrate conditions as a result of SMP policy.	
	Phytobenthos (diatoms only)	Potential for effects on phytobenthos as a result of SMP policy.	
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TraC), light and groundwater connectivity as a result of SMP policy.	
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.	
Trib of Poole Harbour (Luscombe Valley Stream) (River) - PHB12, 13, 14/1	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	<p>Classification: Moderate Status</p> <p>Environmental objectives:</p> <ul style="list-style-type: none"> WFD1: No changes affecting high status sites. WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status.
	Macrophytes	Potential for effects on macrophytes due to possible changes in slope, longitudinal position, shoreline complexity or heterogeneity, light quality and quantity (for macroalgae and bryophytes), episodicity of flows and inundations, turbidity, baseflow (chalk streams), riparian shade and structure and substrate conditions as a result of SMP policy.	
	Phytobenthos (diatoms only)	Potential for effects on phytobenthos as a result of SMP policy.	
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TraC), light and groundwater connectivity as a result of SMP policy.	
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.	

Assessment Table 2. Features and Issues Table (cont).

Trib of Poole Harbour (Upton Heath Stream) (River) - PBH6/2	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	<p>Classification: Moderate Status Environmental objectives:</p> <ul style="list-style-type: none"> ▪ WFD1: No changes affecting high status sites. ▪ WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. ▪ WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. ▪ WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status.
	Macrophytes	Potential for effects on macrophytes due to possible changes in slope, longitudinal position, shoreline complexity or heterogeneity, light quality and quantity (for macroalgae and bryophytes), episodicity of flows and inundations, turbidity, baseflow (chalk streams), riparian shade and structure and substrate conditions as a result of SMP policy.	
	Phytobenthos (diatoms only)	Potential for effects on phytobenthos as a result of SMP policy.	
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TraC), light and groundwater connectivity as a result of SMP policy.	
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.	
Sherford River (River) - PBH6/2	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	<p>Classification: Moderate Status Environmental objectives:</p> <ul style="list-style-type: none"> ▪ WFD1: No changes affecting high status sites. ▪ WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. ▪ WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. ▪ WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status.
	Macrophytes	Potential for effects on macrophytes due to possible changes in slope, longitudinal position, shoreline complexity or heterogeneity, light quality and quantity (for macroalgae and bryophytes), episodicity of flows and inundations, turbidity, baseflow (chalk streams), riparian shade and structure and substrate conditions as a result of SMP policy.	
	Phytobenthos (diatoms only)	Potential for effects on phytobenthos as a result of SMP policy.	
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TraC), light and groundwater connectivity as a result of SMP policy.	
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.	
Wareham Forest Stream (River) - PBH 5/4	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	<p>Classification: Moderate Status Environmental objectives:</p> <ul style="list-style-type: none"> ▪ WFD1: No changes affecting high status sites. ▪ WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. ▪ WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. ▪ WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status.
	Macrophytes	Potential for effects on macrophytes due to possible changes in slope, longitudinal position, shoreline complexity or heterogeneity, light quality and quantity (for macroalgae and bryophytes), episodicity of flows and inundations, turbidity, baseflow (chalk streams), riparian shade and structure and substrate conditions as a result of SMP policy.	
	Phytobenthos (diatoms only)	Potential for effects on phytobenthos as a result of SMP policy.	
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TraC), light and groundwater connectivity as a result of SMP policy.	
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.	

Assessment Table 2. Features and Issues Table (cont).

Piddle (River) - PBH5/4	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	<p>Classification: Poor Potential (HMWB)</p> <p>Environmental objectives:</p> <ul style="list-style-type: none"> WFD1: No changes affecting high status sites. WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status.
	Macrophytes	Potential for effects on macrophytes due to possible changes in slope, longitudinal position, shoreline complexity or heterogeneity, light quality and quantity (for macroalgae and bryophytes), episodicity of flows and inundations, turbidity, baseflow (chalk streams), riparian shade and structure and substrate conditions as a result of SMP policy.	
	Phytobenthos (diatoms only)	Potential for effects on phytobenthos as a result of SMP policy.	
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TraC), light and groundwater connectivity as a result of SMP policy.	
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.	
Dorset Frome (Lower) & Furzebrook Stream (River) - PBH5/4	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	<p>Classification: Poor Status</p> <p>Environmental objectives:</p> <ul style="list-style-type: none"> WFD1: No changes affecting high status sites. WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status.
	Macrophytes	Potential for effects on macrophytes due to possible changes in slope, longitudinal position, shoreline complexity or heterogeneity, light quality and quantity (for macroalgae and bryophytes), episodicity of flows and inundations, turbidity, baseflow (chalk streams), riparian shade and structure and substrate conditions as a result of SMP policy.	
	Phytobenthos (diatoms only)	Potential for effects on phytobenthos as a result of SMP policy.	
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TraC), light and groundwater connectivity as a result of SMP policy.	
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.	
Corfe River (River) - PBH1/2	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	<p>Classification: Moderate Status</p> <p>Environmental objectives:</p> <ul style="list-style-type: none"> WFD1: No changes affecting high status sites. WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status.
	Macrophytes	Potential for effects on macrophytes due to possible changes in slope, longitudinal position, shoreline complexity or heterogeneity, light quality and quantity (for macroalgae and bryophytes), episodicity of flows and inundations, turbidity, baseflow (chalk streams), riparian shade and structure and substrate conditions as a result of SMP policy.	
	Phytobenthos (diatoms only)	Potential for effects on phytobenthos as a result of SMP policy.	
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TraC), light and groundwater connectivity as a result of SMP policy.	
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.	

Assessment Table 2. Features and Issues Table (cont).

Trib of Poole Harbour (Brencombe Stream - Wytch) (River) - PBH1/2	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	<p>Classification: Good Status</p> <p>Environmental objectives:</p> <ul style="list-style-type: none"> WFD1: No changes affecting high status sites. WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status.
	Macrophytes	Potential for effects on macrophytes due to possible changes in slope, longitudinal position, shoreline complexity or heterogeneity, light quality and quantity (for macroalgae and bryophytes), episodicity of flows and inundations, turbidity, baseflow (chalk streams), riparian shade and structure and substrate conditions as a result of SMP policy.	
	Phytobenthos (diatoms only)	Potential for effects on phytobenthos as a result of SMP policy.	
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TrAc), light and groundwater connectivity as a result of SMP policy.	
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.	
Trib of Poole Harbour (Burnbake Stream) (River) - PBH1/2	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	<p>Classification: Moderate Status</p> <p>Environmental objectives:</p> <ul style="list-style-type: none"> WFD1: No changes affecting high status sites. WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater status.
	Macrophytes	Potential for effects on macrophytes due to possible changes in slope, longitudinal position, shoreline complexity or heterogeneity, light quality and quantity (for macroalgae and bryophytes), episodicity of flows and inundations, turbidity, baseflow (chalk streams), riparian shade and structure and substrate conditions as a result of SMP policy.	
	Phytobenthos (diatoms only)	Potential for effects on phytobenthos as a result of SMP policy.	
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TrAc), light and groundwater connectivity as a result of SMP policy.	
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.	
Little Sea (Lake) - STU 4,3,2/5	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth, thermal regime and turbidity as a result of SMP policy.	<p>Classification: Good Status</p> <p>Environmental objectives:</p> <ul style="list-style-type: none"> WFD1: No changes affecting high status sites. WFD2: No changes that will cause failure to meet surface water Good Ecological Status or Potential or result in a deterioration of surface water Ecological Status or Potential. WFD3: No changes which will permanently prevent or compromise the environmental objectives being met in other water bodies. WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration groundwater
	Macrophytes	Potential for effects on macrophytes due to possible changes in slope, longitudinal position, shoreline complexity or heterogeneity, light quality and quantity (for macroalgae and bryophytes), episodicity of flows and inundations, turbidity, baseflow (chalk streams), riparian shade and structure and substrate conditions as a result of SMP policy.	
	Phytobenthos (diatoms only)	Potential for effects on phytobenthos as a result of SMP policy.	
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in beach water table (TrAc), light and groundwater connectivity as a result of SMP policy.	
	Fish	Potential for effects on fish due to possible changes in heterogeneity of habitat (substrate, provision of shelter), continuity of migration routes, substrate conditions, presence of macrophytes and accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone) as a result of SMP policy.	

Assessment Table 3. Assessment of SMP Policy against the Environmental Objectives of the WFD.

Waterbodies in Policy Unit	Management Area	Policy Unit		SMP Policy				Assessment of impact (including list of water bodies affected)	Environmental objectives met?			
				SMP1	2025	2055	2105		WFD 1	WFD 2	WFD 3	WFD 4
Solent (coastal), Dorset Hampshire (coastal)	MA01 Hurst Spit and Milford	CBY.A.1.	Hurst Spit	HTL	HTL	HTL	HTL	Current management practices are to be continued in the majority of this management unit to maintain the geomorphological feature, the HTL policy will maintain the integrity of the spit. However this may mean a reduction in the area of salt marsh as it is squeezed against the defences at Keyhaven in response to sea level rise, this may be an issue with regard to the HRA, but is not in terms of the WFD Environmental Objectives for the Solent waterbody as it is a very small part of the total waterbody area. Managed realignment at Milford could potentially improve the status of the waterbody in terms of WFD as it will reduce exposure of sensitive intertidal habitat to tidal inundations as it rolls backwards in line with sea level rise, compared to the short term HTL policy. Managed realignment at Cliff road will mean the beach will move back and could provide a more substantial beach area also potentially improving the status of the waterbody in terms of WFD.	N/A	✓	✓	✓
Dorset Hampshire (Coastal), Danes Stream (river)		CBY.A.2.	Milford Seafront	HTL	HTL	MR	MR					
Dorset Hampshire (Coastal)		CBY.A.3.	Rook Cliff	HTL	HTL	HTL	HTL					
Dorset Hampshire (Coastal)		CBY.A.4.	Cliff Road	HTL	MR	MR	MR					
Dorset Hampshire (Coastal)	MA02 Barton-on-Sea	CBY.B.1.	Hordle Cliff to Barton	Do Nothing Short term - Selective retreat long term	NAI	NAI	NAI	NAI policy will allow continued natural development of the shoreline, having no effect on the macroalgae, angiosperms and benthic/macrobenthic communities in that area of the waterbody, except at Barton on Sea Marine Drive East where the current defences will continue to be managed. Defences at Barton on Sea Marine Drive West will be maintained initially but allowing the coastline to roll back in the mid to long term. In terms of the lifespan of the WFD there is no change in the management of the coastline in this section and no effects on the water body status are expected.	N/A	✓	✓	✓
Dorset Hampshire (Coastal)		CBY.B.2.	Barton on Sea Marine Drive East	HTL	HTL	HTL	HTL					
Dorset Hampshire (Coastal)		CBY.B.3.	Barton on Sea Marine Drive and Marine Drive West	Retreat short term - HTL long term	MR	MR	MR					
Dorset Hampshire (Coastal)		CBY.B.4.	Naish Cliff	retreat short term - Do nothing long term	MR	MR	MR					
Dorset Hampshire (Coastal), Christchurch Harbour (transitional)	MA03 Highcliffe	CBY.C.1.	Highcliffe to Friars Cliff	Selectively HTL	HTL	HTL	HTL	Present management will be continued in this area to reduce risk to property along the crest of the cliff. As the cliff is relatively stable, maintaining the beach width through beach management and recharge is the preferred method. Continuing this management method aims to sustain the coastal slope and foreshore. It is not expected to affect water body status.	N/A	✓	✓	✓
Christchurch Harbour (transitional)	MA04 Friars Cliff to Mudeford Quay	CBY.D.1.	Avon Beach	Selectively HTL	HTL	HTL	HTL	Present management will be continued in this area where the frontage is maintained by beach recharge, compensating for a general trend for loss of beach towards the east. This is supported by rock groyne and the maintenance of timber groyne to the east. The aim is to maintain the alignment of Mudeford Quay and Avon Beach. Continuing this management is not expected to effect water body status.	N/A	✓	✓	✓
Christchurch Harbour (transitional)		CBY.D.2.	Mudeford Quay	Selectively HTL	HTL	HTL	HTL					

Assessment Table 3. Assessment of SMP Policy against the Environmental Objectives (cont).

Christchurch Harbour (transitional)	MA05 Mudeford Spit to Southbourne	CBY.E.1.	Mudeford Spit	HTL	HTL	MR	MR	Present Management will be continued at Mudeford Spit in the short term. In the mid term it will be allowed to roll back, but still maintaining an effective barrier to the harbour. This roll back may have an impact on the extent of the saltmarsh behind the spit with increased exposure of these sensitive intertidal habitats for angiosperms, macroalgae, benthic/macro invertebrates and associated changes in fish habitats, but this will not fail the WFD Environmental Objectives, as new habitats form as it rolls back with sea level rise, although it may be an issue with regard to HRA. Current maintenance practices will continue at Hengistbury Head and Solent beach will be allowed to roll back and form an embayment. The aim of the policy in this Management Area is to maintain the overall influence of this section of the coast ensuring that neither the Solent beach isthmus nor Mudeford Spit breach. Due to no large scale changes to management practices in this area, we do not see potential for failure of the WFD Objectives.	N/A	✓	✓	✓
Dorset Hampshire (Coastal)		CBY.E.2.	East of Hengistbury Head	HTL	MR	MR	MR					
Dorset Hampshire (Coastal)		PBY.E.3.	Hengistbury Head Long Groyne	Allow backshore to retreat, selectively holding beach width	HTL	HTL	HTL					
Dorset Hampshire (Coastal)		PBY.E.4.	Solent Beach	Selectively HTL	MR	MR	MR					
Dorset Hampshire (Coastal)		PBY.E.5.	Southbourne	Selectively HTL	HTL	HTL	MR					
Christchurch Harbour (transitional), River Mude (river)	MA06 Christchurch Harbour	CHB.F.1.	Mudeford	Not previously included	MR	MR	HTL	The intent in this area is to maintain a general policy of HTL, but also to ensure opportunity for natural adaptation of habitats for phytoplankton, macroalgae, angiosperms, benthic/macroinvertebrates and fish. Around Mudeford move defences back over time to allow for sea level rise, this will allow continued development of above habitats as sea levels rise. Current maintenance at Christchurch will continue into the future. At Wick the plan is to protect the village, but allow natural development of the surrounding area. Overall in the harbour area there is the potential to change the extent of salt marsh habitats and for saline intrusion into the rivers (river waterbodies River Mude GB108043011020, Hampshire Avon GB108043015840 & River Stour GB108043011040), however this is uncertain in terms of scale. Natural development of estuary habitat should be encouraged over the existing marsh and rising land and to the south side of the estuary. Because of this natural adaptation and continued development of habitats for biological indicator species, we do not see at this stage potential for failure of the WFD Environmental Objectives. The managed realignment of areas such as Mudeford may improve the status of the waterbody.	N/A	✓	✓	✓
Christchurch Harbour (transitional)		CHB.F.2.	Stanpit Marshes	Not previously included	HTL	MR	MR					
Christchurch Harbour (transitional), Stour (river), River Avon (Hampshire) (river),		CHB.F.3.	Christchurch	Not previously included	HTL	HTL	HTL					
Christchurch Harbour (transitional), Stour (river)		CHB.F.4.	Wick	Do Nothing	HTL	HTL	HTL					
Christchurch Harbour (transitional)		CHB.F.5.	South Side of Christchurch Harbour	Do Nothing	NAI	NAI	NAI					
Christchurch Harbour (transitional)		CHB.F.6.	Rear of Mudeford Spit	HTL	MR	MR	MR					
Dorset Hampshire (Coastal)	MA07 Southbourne to Flag Head Chine	PBY.G.1.	Southbourne	HTL	HTL	HTL	HTL/A	The intent in this area is to HTL by maintaining protection by recharging sediment, movement control, sustaining the recreational and amenity benefits along with defence of infrastructure and properties along the cliff. Continuing the current management of defences would have no impact on the overall waterbody status.	N/A	✓	✓	✓
Dorset Hampshire (Coastal)		PBY.G.2.	Boscombe	HTL	HTL	HTL	HTL/A					
Dorset Hampshire (Coastal)		PBY.G.3.	Bournemouth Central	HTL	HTL	HTL	HTL/A					
Dorset Hampshire (Coastal)		PBY.G.4.	Westcliffe and Poole	HTL	HTL	HTL	HTL					

Assessment Table 3. Assessment of SMP Policy against the Environmental Objectives (cont).

Dorset Hampshire (Coastal)	MA08 Flaghead Chine to Handfast Point (Open Coast)	PBY/STU.H.1	Flag Head Cliff to Sandbanks Head	HTL	HTL	HTL	HTL/A	The South Haven Point to the Training Bank section will be allowed to develop naturally - in the short term realignment of the existing caes and car parks etc. Training Bank itself will be held in it current position to maintain access to the harbour. South of Training bank will be allowed to develop naturally but in the short term managed realignment of the car parks etc. The NAI policy along the Studlands dunes frontage will allow this area to develop in a natural manner retaining diversity of biological indicator species habitats, maintaining the continuation of coastal processes and natural development of the dune and heathland. This could potentially contribute towards improving the status of the waterbody.	N/A	✓	✓	✓
Poole Harbour (transitional)		PBY/STU.H.2	Sandbanks Village	HTL	HTL	HTL	HTL					
Poole Harbour (transitional)		PBY/STU.H.3	Sandbanks Inner Face	HTL	HTL	HTL	HTL					
Poole Harbour (transitional), Dorset/Hampshire (coastal)		PBY/STU.H.4	South Haven Point	Selectively HTL	HTL	HTL	HTL					
Dorset Hampshire (Coastal)		PBY/STU.H.5 a.	Training Bank	Selectively HTL, Do nothing short term - Retreat long term	HTL	HTL	HTL					
Dorset Hampshire (Coastal)		PBY/STU.H.5	Studland Dunes	Selectively HTL, Do nothing short term - Retreat long term	NAI	NAI	NAI					
Dorset Hampshire (Coastal)		PBY/STU.H.6	Studland Village	Do nothing short term - retreat long term	MR	NAI	NAI					
Dorset Hampshire (Coastal)		PBY/STU.H.7	The Warren to Handfast Point	Do nothing	NAI	NAI	NAI					
Poole Harbour (transitional), Trib of Poole Harbour (Luscombe Valley Stream) (river)	MA09 Poole Harbour North	PHB.I.1.	Luscombe Valley to Parkstone Bay	HTL	HTL	HTL	HTL	The preferred policy for this area is to continue present management practices. From Luscombe Park to Lower Hamworthy, private defences are common and the intent is for continued support for managemnt of private defences. The policies in this area are not expected to have any impact on the status of the waterbody as they are not changing from those at present.	N/A	✓	✓	✓
Poole Harbour (transitional)		PHB.I.2.	Poole Quay	HTL	HTL	HTL	HTL					
Poole Harbour (transitional)		PHB.I.3.	Holes Bay	Selectively HTL	HTL	HTL	HTL					
Poole Harbour (transitional)		PHB.I.3a.	Holes Bay Northwest	Selectively HTL	NAI	NAI	NAI					
Poole Harbour (transitional)		PHB.I.4.	Port Area	HTL	HTL	HTL	HTL					
Poole Harbour (transitional)		PHB.I.5.	Lower Hamworthy	Selectively HTL short term - selectively retreat long term	HTL	HTL	HTL					
Poole Harbour (transitional), Sherford River (river), Trib of Poole Harbour (Upton Heath Stream) (river)	MA10 Poole Harbour - Upper Estuary	PHB.J.1.	Hamworthy Common	Do nothing short term, selectively hold the line long term	MR	MR	NAI	Existing legal requirement for flood defences in these areas. Defences will need to be set back to a new defence line to ensure protection of towns. Potential to increase saline intrusion into the River Frome GB108044009690 and River Piddle GB108044010080 rivers in line with sea level rise, but conversely there is potential to increase salt marsh area towards the lower end of the rivers. The lower defended marshes at Wareham and areas upstream are designated SPA and SAC and compensatory habitat for areas affected by saline flooding would have to be identified. SMP policy therefore anticipates withdrawing management of defences in these areas in the short term to provide this compensatory habitat, subject to legal issues. This withdrawal of defences may increase the extent of intertidal habitats and associated macroalgae, angiosperms, benthic/macro invertebrates and associated fish habitats, potentially contributing to an improvement in waterbody status and allowing adaptation to potential sea level rise.	N/A	✓	✓	✓
Poole Harbour (transitional), Sherford River (river), Trib of Poole Harbour (Upton Heath Stream) (river)		PHB.J.2.	Lychett Bay	Do nothing short term, selectively hold the line long term	NAI	NAI	MR					
Poole Harbour (transitional), Sherford River (river), Trib of Poole Harbour (Upton Heath Stream) (river)		PHB.J.2a.	Lychett Bay East	Do nothing short term, selectively hold the line long term	NAI	MR	MR					
Poole Harbour (transitional)		PHB.J.3.	Holton Railway Line	Selectively HTL	HTL	HTL	HTL					
Poole Harbour (transitional), PIDDLE (Lower), Wareham Forest Stream, Dorset Frome (Lower) & Furzebrook Stream,		PHB.J.4.	Wareham	Selectively HTL short term	MR	MR	MR					
Poole Harbour (transitional)		PHB.J.5.	Arne Peninsular	do nothing	NAI	NAI	NAI					

Assessment Table 3. Assessment of SMP Policy against the Environmental Objectives (cont).

Poole Harbour (transitional)	MA11 Poole Harbour - Brownsea Island	PHB.L.1.	Western Island	Do nothing	NAI	NAI	NAI	Policies chosen for Brownsea Lagoon will help to maintain its natural shoreline and remove defences slowly over time potentially contributing towards increasing extents of habitats for macroalgae, angiosperms, benthic/macro invertebrates and fish, improving the waterbody status in terms of WFD.	N/A	✓	✓	✓
Poole Harbour (transitional)		PHB.L.2.	Brownsea Lagoon	Selectively hold the line	MR	MR	MR					
Poole Harbour (transitional)		PHB.L.3.	Brownsea Quay	Selectively hold the line	HTL	MR	MR					
Poole Harbour (transitional)	MA12 Poole Harbour - South	PHB.K.1.	Poole Harbour South	Do nothing	NAI	NAI	NAI	The policy for the section stretching from Arne Peninsular around to South Haven point is to allow natural coastal evolution. The policies in this area are not expected to have any impact on the status of the waterbody as they allow for roll back of habitats and associated angiosperms, benthic/macro invertebrates etc in response to rising sea levels.				
Poole Harbour (transitional), Corfe River (river), Trib of Poole Harbour (Brenscombe Stream - Wytch) (river), Trib of Poole Harbour (Burnbake Stream) (river), Trib of Poole Harbour (Greenland Stream) (river)		PHB.K.2.	Furzey, Round, Long and Green Islands	Do nothing	NAI	NAI	NAI					
Dorset Hampshire (Coastal)	MA13 Handfast Point (to and including Ballard Common)	SWA.M.1.	Handfast to Ballard Common	Do Nothing	NAI	NAI	NAI	The intent of the plan here is to maintain the important nature conservation geological and exceptional landscape quality of the area. The policy is to allow natural coastal evolution through NAI. This is not expected to have any impact on the waterbody status.	N/A	✓	✓	✓
Dorset Hampshire (Coastal)	MA14 Ballard Common to Peveril Point	SWA.N.1.	New Swanage	HTL	HTL	HTL	MR	The policies in this area are chosen to maintain the viability and important heritage and community aspects of Swanage, reducing flooding and providing protection to the town. Continuation of the HTL policy and the absence of any large scale measures that could be taken it is not considered that there would be a deterioration in water body status through SMP policy.	N/A	✓	✓	✓
Dorset Hampshire (Coastal)		SWA.N.2.	Promenade	HTL	HTL	HTL	HTL					
Dorset Hampshire (Coastal)		SWA.N.3.	Town Centre	HTL	HTL	HTL	HTL					
Dorset Hampshire (Coastal)		SWA.N.4.	Town Centre to Deverill Point	Selectively HTL	HTL	HTL	HTL					
Dorset Hampshire (Coastal)	MA15 Peverill Point to Durlstone Head	DUR.O.1.	Durlston Bay	Various - Do nothing, HTL, Do nothing with long term retreat	MR	MR	NAI	Managed realignment policy here is about drainage at the top of the cliff regarding stability rather than realigning defences at the toe of the cliff. Therefore there is no impact on the coastal waterbody status.	N/A	✓	✓	✓

Assessment Table 4. Summary of achievement (or otherwise) of Environmental Objectives for each water body in the SMP area.

	Water Body	Environmental objectives met?				WFD Summary Statement required?
		WFD1	WFD2	WFD3	WFD4	
GB650705150000	Solent (Coastal)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB520804315900	CHRISTCHURCH HARBOUR (Transitional)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB520804415800	POOLE HARBOUR (Transitional)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB108044009980	Trib of Poole Harbour (Greenland Stream) (River)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB108044010010	Trib of Poole Harbour (Brencombe Stream - Wytch) (River)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB108044010020	CORFE RIVER (River)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB108044074660	Trib of Poole Harbour (Burnbake Stream) (River)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB108044009690	Dorset Frome (Lower) & Furzebrook Stream (River)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB108044010080	PIDDLE (Lower) (River)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB108044010040	Trib of Poole Harbour (Luscombe Valley Stream) (River)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB108044010050	Wareham Forest Stream (River)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB108044010100	Sherford River (River)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB108043015840	River Avon (Hampshire) (River)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB107042011170	Danes Stream (River)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB108043011020	River Mude (River)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB108044010070	Trib of Poole Harbour (Upton Heath Stream) (River)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB108043011040	Stour (River)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives
GB30846102	Little Sea (Lake)	N/A	✓	✓	✓	No - Not necessary as SMP policies should support Environmental Objectives

4.0 CONCLUSIONS

For all of the Poole and Christchurch Bay SMP2 Management Areas, it is considered unlikely that the proposed policies will affect the current or target Ecological Status (or Potential) of the relevant Water Framework Directive Waterbodies. Therefore, the proposed policies meet the Environmental Objectives set out at the beginning of this report. None of the Groundwater Bodies is considered at risk of saline intrusion with regard to its chemical status. Further strategies and studies in this area will have to take this into account in the future the Environmental Objectives are not compromised.

There are no High Status sites in the Poole and Christchurch Bays SMP2 Area, so Environmental Objective WFD1 (no changes affecting High Status sites) is not applicable for this assessment.

There are several recommendations to look into where SMP boundaries could change to match those of the WFD Waterbody boundaries, notably at Christchurch Harbour, Poole Harbour and Hurst Spit. However, SMP Management Area boundaries are based on coastal processes and social and economic reasons and are realistically unlikely to change.

The Programme of Measures from the River Basin Management Plan was not available at the time this assessment was undertaken, therefore mitigation measures have not been included in Assessment Table 2.

At this stage the WFD Assessment is to be used in general terms as a guide to flag up areas where there is potential for problems to occur at strategy and scheme stage in terms of the WFD Environmental Objectives.

REFERENCES

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