North Devon and Somerset Coastal Advisory Group (NDASCAG)

Shoreline Management Plan Review (SMP2)
Hartland Point to Anchor Head

Appendix K – Water Framework Directive Assessment

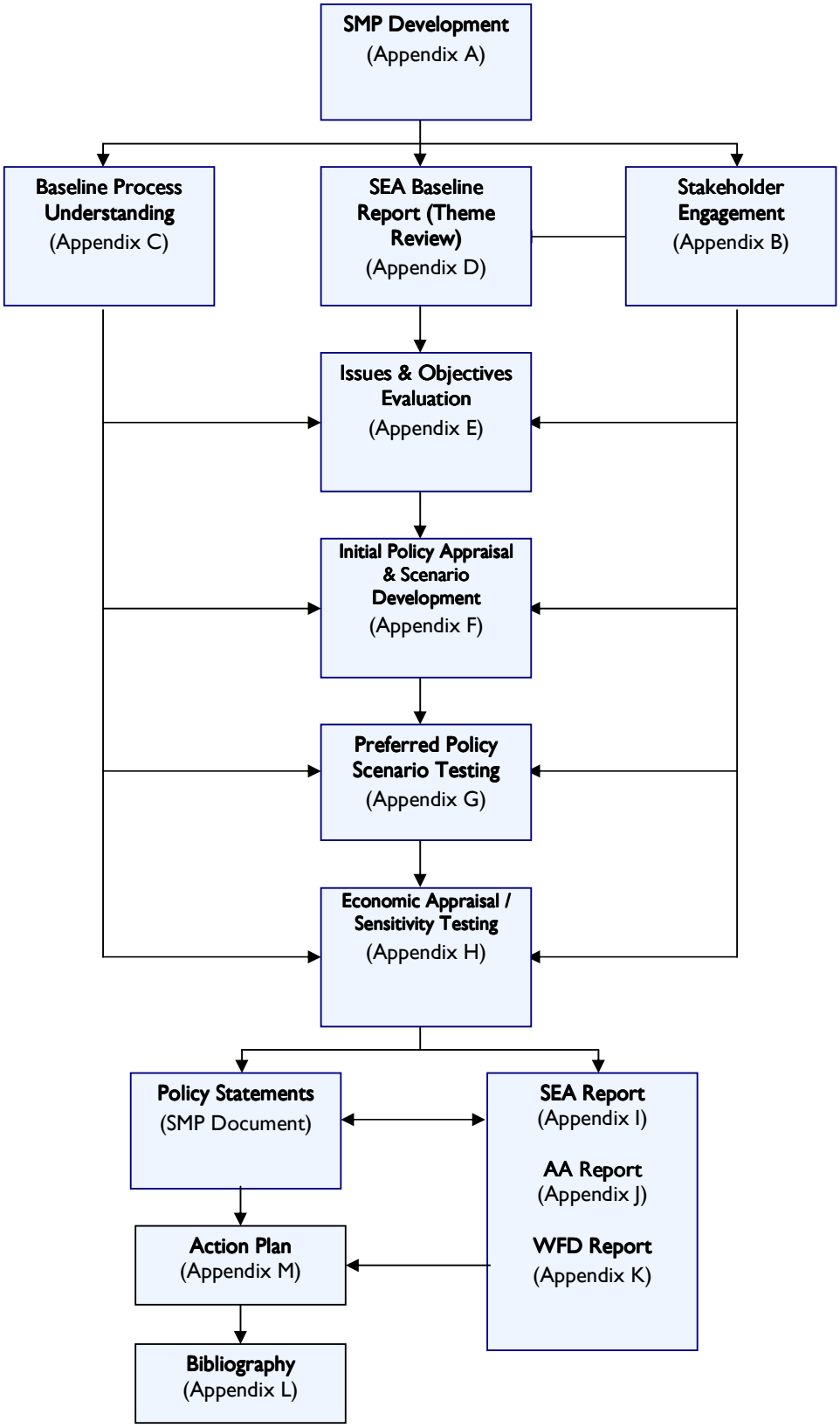
Halcrow

The Supporting Appendices

These appendices and the accompanying documents provide all of the information required to support the Shoreline Management Plan. This is to ensure that there is clarity in the decision-making process and that the rationale behind the policies being promoted is both transparent and auditable. The appendices are:

A: SMP Development	This reports the history of development of the SMP, describing more fully the plan and policy decision-making process.
B: Stakeholder Engagement	All communications from the stakeholder process are provided here, together with information arising from the consultation process.
C: Baseline Process Understanding	Includes baseline process report, defence assessment, NAI and WPM assessments and summarises data used in assessments.
D: SEA Environmental Baseline Report (Theme Review)	This report identifies and evaluates the environmental features (human, natural, historical and landscape).
E: Issues & Objectives Evaluation	Provides information on the issues and objectives identified as part of the Plan development, including appraisal of their importance.
F: Initial Policy Appraisal & Scenario Development	Presents the consideration of generic policy options for each frontage, identifying possible acceptable policies, and their combination into 'scenarios' for testing. Also presents the appraisal of impacts upon shoreline evolution and the appraisal of objective achievement.
G: Preferred Policy Scenario Testing	Presents the policy assessment and appraisal of objective achievement towards definition of the Preferred Plan (as presented in the Shoreline Management Plan document).
H: Economic Appraisal and Sensitivity Testing	Presents the economic analysis undertaken in support of the Preferred Plan.
I: Strategic Environmental Assessment (SEA) Report	Presents the various items undertaken in developing the Plan that specifically relate to the requirements of the EU Council Directive 2001/42/EC (the Strategic Environmental Assessment Directive), such that all of this information is readily accessible in one document.
J: Appropriate Assessment Report	Presents the Appropriate Assessment of SMP policies upon European designated sites (SPAs and SACs) as well as Ramsar sites, where policies might have a likely significant effect upon these sites. This is carried out in accordance with the Conservation (Natural Habitats, &c.) Regulations 1994 (the Habitats Regulations).
K: Water Framework Development Report	Presents assessment of potential impacts of SMP policies upon coastal and estuarine water bodies, in accordance with the requirements of EU Council Directive 2000/60/EC (the Water Framework Directive).
L: Metadatabase and Bibliographic database	All supporting information used to develop the SMP is referenced for future examination and retrieval.
M: Action Plan Summary Table	Presents the Action Plan items included in Section 6 of the main SMP document (The Plan) in tabular format for ease of monitoring and reporting action plan progress.

Within each appendix cross-referencing highlights the documents where related appraisals are presented. The broad relationships between the appendices are illustrated below.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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 EU 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 (WFD) 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.

All the Transitional and Coastal (TraC) and Groundwater Bodies in the North Devon and Somerset SMP2 area were identified and assessed along with the freshwater bodies that are within the Environment Agency's Tidal Flood Zone 2 (up to 0.5% chance of flooding 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 Biological Quality Elements, were identified. Groundwater bodies were also considered.

The preferred SMP2 policies were, for each policy unit and for each 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 water body.

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

There are 9 TraC water bodies, 45 River water bodies, 1 Lake water body and 6 Groundwater bodies identified in the North Devon and Somerset SMP2 area. There are no High Status sites in the North Devon and Somerset SMP2 area.

For many of the North Devon and Somerset 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.

However, there are 8 Management Areas where the proposed policies have the potential not to meet one or more the Environmental Objectives. These being:

- Torridge Estuary – Potential to fail WFD 3.
- Taw Estuary – Potential to fail WFD 3.
- Foreland Point to Hurlestone Point – Potential to fail WFD 2 & 4.
- Minehead to Blue Anchor – Potential to fail WFD 3.
- Blue Anchor to St Audries Bay – Potential to fail WFD 3.
- Hinkley Point – Potential to fail WFD 2 & 3.
- Hinkley Point to Stolford – Potential to fail WFD 3.
- Parrett Estuary (Combwich to River Brue) – Potential to fail WFD 3.

There are several recommendations to look into where SMP boundaries could change to match those of the WFD waterbody boundaries, notably at Westward Ho!, Northam Burrows, Hinkley Point and Brean Down. 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.

Table of Contents

K.1 Introduction

K.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 North Devon and Somerset SMP2 policy options in terms of the requirements of the Directive. The North Devon and Somerset SMP2 draft policy options were completed in August 2009 and subsequently consulted on. 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 North Devon and Somerset SMP2 highlighting future issues for consideration at policy implementation stage.

K.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 ground waters 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 "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, physio-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

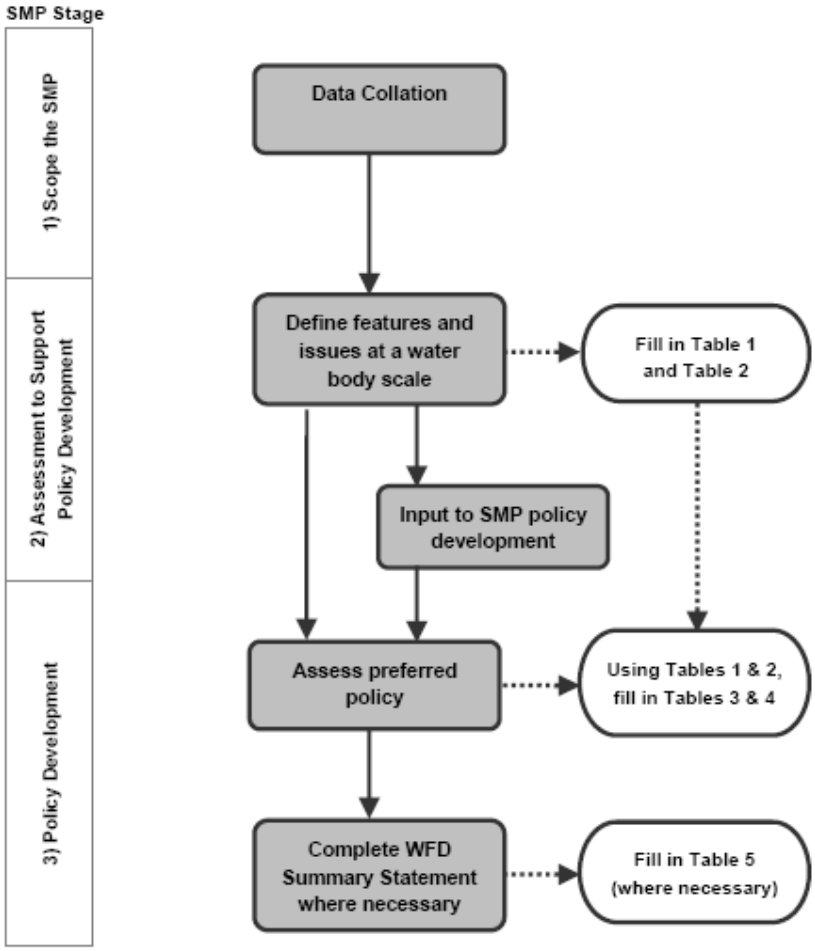
Where there are sites protected under EU legislation (e.g. the Birds or Habitats Directives, Shellfish Waters Directive), the Directive aims for compliance with any relevant standards or objectives for these sites. Therefore, where a site which is water dependent in some way is protected via designation 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.

K.2 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.



K.2.1 Scoping the SMP2 – data collation

All the Transitional and Coastal (TraC) water bodies present within the North Devon and Somerset 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.

K.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.

K.2.3 Assess preferred policies against WFD environmental objectives

The preferred SMP2 policies were, for each policy unit and for each SMP epoch, (0 -20, 20-50 & 50-100 years), 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 a 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 once 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.

K.3 Results

K.3.1 Scoping the SMP2 – data collation

3.1.1 Transitional and Coastal water bodies (TraC)

There are 9 TraC water bodies (Tables 1a & 1b) within the North Devon and Somerset SMP2 area (Figure 3.1). Including 3 Transitional water bodies, all of which are designated as Candidate Heavily Modified and 6 Coastal water bodies, 1 of which is designated as Candidate Heavily Modified and 5 of which are not yet designated in the River Basin Management Plan.

3.1.2 Freshwater bodies (FWBs)

There are 45 River waterbodies identified (Table 1c) in the North Devon and Somerset SMP2 area and 1 Lake waterbody (Table 1d). Of these, 16 River waterbodies are designated as Candidate Heavily Modified, 4 Candidate Artificial and 25 not yet designated under the River Basin Management Plan.

Relevant 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 North Devon and Somerset 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 North Devon and Somerset SMP2 policies.

Potential Issue identified with respect to Freshwater bodies	Freshwater bodies that may be impacted by SMP2 policies (ID number)
Hold The Line policies for Taw/Torridge transitional water body could lead to increased tide locking in, and therefore prolonged increased water depths for, adjacent freshwater bodies, in response to climate change and sea level rise.	GB108050014500 Torridge/tidal, GB108050014510 Horwood Stream, GB108050014590 Taw Estuary, GB108050019980 Taw Estuary, GB108050020040 Bradiford Water, GB10805020020 Knowle Water, GB108050020010 River Caen, GB108050020000 Taw Estuary.
Hold The Line policies for Bristol Channel South Inner coastal water body could lead to increased tide locking in, and therefore prolonged increased water depths for, adjacent freshwater bodies, in response to climate change and sea level rise.	GB108051020370 Park Stream Minehead, GB108051020560 Washford River.
Hold The Line policies for Parrett transitional water body could lead to increased tide locking in, and therefore prolonged increased water depths for, adjacent freshwater bodies, in response to climate change and sea level rise.	GB108052021320 Fiddington Brook, GB1080052021310 Cannington Brook, GB108052021150 Kings Sedgmoor Drain, GB108052021210 Huntspill River, GB108052021260 River Brue.

3.1.3 Groundwater bodies (GWBs)

There are 6 Groundwater bodies identified (Table 1e, Figures 3.2 & 3.3) in the North Devon and Somerset SMP2 area.

Table of Groundwater Body Issues

Groundwater Body	Issue
Bristol Triassic (GB40902G804800)	Not at risk of saline intrusion with regard to chemical status and at good status – no issues.
Mendips (GB40901G804600)	Not at risk of saline intrusion with regard to chemical status and at good status – no issues.
Wells GB40902G804700	Not at risk of saline intrusion with regard to chemical status and at good status – no issues.
Tone and North Somerset Streams GB40802G806400	Not at risk of saline intrusion with regard to chemical status and at good status. Potential for Chemical Status to deteriorate with regard to SMP NAI policy because of the presence of an old landfill site in policy unit 7d17 Porlock Weir to Hurlstone Point.
River Taw and North Devon Streams GB40802G801000	Not at risk of saline intrusion with regard to chemical status and at good status – no issues.
Torridge and Hartland Streams GB40802G800600	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.

The only location where Source Protection Zone 3 is near the coastline, is at the Moorlake Boreholes, Minehead, in the Tone and North Somerset Streams Groundwater body (Figure 3.4).

SMP2 Policy has the potential to cause the deterioration in the quality of abstractions due to saline intrusions where there are Managed Realignment or No Active Intervention policies. The policy covering this area in the SMP2 is No Active Intervention. However, this site is outside the maximum erosion extent predicted over the next 100 years, therefore there are no issues regarding deterioration in quality of abstractions due to saline intrusions over the life of the SMP2.

Figure 3.1 **TraC Waterbodies within the North Devon and Somerset SMP2 Area**

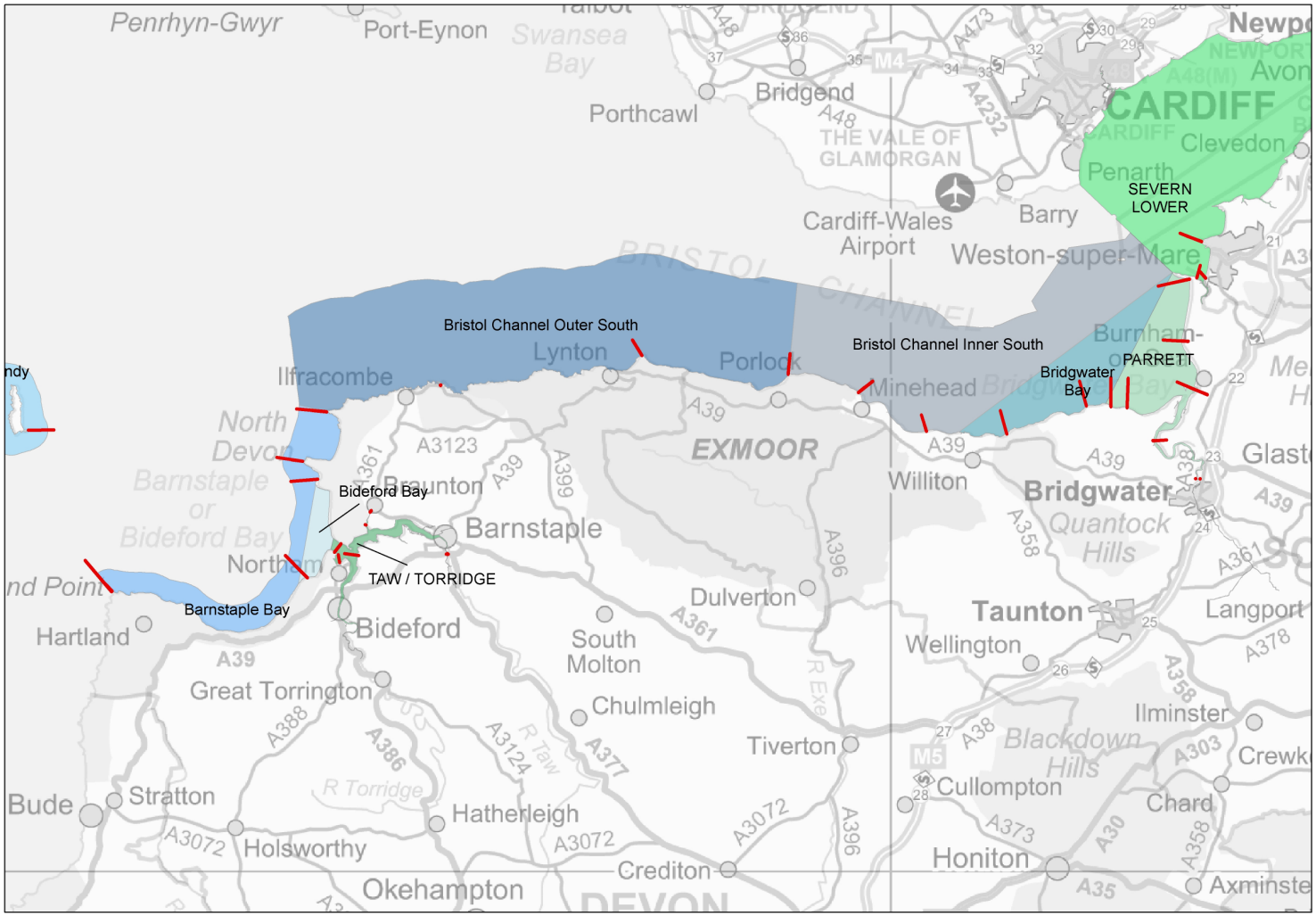


Figure 3.2 **Groundwater Body Chemical Risk within the North Devon and Somerset SMP2 Area.**

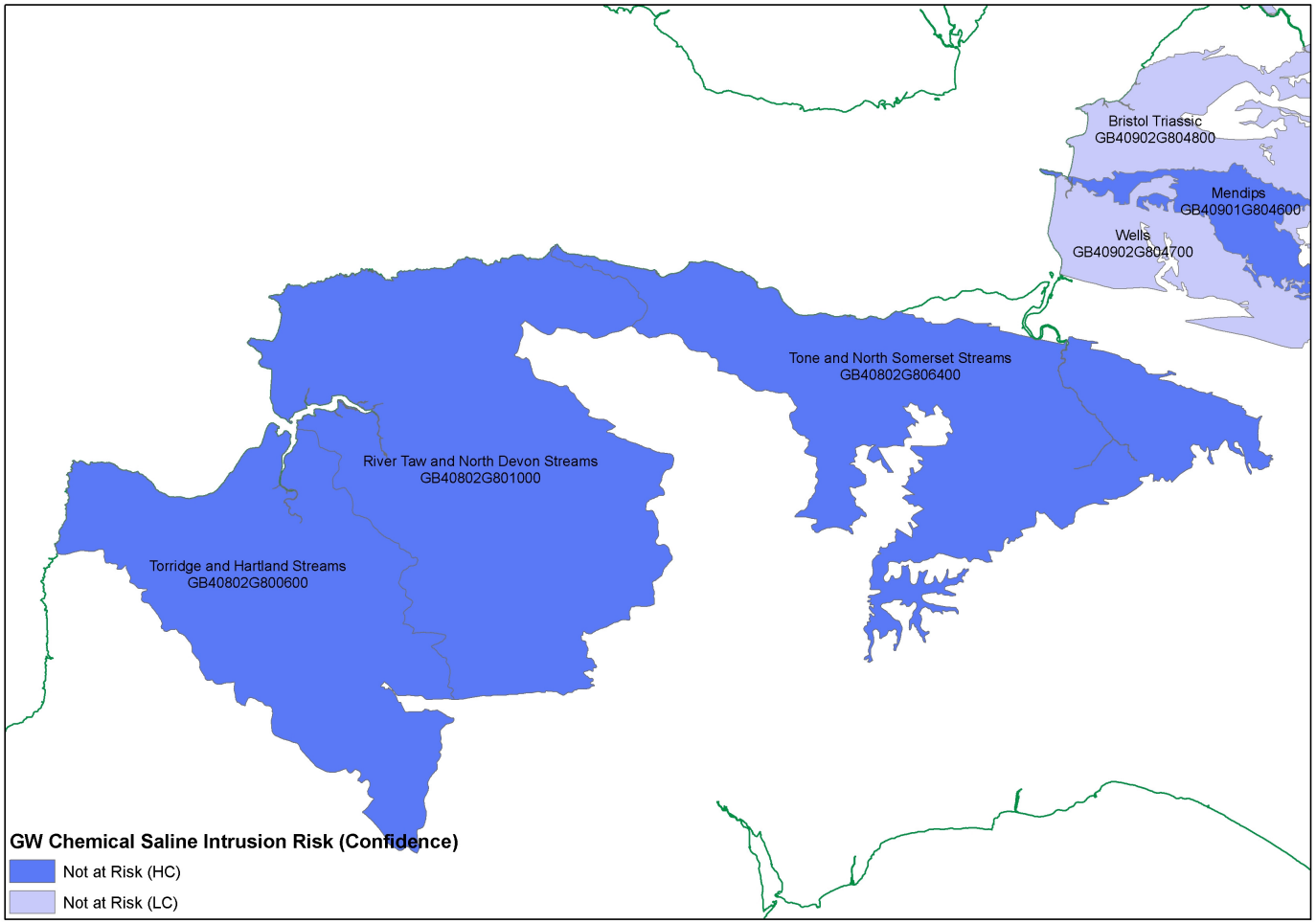


Figure 3.3 Groundwater Body Chemical Status within the North Devon and Somerset SMP2 Area.

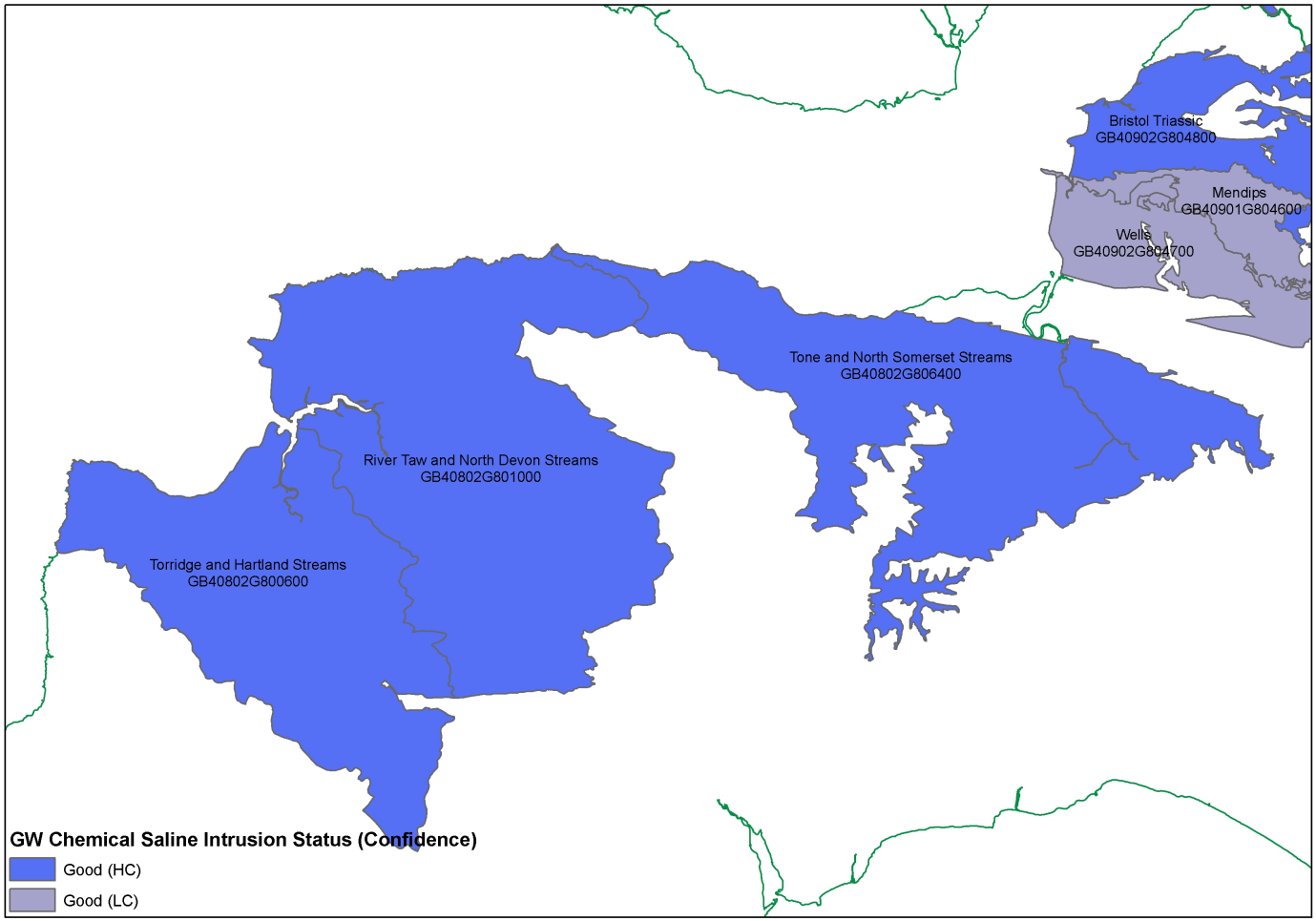
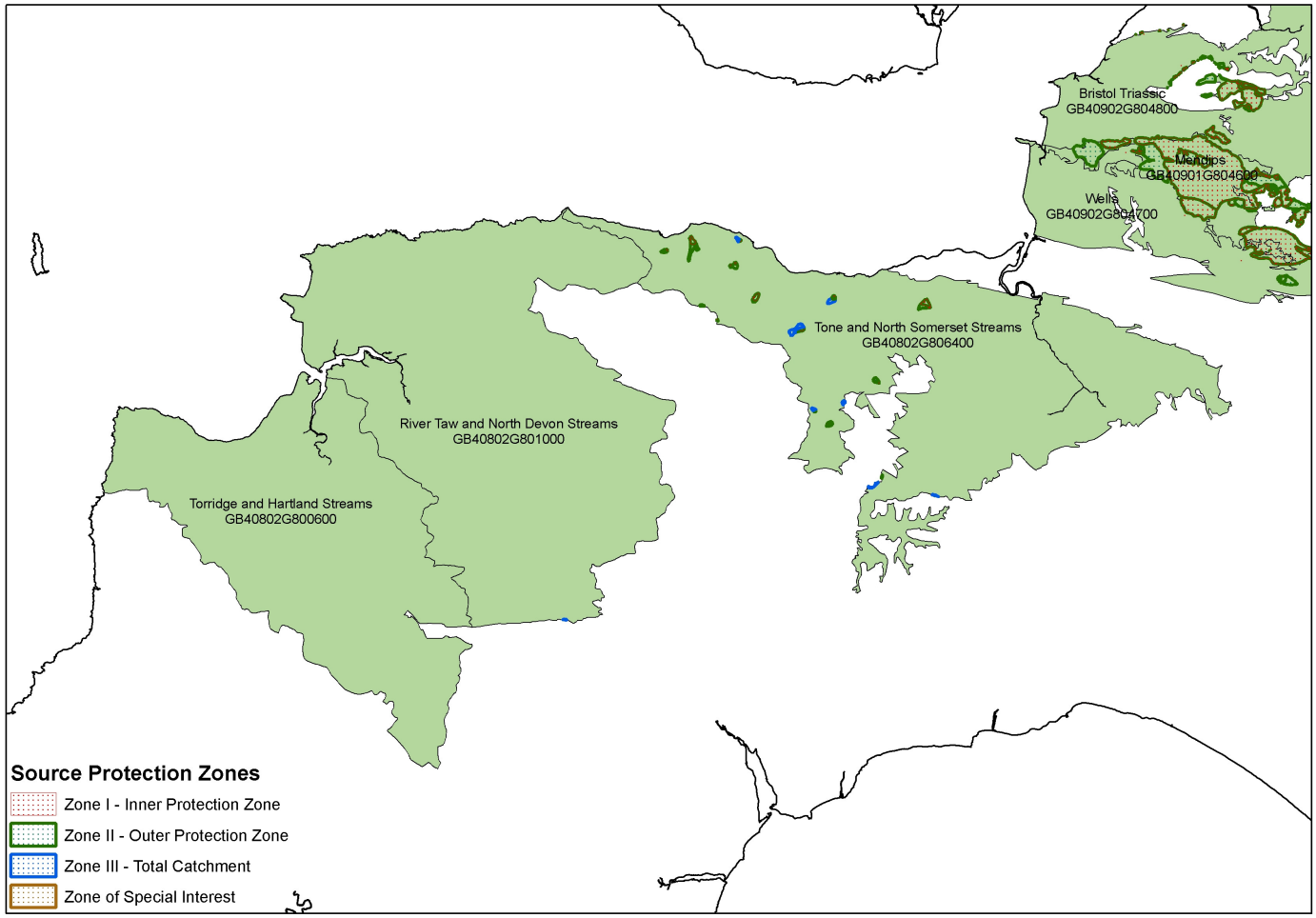


Figure 3.4 **Groundwater Body Source Protection Zones within the North Devon and Somerset SMP2 Area.**



3.1.4 Boundary Issues

There are several boundary issues within the Poole North Devon and Somerset SMP2 area.

Many of the Transitional and Coastal waterbody boundaries are inconsistent with the SMP2 Management Area boundaries.

SMP2 and WFD Water body boundaries are consistent in the following areas:

- Hartland Point SMP2 Management Area (SMP2 MA) western boundary is consistent with Barnstaple Bay WFD Water body boundary (WFD WB).
- Morte Pointe SMP2 MA is consistent with Barnstaple Bay / Bristol Channel Outer South WFD WB.
- Hurlestone Point SMP2 MA is consistent with Bristol Channel Outer South / Bristol Channel Inner South WFD WB.

Although many of 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:

- SMP MA boundary at Westward Ho! to match Barnstaple Bay / Bideford Bay Coastal WFD WB (Figure 3.5).
- SMP MA boundary at Northam Burrows to match Bideford Bay Coastal / Taw/Torridge Transitional WFD WB (Figure 3.5).
- SMP MA boundary at Hinkley Point to match Bridgwater Bay Coastal / Parrett Transitional WFD WB (Figure 3.6).
- SMP MA boundary at Brean Down to match Bristol Channel Inner South Coastal / Severn Lower Transitional WFD WB (Figure 3.7).

3.1.5 High Status water bodies.

There are no high status waterbodies in the North Devon and Somerset SMP2 area.

Figure 3.5 **SMP2 Management Area and WFD Waterbody boundaries at Westward Ho! and Northam Burrows.**

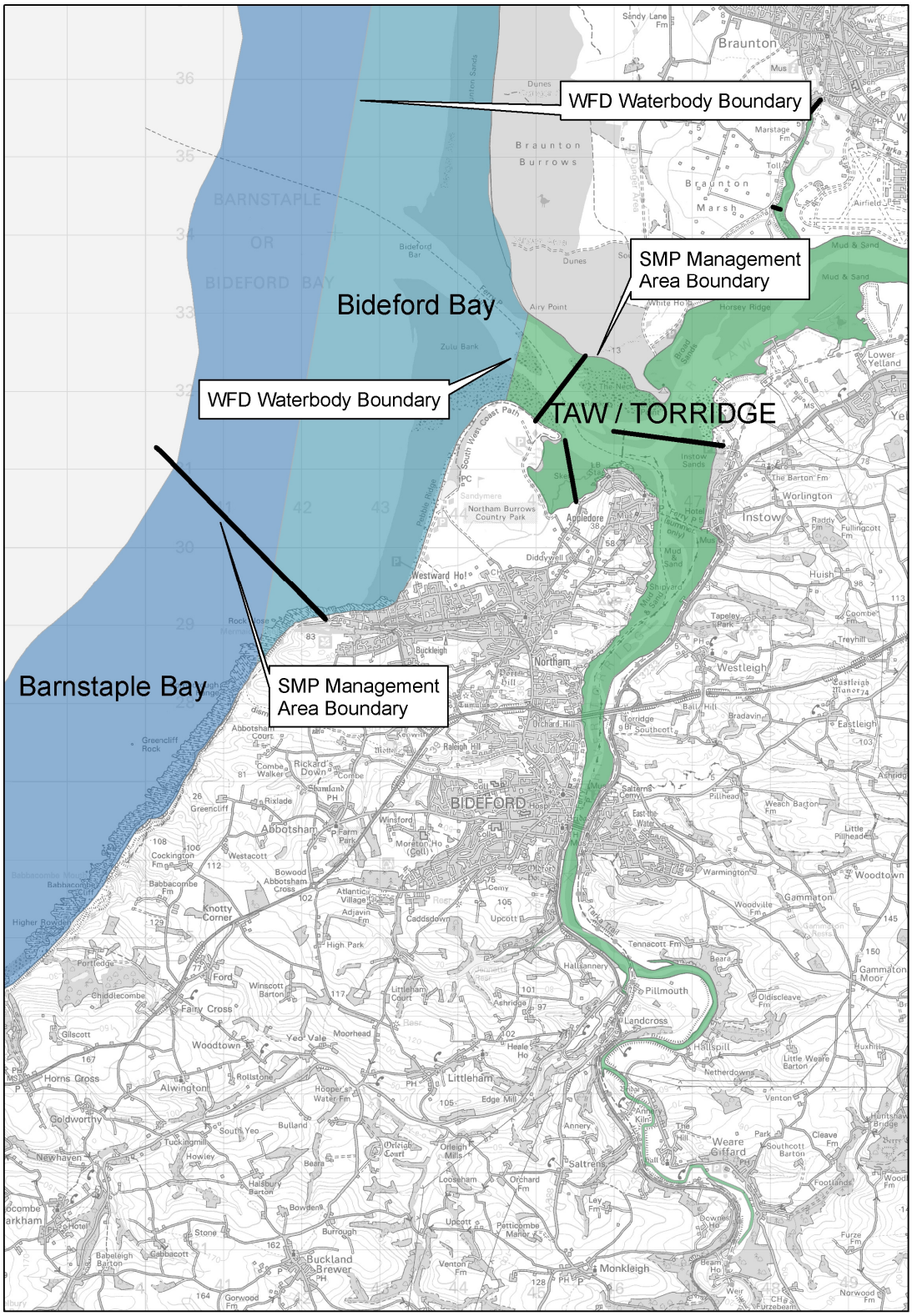


Figure 3.6 **SMP2 Management Area and WFD Waterbody boundaries at Hinkley Point.**

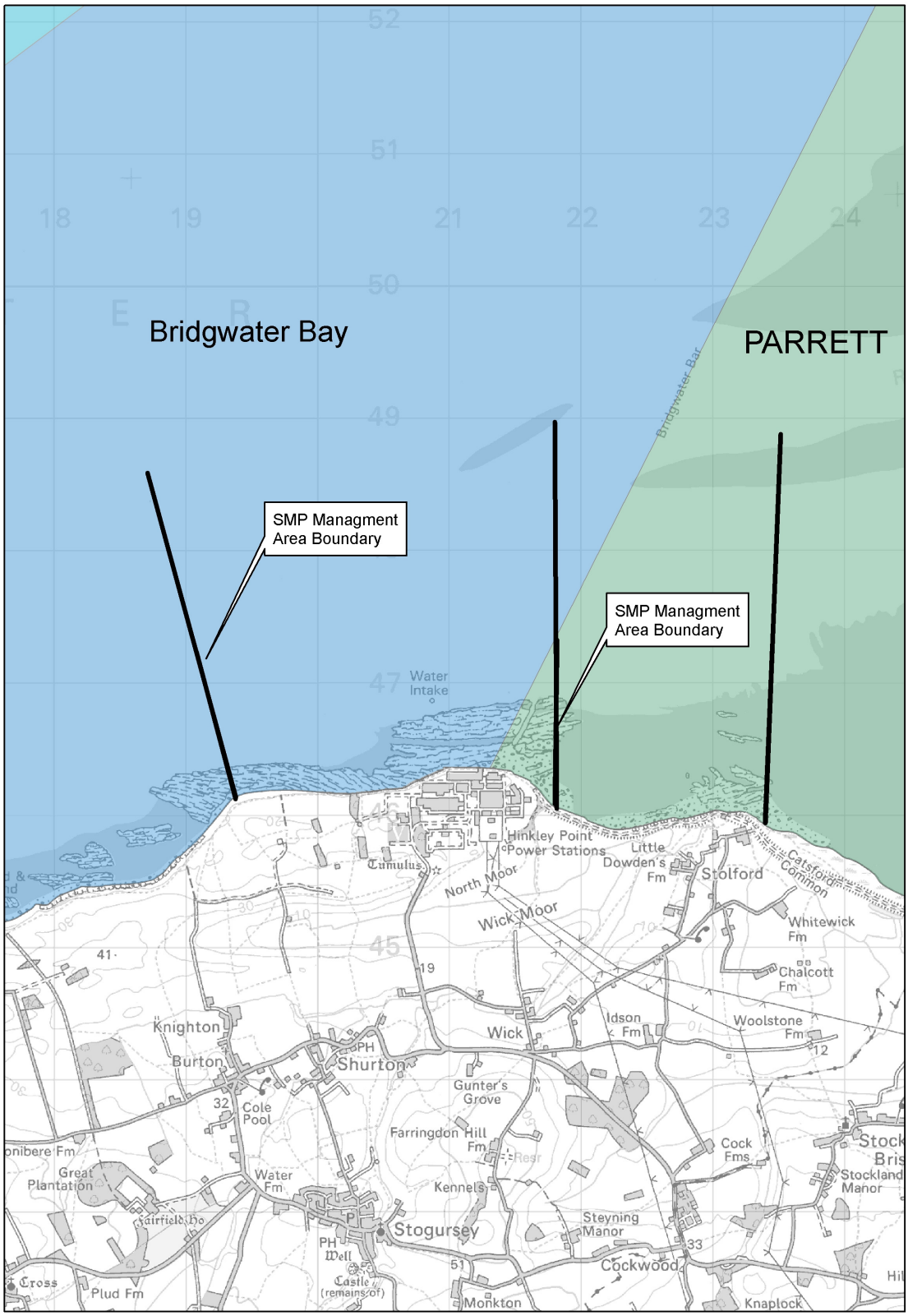
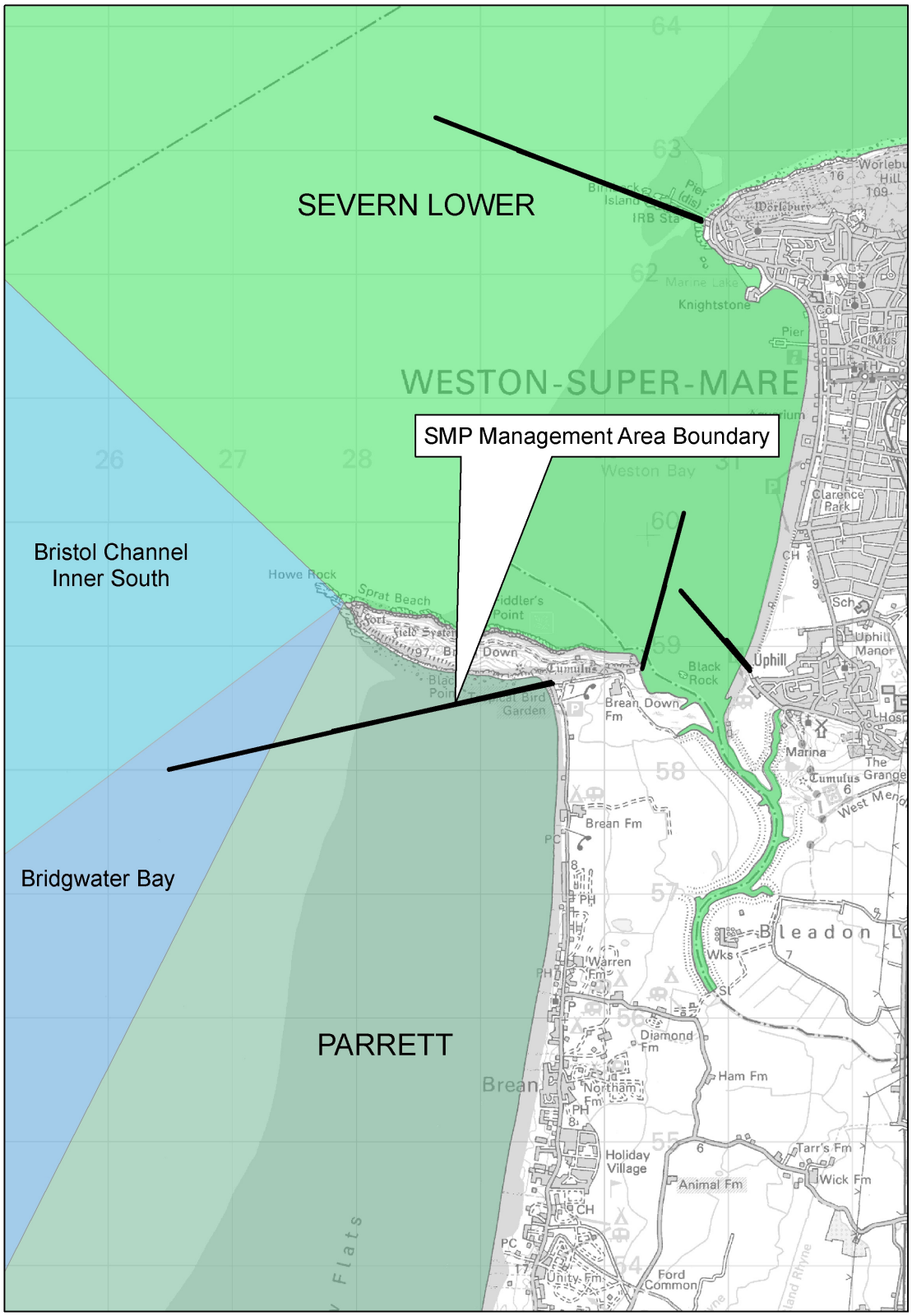


Figure 3.7 **SMP2 Management Area and WFD Waterbody boundaries at Brean Down.**



K.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 North Devon and Somerset SMP2 Area only those that are considered to be potentially affected by the SMP2 policies have been included in the Assessment Tables.

K.3.3 Assess preferred policies against WFD 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.

K.3.4 Assessment tables

Assessment Table 1a Biological Quality Indicators for Coastal Waterbodies.

	Feature	Biological Quality Element	Phytoplankton				Macrophytes										Phytobenthos (diatoms only)	Macroalgae			Angiosperms					Benthic/macro invertebrate					Fish					
	Issue	Potential for change in hydromorphological or physical parameter	Residence time	Water depth	Thermal regime	Turbidity	Slope	Longitudinal position	Shoreline complexity or heterogeneity	Light quality and quantity (for macroalgae and bryophytes)	Episodicity of flows and inundation	Turbidity	Baseflow (in chalk streams)	Riparian shade and structure	Substrate conditions	No hydromorphological elements determined.	Episodicity (at low end of velocity spectrum)	Salinity	Abrasion (associated to velocity)	Inundations (tidal regime)	Sediment loading	Land elevation	Salinity	Abrasion (associated to velocity)	Beach water table (TraC)	Light	Groundwater connectivity	Availability of leaf litter/organic debris	Connectivity with riparian zone	Heterogeneity of habitat (substrate, provision of shelter)	Continuity for migration routes	Substrate conditions	Presence of macrophytes	shoreline/riparian zone)	Accessibility to nursery areas (elevation of saltmarsh, connectivity with
		Water Body Type																																	
GB610807240000	Bideford Bay	Coastal	✗	?	✗	✓											✗	✗	✓	✓	✓	✓	✗	✓	✓	✓	?	✗	✗						
GB610807680003	Barnstaple Bay	Coastal	✗	✗	✗	✗											✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗						
GB610807680004	Bristol Channel Outer South	Coastal	✗	✗	✗	✗											✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗						
GB610878040000	Lundy	Coastal	✗	✗	✗	✗											✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗						
GB670807410000	Bridgwater Bay	Coastal	✗	✓	✓	✓											✗	✗	✓	✓	✓	✓	✗	✓	✗	✓	✗	✗	✗						
GB640807670000	Bristol Channel Inner South	Coastal	✗	✗	✗	✓											✗	✗	✓	✗	✓	✓	✗	✓	✗	✓	✗	✗	✗						

Assessment Table 1b Biological Quality Indicators for Transitional Waterbodies.

	Feature	Biological Quality Element	Phytoplankton				Macrophytes									Phytobenthos (diatoms only)	Macroalgae			Angiosperms					Benthic/macro invertebrate					Fish				
	Issue	Potential for change in hydromorphological or physical parameter	Residence time	Water depth	Thermal regime	Turbidity	Slope	Longitudinal position	Shoreline complexity or heterogeneity	Light quality and quantity (for macroalgae and bryophytes)	Episodicity of flows and inundation	Turbidity	Baseflow (in chalk streams)	Riparian shade and structure	Substrate conditions	No hydromorphological elements determined.	Episodicity (at low end of velocity spectrum)	Salinity	Abrasion (associated to velocity)	Inundations (tidal regime)	Sediment loading	Land elevation	Salinity	Abrasion (associated to velocity)	Beach water table (TraC)	Light	Groundwater connectivity	Availability of leaf litter/organic debris	Connectivity with riparian zone	Heterogeneity of habitat (substrate, provision of shelter)	Continuity for migration routes	Substrate conditions	Presence of macrophytes	Accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone)
		Water Body Type																															
GB530905415401	SEVERN LOWER	Transitional	✗	✗	✗	✗											✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
GB540805015500	TAW / TORRIDGE	Transitional	✓	✓	✗	✓											?	✗	✓	✓	✓	✓	✗	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
GB540805210900	PARRETT	Transitional	✓	✓	✓	✓											✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Assessment Table 1c Biological Quality Indicators for River Waterbodies.

	Feature	Biological Quality Element	Phytoplankton				Macrophytes										Phytobenthos (diatoms only)	Macroalgae			Angiosperms					Benthic/macro invertebrate					Fish				
	Issue	Potential for change in hydromorphological or physical parameter	Residence time	Water depth	Thermal regime	Turbidity	Slope	Longitudinal position	Shoreline complexity or heterogeneity	Light quality and quantity (for macroalgae and bryophytes)	Episodicity of flows and inundation	Turbidity	Baseflow (in chalk streams)	Riparian shade and structure	Substrate conditions	No hydromorphological elements determined.	Episodicity (at low end of velocity spectrum)	Salinity	Abrasion (associated to velocity)	Inundations (tidal regime)	Sediment loading	Land elevation	Salinity	Abrasion (associated to velocity)	Beach water table (TraC)	Light	Groundwater connectivity	Availability of leaf litter/organic debris	Connectivity with riparian zone	Heterogeneity of habitat (substrate, provision of shelter)	Continuity for migration routes	Substrate conditions	Presence of macrophytes	Accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian
		Water Body Type																																
GB108050014000	Hartland/Clovelly	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050014070	Hartland/Clovelly	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050014400	YEO(BIDEFORD)	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050014410	Torridge (Tidal)	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050014420	Torridge (Tidal)	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050014500	Torridge (Tidal)	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050014510	HORWOOD STREAM	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050014530	TAW	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050014550	Torridge (Tidal)	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050014570	Torridge (Tidal)	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050014580	Taw Estuary	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050014590	Taw Estuary	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050014600	Taw Estuary	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050014610	Taw Estuary	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050014620	VENN	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050019980	Taw Estuary	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050020000	Taw Estuary	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050020010	CAEN	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050020020	KNOWL WATER	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108050020040	Bradiford Water	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108051020190	Avill River	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108051020210	AVILL	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108051020230	ALLER	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108051020560	WASHFORD	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108052021150	KINGS SEDGEMOOR DRAIN	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108052021210	HUNTSPILL	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108052021260	BRUE	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108052021270	DURLEIGH BK	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108052021280	Haymoor Old Rhyne	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108052021310	CANNINGTON BK	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108052021320	FIDDINGTON BK	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108052021330	Stogursey Brook	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

Assessment Table 1c Biological Quality Indicators for River Waterbodies (cont).

GB108052021340	STOGURSEY BK	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108052021350	Stogursey Brook	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB109052021530	Pitland Rhyne - source to conf R Axe	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB109052021550	Unnamed trib - source to conf R Axe Estuary	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB109052021560	Hook Pill - source to conf R Axe Estuary	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB109052021570	R Axe-Stubbingham Rhyne to conf Brean Cross Sluice	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB109052021590	Uphill Great Rhyne - source to conf R Axe Estuary	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108051020240	ALLER	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108051020300	HAWCOMBE STR	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108051020360	Lilstock stream(Kilve)	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108051020370	Park stream(Minehead)	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108051020390	PILL	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
GB108051020470	STERRIDGE	River	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

Assessment Table 1d Biological Quality Indicators for Lake Waterbodies.

	Feature	Biological Quality Element	Phytoplankton				Macrophytes									Phytobenthos (diatoms only)	Macroalgae			Angiosperms					Benthic/macro invertebrate					Fish				
	Issue	Potential for change in hydromorphological or physical parameter	Residence time	Water depth	Thermal regime	Turbidity	Slope	Longitudinal position	Shoreline complexity or heterogeneity	Light quality and quantity (for macroalgae and bryophytes)	Episodicity of flows and inundation	Turbidity	Baseflow (in chalk streams)	Riparian shade and structure	Substrate conditions	No hydromorphological elements determined.	Episodicity (at low end of velocity spectrum)	Salinity	Abrasion (associated to velocity)	Inundations (tidal regime)	Sediment loading	Land elevation	Salinity	Abrasion (associated to velocity)	Beach water table (TraC)	Light	Groundwater connectivity	Availability of leaf litter/organic debris	Connectivity with riparian zone	Heterogeneity of habitat (substrate, provision of shelter)	Continuity for migration routes	Substrate conditions	Presence of macrophytes	Accessibility to nursery areas (elevation of saltmarsh, connectivity with shoreline/riparian zone)
		Water Body Type																															
Reservoir	Lake	South West	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✘	✔	✔	✔									✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

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		
Lundy (Coastal) - 7c01 Landing Beach, 7c02 Lundy (except Landing Beach)	Phytoplankton	Potential changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.	Classification: Good Status Environmental objectives: ▪ 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 changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.		
	Angiosperms	Potential changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.		
	Benthic/Macro invertebrates	Potential changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.		
Barnstaple Bay (Coastal) - 7c03 Hartland Point to Clovelly, 7c04 Clovelly, 7c05 Clovelly to Westward Ho! (Seafield House), 7c32 Croyde Sands, 7c33 Middleborough Hill (Croyde Bay north), 7c34 Middleborough Hill (Croyde Bay north) to Baggy Point, 7c35 Baggy Point to Napps Cliff (Putsborough), 7c36 Putsborough Sands and Vention, 7c37 Vention to Woolacombe Beach (Woolacombe Sands) , 7c38 Woolacombe Beach, 7c39 Woolacombe to Morte Point	Phytoplankton	Potential changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.	Classification: Good Status Environmental objectives: ▪ 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 changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.		
	Angiosperms	Potential changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.		
	Benthic/Macro invertebrates	Potential changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.		
Bideford Bay (Coastal) - 7c06 Westward Ho!, 7c07 Northam Burrows , 7c30 Braunton Burrows, 7c31 Saunton Down	Phytoplankton	Potential for effects on phytoplankton due to possible changes in Water depth and turbidity as a result of SMP policy	Classification: Moderate Status Environmental objectives: ▪ 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 abrasion (associated with velocity) as a result of SMP policy		
	Angiosperms	Potential for effects on Angiosperms due to possible changes in innundations (tidal regime), sediment loading, land elevation and abrasion (associated to velocity) as a result of SMP policy		
	Benthic/Macro invertebrates	Potential for effects on Benthic/Macro invertebrates due to possible changes in beach water table (TraC), light, Groundwater connectivity and connectivity with riparian zone as a result of SMP policy		

Assessment Table 2 Features and Issues Table (cont).

Bristol Channel South Outer (Coastal) - 7d01 Morte Point to Lee (west), 7d02 Lee, 7d03 Lee (east) to Ilfracombe (west), 7d04 Ilfracombe, 7d05 Ilfracombe (east- Larkstone Beach) to Hele Beach (west), 7d06 Hele Beach, 7d07 Hele Beach (east) to Watermouth Slipway, 7d08 Watermouth Slipway, 7d09 Watermouth Slipway to Combe Martin, 7d10 Combe Martin, 7d11 Combe Martin to Lymouth, 7d12 Lynmouth, 7d13 Lynmouth to Foreland Point, 7d14 Foreland Point to Gore Point, 7d15 Gore Point to Porlock Weir, 7d16 Porlock Weir, 7d17 Porlock Weir to Hurlstone Point	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: ▪ 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 changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.		
	Angiosperms	Potential changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.		
	Benthic/Macro invertebrates	Potential changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.		
Bristol Channel South Inner (Coastal) - 7d18 Hurlstone Point to Minehead (west), 7d19 Minehead, 7d20 The Warren (Minehead Golf Course), 7d21 Dunster Beach, 7d22 Dunster Beach (east) to Ker Moor, 7d23 Blue Anchor, 7d24 Blue Anchor to Watchet, 7d25 Watchet to Doniford	Phytoplankton	Potential for effects on phytoplankton due to possible changes in turbidity as a result of SMP policy	Classification: Moderate Potential (HMWB) Environmental objectives: ▪ 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 abrasion (associated to velocity) as a result of SMP policy		
	Angiosperms	Potential for effects on Angiosperms due to possible changes in sediment loading, land elevation, and abrasion (associated to velocity) as a result of SMP policy		
	Benthic/Macro invertebrates	Potential for effects on Benthic/Macro invertebrates due to possible changes in light as a result of SMP policy		
Bridgwater Bay (Coastal) - 7d25 Watchet to Doniford, 7d27 St Audries Bay, 7d28 St Audries Bay to Lilstock, 7d29 Lilstock, 7d30 Lilstock to Hinkley Point, 7d31 Hinkley Point	Phytoplankton	Potential for effects on phytoplankton due to possible changes in water depth, thermal regime and turbidity as a result of SMP policy	Classification: Moderate Status Environmental objectives: ▪ 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 abrasion (associated to velocity) as a result of SMP policy		
	Angiosperms	Potential for effects on Angiosperms due to possible changes in innundations (tidal regime), sediment loading, land elevation and abrasion (associated to velocity) as a result of SMP policy		
	Benthic/Macro invertebrates	Potential for effects on Benthic/Macro invertebrates due to possible changes in light as a result of SMP policy		

Assessment Table 2 Features and Issues Table (cont).

Severn Lower (Transitional) 7d46 Brean Down (South Side), 7e01 Brean Down (north side) to Axe Estuary mouth (west), 7e02 Axe Estuary left (west) bank (mouth to near Diamond Farm), 7e03 Axe Estuary right (east) bank (near Diamond Farm to mouth), 7e04 Axe Estuary mouth to Uphill, 7e05 Uphill to Weston-super-Mare (south), 7e06 Weston-super-Mare	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: ▪ 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.	Investigate opportunities for improved habitat connectivity through flood defences by managed re-alignment or changes to flap gate design or operation Flood/Coastal Erosion Risk Management Measure - Bank rehabilitation / reprofiling Flood/Coastal Erosion Risk Management Measure - Operational and structural changes to locks, sluices, weirs, beach control, etc Flood/Coastal Erosion Risk Management Measure - Reopening existing culverts Investigate opportunities for improved habitat connectivity through flood defences by managed re-alignment or changes to flap gate design or operation
	Macrophytes	Potential changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.		
	Phytobenthos (diatoms only)	Potential changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.		
	Benthic/Macro invertebrates	Potential changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.		
	Fish	Potential changes in physical or hydromorphological parameters as a result of SMP2 policies are considered trivial on a waterbody scale.		
Taw/Torridge (Transitional) - 7c07 Northam Burrows, 7c08 Skern salt marsh to Appledore (west), 7c09 Appledore, 7c10 Appledore to Cleave Moorings, Northam, 7c11 Cleave Moorings, Northam and Bideford, 7c12 Upper Torridge Estuary (right (east) and left (west) banks between Bideford and Weare Gifford) , 7c13 East-the-Water to Torridge Bridge (A39), 7c14 Torridge Bridge (A39) to Instow, 7c15 Instow, 7c16 Instow Dunes, 7c17 Instow to Yelland, 7c18 Home Farm Marsh (Yelland to Fremington), 7c19 Fremington, 7c20 Freminton to Penhill Point, 7c21 Penhill Point to Bickington, 7c22 Bickington to A39, 7c23 Upper Taw Estuary (right (east) and left (west) banks between A39 to tidal limit near Bishops Tawton), 7c24 A39 Road Bridge to West Ashford (Barnstaple), 7c25 West Ashford to Braunton (east bank of River Caen), 7c26 Braunton to Horsey Island (west bank of River Caen), 7c27 Horsey Island, 7c28 Horsey Island to Crow Point , 7c29 Crow Point & Crow Neck, 7c30 Braunton Burrows	Phytoplankton	Potential for effects on phytoplankton due to possible changes in residence time, water depth and turbidity as a result of SMP policy.	Classification: Moderate Potential (HMWB) Environmental objectives: ▪ 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.	Taw Torridge Strategy to determine the long-term solutions to sustainable flood and coastal risk management and habitat restoration
	Macroalgae	Potential for effects on macroalgae due to possible changes in episodicity (at low end of velocity spectrum) and abrasion (associated with velocity) as a result of SMP policy.		
	Angiosperms	Potential for effects on angiosperms due to possible changes in innundations (tidal regime), sediment loading, land elevation and abrasion (associated to velocity) as a result of SMP policy.		
	Benthic/Macro invertebrates	Potential for effects on benthic/macroinvertebrates due to possible changes in light, groundwater connectivity, availability of leaf litter/organic debris and connectivity with the riparian zone 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 accesibility to nursery areas (elevation of shoreline/riparian zone) as a result of SMP policy.		
Parrett (Transitional) - 7d31 Hinkley Point , 7d32 Hinkey Point to Stolford, 7d33 Stolford, 7d34 Stolford to Wall Common, 7d35 Steart Village, 7d36 Steart Village to north of Combwich (line of national grid power lines), 7d37 Parrett Estuary from line of national grid power lines to Combwich, 7d38 Combwich, 7d39 Combwich to Bridgwater (Parrett West), 7d40 Bridgwater (upper Parrett Estuary), 7d41 Bridgwater to Dunball, 7d42 Dunball to River Brue, 7d43 Burnham-on-Sea & Highbridge, 7d44 Berrow to Brean (north), 7d45 Brean (north) to Brean Down, 7d46 Brean Down (south side)	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: Moderate Potential (HMWB) Environmental objectives: ▪ 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.	The Somerset Water Management Partnership following on from the Parrett Catchment Project offering farm advice to help manage runoff contributing to increased flood risk and water quality issues
	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 innundations (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 accesibility 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
Lundy (Coastal)	Lundy	7c01 Landing Beach	HTL	HTL	HTL	HTL	The aim in this management area is to allow it to evolve naturally except around the landing beach area where access to the island needs to be maintained. This HTL policy at Landing Beach, into the long term, could potentially mean rebuilding of the sea walls, but there are no new large scale measures that can be taken, effects of the SMP policy on phytoplankton, macroalgae, angiosperms and benthic/macro invertebrates are considered trivial on the waterbody scale and it is not considered there would would be a deterioration in the Ecological Status of the waterbody.	N/A	✔	✔	✔
Lundy (Coastal)		7c02 Lundy (except Landing Beach)	Do Nothing	NAI	NAI	NAI					
Barnstaple Bay (Coastal)	Hartland Point to Westward Ho! (Seafield House)	7c03 Hartland Point to Clovelly	Do Nothing	NAI	NAI	NAI	The aim in this management area is to allow it to evolve naturally along much of its length. This will maintain environmental interests and provide continued sediment supply to beaches locally. The exception to this NAI policy is the area around Clovelly. Here a HTL policy into the long term, will mean maintaining and potentially rebuilding of the sea walls and breakwater, but there are no new large scale measures that can be taken, any potential changes due to SMP policy in this Management Area are considered trivial on a waterbody scale and it is not considered there would would be a deterioration in the Ecological Status of the waterbody.	N/A	✔	✔	✔
Barnstaple Bay (Coastal)		7c04 Clovelly	Hold	HTL	HTL	HTL					
Barnstaple Bay (Coastal), Bideford Bay (Coastal)		7c05 Clovelly to Westward Ho! (Seafield House)	Do Nothing	NAI	NAI	NAI					
Bideford Bay (Coastal)	Westward Ho! To Appledore (west)	7c06 Westward Ho!	Hold	HTL	HTL	HTL	The long term plan here is to provide a long term solution to managing flood risk by protecting property, infrastructure and the former landfill site through a HTL policy. However in the Northam Burrow section Managed Realignment is proposed allowing the pebble ridge to roll back allowing tidal incursions to occur. Potentially mitigating any loss of intertidal habitat through coastal squeeze in HTL areas leading to changes in water depth, tidal innundation and land elevation, impacting on angiosperms and phytoplankton. Therefore it is considered unlikely that a deterioration in overall ecological status will occur due to SMP policy.	N/A	✔	✔	✔
Bideford Bay (Coastal), Taw/Torridge (Transitional)		7c07 Northam Burrows	Retreat	MR	MR	MR					
Taw/Torridge (Transitional)		7c08 Skern salt marsh to Appledore (west)	Retreat	HTL	HTL	HTL					
Taw/Torridge (Transitional)	Torridge Estuary	7c09 Appledore	Hold	HTL	HTL	HTL	The long term plan for this Management Unit is to provide sustainable flood defence to people, property and infrastructure along the estuary at places such as Appledore, Northam, Bideford, East-the-Water and Instow, whilst allowing the estuary to evolve naturally to climate change and sea level rise where possible. Defences will be maintained along the developed frontages, while the rest of the estuary will remain undefended elsewhere. In the short term NAI is the recommended policy along the undefended parts of the outer west side of the estuary between Appledore and Northam and in areas of the Upper Torridge Estuary to allow the estuary to continue to evolve naturally in response to sea level rise allowing sensitive intertidal habitats of angiosperms, macroalgae and benthic /macroinvertebrates to roll back with the coastline. Where socio-economic assets exist in parts of the upper estuary, the plan is to minimise the risk of flooding through HTL. This will ensure continued protection of key assets along this shoreline, but there may be a potential loss of salt marsh and intertidal habitats due to coastal squeeze. However, there are several potential areas in the estuary where Managed Realignment could be undertaken in the mid to long terms, which could allow considerable nature conservation and biodiversity to be realised mitigating the effects of coastal squeeze. The continuation of current Hold The Line policies could result in increase frequency of tide locking and subsequent water depth in adjacent river water bodies (GB108050014500 Torridge/tidal & GB108050014510 Horwood Stream), in response to climate change/sea level rise, therfore potentially failing Environmental Objective WFD 3.	N/A	✔	✘	✔
Taw/Torridge (Transitional)		7c10 Appledore to Cleave Moorings, Northam	Do Nothing	NAI	NAI	NAI					
Taw/Torridge (Transitional)		7c11 Cleave Moorings, Northam and Bideford	Hold	HTL	HTL	HTL					
Taw/Torridge (Transitional)		7c12 Upper Torridge Estuary (right (east) and left (west) banks between Bidefiord and Weare Gifford)	N/A	NAI/ MR/HTL	NAI/ MR/ HTL	NAI./ MR/ HTL					
Taw/Torridge (Transitional)		7c13 East-the-Water to Torridge Bridge (A39)	N/A	HTL	HTL	HTL					
Taw/Torridge (Transitional)		7c14 Torridge Bridge (A39) to Instow	Hold	HTL	HTL	HTL					
Taw/Torridge (Transitional)		7c15 Instow	Hold	HTL	HTL	HTL					
Taw/Torridge (Transitional)		7c16 Instow dunes		MR	MR	MR					

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

Taw/Torridge (Transitional)	Taw Estuary	7c17 Instow to Yelland	Hold	HTL	MR	HTL	The long term plan for this Management Unit is to provide sustainable flood defence to people, property and infrastructure along the estuary at places such as Yelland, Fremington, Bickington, Bishops Tawton, Barnstaple, Chivenor and Braunton, whilst allowing the estuary to evolve naturally to climate change and sea level rise where possible. In the short term NAI is the recommended policy along the undefended parts of the estuary between Fremington and Penhill Point and in areas of the Upper Taw Estuary to allow the estuary to continue to evolve naturally in response to sea level rise. Where socio-economic assets exist in parts of the upper estuary, the plan is to minimise the risk of flooding through HTL. This will ensure continued protection of key assets along this shoreline, but there may be a potential loss of angiosperm, benthic/macroinvertebrates, macroalgae and fish habitats owing to changes in water level and sediment regimes due to coastal squeeze. However, there are several potential areas in the estuary where Managed Realignment could be undertaken in the mid to long terms, which could allow considerable nature conservation and biodiversity to be realised mitigating the effects of coastal squeeze. The continuation of current Hold The Line policies could result in increase frequency of tide locking and subsequent water depth in adjacent river water bodies (GB108050014590 Taw Estuary, GB108050019980 Taw Estuary, GB108050020040 Bradiford Water, GB10805020020 Knowle Water, GB108050020010 River Caen, GB108050020000 Taw Estuary), in response to climate change/sea level rise, therfore potentially failing Environmental Objective WFD 3.	N/A	✔	✘	✔
Taw/Torridge (Transitional)		7c18 Home Farm Marsh (Yelland to Fremington)	Retreat	HTL	MR	HTL					
Taw/Torridge (Transitional)		7c19 Fremington		HTL	HTL	HTL					
Taw/Torridge (Transitional)		7c20 Freminton to Penhill Point	Do Nothing	NAI	NAI	NAI					
Taw/Torridge (Transitional)		7c21 Penhill Point to Bickington	N/A	HTL	MR	HTL					
Taw/Torridge (Transitional)		7c22 Bickington to A39		HTL	HTL	HTL					
Taw/Torridge (Transitional)		7c23 Upper Taw Estuary (right (east) and left (west) banks between A39 to tidal limit near Bishops Tawton)	N/A	NAI/ MR/HTL	NAI/ MR/ HTL	NAI/ MR/ HTL					
Taw/Torridge (Transitional)		7c24 A39 to West Ashford (Barnstaple)	N/A	HTL	HTL	HTL					
Taw/Torridge (Transitional)		7c25 West Ashford to Braunton (east bank of River Caen)	Hold	HTL	MR/ HTL	HTL					
Taw/Torridge (Transitional)		7c26 Braunton to Horsey Island (west bank of River Caen)	Hold/Observe & Monitor	HTL	MR	HTL					
Taw/Torridge (Transitional)		7c27 Horsey Island	Hold	HTL	MR	HTL					
Taw/Torridge (Transitional)		7c28 Horsey Island to Crow Point	Observe & Hold	HTL	MR	HTL					
Taw/Torridge (Transitional)		7c29 Crow Point & Crow Neck	Observe & Hold	MR	MR	MR					
Taw/Torridge (Transitional), Bideford Bay	Braunton Burrows and Saunton Down	7c30 Braunton Burrows	Do Nothing	NAI	NAI	NAI	The preferred policy in this Management Unit is NAI into the long term to promote a naturally functioning coastline, this will have environmental and landscape benefits, supporting the WFD Environmental Objectives, whilst Braunton Burrows dunes are expected to provide a robust natural defence for the low lying area behind the Burrows.	N/A	✔	✔	✔
Bideford Bay (Coastal)		7c31 Saunton Down	Do Nothing	NAI	NAI	NAI					
Barnstaple Bay (Coastal)	Croyde Bay	7c32 Croyde Sands	Observe & Monitor	NAI	NAI	NAI	The overall plan is to allow the natural development of the majority of the coastline and, hence, there is unlikely to be deterioration in Ecological Potentail/Status as a result of SMP2 policy.	N/A	✔	✔	✔
Barnstaple Bay (Coastal)		7c33 Middleborough Hill (Croyde Bay north)	Hold	NAI	NAI	NAI					
Barnstaple Bay (Coastal)		7c34 Middleborough Hill (Croyde Bay north) to Baggy Point	Do Nothing	NAI	NAI	NAI					

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

Barnstaple Bay (Coastal)	Woolacombe Bay	7c35 Baggy Point to Napps Cliff (Putsborough)	Do Nothing	NAI	NAI	NAI	The plan is to allow the natural development of the coastline and, hence, there is unlikely to be deterioration in Ecological Potentail/Status as a result of SMP2 policy.	N/A	✔	✔	✔
Barnstaple Bay (Coastal)		7c36 Putsborough Sands and Vention	Hold	NAI	NAI	NAI					
Barnstaple Bay (Coastal)		7c37 Vention to Woolacombe Beach (Woolacombe Sands)	Do Nothing	NAI	NAI	NAI					
Barnstaple Bay (Coastal)		7c38 Woolacombe Beach	Observe & Monitor	NAI	NAI	NAI					
Barnstaple Bay (Coastal)		7c39 Woolacombe to Morte Point	Do Nothing	NAI	NAI	NAI					
Bristol Channel South Outer (Coastal)	Morte Point to Foreland Point	7d01 Morte Point to Lee (west)	Do Nothing	NAI	NAI	NAI	The long term plan for this largely undefended coast, which extends across part of the Exmoor National Park frontage, is to continue to allow it to evolve naturally, thus conserving the landscape character of the area. The NAI policy will allow natural coastal processes to continue into the long term retaining various designations such as AONB, Heritage Coast and National Park. In the remaining stretches, the long term policy is to protect the already defended frontages of the towns Lee, Ilfracombe, Combe Martin and Lynmouth through a policy of HTL. This long term policy is not considered detrimental to the large scale plan for this coastline, as sediment linkages along this frontage are limited and evolution of the shoreline is predominantly geologically controlled. SMP policy for this managment area is not expected to have a significant impact on phytoplankton, macroalgae, angiosperms or benthic/macroinvertbrates at the waterbody scale.	N/A	✔	✔	✔
Bristol Channel South Outer (Coastal)		7d02 Lee	Hold	HTL	HTL	HTL					
Bristol Channel South Outer (Coastal)		7d03 Lee (east) to Ilfracombe (west)	Do Nothing	NAI	NAI	NAI					
Bristol Channel South Outer (Coastal)		7d04 Ilfracombe	Hold	HTL	HTL	HTL					
Bristol Channel South Outer (Coastal)		7d04 Ilfracombe (east- Larkstone Beach) to Hele Beach (west)	Do Nothing/ Hold at Hillsborough	NAI	NAI	NAI					
Bristol Channel South Outer (Coastal)		7d06 Hele Beach	Hold	HTL	HTL	HTL					
Bristol Channel South Outer (Coastal)		7d07 Hele Beach (east) to Watermouth Slipway	Do Nothing	NAI	NAI	NAI					
Bristol Channel South Outer (Coastal)		7d08 Watermouth Slipway	Hold	NAI	NAI	NAI					
Bristol Channel South Outer (Coastal)		7d09 Watermouth Slipway to Combe Martin	Do Nothing	NAI	NAI	NAI					
Bristol Channel South Outer (Coastal)		7d10 Combe Martin	Hold	HTL	HTL	HTL					
Bristol Channel South Outer (Coastal)		7d11 Combe Martin to Lymouth	Do Nothing	NAI	NAI	NAI					
Bristol Channel South Outer (Coastal)		7d12 Lynmouth	Hold	HTL	HTL	HTL					
Bristol Channel South Outer (Coastal)		7d13 Lynmouth to Foreland Point	Do Nothing	NAI	NAI	NAI					

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

Bristol Channel South Outer (Coastal)	Foreland Point to Hurlstone Point	7d14 Foreland Point to Gore Point	Do Nothing	NAI	NAI	NAI	The aim of the SMP for this largely undefended section of coast, which in part, extends across the Exmoor National Park frontage, is to allow it to eveolve naturally through an SMP policy of NAI into the long term, thereby conserving the important landscape character of the area. At Porlock Weir, the short term policy is NAI, ceasing maintenance to the existing defences throughout the short term. In the mid to long term the defences would be allowed to deteriorate and eventually fail under a NAI policy. The retention of these defences would impact on a wider coastal area and also if retained, would have to be much larger than the present gravel barrier beach, which would have a greater impact on the landscape character of the area. This NAI policy would continue into the long term. However, the presence of an old landfill site in the Porlock Weir to Hurlestone Point policy unit means that under a NAI policy into the long term, this site is under threat and could potentially breach and contaminate both the groundwater body here and the Bristol Channel Inner South coastal water body potentially causing a detrimental effect on the BQEs, such as phytoplankton, macroalgae, angiosperms and benthic/macroinvertebrates causing a deterioration in the Ecological Potential of the waterbody. Potential hydromorphological effects on the above, are however, considered trivial at a watebody scale.	N/A	✗	✔	✗
Bristol Channel South Outer (Coastal)		7d15 Gore Point to Porlock Weir	Observe & Monitor	NAI	NAI	NAI					
Bristol Channel South Outer (Coastal)		7d16 Porlock Weir	Hold	NAI	NAI	NAI					
Bristol Channel South Outer (Coastal)		7d17 Porlock Weir to Hurlstone Point	Retreat	NAI	NAI	NAI					
Bristol Channel South Inner (Coastal)	Hurlstone Point to Minehead (west)	7d18 Hurlstone Point to Minehead (west)	Do Nothing	NAI	NAI	NAI	The plan is to allow the natural development of the coastline and, hence, there is unlikely to be deterioration in Ecological Potentail/Status as a result of SMP2 policy.	N/A	✔	✔	✔
Bristol Channel South Inner (Coastal)	Minehead to Blue Anchor	7d19 Minehead	Hold	HTL	HTL	HTL	The aim in this Management Area is to continue to reduce the risk of flooding and erosion to the town of Minehead in a sustainable way. To achieve this aim, not only will the defences at Minehead need to be maintained into the long term, the risk of 'backdoor flooding' from the east of MInehead needs to be addressed. The risk comes from The Warren/Dunster Beach/Ker Moor frontage which will be increasingly susceptible to flooding and erosion in the future. The plan therefore is to move the defences to a set back position under a MR policy in the long term. This would likely retain more of the beach at Dunster and salt marsh (angiosperm) habitat may develop in front of the set back defences. The long term plan at the eastern end of the section at Blue Anchor is to move to a NAI policy in the long term, defences would need to be replaced and extended eastwards in the immediate future to preserve the recent investments along the low lying parts of Blue Anchor. However, into the long term the defences here would not be replaced as they reach the end of their effective life and maintenance would be withdrawn allowing the coast to function more naturally. The continuation of current Hold The Line policies could result in increase frequency of tide locking and subsequent water depth in adjacent river water bodies (GB108051020370 Park Stream Minehead), in response to climate change/sea level rise, therfore potentially failing Environmental Objective WFD 3.	N/A	✔	✗	✔
Bristol Channel South Inner (Coastal)		7d20 The Warren (Minehead Golf Course)	Observe & Monitor	HTL	HTL	MR					
Bristol Channel South Inner (Coastal)		7d21 Dunster Beach	Observe & Monitor	HTL	HTL	MR					
Bristol Channel South Inner (Coastal)		7d22 Dunster Beach (east) to Ker Moor	Observe & Monitor	MR	HTL	HTL					
Bristol Channel South Inner (Coastal)		7b23 Blue Anchor	Hold	HTL	HTL	NAI/ MR					

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

Bristol Channel South Inner (Coastal)	Blue Anchor to St Audries Bay	7d24 Blue Anchor to Watchet	Do Nothing	NAI	NAI	NAI	The recommended SMP policy for much of this section of coast, which is largely undefended, is one of NAI, into the long term. However, for the remaining currently defended areas, such as those at Watchet, the recommended policy is HTL. This would mean, maintaining the current defences at Watchet. The HTL policy would remain into the long term. The majority of this section will allow natural evolution of phytoplankton, macroalgae, angiosperm and benthic/macroinvertebrate habitats to occur along the coastline under a NAI policy supporting the WFD Environmental Objectives. But, the continuation of current Hold The Line policies could result in increase frequency of tide locking and subsequent water depth in adjacent river water body (GB108051020560 Washford River), in response to climate change/sea level rise, therfore potentially failing Environmental Objective WFD 3.	N/A	✔	✖	✔
Bristol Channel South Inner (Coastal), Bridgwater Bay (Coastal)		7d25 Watchet to Doniford	Hold	HTL	HTL	HTL					
Bridgwater Bay (Coastal)		7d26 Doniford to St Audries Bay	Observe & Monitor	NAI	NAI	NAI					
Bridgwater Bay (Coastal)		7d27 St Audries Bay	Observe & Monitor/ Hold	NAI	NAI	NAI					
Bridgwater Bay (Coastal)	St Audries Bay to Hinkley Point	7d28 St Audries Bay to Lilstock	Do Nothing	NAI	NAI	NAI	The aim for this section of coast is to allow it to evolve naturally into the long term through an SMP policy of NAI. Where there are currently defences at Lilstock, they would be maintained during this short term period, but allowed to fail into the mid term to long term as maintenance is withdrawn. This would lead to a naturally functioning coastline in this area that can roll back and adapt to sea level rise, supporting the WFD Environmental Objectives.	N/A	✔	✔	✔
Bridgwater Bay (Coastal)		7d29 Lilstock	Hold	HTL	NAI	NAI					
Bridgwater Bay (Coastal)		7d30 Lilstock to Hinkley Point	Do Nothing	NAI	NAI	NAI					
Bridgwater Bay (Coastal), Parrett (Transitional)	Hinkley Point	7d31 Hinkley Point	Hold	HTL	HTL	HTL	The long term plan for this section of coast is to provide continued protection against flood and erosion risk to Hinkley Point Power Station. As a result of this long term HTL policy, there is likely to be loss of some intertidal habitat through coastal squeeze. This could potentially impact on Bridgwater Bay SSSI & National Nature Reserve, Severn Estuary SAC, SPA, Ramsar Site and Hinkley Point County Wildlife Site.	N/A	✖	✖	✔
Parrett (Transitional)	Hinkley Point to Stolford	7d32 Hinkey Point to Stolford	Hold	HTL	MR	HTL	The long term plan for this part of the coastline is to provide protection against flood and erosion risk to Hinkley point Power Station (to the west) in a sustainable way. The recommended SMP policy is to HTL in the short term, which will involve maintenance of the existing revetment and embankment defences. During the mid term, the policy is one of MR, using shorter and smaller defences to achieve the plan, which will then be held into the long term. MR between Hinkley and Stolford could deepen the bay which exists here and so reduce the potential sediment supply to the Parrett Estuary, potentially having a negative impact on the BQE's in that waterbody, failing WFD 3. For this stretch though, the MR will allow space for intertidal habitas to roll back in line with rising sea levels.	N/A	✔	✖	✔
Parrett (Transitional)		7d33 Stolford	Observe & Monitor	HTL	MR	HTL					

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

Parrett (Transitional)	Steart Peninsula (Stolford to Combwich)	7d34 Stolford to Wall Common	Observe & Monitor	HTL/MR	HTL/NAI	HTL/NAI	The long term vision for the wider Parrett Estuary area is to turn it to a more natural, less constrained state, whilst continuing to provide defence against the risk of flooding in a sustainable way. The long term plan therefore for the Steart area is to allow the area to become largely natural with little or no intervention. There is potential for considerable nature conservation and biodiversity opportunities to be realised, but this will involve potential changes to the currently designated sites. The short term SMP policy for most of the coastline is HTL, however Stolford to Wall Common frontage the policy is to move to a new defence line further inland through MR. In the mid term between Stolford and Wall Common, the policy is to HTL of the set back defences and this policy continues into the long term. Along the remainder of the Steart Peninsular the mid term policy is to allow natural shoreline change once the defences have reached the end of their life. This NAI policy is recommended by the SMP into the long term.This would result in more frequent inundation of the Peninsula and a more naturally funtioning habitat developing, potentially increasing the extent of macroalgae, angiosperm, benthic/macroinvertebrate and fish intertidal habitats, therefore supporting the WFD Environmental Objectives.	N/A	✔	✔	✔
Parrett (Transitional)		7d35 Steart Village	Observe & Monitor	HTL	NAI	NAI					
Parrett (Transitional)		7d36 Steart Village to north of Combwich (line of national grid power lines)	Observe & Monitor	HTL	NAI	NAI					
Parrett (Transitional)		7d37 Parrett Estuary from line of national grid power lines to Combwich	Observe & Monitor	HTL	NAI	NAI					
Parrett (Transitional)	Parrett Estuary (Combwich to River Brue)	7d38 Combwich	Hold	HTL	HTL	HTL	The long term vision for the wider Parrett Estuary area is to turn it to a more natural, less constrained state, whilst continuing to provide defence against the risk of flooding in a sustainable way. Many of the areas in the outer Parrett Estuary offer potential opportunities for set back defences. The long term plan for this area is to allow much of the outer estuary to become more natural, providing potential for considerable nature conservation and biodiverstiy opportunities to be realised, these will involve changes to currently designated sites. The recommended short term and mid term SMP policy throughout the Parrett Estuary is to HTL, this is likely to involve ongoing maintenance and, where necessary, local reconstruction. At Pawlett Ham however, as existing defences reach the end of their life a realigned defence line will be adopted through a MR policy. The vision in the long term is for a more naturally functioning estuary, through set back defences under a policy of MR except in areas where a long term policy of HTL will continue to provide defence of infrastructure. Where set back defences are constructed the coast will be allowed to evolve more naturally and there would be potential benefits to the Bridgwater SSSI & National Nature Reserve, Severn Estuary SAC, SPA and Ramsar site through the creation of intertidal habitat supporting the Environmental Objectives. The continuation of current Hold The Line policies could result in increase frequency of tide locking and subsequent water depth in adjacent river water bodies (GB108052021320 Fiddington Brook, GB1080052021310 Cannington Brook, GB108052021150 Kings Sedgmoor Drain, GB108052021210 Huntspill River, GB108052021260 River Brue), in response to climate change/sea level rise, therfore potentially failing Environmental Objective WFD 3.	N/A	✔	✘	✔
Parrett (Transitional)		7d39 Combwich to Bridgwater (Parrett West)	N/A	HTL	HTL	MR					
Parrett (Transitional)		7d40 Bridgwater (upper Parrett Estuary)	N/A	HTL	HTL	HTL					
Parrett (Transitional)		7d41 Bridgwater to Dunball	N/A	HTL	HTL	HTL					
Parrett (Transitional)		7d42 Dunball to River Brue	Hold	HTL	MR/ HTL	HTL/ MR					

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

Parrett (Transitional)	Burnham-on-Sea, Highbridge and Berrow	7d43 Burnham-on-Sea & Highbridge	Hold/ Observe & Monitor	HTL	HTL	HTL	The recommend SMP policy for this Management Area is to HTL into the long term. This will involve the maintenance of the existing seawall and embankment defences both along the open coast and the north bank of the River Brue as well as dune management of the existing dune systems such as those at Berrow. This HTL policy would potentially result in narrowing and lowering of the beach at Burnham-on-Sea as a result of coastal squeeze potentially impacting on BQE's such as macroalgae, angiosperms and benthic/macroinvertebrates through changes in land elevation sediment loading and water depth. However with the potentially large scale setting back of defences in this water body, it is unlikely to have an impact on waterbody status.	N/A	✔	✔	✔
Parrett (Transitional)	Berrow to Brean Down	7d44 Berrow to Brean (north)	Observe & Monitor (possible Hold)	HTL	MR	MR	Along this coastline, the current defence is provided by a belt of dunes, which narrow considerably towards the north. In the future, this dune belt will become more difficult to maintain in its current position. Therefore, the long term plan for this frontage is to maintain the existing defences for as long as possible and set back defences to provide a more sustainable solution to managing flood risk to the Somerset Levels area. Along the Berrow and Brean part of this section, the SMP policy to undertake dune management to retain the the dunes as an effective defence through MR into the long term. Between Brean and Brean Down the long term policy is to continue to HTL by maintaining the existing rock revetment but allow the coastline to role back in response to sea level rise through MR in the long term.	N/A	✔	✔	✔
Parrett (Transitional)		7d45 Brean (north) to Brean Down	Hold	HTL	HTL	MR					
Parrett (Transitional), Bridgwater Bay (Coastal), Bristol Channel Inner South (Coastal), Severn Lower (Transitional)	Brean Down	7d46 Brean Down (South Side)	Do Nothing	NAI	NAI	NAI	The plan is to allow the natural development of the coastline and associated Biological Quality Element habitats (such as macroalgae, angiosperms and benthic/macroinvertebrates) and, hence, there is unlikely to be deterioration in Ecological Potentail/Status as a result of SMP2 policy.	N/A	✔	✔	✔
Severn Lower (Transitional)		7e01 Brean Down (noth side) to Axe Estuary mouth (west)	Do Nothing	NAI	NAI	NAI					
Severn Lower (Transitional)	Axe Estuary	7e02 Axe Estuary left (west) bank (mouth to near Diamond Farm)	Hold (locally retreat)	HTL	HTL	MR	The recommended SMP policy for the Axe Estuary is to HTL in the short term through ongoing maintenance of the existing embankments. Once the existing defences reach the end of their effective life, the medium term vision is for a more naturally functioning estuary through construction of set back defences through MR policy. Realignment in this area will offer potential flood storge and habitat creation benefits for the wider area potentially increasing the scale of macroalgae, angiosperm, benthic/macroinvertebrate and fish habitats available. However, defences need to be maintained in line with the policy for the adjacent open coast between Brean and Brean Down, therefore the SMP policy here is HTL. Into the long term, the SMP policy is to HTL of the set back defences, which will involve ongoing maintenance of these defences. In the Brean and Brean Down area the long term policy is to move to NAI allowing a more natural coast to develop.	N/A	✔	✔	✔
Severn Lower (Transitional)		7e03 Axe Estuary right (east) bank (near Diamond Farm to mouth)	Hold (locally retreat)	HTL	MR	HTL					
Severn Lower (Transitional)		7e04 Axe Estuary mouth to Uphill	Hold (posibly retreat long term)	HTL	MR	HTL					
Severn Lower (Transitional)	Uphill to Weston-super-Mare (Anchor Head)	7e05 Uphill to Weston-super-Mare (south)	Hold (possibly retreat long term)	MR	MR	MR	The long term plan in this Management Area is to continue to provide flood and erosion protection to Weston-super-Mare, Uphill and the wider area of the Somerset Levels. The recommended SMP policy is to continue to HTL through maintaining the current defences and possible improvement of the defences into the long term. Along the undefended dunes between Uphill and Weston, the recommended policy is to allow the dunes to function naturally, however should there be a high risk of a breach in the long term, a secondary defence embankment may need to be constructed landward, through a policy of MR. With the HTL policy there is potential for the beach width to reduce over time and potential for habitat loss due to coastal squeeze, however this may be mitigated for through the natural evolution of the dunes systems, causing no overall deterioration in ecological potentail of the waterbody.	N/A	✔	✔	✔
Severn Lower (Transitional)		7e06- Weston-super-Mare	Hold	HTL	HTL	HTL					

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	
GB610807240000	Bideford Bay	N/A	✔	✔	✔	**No** - Environmental Objectives are likely to be supported by proposed SMP policies.
GB610807680003	Barnstaple Bay	N/A	✔	✔	✔	**No** - Environmental Objectives are likely to be supported by proposed SMP policies.
GB610807680004	Bristol Channel Outer South	N/A	✘	✔	✘	**Yes** - Environmnetal Objectives WFD 2 & WFD 4 may not bne met in some Management Areas in these Waterbodies under SMP Policy.
GB610878040000	Lundy	N/A	✔	✔	✔	**No** - Environmental Objectives are likely to be supported by proposed SMP policies.
GB670807410000	Bridgwater Bay	N/A	✘	✘	✔	**Yes** - Environmnetal Objectives WFD 2 & WFD 3 may not bne met in some Management Areas in these Waterbodies under SMP Policy.
GB640807670000	Bristol Channel Inner South	N/A	✔	✘	✔	**No** - Environmental Objectives are likely to be supported by proposed SMP policies.
GB530905415401	SEVERN LOWER	N/A	✔	✔	✔	**No** - Environmental Objectives are likely to be supported by proposed SMP policies.
GB540805015500	TAW / TORRIDGE	N/A	✔	✘	✔	**No** - Environmental Objectives are likely to be supported by proposed SMP policies.
GB540805210900	PARRETT	N/A	✘	✘	✔	**Yes** - Environmnetal Objectives WFD 2 & WFD 3 may not bne met in some Management Areas in these Waterbodies under SMP Policy.

Assessment Table 5 WFD Summary Statements

Water body (including policy units that affect it)	Water Framework Directive Summary Statement checklist	Provide a brief description of decision making and reference to further documentation within the SMP	
Bridgwater Bay	**Mitigation measures:** have all practicable mitigation measures been incorporated into the preferred SMP policies that affect this water body in order to mitigate the adverse impacts on the status of the water body? If not, then list mitigation measures that could be required.	In 7d31 Hinkley Point & 7d32 Hinkey Point to Stolford, the aim is to protect the Nuclear Power Station. In order to do this a HTL policy is proposed. This hold the line policy will lead to loss of intertidal habitats as sea levels rise. Sites for potential compensatory habitats are currently being assessed - mitigation methods from programme of measures not available at time of writing. Managed Realignment sites at different locations in the estuary can provide some mitigation for the lose of intertidal habitat due to sea level rise.	*Describe any mitigation measures discounted on basis of disproportionate cost or impacts on wider environment.*
	Overriding public interest: can it be shown that the reasons for selecting the preferred SMP policies are reasons of overriding public interest (ROPI) and/or the benefits to the environment and to society of achieving the environmental objectives are outweighed by the benefits of the preferred SMP policies to human health, to the maintenance of health and safety or to sustainable development?	There is a nuclear power station in this Management Area, there are no viable alternatives to HTL with regard to overiding public interest and environmental benefits.	*Refer to sections of the SMP Environmental Assessment which deal with these considerations and provide a brief summary. Set out the benefits of the preferred SMP policies and, if environmental benefits are outweighed by benefits to human health, maintenance of health and safety or sustainable development, then set out disadvantages to the environment for comparison.*
	Better environmental options: have other significantly better options for the SMP policies been considered? Can it be demonstrated that those better environmental policy options which were discounted were done so on the grounds of being either technically unfeasible or disproportionately costly?	HTL is the best policy opton for this unit. All other policy options have been discounted due to severve adverse effects on human health, environmental impacts etc.	*Outline any significantly better options for the SMP policy and explain why these options have disproportionate costs or are technically unfeasible.*
			Point to sections of SMP Environmental Assessment where the Directive has been considered against each alternative option.
	Affect on other water bodies: Can it be demonstrated that the preferred SMP policies do not permanently exclude or compromise the achievement of the objectives of the Directive in water bodies within the same River Basin District that are outside of the SMP2 area?	All adjacent waterbodies are within the SMP2 area, therefore SMP policy will not permanently exclude or compromise the achievement of the objectives of the Directive in water bodies within the same River Basin District that are outside of the SMP2 area.	*Refer to the assessment to demonstrate that this is not the case.*
	Other issues: Can it be shown that there are no other over-riding issues that should be considered (such as designated sites, recommendations of the Appropriate Assessment)?	Area in front of Hinkley Point power station is designated SPA, SAC, Ramsar, SSSI, LNR & CWS, however the intent of the SMP policy in this area is to protect the vital infrastructure of the power station. Other areas of the weater body coastline are to be allowed to develop naturally.	*Refer to Appropriate Assessment (where relevant) to demonstrate that this is not the case.*

Assessment Table 5 WFD Summary Statements (cont).

Water body (including policy units that affect it)	Water Framework Directive Summary Statement checklist	Provide a brief description of decision making and reference to further documentation within the SMP	
Parrett	**Mitigation measures:** have all practicable mitigation measures been incorporated into the preferred SMP policies that affect this water body in order to mitigate the adverse impacts on the status of the water body? If not, then list mitigation measures that could be required.	In 7d32 Hinkey Point to Stolford, the aim is to protect the Nuclear Power Station. In order to do this a HTL policy is proposed. This hold the line policy will lead to loss of intertidal habitats as sea levels rise. Sites for potential compensatory habitats are currently being assessed - mitigation methods from programme of measures not available at time of writing. Managed Realignment sites at different locations in the estuary can provide some mitigation for the lose of intertidal habitat due to sea level rise.	*Describe any mitigation measures discounted on basis of disproportionate cost or impacts on wider environment.*
	Overriding public interest: can it be shown that the reasons for selecting the preferred SMP policies are reasons of overriding public interest (ROPI) and/or the benefits to the environment and to society of achieving the environmental objectives are outweighed by the benefits of the preferred SMP policies to human health, to the maintenance of health and safety or to sustainable development?	There is a nuclear power station in this Management Area, there are no viable alternatives to HTL with regard to overiding public interest and environmental benefits.	*Refer to sections of the SMP Environmental Assessment which deal with these considerations and provide a brief summary. Set out the benefits of the preferred SMP policies and, if environmental benefits are outweighed by benefits to human health, maintenance of health and safety or sustainable development, then set out disadvantages to the environment for comparison.*
	Better environmental options: have other significantly better options for the SMP policies been considered? Can it be demonstrated that those better environmental policy options which were discounted were done so on the grounds of being either technically unfeasible or disproportionately costly?	HTL is the best policy opton for this unit. All other policy options have been discounted due to severve adverse effects on human health, environmental impacts etc.	*Outline any significantly better options for the SMP policy and explain why these options have disproportionate costs or are technically unfeasible.*
			Point to sections of SMP Environmental Assessment where the Directive has been considered against each alternative option.
	Affect on other water bodies: Can it be demonstrated that the preferred SMP policies do not permanently exclude or compromise the achievement of the objectives of the Directive in water bodies within the same River Basin District that are outside of the SMP2 area?	All adjacent waterbodies are within the SMP2 area, therefore SMP policy will not permanently exclude or compromise the achievement of the objectives of the Directive in water bodies within the same River Basin District that are outside of the SMP2 area.	*Refer to the assessment to demonstrate that this is not the case.*
	Other issues: Can it be shown that there are no other over-riding issues that should be considered (such as designated sites, recommendations of the Appropriate Assessment)?	Area in front of Hinkley Point power station is designated SPA, SAC, Ramsar, SSSI, LNR & CWS, however the intent of the SMP policy in this area is to protect the vital infrastructure of the power station. Other areas of the weater body coastline are to be allowed to develop naturally.	*Refer to Appropriate Assessment (where relevant) to demonstrate that this is not the case.*

Assessment Table 5 WFD Summary Statements (cont).

Water body (including policy units that affect it)	Water Framework Directive Summary Statement checklist	Provide a brief description of decision making and reference to further documentation within the SMP	
Bristol Channel South Outer	**Mitigation measures:** have all practicable mitigation measures been incorporated into the preferred SMP policies that affect this water body in order to mitigate the adverse impacts on the status of the water body? If not, then list mitigation measures that could be required.	In policy unit 7a17 Porlock Weir to Hurlstone Point there is a landfill site which, under the proposed SMP policy, has the potential to breach and contaminate the Bristol Channel South Water Body. However, the National Trust Adaptations Study is looking into mitigation measures for this site whilst allowing for NAI along the coastal frontage. The No Active Intervention policy will also allow the gravel ridge to roll back, increasing the extent of the Porlock Ridge and Saltmarsh SSSI's designated saltmarsh whhich would would then act as a 'sponge' reducing the wave action and erosion potential on the landfill area providing a natural defence.	*Describe any mitigation measures discounted on basis of disproportionate cost or impacts on wider environment.*
	Overriding public interest: can it be shown that the reasons for selecting the preferred SMP policies are reasons of overriding public interest (ROPI) and/or the benefits to the environment and to society of achieving the environmental objectives are outweighed by the benefits of the preferred SMP policies to human health, to the maintenance of health and safety or to sustainable development?	The reasons for selecting the preferred SMP policy of No Active Intervention in this policy unit are several, the natural defence of the gravel barrier will roll backwards and potential growth of new saltmarsh will act as a natural defence and a 'sponge' soaking up and dissipating wave energy thereby protecting the landfill site and benefitting human health, the NAI policy will help to protect the Porlock Ridge and Saltmarsh SSSI and Heritage Coast from development of new defences, which would in the future have to be scaled up to provide the same standard of protection as the gravel barrier currently provides, due to sea level rise, this would be disproportionately costly and unsustainable into the long term and unlikely to attract public funding. These reasons combined outweigh the environmental objectives.	*Refer to sections of the SMP Environmental Assessment which deal with these considerations and provide a brief summary. Set out the benefits of the preferred SMP policies and, if environmental benefits are outweighed by benefits to human health, maintenance of health and safety or sustainable development, then set out disadvantages to the environment for comparison.*
	Better environmental options: have other significantly better options for the SMP policies been considered? Can it be demonstrated that those better environmental policy options which were discounted were done so on the grounds of being either technically unfeasible or disproportionately costly?	Other, better environmental opttions have been considered, including Hold The Line, in this area which would protect the landfill site from flooding, however due to the lack of infrastructure and socio economic assets along the frontage, it is unlikely that it would generate justification for defence construction.	*Outline any significantly better options for the SMP policy and explain why these options have disproportionate costs or are technically unfeasible.* *Point to sections of SMP Environmental Assessment where the Directive has been considered against each alternative option.*
	Affect on other water bodies: Can it be demonstrated that the preferred SMP policies do not permanently exclude or compromise the achievement of the objectives of the Directive in water bodies within the same River Basin District that are outside of the SMP2 area?	If the preferred SMP policy of No Active Intervention does lead to the flooding of the landfill site, then there is the potential to pollute the Tone and North Somerset Streams groundwater body causing a deterioration in chemical status.	*Refer to the assessment to demonstrate that this is not the case.*
	Other issues: Can it be shown that there are no other over-riding issues that should be considered (such as designated sites, recommendations of the Appropriate Assessment)?	The extent of the Porlock Ridge and Saltmarsh SSSI will potetntially increase in extent as the pebble ridge rolls back landwards as a result of the No Active Intervention policy. This increase in extent of designated site could then potentially be used as compensatory habitat for any future developments within the estuary Ramsar Site.	*Refer to Appropriate Assessment (where relevant) to demonstrate that this is not the case.*

Assessment Table 5 WFD Summary Statements (cont).

Water body (including policy units that affect it)	Water Framework Directive Summary Statement checklist	Provide a brief description of decision making and reference to further documentation within the SMP	
Bristol Channel South Inner	**Mitigation measures:** have all practicable mitigation measures been incorporated into the preferred SMP policies that affect this water body in order to mitigate the adverse impacts on the status of the water body? If not, then list mitigation measures that could be required.	In this waterbody, there are social and economic assets at risk of flooding, this risk is to be minimised through the SMP Hold The Line policy. However this HTL policy may lead to adjacent waterbodies being subject to increased frequency of tidelocking and subsequent water depth increases. Mitigation measures such as moving properties and infrastructure inland or abandoning are considered disproportionately costly.	*Describe any mitigation measures discounted on basis of disproportionate cost or impacts on wider environment.*
	Overriding public interest: can it be shown that the reasons for selecting the preferred SMP policies are reasons of overriding public interest (ROPI) and/or the benefits to the environment and to society of achieving the environmental objectives are outweighed by the benefits of the preferred SMP policies to human health, to the maintenance of health and safety or to sustainable development?	No viable alternatives to HTL in areas for protecting infrastructure and populated areas.	*Refer to sections of the SMP Environmental Assessment which deal with these considerations and provide a brief summary. Set out the benefits of the preferred SMP policies and, if environmental benefits are outweighed by benefits to human health, maintenance of health and safety or sustainable development, then set out disadvantages to the environment for comparison.*
	Better environmental options: have other significantly better options for the SMP policies been considered? Can it be demonstrated that those better environmental policy options which were discounted were done so on the grounds of being either technically unfeasible or disproportionately costly?	NAI and MR policies in place on various sections of the waterbody - no other feasible option than HTL to protect populated areas and infrastructure.	*Outline any significantly better options for the SMP policy and explain why these options have disproportionate costs or are technically unfeasible.*
		NAI and MR policies in place on various sections of the waterbody - no other feasible option than HTL to protect populated areas and infrastructure.	*Point to sections of SMP Environmental Assessment where the Directive has been considered against each alternative option.*
	Affect on other water bodies: Can it be demonstrated that the preferred SMP policies do not permanently exclude or compromise the achievement of the objectives of the Directive in water bodies within the same River Basin District that are outside of the SMP2 area?	SMP policies do lead to failure of other adjacent river waterbodies, but no option other than to protect populated areas and infrastructure through Hold The Line policy.	*Refer to the assessment to demonstrate that this is not the case.*
	Other issues: Can it be shown that there are no other over-riding issues that should be considered (such as designated sites, recommendations of the Appropriate Assessment)?	No other over-riding issues.	*Refer to Appropriate Assessment (where relevant) to demonstrate that this is not the case.*

Assessment Table 5 WFD Summary Statements (cont).

Water body (including policy units that affect it)	Water Framework Directive Summary Statement checklist	Provide a brief description of decision making and reference to further documentation within the SMP	
Taw/Torridge	**Mitigation measures:** have all practicable mitigation measures been incorporated into the preferred SMP policies that affect this water body in order to mitigate the adverse impacts on the status of the water body? If not, then list mitigation measures that could be required.	In this waterbody, there are social and economic assets at risk of flooding, this risk is to be minimised through the SMP Hold The Line policy. However this HTL policy may lead to adjacent waterbodies being subject to increased frequency of tidelocking and subsequent water depth increases. Mitigation measures such as moving properties and infrastructure inland or abandoning are considered disproportionately costly.	*Describe any mitigation measures discounted on basis of disproportionate cost or impacts on wider environment.*
	Overriding public interest: can it be shown that the reasons for selecting the preferred SMP policies are reasons of overriding public interest (ROPI) and/or the benefits to the environment and to society of achieving the environmental objectives are outweighed by the benefits of the preferred SMP policies to human health, to the maintenance of health and safety or to sustainable development?	No viable alternatives to HTL in areas for protecting infrastructure and populated areas.	*Refer to sections of the SMP Environmental Assessment which deal with these considerations and provide a brief summary. Set out the benefits of the preferred SMP policies and, if environmental benefits are outweighed by benefits to human health, maintenance of health and safety or sustainable development, then set out disadvantages to the environment for comparison.*
	Better environmental options: have other significantly better options for the SMP policies been considered? Can it be demonstrated that those better environmental policy options which were discounted were done so on the grounds of being either technically unfeasible or disproportionately costly?	NAI and MR policies in place on various sections of the waterbody - no other feasible option than HTL to protect populated areas and infrastructure.	*Outline any significantly better options for the SMP policy and explain why these options have disproportionate costs or are technically unfeasible.*
		NAI and MR policies in place on various sections of the waterbody - no other feasible option than HTL to protect populated areas and infrastructure.	*Point to sections of SMP Environmental Assessment where the Directive has been considered against each alternative option.*
	Affect on other water bodies: Can it be demonstrated that the preferred SMP policies do not permanently exclude or compromise the achievement of the objectives of the Directive in water bodies within the same River Basin District that are outside of the SMP2 area?	SMP policies do lead to failure of other adjacent river waterbodies, but no option other than to protect populated areas and infrastructure through Hold The Line policy.	*Refer to the assessment to demonstrate that this is not the case.*
	Other issues: Can it be shown that there are no other over-riding issues that should be considered (such as designated sites, recommendations of the Appropriate Assessment)?	Likely to be change in composition and distribution of habitats within the Taw/Torridge Estuary SSSI due to coastal squeeze. However, low lying areas areas of the Taw/Torridge with NAI and MR policies provide opportunities to create intertidal habitat to offset any loses.	*Refer to Appropriate Assessment (where relevant) to demonstrate that this is not the case.*

K.4 Conclusions

For many of the North Devon and Somerset 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.

However, there are 8 Management Areas where the proposed policies have the potential not to meet one or more the Environmental Objectives. These being:

- Torridge Estuary – Potential to fail WFD 3.
- Taw Estuary – Potential to fail WFD 3.
- Foreland Point to Hurlestone Point – Potential to fail WFD 2 & 4.
- Minehead to Blue Anchor – Potential to fail WFD 3.
- Blue Anchor to St Audries Bay – Potential to fail WFD 3.
- Hinkley Point – Potential to fail WFD 2 & 3.
- Hinkley Point to Stolford – Potential to fail WFD 3.
- Parrett Estuary (Combwich to River Brue) – Potential to fail WFD 3.

These Management Areas have the potential to fail Environmental Objective WFD2 & 3 because of the loss of intertidal habitats in the mid to long term due to coastal squeeze, where the vital and extensive infrastructure of Hinkley Point nuclear power station is to be defended (i.e. ROPI). However there is the opportunity to provide mitigation for this in other part of the estuary.

Hold The Line Sea policies could, with, level rise due to climate change, potentially lead to increased tide locking and subsequent water depth in adjacent freshwater bodies. Foreland Point to Hurlestone Point has potential to fail WFD 2 & 4 because of the presence of an old landfill site and an SMP policy of NAI. However, mitigation measures for this are being explored by the National Trust's Adaptations Study.

All of the Groundwater Bodies are considered not at risk of saline intrusion with regard to its chemical status, except for the Tone and North Somerset Streams groundwater body. This has the potential for Chemical Status to deteriorate with regard to SMP NAI policy because of the presence of an old landfill site in policy unit 7a17 Porlock Weir to Hurlstone Point. Further strategies and studies in this area will have to take this into regard in future to ensure the Environmental Objectives are not compromised.

There are no High Status sites in the North Devon and Somerset 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 Westward Ho!, Northam Burrows, Hinkley Point and Brean Down. 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

- Defra (2006). Shoreline management plan guidance Volume 2: Procedures. Department for Environment, Food and Rural Affairs, March 2006.
- Environment Agency (2009). Operational Instruction 82_09. Water Framework Directive: Step by Step Process for Assessing Shoreline Management Plans. 24/03/09.
- Royal Haskoning (2008). Water Framework Directive: Retrospective Assessment for the River Tyne to Flamborough Head SMP2. December 2008.
- Royal Haskoning (2009). Appendix K: Water Framework Directive Assessment Northumberland SMP2. May 2009.
- Royal Haskoning (2009). Poole and Christchurch Bays SMP2 (Draft). August 2009.