

Name	Designation
Wick Marsh	Colne Estuary SPA / SSSI
Brightlingsea	Colne Estuary SPA / SSSI
Lagenhoe Marsh	Colne Estuary SPA / SSSI
Maydays Marsh	Not in SSSI – north Mersea Island Defined by the Essex Coast Environmentally Sensitive Area designation. Potential habitat for waders, geese and ducks both overwintering and on passage.
Reeveshall Marsh	Not in SSSI – north Mersea Island Noted for its reedbed, providing suitable habitat for marsh harriers. Also provides potential habitat for waders, geese and ducks both overwintering and on passage.
Feldy Marshes	Not in SSSI – just west of West Mersea Level grazing marshes and potential habitat for overwintering waders, geese and ducks.
Old Hall Marshes	Blackwater Estuary SPA / SSSI
Tollesbury Wick Marshes	Blackwater Estuary SPA / SSSI
Ramsey Marshes	Blackwater Estuary SPA / SSSI
Bradwell Marshes	Sandbeach Meadows SSSI
Tillingham Marshes	Not in SSSI – 3 km east of Tillingham Potential nesting, roosting and feeding ground to 18 bird species of both national and international importance which visit the Dengie peninsula.
Dengie Marshes	Not in SSSI – 4 km east of Southminster Potential nesting, roosting and feeding ground to 18 bird species of both national and international importance which visit the Dengie peninsula.
Fambridge Marshes	Crouch and Roach Estuaries SPA / SSSI
Foulness	Foulness SPA / SSSI
Hadleigh Marsh	Not in SSSI - 1.5km southwest of Leigh-on-Sea Potential habitat for waders, geese and ducks both overwintering and on passage.

## L10.7 **Population & communities**

### L10.7.1 Land Use Planning Policy

The environmental issues on the Essex coast are central to the development of land use planning policy at the regional and local level. In regard to this, the three planning documents critical to identifying the environmental issues in this context are:

- Tendring District Council Adopted Local Plan (to be replaced by the Tendring District Council Local Development Framework in 2010);
- Maldon District Council Local Development Framework Core Strategy Document (in progress – expected mid 2009);
- Rochford District Council Local Plan 2006. Scheduled to be replaced by the Rochford Local Development Framework in June 2009.
- Colchester District Council Local Development Framework Core Strategy 2008;
- Southend-on-Sea Borough Local Development Framework; and
- East of England Plan 2008 (East of England Regional Assembly, May 2008).

Plans and pertinent policy is presented in further detail in **Appendix A**.

The main issues for land use plans on the Essex coast are flood risk, sustainable development and designated sites (for nature conservation). A further key issue for land use plans in the context of an SMP relates to their compatibility with the Habitats

Regulations, especially where land is allocated for housing, employment or other uses which may prejudice SMP policies. For example, housing allocations in areas currently prevented from flooding by flood defence structures or practices would make it more difficult to undertake managed retreat or abandon existing defences. Managed realignment or no active intervention options may be preferred, or necessary in response to coastal squeeze, which may be adversely affecting international sites.

Planning Policy Statement (PPS) 25 sets out government policy on development in relation to flood risk. Broadly speaking, this seeks to avoid development in flood prone areas, or undertaking any development which may lead to enhanced flood risk. PPS 25 requires local authorities to undertake Strategic Flood Risk Assessments (SFRAs) to assist in developing LUPs and LDFs, such that they achieve these objectives.

Adherence to PPS 25 guidance will ensure that the likelihood of development occurring which will prejudice SMP policies is minimised. However, it does not entirely preclude the possibility that detrimental impacts may result and individual local plans thus need to be examined to identify any constraints which may act “in combination” with SMP policies. This is particularly relevant in the case of the two Local Authorities concerned, given that large amounts of their coastal fringe is within Flood Zone 1. Flood Zone 1 is defined as an area within which there is a 1 in 200 year (0.5% per annum) or greater probability of coastal, or 1 in 100 year (1% per annum) or greater probability of fluvial flooding (assuming the absence of defences). PPS 25 states that in Flood Zone 1, there should be a presumption against non-essential development but that this may be acceptable in already developed areas.

#### L10.7.2 Catchment Flood Management Plans (CFMPs)

The Catchment Flood Management Plans for this area provide a strategic approach to the management of flood risk in fluvial areas adjacent to the coast. The two relevant CFMPs for the Essex Coast are the North Essex and the South Essex plans (which were published in 2008).

Both plans provide a suite of common broad objectives, which relate to the approach of policy to social, economic and environmental objectives. The objectives offered, which are pertinent to SMPs are as follows:

**SOCIETY:** To minimise risk to human life;  
To minimise community disruption;  
To maintain critical infrastructure; and  
To protect and improve cultural heritage.

**ECONOMY:** To minimise economic harm through flooding.

**ENVIRONMENT:** To protect and enhance habitats and species.

Under these objectives the CFMPs have identified a series of features which are considered critical to management of the catchments. Each feature is then described in terms of the opportunities for policy. Relevant elements of this process have been fed into the SMP assessment criteria contained within this document. Whilst differences remain in the issues facing fluvial and coastal management, some common features and opportunities exist. The CFMPs both contain a series of objectives, including:

<i>Biodiversity:</i>	The need to maintain or enhance biodiversity.
<i>Fisheries:</i>	To improve the size, condition and recreational value of natural fish stocks.
<i>Landscape:</i>	To safeguard, enhance and reduce flooding of regionally & nationally important landscape features.
<i>Geomorphology:</i>	To restore the natural appearance and processes of rivers.
<i>Cultural, Architectural and Archaeological:</i>	To safeguard, enhance and reduce flooding of important heritage sites.
<i>Damage to Agricultural Land:</i>	To reduce flooding and degradation of important soils and agricultural land
<i>Water Quality:</i>	To help improve chemical and biological water quality in line with regional, national and international targets.

The identification of objectives in this way, coupled with the specification of opportunities to address issues, has been used to aid in the development of assessment criteria for use in this SEA Scoping Report.

#### L10.7.3 Blue Flag beaches

The Blue Flag award is given to coastal destinations which have achieved the highest quality in water, facilities, safety, environmental education and management. Since its inception, it has acted as an incentive to many beach managers to improve the quality of the coast, leading to a revival of the UK coastline and beaches around the world, being particularly important for tourism. The 2008 Blue Flag beaches in Essex are listed below:

- Brightlingsea Beach;
- Dovercourt Bay; and
- Jubilee Beach.

#### L10.7.4 Coastal communities

Several communities are located along the Essex coastline, with SMP policy having the potential to impact these areas. Due to the low-lying nature of much of the Essex coast, many of these communities are located within the 1 in 1000 flood zone and therefore are at risk of coastal inundation or coastal erosion. Areas likely to be subject to erosion will be defined in the various scenarios within the SMP. The risk to settlements is considered in the wider context, so the loss due to flooding of key areas or assets of a settlement would clearly have an effect on population located outside the floodplain, but within the band of coastal settlements. The communities located along the Essex coast and within the 1 in 1000 flood zone are listed in **Table 2.8 (Note – Not all of the population of the settlements below necessarily live in the flood zone)**.

**Table 2.8 Coastal communities along the Essex coastline and within the 1 in 1000 flood zone (population statistics from National Statistics, 2001)**

Coastal Community	District Council	Population estimates (2001 census)
Felixstowe	Suffolk Coastal	24,052
Ipswich	Ipswich Borough Council	121,000
Sproughton	Ipswich Borough Council	No information available
Maidenhall	Ipswich Borough Council	No information available
Shotley Gate	Ipswich Borough Council	2,380
Chchurch End	Braintree District	No information available
Harwich	Tendring District	20,130
Parkeston	Tendring District	No information available
Manningtree	Tendring District	5,628
Mistley	Tendring District	1,684
Walton-on-the-Naze	Tendring District	12,000
Kirkby-le-Soken	Tendring District	1,488
Holland-on-Sea and Clacton-on-Sea	Tendring District	51,284
Jaywick and Seawick	Tendring District	4,665
Brightlingsea	Tendring District	8,146
Ramsey	Tendring District	No information available
Point Clear	Tendring District	1,438
St Lawrence	Tendring District	No information available
Colchester	Colchester Borough	104,390
West Mersea	Colchester Borough	6,792
Tollesbury	Colchester Borough	2,680
Rowhedge	Colchester Borough	1,591
Burnham-on-Crouch	Maldon District	7,636
Maylandsea	Maldon District	3,604
Maldon and Heybridge	Maldon District	20,731
North Fambridge	Maldon District	700
Bradwell Waterside	Maldon District	No information available
Goldhanger	Maldon District	No information available
South Woodham Ferrers	Chelmsford District	16,629
Hullbridge	Chelmsford District	6,050
Battlesbridge	Chelmsford District	No information available
Southend-on-Sea	Southend-on-Sea Borough	160,257
Courtsend	Southend-on-Sea Borough	No information available
Canvey Island	Castlepoint District	37,479
Benfleet	Castlepoint District	48,539
Great and Little Wakering (including Barling)	Rochford District	5,248
Ridgemarsh	Rochford District	No information available
Rochford	Rochford District	16,374

#### L10.7.5 Wealth & deprivation

The 2001 census data gives a total population for Essex of 1,310,835 people. There are 39 small areas within the county that are designated ‘seriously deprived’ that fall into the 20% most deprived areas nationally. Jaywick in Tendring is the third most deprived area in England. Overall, Essex falls just inside the 20% least deprived counties in England in terms of overall deprivation. Of the districts within the county, Tendring is the one with the highest overall level of deprivation. The figures in **Table 2.9** below show the percentage of small areas that are considered seriously deprived with regard to employment and income.

**Table 2.9 Percentage of small areas that are seriously deprived in terms of employment and income**

District	% areas income deprived	% areas employment deprived
<b>Tendring</b>	<b>12</b>	<b>18</b>
<b>Maldon</b>	<b>2</b>	<b>0</b>
<b>Colchester</b>	<b>4</b>	<b>3</b>
<b>Rochford</b>	<b>2</b>	<b>2</b>
<b>Southend-on-Sea</b>	<b>Not listed – unitary authority</b>	<b>Not listed – unitary authority</b>

#### L10.7.6 Key tourism features

Key tourism features along the Essex coast and within the 1 in 1000 year flood zone are listed in **Table 2.10**.

**Table 2.10 Key tourism features along the Essex coast and within SEA study area**

Location	Attraction
Suffolk Coast and Heaths AONB	Stretching south from Lowestoft to the river Stour, the AONB protects heathland, reed beds, salt-marsh and mud-flats, a rich mixture of unique and vulnerable lowland landscapes.
Dedham Vale AONB	AONB protects an exceptional example of a lowland river valley. The designated area of the AONB stretches upstream from Manningtree to within one mile of Bures.
Stour Estuary RSPB Reserve	Popular site for birdwatchers. The site receives a large number of migratory birds in the autumn and large flocks of feeding birds in the winter.
Brightlingsea	Blue flag beach. Popular tourist destination in the summer. Yachting activities are widespread in the area.
Southend-on-Sea	Important tourist destination. Southend-on-Sea has 3 blue flag beaches. There are also adventure parks, nature reserves, museums and galleries.
Clacton-on-Sea	Clacton has a pleasure pier, arcades, a golf course and caravan parks. The beaches are popular with tourists in the summer.
Old Hall Marshes RSPB Reserve	Extensive grazing marshes with brackish water fleets, reedbeds, saltmarsh and two offshore islands. In winter, thousands of wildfowl come here and in the summer the sight is popular for its breeding waders.

#### L10.7.7 Critical Infrastructure

Critical infrastructure within the Essex SMP SEA study area is presented in **Table 2.11**. Many of the larger coastal settlements are served by a network of “B” class roads, with much of the remaining road network being single-track roads. Additionally, the study

area includes Bradwell power station which has an active remaining timeline within Epoch 1 of the SMP

**Table 2.11 Critical infrastructure within the Essex SMP SEA study area**

<b>Critical Infrastructure</b>	<b>Description</b>
A154	Road which links the port of Felixstowe to the A14. Important route for commercial usage.
A14 (T)	Vital road linking Felixstowe peninsula to Ipswich and the rest of the country, but very prone to congestion due to lack of alternate routes.
A137	Connects Ipswich to Colchester. Not a major route but is used to get to smaller settlements such as Manningtree.
A120	Main road leading into Harwich, important route for holidaymakers using the port.
A414	Connects Maldon to Chelmsford, but not a heavily used route.
A132	Small road that connect South Woodham Ferrers to the A130 which leads to Southend-on-Sea. Not a heavily used route.
Harwich International Port	Multipurpose port, the port is primarily involved with ferry operations.
Felixstowe Port	The largest container port in the UK and 5 <sup>th</sup> largest in Europe, employs over 2,700 people. The port is recognised as a strategic employment site of regional and national importance.
Railway line between Burnham-on-Crouch and South Woodham Ferrers	Railway connects small settlements together, ultimately leading to Southend-on-sea. Is not on the main route so is mainly used by commuters and local people.
Railway line in Manningtree and Harwich	This railway connects Manningtree to Harwich and thus connects Harwich to the rest of the country. This rail link connects to the port which is a key destination for holidaymakers going abroad.
Railway and freight line in Southend-on-Sea	The railway connects Southend-on-Sea to London. Easy access route for tourists.
Railway line into Felixstowe port	Important commercial link for businesses to the port.
Railway in Ipswich	Connects Ipswich to Norwich and Cambridge.
Bradwell nuclear power station	Provides electricity for the national grid and has a lifespan within epoch 1.

## **L10.8 Soil**

Soil types found along the coast of Essex reflect closely the underlying drift deposits, and Tertiary London Clays and sands. The soils most commonly found along the coast are associated with marine alluviums. Such soils tend to be deep and largely clayey and tend to be found forming the marshlands of the Colne and Blackwater estuaries, the Rivers Roach and Crouch, the length of the Dengie and Foulness as well as much of the Roach archipelago. A more silty and calcareous soils is more evident on the seaward

side of Dengie and Foulness and gives rise to good quality soils that have been traditionally used for arable farming.

Marsh hinterlands are formed on the clayey soils and loams that have developed on the London Clay and terrace gravels. Finer loamy soils are found on Mersea that have given rise to grasslands and some arable usage. Gravels underlie the well-drained, dark brown loams evident in the Tollesbury area, supporting small areas of woodland and arable and horticultural crops.

Slightly higher terrain exists above the London Clays, leading to clayey soils and where overlain by river terrace gravels, loamy soils. Clayey, frequently waterlogged soils sit on higher ground behind the marshes along the Blackwater and Crouch.

In areas where London Clays and drift deposits are overlain by river terrace gravels, for example around Heybridge, in the Dengie hinterlands and between the Crouch and the Roach, good quality soils are evident supporting crops and horticultural activities. Large amounts of the gravel have been removed for commercial use.

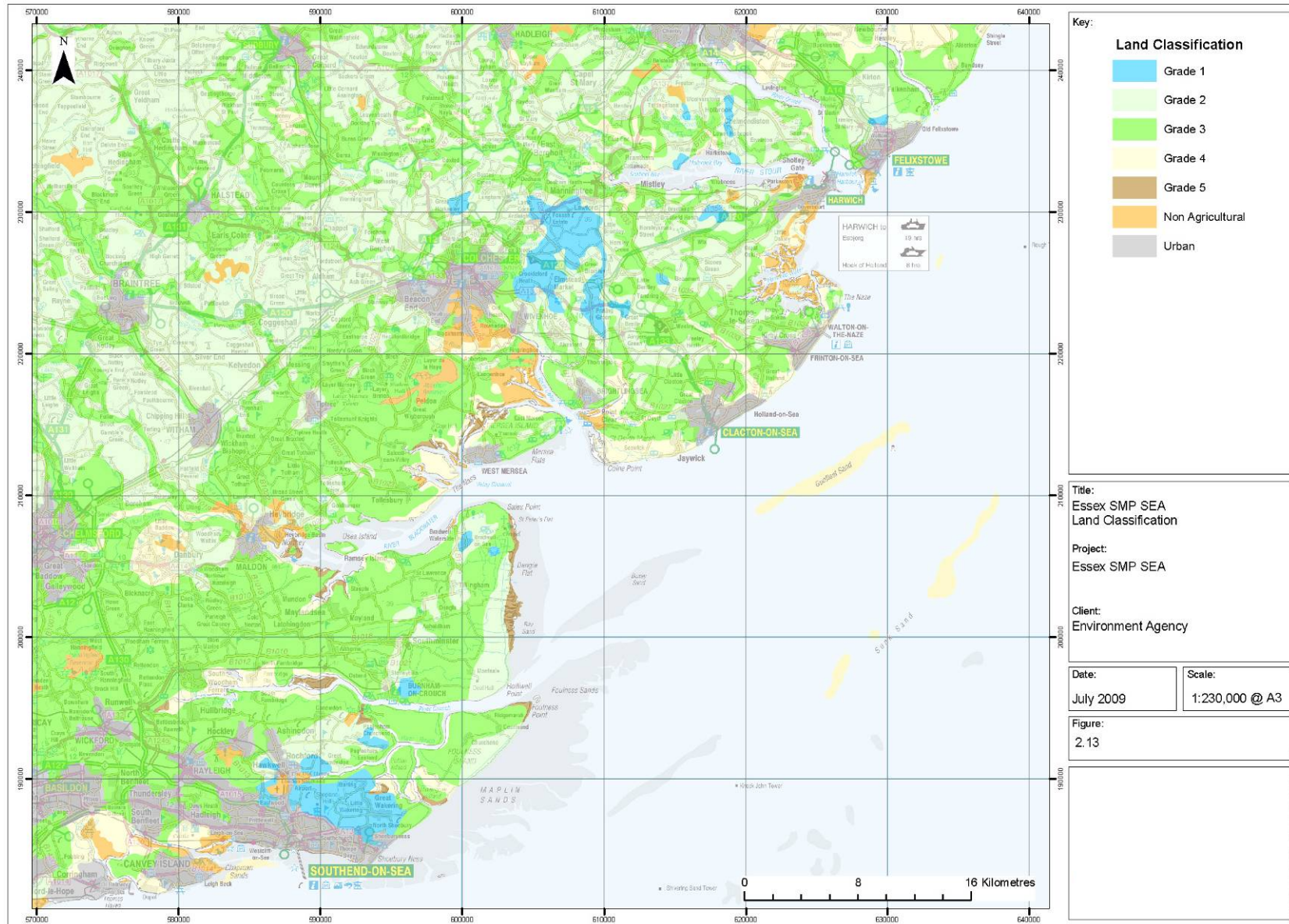
The majority of agricultural land within the 1 in 1000 year flood zone along the Essex coast is classified as Grade 3 land. Due to a favourable combination of climate and soils, subsidised production and national/international policies, the agricultural land in Essex is dominated by intensive cereal production. The location of different sectors is largely related to the distribution of soil types across the county (Essex County Council, 2006). Some of the most productive agricultural land in Essex lies on the Dengie peninsula and surrounds (CLA, 2009).

**Table 2.12** provides information relating to land classification within the 1 in 1000 year flood zone, which is graphically presented in **Figure 2.13**.

**Table 2.12** Quantification of land classification within the 1 in 1000 year flood zone along the Essex coastline

Land Grade	Area in hectares
Grade 1	838.5
Grade 2	5964.7
Grade 3	22803.9
Grade 4	5718.9
Grade 5	308.2
Non Agricultural	2284.7
Urban	1781.7

Figure 2.13 Land classification map for the Essex SMP SEA study area





## L11 ENVIRONMENTAL ISSUES AND ASSESSMENT CRITERIA

In this section the environmental issues for the Essex coast are identified and a series of corresponding assessment criteria provided which will form the basis of the assessment of SMP policy.

### L11.1 Environmental Issues

From a consideration of the policy, legislation and designations relevant to the Essex coast and supported by discussions with key stakeholders as part of the SMP process, a series of **environmental issues** have been identified. These issues are an expression of the environmental considerations relating to coastal areas which the SMP needs to address in the delivery of providing policy for coastal erosion and flood risk management. The issues suite has been developed to avoid a reliance on generic coastal management issues (although some issues are the same around the coast and are therefore included) and has provided an account of what other plans, management obligations and stakeholders consider to be the most critical environmental issues on the Essex Coast.

**The suite of issues provided is as follows:**

- 1 The need to maintain a balance of providing navigation and access to estuary communities;**
- 2 Protection of coastal towns and settlements and the maintenance of features which support tourism and commerce;**
- 3 Maintenance of the coastal landscape with regard to the provision of a mosaic of landscape features which is characteristic of the Essex coast;**
- 4 Potential loss of historic and archaeological features on a dynamic coastline;**
- 5 Threat to biodiversity on a dynamic coast and the interactions between various coastal habitat types;**
- 6 Maintenance of Balance of Coastal Processes on a Dynamic Linear Coastline with Settlements Along Estuaries;**
- 7 Maintenance of Water Supply in the Coastal Zone;**
- 8 Threat to the environmental conditions to support biodiversity and the quality of life; and**
- 8 Maintenance of coastal processes required for sustainable coastal management and the integrity of critical coastal habitat and species.**

The issues and assessment table (**Table 3.1**) provides a detailed account of how these issues are explicitly evident on the Essex coast. **Table 3.1** clearly illustrates these issues in detail and specifies matters that will be scoped in and scoped out of the assessment, subject to the conclusions of this scoping consultation.

In response to each specific issue a series of **assessment criteria** have been developed, which will ensure that the assessment of SMP policy is focussed on the key environmental issues of this area.

Table 3.1 Issues and Assessment Table

ISSUE	ASSESSMENT CRITERIA	INDICATOR	RECEPTORS
<b>Threat to biodiversity on a dynamic coast and the interactions between various coastal habitat types</b>			
The interaction between the maintenance of designated freshwater or terrestrial habitat protected by defences and designated coastal habitat seaward of defences.	Will SMP provide a balanced approach to providing terrestrial, freshwater and coastal habitats when balancing habitat loss and gain?	Number of schemes which address the potential loss or change of terrestrial, freshwater and coastal habitat adjacent to defences or maintained structures.	Habitats Species
Coastal squeeze and changes to coastal processes have the potential to adversely affect the integrity of international sites (Ramsar sites and areas designated under the Habitats and Birds Directives).	Will SMP policy have an adverse effect on the integrity of any international sites?	Number of international sites recorded as not meeting conservation objectives for the sites.	Habitats Species
Loss of EU Annex I priority habitat on the Essex coast, which may be at risk from natural coastal processes or coastal policy which seeks to protect public health and safety.	Will SMP policy have an adverse effect on the integrity of any Annex I Priority Habitat?	Number of Annex I Priority Habitat features not meeting conservation objectives.	Habitat Species
Coastal squeeze has the potential to lead to the loss of UK BAP (priority & broad) coastal habitat. Alternative sites for habitat creation are required to help offset the possible future natural losses. Targets exist for the creation of UKBAP habitat at a local (LBAP) and national level (UKBAP).	Will there be no net loss of UK BAP habitat within the SMP timeline up to 2100 or will the SMP contribute towards the creation of UKBAP habitat?	Area of UK BAP habitat lost.	Habitat
Coastal squeeze has the potential to lead to coastal SSSIs falling into unfavourable condition. Factors attributable to the unfavourable declining condition relating to the SMP, are cited as coastal squeeze.	Will SMP policy contribute to further SSSIs falling into unfavourable?	Number of SSSI units in unfavourable declining condition as a result of coastal management.	Habitat Species
<b>Maintenance of coastal processes required for sustainable coastal management and the integrity of critical coastal habitat and species</b>			
The effects of coastal processes on land quality/use and land sediment derived on the Essex Coast.	Not applicable.	Not applicable.	Soil
<b>Maintenance of environmental conditions to support biodiversity and the quality of life</b>			
The need to ensure that water quality is not adversely affected as a result of SMP policy.	To be established in the context of the ongoing WFD assessment of the Essex SMP	To be established in the context of the ongoing WFD assessment of the Essex SMP	Water
<b>Maintenance of balance of coastal processes on a dynamic linear coastline with settlements along estuaries</b>			
The Essex coast is a complex system of a dynamic linear coast, interspersed with a series of navigable estuary systems. The system has been maintained in recent years to provide relative stability to the system in order to protect coastal assets. The effects of sea level rise require a more strategic approach to shoreline management, but the relative stability of the plan area needs to be maintained albeit within a dynamic context.	Will SMP policy maintain an overall level of balance across the Essex coast in regard to coastal processes, which accepts dynamic change as a key facet of overall coastal management?	Professional expert judgment required on the overall integrity and balance on the coast.	Water Soil Landscape Historic Environment Habitats Species Population Communities
	Will SMP policy increase actual or potential coastal erosion or flood risk to communities in the future?	Projected future risk levels for communities (existing or emerging).	
	Does the policy work with or against natural processes.	Professional expert judgment required on the overall approach to management.	
<b>Maintenance of water supply in the coastal zone</b>			
Agriculture on the Essex coast utilises freshwater derived from groundwater aquifers. The delivery of this supply has the potential to be threatened by intrusion of salt water into freshwater aquifers and from the loss of	Will SMP policy adversely affect abstraction infrastructure?	Number of boreholes on the Essex coast lost to erosion.	Water

ISSUE	ASSESSMENT CRITERIA	INDICATOR	RECEPTORS
boreholes at risk from erosion.		Changes of salinity in the freshwater aquifer attributable to SMP policy.	
<b>Maintenance of the coastal landscape with regard to the provision of a mosaic of landscape features which is characteristic of the Essex coast</b>			
The maintenance of the coastal landscape in the face of coastal change on a dynamic coast and estuary system. A key factor being the potential change in the landscape in response to shifts in coastal habitat composition.	Will SMP policy maintain a range of key natural, cultural and social features critical to the integrity of the Essex coastal landscape?	The maintenance of relative proportions and diversity for the key features (social, historical and natural) in the coastal landscape, particularly those areas identified as rare and sensitive in character.	Landscape Historic Environment Habitats Communities
<b>Potential loss of historic and archaeological features on a dynamic coastline</b>			
The Essex coast contains a range of historic settlements and harbours typically located on along estuaries (for example, Burnham on Crouch, Southend on Sea etc). These communities may be at higher levels of risk from coastal flooding as a result of climate change or levels of erosions along the coast.	Will SMP policy maintain key historic features and areas along the coastline?	Number of historic buildings or historic features lost or impacted by inundation or erosion.	Historic Environment
The coastal zone in Essex contains a range of heritage and archaeological features which may be at risk from loss from erosion or inundation within the timeline of the SMP	Will SMP policy provide sustainable protection of archaeological features (where possible) and ensure the provision of adequate time for the survey of archaeological sites where loss is expected.	Number of historic environment features lost to erosion or inundation, without time being allowed for adaptation or survey prior to loss.	Historic Environment
<b>Protection of coastal towns and settlements and the maintenance of features which support tourism and commerce</b>			
<i>Protection of coastal towns and settlements</i>			
The Core Strategies of local authorities in Essex identify key coastal settlements which are important to the quality of life locally and the integrity of the economy of the area. The potential exists for these settlements to face a higher level of risk from coastal flooding and erosion in the future. There is a need therefore to ensure that coastal settlements are provided with sustainable flood risk management policies for the duration of the SMP.	Will SMP policy maintain key coastal settlements in a sustainable manner, where the impact of coastal flooding and erosion is minimised and time given for adaptation, where required?	Maintenance of key coastal communities.  Provision of appropriate standard of protection for key coastal communities.  Number of new developments located in unsustainable coastal locations.	Populations Communities
Coastal communities in Essex are often dependent on key features located outside of the settlement area. There is a need, therefore, to ensure that features which support communities are maintained, or the actual utility is maintained.	Will SMP policy maintain the form or function of features located outside of established settlements, which are essential to the economy and quality of life of key coastal settlements?	Maintenance of key features (features essential for the sustainability or quality of life of key coastal communities) located outside or key coastal settlements or maintenance of the function or utility of such features.	Populations Communities
<i>Protection of key coastal infrastructure</i>			

ISSUE	ASSESSMENT CRITERIA	INDICATOR	RECEPTORS
<p>The Essex coast is served by a network of roads along the coast and a network of smaller roads to coastal settlements. The maintenance of these roads is important in regard to the utility it provides for the coastal economy and quality of life etc. The roads themselves are of secondary importance (they could be replaced), the important feature is the actual access provided as a social and economic function. The potential exists for this network to be affected by coastal processes.</p>	<p>Will SMP policy maintain road based transport connectivity between settlements on the Essex coast?</p>	<p>Loss of any major route to coastal settlements on the Essex coast.</p>	<p>Communities</p>
<p>The Essex coast is served by rail network linking towns along the coast to London and the national rail network. The network is critical to the functionality of the ports at these centres, supports commuting to London and tourism and runs through the 1 in 1000 year floodplain. The potential exists for areas of the network to be impacted by coastal processes.</p>	<p>Will SMP policy maintain rail based transport connectivity between the Essex coast and the national rail network?</p>	<p>Loss of any active rail links on the Essex coast.</p>	<p>Communities</p>
<p>The Suffolk coast is visited by a large number of tourists and residents every year. Access to and along the coast is provided by a range of coastal footpaths. The provision of this access, rather than the actual footpaths themselves supports a range of values which contribute to the quality of life and local economy of the Essex coastal area. Paths are often located close to the foreshore or along estuaries in areas at risk from coastal erosion (or within potential areas for managed realignment).</p> <p>The nuclear power station at Bradwell is located close to the foreshore. The protection of the power station in situ is important in the national interest and essential for the national interest and the protection of the environment.</p>	<p>Will SMP policy maintain or enhance levels of access along or to the Essex coast and estuaries.</p> <p>Will SMP policy protect, in situ, Bradwell Nuclear power station.</p>	<p>Loss of rights of way routes on the Essex coast and estuaries.</p> <p>Maintenance of Bradwell Power station.</p>	<p>Communities</p> <p>Communities</p>
<p><b>The need to maintain a balance of providing navigation and access to estuary communities</b></p>			
<p>The Essex coastline is a mixture of open coast and relatively large estuary systems. Historically, the county has developed a series of settlements on the estuaries based on providing transport and commerce. In the last century, estuary settlements have become important for tourism, as well as being attractive places to live. The amenity and utility offered by the estuaries is dependent on navigation for commercial and recreational vessels. The value of the estuaries to communities is therefore critically dependent on the provision of existing navigable channels.</p>	<p>Will SMP policy maintain the network of navigable channels in estuaries which support coastal/estuary communities.</p>	<p>Loss of navigable channels which provide a utility to coastal/estuary communities.</p>	<p>Population Communities</p>

## L11.2 **Assessment criteria**

As stated above, assessment criteria have been developed in response to the key environmental issues identified for the Essex SMP area. The use of assessment criteria is a recognised way of considering the environmental effects of a plan or programme and comparing the effect of alternatives. Assessment criteria are used to:

1. Help show whether the objectives of the SMP are beneficial to the study area's environment;
2. Compare the environmental effects of alternative options under consideration; and
3. Identify and recommend mitigation and enhancement.

The overarching assessment criteria for this SEA have been derived from the environmental considerations and issues identified within the scope of this SEA and the SMP process itself. The SMP process has a clearly articulated measured approach which provides for the consideration of environmental issues at the core of the process.

**NOTE** As stated above, in the course of producing the objectives for the SMP, a review of other plans relevant to the study areas was undertaken. From this, the objectives of these supporting plans fed the process of producing objectives for the SMP. It therefore follows, that the SMP objectives are inclusive of the environmental objectives of the other plans discussed in **Appendix A**.

The Scoping Report should set out the following and through consultation seek agreement on:

- The baseline environment for the SMP and how it might develop over the study period (No Active Intervention and With Present Management scenarios);
- The role of relevant plans and projects in this area;
- To identify the key issues for this SEA which relate to the SMP objectives (listed in **Section 1.5.1**); and
- To define the assessment criteria which relate to the key issues / objectives and allow the policy options to be judged for performance against the SMP objectives.

For all Assessment Criteria, the relevant **Receptors** are identified (as defined in Section 1) and specified in **Tables 1.3** and **Table 3.1** to ensure that the assessment stage has regard to the key issues of the Essex Coast in a manner targeted towards the actual receptors of possible effects.

## L12 CONSULTATION

In this section, the consultation which is planned to be undertaken throughout the SEA is summarised. It outlines:

- The purpose of consultation and the methods used; and
- The manner in which feedback will be included into the SEA process.

### L12.1 Approach

The consultation for this SEA will be based on an initial consultation period for the Scoping Report (this document) followed by a period of consultation for the draft SMP which will be supported by the information in the Environmental Report (and other documents).

This report represents **STEP 1** of the consultation process and is intended to ensure that the methodology, baseline and draft assessment criteria are appropriate for the strategic assessment of the SMP. This report will be provided for five weeks of consultation to:

- Environment Agency;
- English Heritage;
- Natural England;
- Tendring District Council;
- Chelmsford Borough Council;
- Suffolk Coastal District Council;
- Ipswich Borough Council;
- Babergh District Council;
- Colchester Borough Council;
- Maldon District Council;
- Braintree District Council;
- Rochford District Council
- Southend-on-Sea Borough Council; and
- Essex County Council.

Following the consultation on **STEP 1**, the Draft SEA key issues list and assessment criteria will be refined and will be used in the evaluation of SMP policy.

The key purpose of this report is to gain feedback from the agencies listed above to address the following questions:

1. **Has the Scoping Report correctly identified the environmental issues on the Essex Coast? (i.e. are there additional issues which need to be addressed?)**
2. **Has the baseline (in combination with the Theme Review and Characterisation report) provided an appropriate level of detail to support the assessment?**
3. **Do the Assessment Criteria provide an appropriate mechanism for the assessment of the environmental effects of the SMP?**

**4. Is the suggested methodology considered robust and appropriate to the assessment of the environmental effect of the SMP?**

Once the SMP desired policy has been selected and offered in draft form for consultation, an **ENVIRONMENTAL REPORT** will be provided which shows a detailed assessment of the selected scenario and feasible alternatives. Consultation on SMP process will therefore support **STEP 2** of the SEA consultation process, and SMP consultation is expected to be provided in October 2009.

Following approval of the SMP a Post-Adoption Statement will be produced with will identify how public response to the Environmental Report has been taken into account. If changes are required to the draft SMP, following consultation, a revised **ENVIRONMENTAL REPORT** will be provided for consultation which will also include details of monitoring the effect of SMP policy on the SEA objectives. This will be **STEP 3** of the consultation process.

**L12.2 Key Issues raised through Consultation**

Key issues raised through the consultation process on this Scoping Report will feed back into the SEA (as an iterative process).

Key issues from this consultation exercise will be detailed in the **ENVIRONMENTAL REPORT**.

## L13 NEXT STEPS

In this section the process of providing the SEA alongside the SMP process will be described through to the production of the **ENVIRONMENTAL REPORT**.

### L13.1 Active use of the SEA within the SMP Process

Following consultation on this **SCOPING REPORT**, the assessment criteria will be used to evaluate policy scenarios for the SMP. The SEA will therefore provide a key instrument in the assessment and refinement of SMP policy. This active use of the SEA will happen alongside the use of:

- The Appropriate Assessment under the Habitats Directive for the SMP; and
- Consideration of the requirements of the Water Framework Directive.

Suggested policy will be developed as a preferred option; at this stage the SEA will be used to clearly demonstrate how environmental considerations have been addressed within the SMP process. To this end, the SEA will provide a transparent account of how environmental matters have been addressed and how this has shaped policy selection. This will culminate in the provision of the **ENVIRONMENTAL REPORT**.

As a component of the Environmental Report, the SEA Monitoring Plan will provide a series of actions, based on the indicators provided, which will ensure that unexpected consequences of the plan will be identified.

### L13.2 Context and methodology

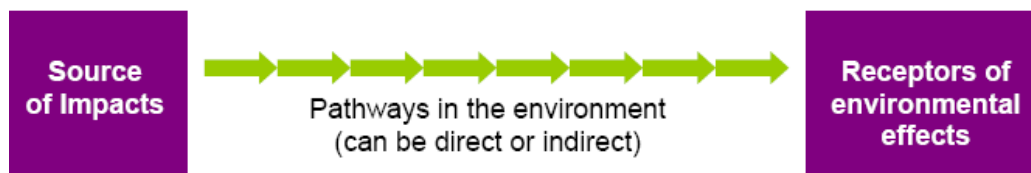
The SEA process is clearly defined in the SEA Regulations and guidance suite. The basic process follows the provision of a Scoping Report (this document) which provides the baseline, identifies key environmental issues, outlines the methodology and offers a series of assessment criteria. Following consultation on this document and the development and assessment of SMP policy, an Environmental Report will be produced which details and records the actual assessment. Subsequent to this, a Post Adoption Statement will be provided which will details the manner in which the assessment will be used to ensure that the actual effects of the SMP are accounted for through monitoring and response.

### L13.3 Prediction and Evaluation Methodology

The methodology we will use to identify and predict the likely significant environmental effects of implementing the plan is described below. To assess the environmental effects of implementing the SMP, we will adopt an evidence based expert judgement system. This approach is based on the widely accepted Source-Pathway-Receptor model (SPR) (**Figure 12.1**).



Figure 12.1 The Source-Pathway-Receptor model as applied to SEA



The appraisal will be a qualitative exercise based on professional judgment and supported by peer-reviewed literature where possible. It is important to stress that given the nature of SMP policy, which is high level and therefore lacks the detail of an actual scheme, the assessment will be based on established effects wherever possible, but will rely heavily on expert judgement of anticipated effects. The performance of each SMP policy against each assessment criteria will be given a significance classification in addition to a short descriptive summary (e.g. widespread negative effects with no uncertainty). For each SMP policy, the assessment table will also include a more comprehensive rationale of the judgment process used for determining the environmental effects and likely significance of each SMP policy. In particular, the following considerations will be paramount in determining environmental effect and likely significance:

- Value and sensitivity of the receptors;
- Is the effect permanent / temporary;
- Is the effect positive / negative;
- Is the effect probable / improbable;
- Is the effect frequent / rare;
- Is the effect direct / indirect;
- Will there be secondary, cumulative and / or synergistic effects.

Table 12.2 Environmental Impact Significance Categorisation

Significance of SMP Policy	
	SMP policy is likely to result in a significant positive impact on the environment.
	SMP policy is likely to have a positive or minor positive impact on the environment (dependant on scheme specifics at implementation).
	SMP policy is likely to have a neutral or negligible effect on the environment.
	SMP policy is likely to have a negative or minor negative impact on the environment (dependant on scheme specifics at implementation).
	SMP policy is likely to have a significant negative impact on the environment.
	The relationship between the SMP policy and the environment is unknown or unquantifiable.

The assessment will be recorded on a series of assessment tables (**Table 12.3**), with each SMP policy benefiting from a clear and transparent account of its likely effects on the environment and the significance of such effects.

**Table 12.3 Method of impact derivation for environmental effect and likely significance**

Environmental issue	Scoped in	Indicator	Receptor	Assessment

Data will be required to support the assessment of likely effects on a range of environmental receptors. This assessment will be based on available information and will have regard to the relatively abstract nature of SMP policy (in comparison to scheme level data).

The use of appropriate receptors has been considered in the development of assessment criteria, whereby the manner in which each receptor (in response to the environmental issues of the Essex coast) is affected by SMP will be clearly described. Where gaps in knowledge exist (relating to the information required to support an assessment of the link between policy and receptor), expert judgement will be used or a decision of unquantifiable effect recorded.

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**Appendix A**  
**Plans and pertinent policy**

Source	Objective
<p><b>East of England Regional Spatial Strategy (RSS): Objectives of the sub-regional strategy</b></p>	<p>In the northern part of the region:</p> <ul style="list-style-type: none"> <li>• major change in the Cambridge sub-region, to achieve a more sustainable balance between job growth and housing development</li> <li>• a matching focus on other key regional centres (Norwich, Peterborough and Ipswich) and other regionally significant towns (Bury St Edmunds and King's Lynn) to provide economic and urban development</li> <li>• priority for the economic regeneration of Great Yarmouth and Lowestoft, for localised pockets of deprivation in all the above centres and the rural areas and market towns.</li> </ul> <p>In the southern part of the region:</p> <ul style="list-style-type: none"> <li>• consideration of major growth pressures and potential in the Stansted/M11 area, and around Milton Keynes (immediately outside but affecting the region)</li> <li>• national and regional priority for regeneration of the Thames Gateway (RPG9 extended this in south Essex up to Southend-on-Sea) and the definition of additional 'priority areas for economic regeneration' at Luton/Dunstable, Harlow and the Lee Valley, and the Harwich/Clacton area.</li> </ul>
	<p><b>Policy SS1: achieving sustainable development</b></p> <ul style="list-style-type: none"> <li>• The spatial strategy aims to achieve a sustainable relationship between jobs, homes and services at the strategic and local level. It requires a sequential approach to the location of major development as a core component of sustainable development. Conserving the region's environment, quality of life, local character and natural resources, whilst adapting to climate change, together with tackling the problems of social inclusion and deprivation are also key strands in achieving sustainable development; and</li> <li>• Local development documents will first consider the reuse of land and buildings within urban areas, then extensions to those areas, and finally other locations where there is good accessibility to public transport, or where proposed development can contribute to improving public transport access.</li> </ul>
	<p><b>Policy SS2: overall approach to the spatial strategy</b></p> <ul style="list-style-type: none"> <li>• In order to achieve a close correlation between homes, jobs and community facilities, urban areas will be the main focus for development and redevelopment in the region;</li> <li>• A sequential approach to the location of new development will be adopted to deliver the quality of life improvements set out in the vision; and</li> <li>• Local development documents will ensure a balanced and deliverable supply of land for employment, housing, and supporting services, by encouraging the change of use of land where alternative development would represent a more sustainable land-use and allow for proposals that would make more efficient use of vacant and underused land and property</li> </ul>
	<p><b>Policy SS3: development in and adjoining urban area</b></p> <ul style="list-style-type: none"> <li>• Greenfield land releases should be appropriate in scale to the adjoining urban area. Significant urban extensions should be large enough to provide a sustainable form of development, in relation to employment, public transport provision, and social, health, education, and community facilities provision.</li> </ul>

Source	Objective
	<p><b>Policy SS4: use of previously developed land and buildings</b></p> <ul style="list-style-type: none"> <li>At least 60% of all new development in the region will take place in or using previously used land or buildings. Local development documents will identify and allocate suitable previously developed land and buildings for new development with a view to contributing to this target.</li> </ul>
	<p><b>Policy SS5: town centres</b></p> <ul style="list-style-type: none"> <li>Thriving, vibrant and attractive town centres are fundamental to the sustainable development of the East of England and they will continue to be the focus for investment, environmental enhancement and regeneration.</li> </ul>
	<p><b>Policy SS6: transport strategy</b></p> <ul style="list-style-type: none"> <li>Transport delivery agencies will improve accessibility and support the economic and spatial development of the region;</li> <li>Improving accessibility to jobs, services and leisure/tourist activities;</li> <li>Reducing the need to travel, while addressing the problems of congestion, economic regeneration and further housing growth as well as strategic movement to neighbouring regions, ports and airports; and</li> <li>Minimising environmental damage and improving safety and security</li> </ul>
	<p><b>Policy SS7: green belt</b></p> <ul style="list-style-type: none"> <li>The broad extent of green belts in the East of England is considered to be appropriate, and will be maintained;</li> <li>Some urban area green belts need reviewing as part of an appraisal to identify the most sustainable locations for new development; and</li> <li>In order to maintain the broad extent of green belts in the region, reviews will consider if compensating additions to the green belts are needed.</li> </ul>
	<p><b>Policy SS8: land in the urban fringe</b></p> <p>Local development documents will:</p> <ul style="list-style-type: none"> <li>Ensure that new development contributes to enhancing the character, appearance, recreational and biodiversity value of the urban fringe;</li> <li>Seek to provide connected networks of accessible green space linking urban areas with the countryside; and</li> <li>Set targets for the provision of green space for planned urban extensions.</li> </ul>
	<p><b>Policy SS9: development in rural areas</b></p> <p>In order to sustain the viability and secure revitalisation of the region's market towns, local authorities will consider the need to:</p> <ul style="list-style-type: none"> <li>Accommodate additional housing, employment growth and economic diversification;</li> <li>Enhance the environment of the town centre;</li> <li>Improve the accessibility of the town by public transport from surrounding rural areas;</li> <li>Extend provision for shopping facilities and services in the town centre; and</li> <li>Improve access to high-speed communications technology to assist economic diversification.</li> </ul>
	<p><b>Policy SS10: the regional economy</b></p> <ul style="list-style-type: none"> <li>The regional economy will be supported and developed to ensure that it contributes fully to national, regional and local prosperity in order to improve quality of life for those who live and work in the Region. Opportunities provided by the relationship with the European economy, the London economy and other neighbouring economies will be exploited and will follow the principles of sustainable development.</li> </ul>

Source	Objective
	<p><b>Policy SS11: priority areas for regeneration</b></p> <ul style="list-style-type: none"> <li>The spatial strategy aims to secure sustainable economic, social and environmental development across the whole of the East of England, in both urban and rural areas.</li> <li>The priority areas are therefore concentrated on some of the larger urban areas and on the more peripheral north and east of the region.</li> </ul> <p><b>Policy SS12: health, education and social inclusion</b></p> <ul style="list-style-type: none"> <li>Seek early provision of services and facilities closely coordinated with development, particularly in the Government's Sustainable Communities Plan growth areas and in the priority areas for regeneration</li> </ul> <p><b>Policy SS13: overall housing provision</b></p> <ul style="list-style-type: none"> <li>Within the regional provision for 23,900 units, social rented housing should be provided at a regional annual average rate of at least 7,200 net additional dwellings, or 30% of overall provision. In addition to this, at least 760 net additional units per year should be provided for key worker housing. The region will also aspire to provide higher provision in the period up to 2015 to reduce the level of unmet housing need and address intermediate housing needs.</li> </ul> <p><b>Policy SS14: development and flood risk</b></p> <ul style="list-style-type: none"> <li>Coastal and river flood risk is a significant factor in the East of the England. The priority is to defend existing properties from flooding, and where possible locate new development in locations with little or no risk of flooding; and</li> <li>Promote the use of strategic flood risk assessments to guide development away from floodplains, areas at risk or likely to be at risk in future from flooding, or where development would increase the risk of flooding elsewhere</li> </ul>
<p><b>Planning Policy Statement (PPS) 25: Development and Flood Risk</b></p>	<ul style="list-style-type: none"> <li>The aims of planning policy on development and flood risk are to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk. Where new development is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and where possible, reducing flood risk overall.</li> <li>In areas at risk of river or sea flooding, preference should be given to locating new development in Flood Zone 1. If there is no reasonably available site in Flood Zone 1, the flood vulnerability of the proposed development can be taken into account in locating development in Flood Zone 2 and then Flood zone 3. Within each Flood Zone new development should be directed to sites at the lowest probability of flooding from all sources</li> </ul> <p><i>Zone 1 (Low Probability)</i></p> <ul style="list-style-type: none"> <li>This zone comprises land assessed as having a less than 1 in 1000 annual probability of river or sea flooding in any year (&lt;0.1%).</li> <li>All uses of land are appropriate in this zone</li> </ul> <p><i>Zone 2 (Medium Probability)</i></p> <ul style="list-style-type: none"> <li>This zone comprises land assessed as having between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% - 0.1%) or between a 1 in 200 and 1 in 1000 annual probability of sea flooding (0.5% - 0.1%) in any year.</li> <li>The water-compatible, less vulnerable and more vulnerable uses</li> </ul>



Source	Objective
	<p>of land and essential infrastructure are appropriate in this zone.*</p> <p><i>Zone 3a (High Probability)</i></p> <ul style="list-style-type: none"> <li>• This zone comprises land assessed as having a 1 in 100 or greater annual probability of flooding from the sea (&gt;0.5%) in any year.</li> <li>• The water-compatible and less vulnerable uses of land are appropriate in this zone.*</li> <li>• The highly vulnerable uses should not be permitted in this zone.*</li> <li>• Essential infrastructure permitted in this zone should be designed and constructed to remain operational and safe for users in time of flood.*</li> </ul> <p><i>Zone 3b (The Functional Floodplain)</i></p> <ul style="list-style-type: none"> <li>• This zone comprises land where water has to flow or be stored in times of flood. It has an annual probability of 1 in 20 (5%) or greater in any year or is designated to flood in an extreme (0.1%) flood.</li> <li>• Only the water-compatible uses* and the essential infrastructure* that has to be there should be permitted in this zone. It should be designed and constructed to: <ul style="list-style-type: none"> <li>○ Remain operational and safe for users in times of flood;</li> <li>○ Result in no net loss of floodplain storage;</li> <li>○ Not impede water flows; and</li> <li>○ Not increase flood risk elsewhere</li> </ul> </li> </ul>
<p><b>Tendring District Council Local Plan (2007)</b></p>	<p><b>Policy QL1 - Spatial Strategy</b></p> <p>The spatial strategy for Tendring to 2011 follows established national and regional principles for sustainable development.</p> <ul style="list-style-type: none"> <li>• Most new development will therefore be concentrated at the larger urban areas of Clacton and Harwich, where accessibility to employment, shops, and other facilities and services is maximised, and there is a choice of means of transport. These towns also contain the largest supply of previously developed land, for use in general preference to greenfield sites.</li> <li>• In the smaller towns and villages, limited development consistent with local community needs will be permitted.</li> </ul> <p>Development will be concentrated within the following settlement development boundaries.</p> <hr/> <p><b>Policy QL3 – Minimising and Managing Flood Risk</b></p> <p>The Council will ensure that flood risk is taken into account at all stages in the planning process, to avoid inappropriate development in areas at risk of flooding. Development will only be permitted in areas of flood risk when there are no reasonably available sites in areas of lower flood risk and the benefits of development outweigh the risks of flooding.</p> <p>Therefore for all proposed sites within Flood Zones 2 and 3, it must be demonstrated that there are no reasonably available sites in a lower flood risk area. The flood vulnerability of the proposed use must match the flood risk probability of the site. Higher vulnerability uses must be located on the part of the site of the lowest probability of flooding.</p> <p>Where development is shown to be required in Flood Zone 2 or 3, compliance with the exception test should be demonstrated for the required development types. Only where the exception test is passed will planning permission be exceptionally granted.</p>

Source	Objective
	<p>A Flood Risk Assessment is required to be submitted with all planning applications for new development on land within Flood Zones 2 and 3. Within Flood Zone 1 proposals on sites of 1 hectare or more will be required to submit a Flood Risk Assessment to consider drainage and flooding from other sources.</p> <p><b>Policy QL5 – Economic Development and Strategic Development Sites</b>  The following strategic employment sites are allocated for development in order to encourage new economic activity and employment opportunities:</p> <ul style="list-style-type: none"> <li>• Bathside Bay (122ha) as an extension to Harwich International Port – for the development of a deep water quayside, container handling area, rail terminal, logistics facility and associated infrastructure;</li> </ul> <p>Land East of Pond Hall Farm (27ha gross) is allocated for the development of a new business park for storage and distribution, along with general and light industrial uses</p> <p><b>Policy QL6 – Urban Regeneration Areas</b>  The following areas are identified on the Local Plan Proposals Maps as Urban Regeneration Areas:</p> <ol style="list-style-type: none"> <li>a) Clacton Seafront and Town Centre</li> <li>b) West Clacton and Jaywick</li> <li>c) Dovercourt Town Centre and adjoining areas</li> <li>d) Harwich</li> <li>e) Walton Seafront and Town Centre</li> <li>f) Brightlingsea Waterfront; and</li> <li>g) Mistley Waterfront and Village.</li> </ol> <p>Within these Urban Regeneration Areas permission will be granted for development that reinforces and/or enhances the function, character and appearance of the area and contributes towards regeneration and renewal. In particular, the Urban Regeneration Areas will be the focus for:</p> <ul style="list-style-type: none"> <li>• Investment in social, economic and transportation infrastructure; and Initiatives to improve vitality, environmental quality, social inclusion, economic prospects, education, health, community safety and accessibility.</li> </ul> <p><b>Policy ER1 – Employment Sites</b>  Land is allocated for employment development (Class B1 [(b) and (c)], B2 and B8) at the following locations:</p> <ul style="list-style-type: none"> <li>• Harwich Area: 24.57ha</li> <li>• Brightlingsea Area: 2.67ha</li> </ul> <p><b>Policy ER16 – Tourism and Leisure Uses</b>  Proposals for tourism and leisure uses will be permitted provided that:</p> <ul style="list-style-type: none"> <li>• the development is accessible to all potential visitors and users;</li> <li>• there is suitable vehicular and public transport access to the site and parking provision, especially where the proposal is likely to generate large traffic volumes. Proposals should be located close to the main road network and link to other public rights of way wherever possible;</li> <li>• the type of use proposed would not cause undue disturbance by reason of noise. Uses creating high levels of noise should be located well away from residential property and sensitive wildlife areas;</li> <li>• there will not be an adverse effect on agricultural holdings and the proposal would not result in an irreversible loss of high quality agricultural land; and where appropriate opportunities are taken to improve damaged and despoiled landscapes and enhance the landscape character of the area.</li> </ul> <p><b>Policy COM32 - Sea Defences</b>  In order to maintain and enhance the interests of marine and coastal habitats the District Council will, where appropriate, require the use of soft engineering sea defences such as wider and deeper beaches or the rehabilitation of salt marshes,</p>

Source	Objective
	<p>as a means of sea defence, rather than the installation of or raising of sea walls or other hard defences. Planning permission will not be granted for development, which would adversely affect the integrity of tidal or fluvial defences, unless the removal or alteration to those defences is necessary to achieve the purpose of the development.</p> <p><b>Policy HG1 - Housing Provision</b>  Provision is made for a net dwelling stock increase of 6,250 dwellings in Tendring District in the period 1 April 1996 to 31 March 2011 in accordance with Policy H1 of the Adopted Essex and Southend-on-Sea Replacement Structure Plan. Future general housing needs in the Tendring District Local Plan 2007 Period 2004 to 2011 will be met by the development of sites allocated for residential or mixed use development and appropriate unidentified sites that meet PPG3 paragraph 31 sustainability criteria and are located within the defined development boundaries of towns and villages. A recycling target of 80% of the Plan's provision between 2004 and 2011 is proposed on previously developed land.</p> <p><b>Policy COM15 - Coastal Water Recreation Facilities</b>  Proposals for new water-based recreational facilities or the renewal or extension of existing facilities will be permitted in coastal towns and resorts where the following criteria are met:</p> <ul style="list-style-type: none"> <li>a) the size and location of the development is appropriate to its setting;</li> <li>b) there will be no undue harm to the amenity of neighbouring residents;</li> <li>c) the surrounding highway network and access to the site is satisfactory;</li> <li>d) the site is accessible by a choice of means of transport;</li> <li>e) no undue harm will be caused to the townscape;</li> <li>f) no undue damage will be caused to local landscape, nature conservation or biodiversity; and</li> <li>g) there will be no safety hazard created by the users either to each other, to bathers or other users of the seafront amenities.</li> </ul> <p>When considering such proposals the Council will require a full noise impact assessment to be submitted in relation to the proposed use of powered watercraft.</p> <p><b>Policy COM16 - Hamford Water, the Stour Estuary and the Colne Estuary</b>  No further extension of areas currently used for boat moorings, the establishment of new marina/boat facilities or other water recreation facilities will be permitted outside existing Settlement Development Boundaries in the undeveloped estuaries and inlets of Hamford Water, the Stour Estuary or the Colne Estuary unless it can be demonstrated that there will be no damaging impact on the relevant SSSI, SAC, SPA and Ramsar sites. In exceptional cases where consent may be granted any adverse impact on the environment must be satisfactorily mitigated.</p> <p><b>Policy COM35 – Managed Re-Alignment</b>  Proposals for alternative “soft” or “natural” engineering methods of sea defence, including managed re-alignment and foreshore recharge will be encouraged where appropriate to ensure sustainable flood management. Schemes should be designed so as to maximise nature conservation benefits with respect to local landscape impact considerations. Access to and along the coastline will be maintained by ensuring that public rights of way affected by managed re-alignment are diverted by formal Public Path Orders to the ‘new coastline’ in order to maintain recreational access along the coastline in accordance with the aims of the Essex Heritage Coastal Trail. The protection of sites of archaeological importance will also be an important consideration.</p> <p>In providing managed realignment areas which are located in or adjacent to</p>

Source	Objective
	<p>international sites, new access arrangements must not increase the nature or degree of accessibility to the international sites such that it will increase physical or non-physical disturbance to designated international features, or otherwise adversely affect site integrity.</p> <p>Proposals should ensure that areas of newly designated/ created SAC is at least the same as the original habitat, taking into account any land take required by new access infrastructure (i.e paths).</p>
	<p><b>Policy EN3 - Coastal Protection Belt</b></p> <p>New development which does not have a compelling functional need to be located in the Coastal Protection Belt, as defined on the Proposals Map, will not be permitted. The onus will be on the applicant to prove such a need, by showing that by reason of its critical operational requirements the development cannot be located outside the Coastal Protection Belt. Even where a compelling functional need is demonstrated, the development should not significantly harm the landscape character and quality of the undeveloped coastline.</p>
	<p><b>Policy EN11a - Protection of International Sites: European Sites and Ramsar Sites</b></p> <p>Development, which may affect a European Site, a proposed European Site or a Ramsar site, will be subject to the most rigorous examination. Development that is not directly connected with or necessary to the management of the site for nature conservation, which is likely to have significant effects on the site (either individually or in combination with other plans or projects) and where it cannot be ascertained that the proposed would not adversely affect the integrity of the site, will not be permitted unless:</p> <ul style="list-style-type: none"> <li>• There is no alternative solution;</li> <li>• There are imperative reasons of over-riding public interest for the development; and</li> <li>• And in the event that (i) and (ii) above are met, an appropriate compensatory habitat is provided.</li> </ul> <p>Where the site concerned hosts a priority natural habitat type and/or a priority species, development or land use changes will not be permitted unless the Council is satisfied that it is necessary for reasons of human health or public safety or for beneficial consequences of primary importance for nature conservation.</p>
	<p><b>Policy EN11b – Protection of National Sites: Sites of Special Scientific Interest, National Nature Reserves, Nature Conservation Review sites, Geological Conservation Review sites.</b></p> <p>Development in or likely to affect Sites of Special Scientific Interest will be subject to special scrutiny. Where such development may have an adverse effect, directly or indirectly on the special interest of the site it will not be permitted unless the reasons for the development clearly outweigh the nature conservation value of the site itself and the national policy to safeguard such sites.</p> <p>Where the site concerned is a National Nature Reserve (NNR) or a site identified under the Nature Conservation Review (NCR) or Geological Conservation Review (GCR) particular regard will be paid to the individual site's national importance.</p> <p>Where development is permitted the Council will consider the use of conditions or planning obligations to ensure the protection and enhancement of the site's nature conservation interest.</p>
	<p><b>Policy EN11c – Protection of Local Sites: Local Nature Reserves, County Wildlife Sites, Regionally Important Geological/Geomorphological Sites</b></p> <p>Development likely to have an adverse effect on a Local Nature Reserve, a</p>

Source	Objective
<p><b>Rochford District Council Local Plan (2007)</b></p>	<p>County Wildlife Site or a Regionally Important Geological/ Geomorphological Site, will not be permitted unless it can be clearly demonstrated that there are reasons for the proposal which outweigh the need to safeguard the substantive nature conservation value of the site.</p> <p>In all cases where development is permitted which would damage the nature conservation value of the site or feature, such damage will be kept to a minimum. Where appropriate the Council will consider the use of conditions and/or planning obligations to provide appropriate mitigation and compensatory measures.</p>
	<p><b>Policy COM33 - Flood Protection</b></p> <p>In order to minimise the effects of tidal flooding, permission will be refused for development on land to the seaward side of sea defences, including the siting of temporary structures such as holiday chalets and caravans. On land between the first line of sea defence and the main defence, the siting of temporary structures may be permitted following consultation with the Environment Agency. Time limited occupancy conditions will be imposed and enforced preventing occupancy during the winter period from November to March inclusive when the risk of tidal inundation is greatest.</p>
	<p><b>Policy NR5 – European and International sites</b></p> <p>Proposals for development which may affect a Special Area of Conservation (either candidate or designated), Ramsar site or Special Protection Area will be subject to the most rigorous examination. Development not directly connected with or necessary to the management of the site, and which would have significant effects on the site (either singly or in combination with other plans and projects), and where it cannot be ascertained that the proposals would not adversely affect the integrity of the site, will not be permitted unless it can be clearly demonstrated that there is no alternative solution and that the development is necessary for imperative reasons of overriding public interest.</p>
	<p><b>Policy NR6 – Sites of Special Scientific Interest</b></p> <p>Proposals for development which is likely to have an adverse impact, either directly or indirectly, on a Site of Special Scientific Interest (SSSI) will not be permitted unless the justification for the development clearly outweighs the national nature conservation interest of the site.</p> <p>If there is risk of damage to a designated site from development the Local Planning Authority will endeavour to enter into a planning obligation with the developers to secure future site management or to make compensatory provision elsewhere for losses expected when development occurs.</p>
	<p><b>Policy NR10 – Coastal protection belt</b></p> <p>Within the Coastal Protection Belt priority will be given to the protection of the rural and undeveloped coastline. Applications for development will not be granted planning permission unless it can be shown that the development would not adversely affect the open and rural character of the coastline, or its historic features, wildlife or geological features.</p>
<p><b>Policy NR11 – Development within flood risk areas</b></p> <p>Applications for development within flood risk areas will be accompanied by full flood risk assessments to enable the Local Planning Authority to properly consider the level of risk posed to the proposed development throughout its lifetime, and the effectiveness of flood mitigation and management measures.</p> <p>Within developed areas of a flood risk area development may be permitted, subject to the conclusions of the flood risk assessment and the suitability of the flood mitigation and management measures recommended therein.</p> <p>Within sparsely developed and undeveloped areas of a flood risk area, commercial, industrial and new residential development will not be permitted except in exceptional cases. Other applications (including applications for the</p>	

Source	Objective
	<p>replacement of existing dwellings on a one-for-one basis) will be considered on their merits, having regard to the conclusions of the flood risk assessment and the suitability of the flood mitigation and management measures recommended therein.</p> <p>Within the functional floodplain buildings will not be permitted except in wholly exceptional cases. Other applications will be considered on their merits, having regard to the conclusions of the flood risk assessment and the suitability of the flood mitigation and management measures recommended therein.</p>
<p><b>Maldon District Council Local Development Framework Core Strategy</b></p>	<p><b>Policy NR13 – Creation of intertidal habitats</b></p> <p>The creation of new intertidal habitats will be permitted provided it can be demonstrated through consultation with the appropriate bodies that the benefits of the proposed new habitats clearly outweigh the resultant loss of other natural habitats, agricultural or other land.</p>
	<p><b>Strategic Objectives (relevant to SMP SEA)</b></p> <ul style="list-style-type: none"> <li>• S ii. To protect and enhance the coast and countryside, recognising the contribution of their intrinsic character and beauty and the diversity of their landscapes, heritage and wildlife, the wealth of natural resources and the character, ecology and economy of the District.</li> <li>• S v. To retain and protect the existing retail base in urban and rural areas.</li> <li>• S vi. To improve access to and the provision of sport and leisure facilities and enhance tourism for all.</li> <li>• S vii. To create a sustainable and accessible environment in which living, working and leisure encourage pride in the District, recognising its important historic qualities.</li> <li>• S ix. To control development within the natural, man-made and statutory constraints that exist in and apply to the District.</li> </ul>
	<p><b>POLICY S2 Development outside development boundaries</b></p> <p>Outside development boundaries defined in the Local Plan, the coast and countryside will be protected for their own sake, particularly for their landscape, natural resources and areas of ecological, historical, archaeological, agricultural and recreational value.</p>
	<p><b>POLICY CON1 Development in Areas at Risk from Flooding</b></p> <p>Development in areas at risk of flooding as shown by the latest Flood Risk Maps will only be permitted where:</p> <ol style="list-style-type: none"> <li>1) There are no alternative sites suitable for the type of proposed development at lower risk of flooding as set out in Table 1 of PPG 25, taking account of all sustainability criteria; and</li> <li>2) It would not have an adverse impact on the function of the flood zone;</li> <li>3) It would not increase the risk of flooding elsewhere.</li> </ol>
	<p><b>POLICY CON3 Coastal Defence</b></p> <p>Proposals for soft engineering methods of coast protection or flood defence will only be permitted where they will ensure sustainable flood management of the estuary, taking into account:</p> <ol style="list-style-type: none"> <li>1) the protection of life, agricultural land, homes and places of work;</li> <li>2) nature conservation and archaeological interests; and</li> <li>3) habitat creation.</li> </ol>
<p><b>POLICY CC1 Development Affecting an Internationally Designated Nature Conservation Site</b></p> <p>Development likely to have a direct or indirect effect on a Ramsar site, Special</p>	

Source	Objective
	<p>Protection Area or Special Area of Conservation will not be permitted unless it is necessary for reasons of overriding public interest. Any such proposals will be subject to the most rigorous examination. Where development is permitted, the use of conditions or planning obligations will be considered, to avoid and/or minimise harm to the site, to enhance the site's nature conservation interest and to secure any compensatory measures and appropriate management that may be required.</p>
	<p><b>POLICY CC2 Development Affecting a Nationally Designated Nature Conservation Site</b></p> <p>Development likely to have a direct or indirect effect on a National Nature Reserve, Site of Special Scientific Interest or Environmentally Sensitive Area will not be permitted unless the need for the development clearly outweighs the importance of the site or the effects can be satisfactorily mitigated. Where development is permitted, the use of conditions or planning obligations will be considered, to avoid and/or minimise harm to the site, to enhance the site's nature conservation interest and to secure any compensatory measures and appropriate management that may be required</p>
	<p><b>POLICY CC3 Development Affecting Locally Designated Nature Conservation Sites</b></p> <p>Proposals for development within or affecting areas designated as Local Nature Reserves (LNR), Wildlife Sites (WS) (formerly SINCs), or Regionally Important Geological Sites (RIGS) will not be permitted unless:</p> <ol style="list-style-type: none"> <li>1) The reasons for the proposal outweigh the need to safeguard the conservation or geological value of the site, and</li> <li>2) The proposal does not cause loss or damage to the nature conservation or geological interest of the site in which the development is proposed, or</li> <li>3) Any adverse or potentially adverse effects on a LNR, WS or RIGS of a proposal will be satisfactorily mitigated, for example through the creation of habitats of equal quality and value elsewhere on the site or in the District.</li> </ol>
	<p><b>POLICY CC4 Local Nature Reserves</b></p> <p>The creation and management of Local Nature Reserves will be encouraged. Sites identified as proposed LNRs on the Proposals Map shall be reserved for that purpose:</p> <ol style="list-style-type: none"> <li>1) Ironworks Water Meadow, Maldon (CC4/1)</li> <li>2) Heybridge Creek, Heybridge (CC4/2)</li> <li>3) Heybridge Gravel Pits, Heybridge (CC4/3)</li> </ol>
	<p><b>POLICY CC5 Protection of Wildlife at Risk on Development Sites</b></p> <ol style="list-style-type: none"> <li>1) Planning permission will not be granted for any development that would be liable to cause demonstrable harm to a species of animal or plant, or its habitat, protected under law, unless conditions are attached requiring the developer to take steps to secure their protection.</li> <li>2) If development is likely to affect features of nature conservation interest, planning permission will not be granted for development there unless either: <ol style="list-style-type: none"> <li>(a) The development would not harm them; or</li> <li>(b) Adequate mitigation measures are put in place; or</li> <li>(c) The importance of the development outweighs the value of the</li> </ol> </li> </ol>

Source	Objective
	<p>features.</p> <p>3. Where there is special wildlife value, or where wildlife gains can be achieved, the developer will be required to:</p> <ol style="list-style-type: none"> <li>(a) Take steps during development to secure the protection of the nature conservation interest;</li> <li>(b) Carry out any identified mitigation measures;</li> <li>(c) Carry out any identified habitat enhancements.</li> </ol> <p>4. Relocation of the wildlife interest from the development site will only be considered in exceptional circumstances.</p>
	<p><b>POLICY CC6 Landscape Protection</b></p> <p>The natural beauty, tranquillity, amenity and traditional quality of the District's landscape will be protected, conserved and enhanced. Proposals for development in the countryside will only be permitted provided that:</p> <ol style="list-style-type: none"> <li>1) No harm is caused to the landscape character in the locality;</li> <li>2) The location, siting, design and materials are appropriate for the landscape in which the development is proposed, and</li> <li>3) The development is landscaped to protect and enhance the local distinctiveness and diversity of the landscape character of the area in which it is proposed.</li> </ol>
	<p><b>POLICY CC7 Special Landscape Areas</b></p> <p>Within Special Landscape Areas permission will not be given for development unless its location, siting, design, materials and landscaping conserve or restore the character of the area in which the development is proposed. The Special Landscape Areas are:</p> <ul style="list-style-type: none"> <li>• Chelmer - Blackwater Ridges</li> <li>• Dengie Marshes</li> <li>• Crouch - Roach Marshes</li> <li>• Blackwater - Colne Estuary</li> <li>• Upper Crouch</li> <li>• Woodham Scarp</li> </ul>
	<p><b>POLICY CC10 Historic Landscape Features</b></p> <p>Development will not be permitted which would have a materially adverse impact upon landscape features of historic importance, such as ancient woodlands, registered parks and gardens, registered battlefields, protected lanes and hedgerows.</p> <p>Any proposal, which would give rise to a material increase in the amount of traffic using protected lanes, will not be permitted.</p>
	<p><b>POLICY CC11 The Coastal Zone</b></p> <p>Within the defined Coastal Zone, development will only be permitted if:-</p> <ol style="list-style-type: none"> <li>1) It requires a coastal location or is associated with an existing use within the Coastal Zone;</li> <li>2) The location, siting, design, materials and landscaping would not adversely affect the open and rural character of the area, its historic features and its wildlife;</li> <li>3) It has minimal impact on views into and out of the area;</li> <li>4) It meets an essential overriding local need which cannot be met within the settlement development boundaries; and</li> <li>5) Every reasonable effort is made to use previously developed land and/or buildings in preference to undeveloped land.</li> </ol>



Source	Objective
	<p><b>POLICY CC13 Protection of the Best and Most Versatile Agricultural Land</b>  Development will not be permitted if it would result in the loss of the best and most versatile agricultural land within grades 1, 2 and 3a of the DEFRA land classification system, unless all the following criteria are met:</p> <ol style="list-style-type: none"> <li>1) There is an overriding need for the development and it is allowed under other policies in the Plan;</li> <li>2) Land in grades below 3a is unavailable or impractical for the purpose proposed, which does not have an environmental value recognised by a statutory designation; and</li> <li>3) The development is proposed on land of the lowest practicable grade.</li> </ol> <p><b>POLICY BE13 Development in Conservation Areas</b>  Development including extensions to existing buildings in Conservation Areas will only be permitted if all of the following criteria are met:</p> <ol style="list-style-type: none"> <li>1) The design is of a high standard incorporating scale, form, materials and detailing that respect the characteristics of buildings in the area.</li> <li>2) Open spaces important to the character or historic value of the area are protected.</li> <li>3) Important views within, into and out of the area are protected.</li> <li>4) Trees and other landscape features contributing to the character or appearance of the area are protected.</li> </ol>
<p><b>Colchester District Council  Adopted Core Strategy  (December 2008)</b></p>	<p><b>Environment and Rural Communities Policies – ENV 1 Environment</b>  The Borough Council will conserve and enhance Colchester’s natural and historic environment, countryside and coastline. The Council will safeguard the Borough’s biodiversity, geology, history and archaeology through the protection and enhancement of sites of international, national, regional and local importance. In particular, developments that have an adverse impact on Natura 2000 sites or the Dedham Vale Area of Outstanding Natural Beauty will not be supported.</p> <p>Within the Coastal Protection Belt development will not be permitted that would adversely affect the open and rural character of the undeveloped coastline, and its historic features, sites of nature conservation importance and wildlife habitats.</p> <p>The network of strategic green links between the rural hinterland, river corridors, and key green spaces and areas of accessible open space that contribute to the green infrastructure across the Borough will be protected and enhanced.</p> <p>Development will be supported at appropriate locations to improve public access, visual amenity and rehabilitate the natural environment. Development will need to minimise and mitigate adverse impacts on river, coastal and ground water quality.</p> <p>The Council will seek to direct development away from land at risk of fluvial or coastal flooding in accordance with PPS25, including areas where the risk of flooding is likely to increase as a result of climate change.</p> <p>Unallocated greenfield land outside of settlement boundaries (to be defined/reviewed in the Site Allocations DPD) will be protected and where possible enhanced, in accordance with the Landscape Character Assessment. Within such areas development will be strictly controlled to conserve the environmental assets and open character of the Borough. Where new</p>

Source	Objective
	<p>development needs, or is compatible with, a rural location, it should demonstrably:</p> <ol style="list-style-type: none"> <li>1) be in accord with national, regional and local policies for development within rural areas,</li> <li>2) including those for European and nationally designated areas; and</li> <li>3) be appropriate in terms of its scale, siting, and design; and</li> <li>4) protect, conserve or enhance landscape and townscape character, including maintaining settlement separation; and</li> <li>5) protect, conserve or enhance the interests of natural and historic assets; and</li> <li>6) apply a sequential approach to land at risk of fluvial or coastal flooding in line with the guidance of PPS25; and</li> <li>7) protect habitats and species and conserve and enhance the biodiversity of the Borough; and</li> <li>8) provide for any necessary mitigating or compensatory measures.</li> </ol> <p><b>Environment and Rural Communities Policies – ENV 2 Rural Communities</b></p> <p>The Borough Council will enhance the vitality of rural communities by supporting appropriate development of infill sites and previously developed land (PDL) within the settlement development boundaries of villages. The design and construction of new village development must be high quality in all respects, including design, sustainability and compatibility with the distinctive character of the locality. Development should also contribute to the local community through the provision of relevant community needs such as affordable housing, open space, local employment, and community facilities.</p> <p>Outside village boundaries, the Council will favourably consider small-scale rural business, leisure and tourism schemes that are appropriate to local employment needs, minimize negative environmental impacts and harmonise with the local character and surrounding natural environment. Development outside but contiguous to village settlement boundaries may be supported where it constitutes an exception to meet identified local affordable housing needs.</p> <p>Towns and villages are encouraged to plan for the specific needs of their communities by developing Parish Plans and Village Design Statements for adoption as guidance.</p>
<p><b>Southend-on-Sea Core Strategy January 2007</b></p>	<p><b>Policy CP4: The Environment and Urban Renaissance</b></p> <p>Development proposals will be expected to contribute to the creation of a high quality, sustainable urban environment which enhances and complements the natural and built assets of Southend. This will be achieved by (aspects specific to SMP SEA):</p> <ol style="list-style-type: none"> <li>1) Safeguarding, protecting and enhancing nature conservation sites of international, national and local importance; and</li> <li>2) Protecting natural resources from inappropriate development.</li> </ol> <p><b>Policy G6 – Nature Conservation</b></p> <p>Development will not be permitted in those areas delineated on the Proposals Map (refer to Southend-on-Sea Local Development Framework Development Plan Document 4 – Seafront Area Action Plan) as being within a nature reserve, site of special scientific interest or Ancient Woodland, or which are subsequently notified as such, unless it can be shown that there will be no adverse effects on</p>

Source	Objective
	<p>plants or animals in their natural surroundings and that physical and natural features will be protected. The Council will also seek to protect wildlife habitats identified elsewhere as being important to nature conservation.</p> <p>The advice of relevant nature conservation agencies and local organisations will be sought in relation to proposed development affecting identified wildlife habitats. The Council will also seek the proper management and maintenance of sites identified as being of nature conservation value, in particular Sites of Special Scientific Interest, Nature Reserves and Ancient Woodlands.</p> <p><b>Policy G7 – Coastal Protection</b></p> <p>There shall be the most stringent restrictions on development in those coastal areas of Belton Hills, Leigh Marshes and Two Tree Island delineated on the Proposals Map. Proposals for recreation development will be permitted within these areas only if they are open and informal in nature and do not adversely affect its rural character and wildlife or important local views.</p>
<p><b>Suffolk Coastal District Council (SCDC): Local Plan and other documents considered</b></p>	<p><b>Planning Policy</b></p> <p>It is in towns where most development, particularly of a large scale, is more appropriately located. The coastal towns, potentially affecting the SMP, identified in the Suffolk Structure Plan and confirmed in this Local Plan are:</p> <p><i>Felixstowe Peninsula South (Felixstowe, Trimley St Martin and Trimley St Mary)</i></p> <ul style="list-style-type: none"> <li>• Has developed its tourism role in terms of services, facilities and accommodation, which builds on the qualities and facilities offered by the town of Felixstowe, creating strong links between the seafront and town centre areas and the qualities of the surrounding natural environment; and</li> <li>• Is well defended from risk of flooding and coastal erosion.</li> <li>• Other than developments required to implement the provisions of the Felixstowe Dock and Railway Act, 1988 and its associated legal agreements, any development or third port access routes will be opposed. The possibility of a new access road to the quays is considered.</li> <li>• If not required for new road access to the quayside, land to the rear of premises on Parker Avenue is identified as a General Employment Area to which Policy AP51 will apply.</li> <li>• A suitably screened, surfaced and landscaped public car park will be provided with access from Ferry Road. The District Council will support measures to reduce the visual and physical impact of car parking on the Common, particularly within the vicinity of the Ferry Church, Harbour Villas, and Ferry Boat Inn by appropriate earth banking and landscaping, to create small greens.</li> <li>• The frontage of Sea Road is considered to make an important contribution to the health and vitality of the resort. Therefore, recreation / leisure / tourist activities, self-catering / serviced accommodation and retailing are deemed the most appropriate uses and will therefore be encouraged.</li> <li>• This area is basically that bounded by Orford Road, Langer Road, Manor Road, Manor Terrace and the seawall. The area is low lying and may be liable to shallow flooding. The major use would be a seafront park, which could be a significant attraction. A space to accommodate a permanent market could be a complementary use.</li> </ul>

Source	Objective
	<ul style="list-style-type: none"> <li>• Whilst recognising the contribution which the site makes to the supply of accommodation in Felixstowe for tourists, the District Council would encourage redevelopment of the land currently used for static and touring caravans at Manor Terrace for chalets, if carried out to a high standard of design and subject to access and infrastructure criteria.</li> <li>• The District Council will protect the open character of the land which separates the physical limits of Felixstowe from those of Trimley St Mary, and the physical limits of Trimley St Mary (including a small part of the parish of Trimley St Martin) from those of Trimley St Martin.</li> <li>• Following the Seafront and Town Centre Masterplan, suggestions of building a leisure path along the seafront in Felixstowe emerged. The path would widen the public access and extend the length of the seafront in the town. Other improvements to the seafront proposed within this report included pier improvements, works on sea defences, cycle paths, a winter garden, cafes, improved public amenities and street furniture. The main areas for the improvements are Undercliff Road West, Sea Road, Convalescent Hill, Wolsey Gardens, Bent Hill, Orwell Road, Crescent Road and Hamilton Road. Other key projects included for evaluation in the master plan include: <ul style="list-style-type: none"> <li>• Bent Hill – a road improvement scheme, with the objective of making the route more ‘user friendly’, by creating shared space between traffic and pedestrians. This scheme will be the responsibility of SCC to implement and is subject to funding from the Local Transport Plan;</li> <li>• South Seafront Regeneration – this scheme involves the property development company Bloor Homes and will create a new visitor attraction at the Martello tower and gardens. This scheme cannot go ahead until the coastal defence works have been completed; and</li> <li>• Landguard Visitor Centre – this scheme will be implemented using funds created from the Felixstowe Port South Reconfiguration project. The scheme will not be implemented until the second stage of the reconfiguration project is underway.</li> </ul> </li> </ul>
<p><b>Water Framework Directive</b></p>	<p>Environmental objectives: Article 4.1:</p> <p>1(a)(i) member states shall implement the necessary measures to avoid deterioration of the status of all bodies of surface water;</p> <p>1(c) Member States shall achieve compliance with any standards and objectives at the latest 15 years after the date of entry into force of this Directive, unless otherwise specified in the Community legislation under which the individual protected areas have been established;</p> <p>the <b>main environmental objectives</b> in the Directive are manifold and include the following elements (for details see Article 4 §1, (a) surface waters, (b) groundwaters and (c) protected areas):</p> <ul style="list-style-type: none"> <li>• <b>No deterioration</b> of status for surface and groundwaters and the protection, enhancement and restoration of all water bodies;</li> <li>• Achievement of <b>good status</b> by 2015, i.e. good ecological status (or potential) and good chemical status for surface waters and good chemical and good quantitative status for groundwaters;</li> <li>• <b>Progressive reduction of pollution</b> of priority substances and <b>phase-out</b> of priority hazardous substances in surface waters and prevention and</li> </ul>

Source	Objective
	<p>limitation of input of pollutants in groundwaters;</p> <ul style="list-style-type: none"> <li>• <b>Reversal</b> of any significant, upward <b>trend</b> of pollutants in groundwaters;</li> <li>• Achievement of standards and objectives set for <b>protected areas</b> in Community legislation.</li> </ul>
<p><b>Habitats Directive</b></p>	<p>The main provisions of the Habitats Directive include:</p> <ul style="list-style-type: none"> <li>• Whereas the preservation, protection and improvement of the quality of the environment, including the conservation of natural habitats and of wild fauna and flora, are an essential objective of general interest pursued by the Community, as stated in Article 130r of the Treaty;</li> <li>• Whereas the European Community policy and action programme on the environment (1987 to 1992)(4) makes provision for measures regarding the conservation of nature and natural resources;</li> <li>• Whereas, the main aim of this Directive being to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements, this Directive makes a contribution to the general objective of sustainable development; whereas the maintenance of such biodiversity may in certain cases require the maintenance, or indeed the encouragement, of human activities;</li> <li>• Whereas, in the European territory of the Member States, natural habitats are continuing to deteriorate and an increasing number of wild species are seriously threatened; whereas given that the threatened habitats and species form part of the Community's natural heritage and the threats to them are often of a transboundary nature, it is necessary to take measures at Community level in order to conserve them;</li> <li>• Whereas, in view of the threats to certain types of natural habitat and certain species, it is necessary to define them as having priority in order to favour the early implementation of measures to conserve them;</li> <li>• Whereas, in order to ensure the restoration or maintenance of natural habitats and species of Community interest at a favourable conservation status, it is necessary to designate special areas of conservation in order to create a coherent European ecological network according to a specified timetable;</li> <li>• Whereas all the areas designated, including those classified now or in the future as special protection areas pursuant to Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds(5), will have to be incorporated into the coherent European ecological network;</li> <li>• Whereas it is appropriate, in each area designated, to implement the necessary measures having regard to the conservation objectives pursued;</li> <li>• Whereas sites eligible for designation as special areas of conservation are proposed by the Member States but whereas a procedure must nevertheless be laid down to allow the designation in exceptional cases of a site which has not been proposed by a Member State but which the Community considers essential for either the maintenance or the survival of a priority natural habitat type or a priority species;</li> <li>• Whereas an appropriate assessment must be made of any plan or programme likely to have a significant effect on the conservation objectives of a site which has been designated or is designated in future;</li> <li>• Whereas it is recognized that the adoption of measures intended to promote the conservation of priority natural habitats and priority species of Community interest is a common responsibility of all Member States; whereas this may, however, impose an excessive financial burden on certain Member States given, on the one hand, the uneven distribution of</li> </ul>

Source	Objective
	<p>such habitats and species throughout the Community and, on the other hand, the fact that the "polluter pays" principle can have only limited application in the special case of nature conservation;</p> <ul style="list-style-type: none"> <li>• Whereas it is therefore agreed that, in this exceptional case, a contribution by means of Community co-financing should be provided for within the limits of the resources made available under the Community's decisions;</li> <li>• Whereas land-use planning and development policies should encourage the management of features of the landscape which are of major importance for wild fauna and flora;</li> <li>• Whereas a system should be set up for surveillance of the conservation status of the natural habitats and species covered by this Directive;</li> <li>• Whereas a general system of protection is required for certain species of flora and fauna to complement Directive 79/409/EEC; whereas provision should be made for management measures for certain species, if their conservation status so warrants, including the prohibition of certain means of capture or killing, whilst providing for the possibility of derogations on certain conditions;</li> </ul>
<b>Birds Directive</b>	<p>The main provisions of the Directive include:</p> <ul style="list-style-type: none"> <li>• The maintenance of the favourable conservation status of all wild bird species across their distributional range (Article 2) with the encouragement of various activities to that end (Article 3).</li> <li>• The identification and classification of Special Protection Areas for rare or vulnerable species listed in Annex I of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance (Article 4). (Together with Special Areas of Conservation (SACs) designated under the Habitats Directive, SPAs form a network of pan-European protected areas known as Natura 2000.)</li> <li>• The establishment of a general scheme of protection for all wild birds (Article 5).</li> <li>• Restrictions on the sale and keeping of wild birds (Article 6).</li> <li>• Specification of the conditions under which hunting and falconry can be undertaken (Article 7). (Huntable species are listed on Annex II.1 and Annex II.2 of the Directive).</li> <li>• Prohibition of large-scale non-selective means of bird killing (Article 8).</li> <li>• Procedures under which Member States may derogate from the provisions of Articles 5-8 (Article 9) — that is, the conditions under which permission may be given for otherwise prohibited activities.</li> <li>• Encouragement of certain forms of relevant research (Article 10).</li> <li>• Requirements to ensure that introduction of non-native birds do not threaten other biodiversity (Article 11).</li> </ul>

**Appendix B**  
**Pertinent legislation**

## A. The Convention on the Conservation of European Wildlife and Natural Habitats

The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) was adopted in Bern, Switzerland in 1979, and came into force in 1982. The principal aims of the Convention are to ensure conservation and protection of wild plant and animal species and their natural habitats (listed in Appendices I and II of the Convention), to increase cooperation between contracting parties, and to regulate the exploitation of those species (including migratory species) listed in Appendix 3. To this end the Convention imposes legal obligations on contracting parties, protecting over 500 wild plant species and more than 1000 wild animal species (JNCC, 2008i).

To implement the Bern Convention in Europe, the European Community adopted Council Directive 79/409/EEC on the Conservation of Wild Birds (the EC Birds Directive) in 1979, and Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the EC Habitats Directive) in 1992 (JNCC, 2008i). Among other things the Directives provide for the establishment of a European network of protected areas (Natura 2000), to tackle the continuing losses of European biodiversity on land, at the coast and in the sea to human activities (JNCC, 2008i).

The UK ratified the Bern Convention in 1982. The Convention was implemented in UK law by the Wildlife and Countryside Act (1981 and as amended) (JNCC, 2008i). As the inspiration for the EC Birds and Habitats Directives, the Convention had an influence on the Conservation (Natural Habitats &c.) Regulations (1994) and the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995, which were introduced to implement those parts of the Habitats Directive not already covered in national legislation (JNCC, 2008i).

## B. The Convention on Biological Diversity

Biological diversity - or biodiversity - is the term given to the variety of life on Earth and the natural patterns it forms (JNCC, 2008j). The biodiversity we see today is the fruit of billions of years of evolution, shaped by natural processes and, increasingly, by the influence of humans. It forms the web of life of which we are an integral part and upon which we so fully depend, providing a large number of goods and services that sustain our lives. Biodiversity consists of hierarchical levels, encompassing the range of landscapes and ecosystems found on the planet, the communities of organisms found within them, the variety of animal, plant and micro-organism species of which these communities consist, and the genetic differences within each species. All of these levels are linked by natural (or semi-natural or human-induced) processes, from gene-flow at the genetic level through to successional habitat change at the landscape level. It is the combination of life forms and their interactions with each other and with the rest of the environment that has made Earth a uniquely habitable place for humans. However, biodiversity is threatened by many factors, including habitat destruction and degradation, pollution, climate change and introduced species. The loss of biodiversity affects food supplies, opportunities for tourism and recreation, sources of medicines, and energy. It also interferes with essential ecological functions.

The Convention on Biological Diversity (Biodiversity Convention or CBD) was adopted at the Earth Summit in Rio de Janeiro, Brazil in June 1992 and entered into force in December 1993 (JNCC, 2008j). As the first treaty to provide a legal framework for biodiversity conservation, the Convention established three main goals: the conservation



of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising from the use of genetic resources (JNCC, 2008j). Contracting Parties are required to create and enforce national strategies and action plans to conserve, protect and enhance biological diversity. They are also required to undertake action to implement the thematic work programmes on ecosystems and a range of cross-cutting issues which have been established to take forward the provisions of the Convention (JNCC, 2008j).

Within Europe, the Pan-European Biological and Landscape Diversity Strategy was developed in 1994 to introduce a coordinating and unifying framework for strengthening and building on existing initiatives which support the implementation of the CBD (JNCC, 2008j). In 1998, the European Community Biodiversity Strategy was adopted, defining a precise framework for action, by setting out four major themes and specifying sectoral and horizontal objectives to be achieved. In 2001, this was followed by the production of Biodiversity Action Plans (BAPs) for fisheries, agriculture, economic cooperation and development, and conservation of natural resources. These sectoral Action Plans define concrete actions and measures to meet the objectives defined in the strategy, and specify measurable targets.

The UK ratified the Convention in June 1994 (JNCC, 2008j). Responsibility for the UK contribution to the Convention in the UK lies with the Department for Environment, Food and Rural Affairs (Defra), who promote the integration of biodiversity into policies, projects and programmes within Government and beyond. Further to this, in 1994 the Government launched the UK Biodiversity Action Plan (UK BAP), a national strategy which identified broad activities for conservation work over the next 20 years, and established fundamental principles for future biodiversity conservation (JNCC, 2008j). Subsequently, costed Biodiversity Action Plans (BAPs) to conserve 391 species and 45 habitats were published. Local Biodiversity Action Plans (LBAPs) have also been identified as important in the implementation of the strategy, and 163 have so far been developed (JNCC, 2008j).

### C. The Convention on the Conservation of Migratory Species of Wild Animals

Migration is a natural phenomenon, by which individuals of a given species move between areas which they inhabit at different times of the year (JNCC, 2008k). Migratory species of animals are, on average, more at risk of becoming endangered than non-migratory species, because their requirements are greater; not only do they need good habitat for reproduction but also during their non-breeding and all along their migratory routes (JNCC, 2008k). In an ever-changing world, human pressure is high on some of those habitats, and also often on the animals themselves (hunting, incidental catch etc). To conserve species whose movements regularly cross national borders, international cooperation is of vital importance (JNCC, 2008k).

The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention or CMS) was adopted in Bonn, Germany in 1979 and came into force in 1985 (JNCC, 2008k). Contracting Parties work together to conserve migratory species and their habitats by providing strict protection for endangered migratory species (listed in Appendix 1 of the Convention), concluding multilateral Agreements for the conservation and management of migratory species which require or would benefit from international cooperation (listed in Appendix 2), and by undertaking co-operative research activities (JNCC, 2008k). The UK ratified the Convention in 1985 (JNCC,

2008k). The legal requirement for the strict protection of Appendix I species is provided by the Wildlife & Countryside Act (1981 and as amended).

#### D. Convention on Trade in Endangered Species of Wild Flora and Fauna

Annually, international wildlife trade is estimated to be worth billions of dollars and to include millions of individual plant and animal specimens (JNCC, 2008l). The trade is diverse, ranging from live animals and plants to a vast array of wildlife products derived from them. An annual import value approaching US\$160 billion has been estimated for all wildlife products, including wild-sourced timber and fish products, in the early 1990s (JNCC, 2008l). Levels of exploitation of some animal and plant species are high and the trade in them, together with other factors, such as habitat loss, is capable of heavily depleting their populations and even bringing some species close to extinction. Many wildlife species in trade are not endangered, but the existence of an agreement to ensure the sustainability of the trade is important in order to safeguard these resources for the future. Since the trade in wild animals and plants crosses borders between countries, the effort to regulate it requires international cooperation to safeguard certain species from over-exploitation.

The Convention on Trade in Endangered Species of Wild Flora and Fauna (CITES or the Washington Convention) was adopted in Washington DC, United States of America in March 1973 and entered into force in July 1975 (JNCC, 2008l). CITES aims to regulate international trade in species which are endangered or which may become endangered if their exploitation is not controlled. CITES is implemented within Europe through two EC Regulations (338/97 and 1808/01) (JNCC, 2008l). These Regulations implement CITES in a stricter manner than is required by the Convention. For instance they include certain non-CITES species, and also contain provisions to prohibit or restrict imports of species which are considered to be a threat to native EC flora and fauna.

The UK ratified CITES in August 1976. The Endangered Species (Import & Export) Act 1976 was the first piece of legislation to give effect to CITES. It has been substantially amended and is now largely superseded by the European Regulations (JNCC, 2008l). The Control of Trade in Endangered Species (Enforcement) Regulations 1997 (COTES) make provision for enforcement of the European Regulations (JNCC, 2008l).

#### E. United Nations Framework Convention on Climate Change

While the world's climate has always varied naturally, the vast majority of scientists now believe that rising concentrations of 'greenhouse gases' in the earth's atmosphere, resulting from economic and demographic growth over the last two centuries since the industrial revolution, are overriding this natural variability and leading to potentially irreversible climate change (JNCC, 2008m). The implications of climate change are far reaching and include rises in sea levels, changes in rainfall patterns (increasing the threat of drought or floods in many regions) and a greater threat of extreme weather events, such as intense storms and heatwaves (JNCC, 2008m). Climate change could, therefore, have potentially dramatic negative impacts on human health, food security, economic activity, water resources, physical infrastructure and global biodiversity.

The United Nations Framework Convention on Climate Change was adopted at the Earth Summit in Rio de Janeiro, Brazil in 1992 and came into force on 1994 (JNCC,

2008m). The Convention set a non-binding goal for Contracting Parties to stabilise their greenhouse emissions to 1990 levels by the year 2000. To this end, Parties were required to undertake necessary measures, including the submission of national inventories of greenhouse-gas emissions and removals, adoption of national programmes for mitigating climate change and developing strategies for adapting to its impacts, and promotion of technology transfer and the sustainable management, conservation, and enhancement of greenhouse gas sinks and 'reservoirs' (such as forests and oceans). In addition, Parties were required to take climate change into account in their relevant social, economic, and environmental policies; cooperate in scientific, technical, and educational matters; and promote education, public awareness, and the exchange of information related to climate change (JNCC, 2008m). However, in 1995 it was acknowledged that the commitment of Parties to take these measures was not adequate to achieve the aims of the Convention. As a result, the Kyoto Protocol was adopted in 1997 to strengthen the obligations of the Convention. Under the Protocol, industrialized countries have a legally binding commitment to reduce their collective greenhouse gas emissions by at least 5% compared to 1990 levels by the period 2008 – 2012.

The UK ratified the Climate Change Convention in 1993 and the Kyoto Protocol in 2002. In November 2000, the UK Government published a national strategy for addressing climate change issues, providing details of how the UK plans to deliver its targets under the Kyoto Protocol (JNCC, 2008m).

#### F. The Convention for the Protection of the Marine Environment of the North-East Atlantic

During the latter half of the last century deliberate dumping of substances and spillage disasters in the North-East Atlantic highlighted the need for international cooperation to combat marine pollution in this region (JNCC, 2008n). Accordingly, the Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft (the Oslo Convention) was adopted in 1972 to address pollution at sea, while the Convention for the Prevention of Marine Pollution from Land-Based Sources (the Paris Convention) was adopted in 1974 to address marine pollution by discharges of dangerous substances from land-based sources, watercourses or pipelines (JNCC, 2008n).

The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) was adopted in Paris, France in September 1992 and entered into force in March 1998 (JNCC, 2008n). OSPAR replaced both the Oslo and Paris Conventions, with the intention of providing a comprehensive and simplified approach to addressing all sources of pollution which might affect the maritime area, as well as matters relating to the protection of the marine environment other than those relating to the prevention and elimination of pollution. It retained all decisions, recommendations and agreements adopted under the previous Conventions, subject to termination through the adoption of new measures under OSPAR. An OSPAR Commission was established to administer the Convention and to develop policy and international agreements. In July 1998 parties agreed on a new Annex V on the protection and conservation of the ecosystems and biological diversity of the maritime area and a new appendix 3 with criteria for identifying human activities for the purpose of Annex V (JNCC, 2008n). The Commission has adopted five strategies for directing its work. Measures and programmes within the Biodiversity Strategy include the identification of ecological quality objectives of the North Sea, development of lists of species and habitats in need of protection,

identification and selection of marine protected areas, and the prevention and control of adverse impacts from human activities. The UK ratified OSPAR in 1998, and Annex V and Appendix 3 in June 2000 (JNCC, 2008n).

#### G. The Convention on Wetlands of International Importance especially as Waterfowl Habitat

Wetlands are among the world's most productive environments (JNCC, 2008o). They are cradles of biological diversity, providing the water and primary productivity upon which large numbers of plant and animal species depend for survival. They are also important locations of plant genetic diversity and support large numbers of bird, mammal, reptile, amphibian, fish and invertebrate species (JNCC, 2008o). Wetlands provide tremendous economic benefits through their role in supporting fisheries, agriculture and tourism and through much of the world they have a crucial role as a source of clean water for dependant human populations (JNCC, 2008o). Unfortunately they are also among the world's most threatened ecosystems, owing mainly to continued drainage, pollution, over-exploitation or other unsustainable uses of their resources (JNCC, 2008o).

The Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention or Wetlands Convention) was adopted in Ramsar, Iran in February 1971 and entered into force in December 1975 (JNCC, 2008o). The Convention covers all aspects of wetland conservation and wise use. The Convention has three main 'pillars' of activity: the designation of wetlands of international importance as Ramsar sites; the promotion of the wise-use of all wetlands in the territory of each country; and international co-operation with other countries to further the wise-use of wetlands and their resources.

The UK ratified the Convention in 1976. The UK has generally chosen to underpin the designation of its Ramsar sites through prior notification of these areas as Sites of Special Scientific Interest (SSSIs) (or Areas of Special Scientific Interest (ASSIs) in Northern Ireland) (JNCC, 2008o). Accordingly, these receive statutory protection under the Wildlife & Countryside Act (WCA) 1981, and the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 (JNCC, 2008o). In England and Wales, further protection is provided by the Countryside and Rights of Way (CRoW) Act 2000. Government in England and Wales has issued policy statements relating to the special status of Ramsar sites. This extends the same protection at a policy level to listed Ramsar sites in respect of new development as that afforded to sites which have been designated under the EC Birds and Habitats Directives as part of the EU Natura 2000 network (JNCC, 2008o).

#### H. Council Directive 79/409/EEC on the conservation of wild birds

In 1979, the European Community adopted Council Directive 79/409/EEC on the conservation of wild birds (the 'Birds Directive'), in response to the 1979 Bern Convention on the conservation of European habitats and species (the 'Bern Convention') (JNCC, 2008p). The annexes were amended by the Environment Chapter of the Treaty of Accession 2003. The Directive provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. It sets broad objectives for a wide range of activities, although the precise legal mechanisms for their achievement are at the discretion of each Member State (in the UK

delivery is via several different statutes). The Directive applies to the UK and to its overseas territory of Gibraltar (JNCC, 2008p).

The main provisions of the Directive include:

- The maintenance of the favourable conservation status of all wild bird species across their distributional range (Article 2) with the encouragement of various activities to that end (Article 3);
- The identification and classification of Special Protection Areas for rare or vulnerable species listed in Annex I of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance (Article 4) (Together with Special Areas of Conservation (SACs) designated under the Habitats Directive, SPAs form a network of pan-European protected areas known as Natura 2000);
- The establishment of a general scheme of protection for all wild birds (Article 5);
- Restrictions on the sale and keeping of wild birds (Article 6);
- Specification of the conditions under which hunting and falconry can be undertaken (Article 7). (Huntable species are listed on Annex II.1 and Annex II.2 of the Directive);
- Prohibition of large-scale non-selective means of bird killing (Article 8);
- Procedures under which Member States may derogate from the provisions of Articles 5-8 (Article 9) — that is, the conditions under which permission may be given for otherwise prohibited activities;
- Encouragement of certain forms of relevant research (Article 10); and
- Requirements to ensure that introduction of non-native birds do not threaten other biodiversity (Article 11).

A very wide range of other statutory and non-statutory activities also support the Bird Directive's implementation in the UK (JNCC, 2008p), including national bird monitoring schemes, bird conservation research and the UK Biodiversity Action Plan (UKBAP) which involves action for a number of bird species and the habitats which support them.

In the UK, the provisions of the Birds Directive are implemented through the Wildlife & Countryside Act 1981 (as amended) The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), the Wildlife (Northern Ireland) Order 1985, the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 and The Conservation (Natural Habitats, &c.) (Northern Ireland) Regulations 1995 (as amended). The 'Habitats Regulations' apply to the UK land area and its territorial sea (to 12 nautical miles from the coast), and are supported by government policy guidance (JNCC, 2008p).

#### I. Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora

Within Europe natural habitats are continuing to deteriorate and an increasing number of wild species are seriously threatened, with much of this being as a result of development and agricultural intensification (JNCC, 2008q). The main aim of the EC Habitats Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species at a favourable conservation status, introducing robust protection for those habitats and species of European importance. In applying these measures Member States are required to take

account of economic, social and cultural requirements and regional and local characteristics (JNCC, 2008q).

In 1992 the European Community adopted Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (EC Habitats Directive). This is the means by which the Community meets its obligations as a signatory of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) (JNCC, 2008q). The provisions of the Directive require Member States to introduce a range of measures including the protection of species listed in the Annexes; to undertake surveillance of habitats and species and produce a report every six years on the implementation of the Directive. The 189 habitats listed in Annex I of the Directive and the 788 species listed in Annex II, are to be protected by means of a network of sites. Each Member State is required to prepare and propose a national list of sites for evaluation in order to form a European network of Sites of Community Importance (SCIs). Once adopted, these are designated by Member States as Special Areas of Conservation (SACs), and along with Special Protection Areas (SPAs) classified under the EC Birds Directive, form a network of protected areas known as Natura 2000 (JNCC, 2008q). The Directive was amended in 1997 by a technical adaptation Directive, with the annexes being further amended by the Environment Chapter of the Treaty of Accession 2003.

The Habitats Directive introduces the precautionary principle for the first time to protected areas; that is that projects can only be permitted having ascertained no adverse effect on the integrity of the site for the first time for protected areas,. Projects may still be permitted if there are no alternatives, and there are imperative reasons of overriding public interest. In such cases, compensation measures will be necessary to ensure the overall integrity of network of sites. As a consequence of amendments to the Birds Directive these measures are to be applied to SPAs also. Member States shall also endeavour to encourage the management of features of the landscape to support the Natura 2000 network (JNCC, 2008q).

In the UK the Directive has been transposed into national laws by means of the Conservation (Natural Habitats, & c.) Regulations 1994 (as amended), and the Conservation (Natural Habitats, & c.) Regulations (Northern Ireland) 1995 (as amended), which are known as 'the Habitats Regulations'. Most SACs on land or freshwater areas are underpinned by notification as Sites of Special Scientific Interest (SSSIs) (or as Areas of Special Scientific Interest (ASSIs) in Northern Ireland) (JNCC, 2008q).

#### J. The Convention Concerning the Protection of the World Cultural and Natural Heritage

The Convention Concerning the Protection of the World Cultural and Natural Heritage (the World Heritage Convention) was adopted in Paris, France in November 1972 and came into force in December 1975, being ratified in the UK in 1984 (JNCC, 2008r). The Convention is a unique international instrument in that it seeks to protect both cultural and natural heritage and defines the kind of sites which can be considered for inscription of the World Heritage List (ancient monuments, museums, biodiversity and geological heritage all come within the scope of the Convention), setting out the duties of States Parties in identifying potential sites and their role in protecting them (JNCC, 2008r). Although many World Heritage sites fall into either the 'cultural' or 'natural' categories, a

particularly important aspect of the Convention is its ability to recognise landscapes that combine these values, and where the biological and physical aspects of landscape have evolved alongside human activity (JNCC, 2008r).

#### K. Council Directive 76/160/EEC on the Quality of Bathing Water

The main objective of the 1976 EC Bathing Water Directive (76/160/EEC) is to protect public health and the environment from faecal pollution at bathing waters (Defra, 2008a). The Directive requires Member States to identify popular bathing areas and to monitor water quality at these bathing waters throughout the bathing season, which runs from mid May to September in England (Defra, 2008a). The Directive sets a number of microbiological and physico-chemical standards that bathing waters must either comply with ('mandatory' standards) or endeavour to meet ('guideline' standards) (Defra, 2008a).

The mandatory standards used by the European Commission to determine compliance of bathing waters with the Directive are the microbiological parameters - total and faecal coliforms and three physico-chemical parameters - surface active substances, mineral oils and phenols. Cases of non-compliance with the physico-chemical parameters are extremely rare so compliance in the UK each year is normally determined by the extent of pollution by total and faecal coliform bacteria (Defra, 2008a). Meeting the mandatory water quality standards of the Bathing Water Directive is the minimum legal requirement. Mandatory standards are given for 10 parameters: total coliforms, faecal coliforms, salmonella, enteroviruses, pH, colour, mineral oils, surface active substances (detergents), phenols and transparency. The Directive also sets the minimum frequency at which bathing waters should be sampled.

The Bathing Water Directive was initially transposed into national legislation through the Bathing Waters (Classifications) Regulations (SI 1991 No. 1597) and the Bathing Waters (Classifications) (England) Regulations 2003 (SI 2003 No. 1238). A revised Bathing Water Directive (2006/7/EC) came into force in March 2006, with key changes including a tightening of water quality standards and a requirement to provide information about bathing waters to the public on signage on beaches and online. The revised Directive sets 4 new standards of water quality (excellent, good, sufficient and poor) and all bathing waters will be expected to achieve at least the "sufficient" classification by 2015, with limited exceptions (Defra, 2008a). In 2008, there are 414 identified and monitored bathing waters in England, 81 in Wales, 80 in Scotland and 24 in Northern Ireland, making a total of 599 bathing waters across the UK. Of these sites, 587 are coastal waters and 12 are inland freshwater sites (Defra, 2008a).

#### L. Shellfish Waters Directive (79/923/EC)

The aim of the EC Shellfish Waters Directive is to protect or improve shellfish waters in order to support shellfish life and growth, therefore contributing to the high quality of shellfish products directly edible by man (Defra, 2008b). It sets physical, chemical and microbiological water quality requirements that designated shellfish waters must either comply with ('mandatory' standards) or endeavour to meet ('guideline' standards) (Defra, 2008b). The Directive is designed to protect the aquatic habitat of bivalve and gastropod molluscs, including oysters, mussels, cockles, scallops and clams. It does not cover shellfish crustaceans such as crabs, crayfish and lobsters (Defra, 2008b).

The original Shellfish Waters Directive (79/923/EC), adopted on 30 October 1979, was repealed by the codified Shellfish Waters Directive (2006/113/EC), adopted on 12 December 2006. Codification is a routine procedure that consolidates an existing Directive, with any amendments made since its introduction, into a single, more accessible document (Defra, 2008b). The codified Directive maintains all existing measures which provide for the monitoring and assessment of shellfish waters and the setting of the water quality standards they are required to achieve (Defra, 2008b). The original Shellfish Waters Directive (79/923/EEC) was transposed into UK legislation through the Surface Waters (Shellfish) Classifications Regulations 1997 and the Surface Waters (Shellfish) Directions 1997 (Defra, 2008b).

Defra is committed to improving water quality to a level where all designated shellfish waters can support at least 'class B' production areas (Defra, 2008b). This is regarded as an achievable interim target towards meeting the guideline faecal coliform standard for shellfish flesh quality under the Shellfish Waters Directive, providing significant environmental benefits as well as benefits to the shellfish industry (Defra, 2008b).

The Directive will be repealed in 2013 by the EC Water Framework Directive. When this occurs, the Water Framework Directive must provide at least the same level of protection to shellfish waters (which the WFD classifies as protected areas) as the Shellfish Waters Directive does (Defra, 2008b).

There are currently 98 designated shellfish waters in England, 108 in Scotland, 26 in Wales and 9 in Northern Ireland, a total of 241 shellfish waters in the UK. Shellfish waters are formally designated under the Shellfish Waters Directive through the issue of a Notice and Schedule (Defra, 2008b).

#### M. Water Framework Directive (2000/60/EC)

Rivers, lakes and coastal waters are vital natural resources, they provide drinking water, crucial habitats for many different types of wildlife and are an important resource for industry and recreation. A significant proportion of them are environmentally damaged or under threat. Protecting and improving the environment is an important part of achieving sustainable development and is vital for the long term health, well being and prosperity of everyone. The new EU Water Framework Directive is a welcome and radical improvement on earlier, piecemeal EU water legislation. It expands the scope of water protection to all waters and sets out clear objectives that must be achieved by specified dates (JNCC, 2008s).

In October 2000 the 'Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy' (EU Water Framework Directive or WFD) was adopted (JNCC, 2008s). The purpose of the Directive is to establish a framework for the protection of inland surface waters (rivers and lakes), transitional waters (estuaries), coastal waters and groundwater. It will ensure all aquatic ecosystems and with regard to their water needs, terrestrial ecosystems and wetlands meet 'good status' by 2015. The Directive requires Member States to establish river basin districts and for each of these a river basin management plan and envisages a cyclical process where river basin management plans are prepared, implemented and reviewed every six years. A key part of the Water Framework Directive, that is central to its successful implementation, is the requirement



to achieve 'good' status for most European surface water bodies by 2015. The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 were laid before Parliament at the end of 2003. The regulations include (JNCC, 2008s):

- The framework for delivering the Directive's environmental objectives. The quality of rivers, lakes, estuaries, coastal waters and groundwaters must be protected and enhanced by 2015;
- Wetlands depending on groundwater must be safeguarded and water related requirements of other European Community legislation taken into account;
- Integration into packages of measures and plans based on river basins, which must be drawn up with full public participation;
- The Environment Agency as competent authority for these Regulations has responsibility to:
  - Characterise river basin districts;
  - Identify bodies of water used for the abstraction of drinking water;
  - Prepare, review and keep up to date a register of protected areas for each river basin district;
  - Establish programmes to monitor water status, so as to establish an overview within each river basin district;
  - Prepare and submit to the 'appropriate authority' (Secretary of State and/or National Assembly for Wales) environmental objectives for each body of water and programmes of measures; and
  - Prepare and submit to the appropriate authority a river basin management plan for each district (including consultation, publicity and taking account of views) and supplementary plans.

#### N. Council Directive on Environmental Liability (2004/35/EC)

The Directive is likely to be transposed by December 2008 and seeks to achieve the prevention and remedying of environmental damage - specifically, damage to habitats and species protected by EC law and to species or habitat on a site of special scientific interest for which the site has been notified, damage to water resources and land contamination which presents a threat to human health. It reinforces the "polluter pays" principle - making operators financially liable for threats of or actual damage (Defra, 2008c).

The Directive introduces a number of key features (Defra, 2008c):

- Scope - the Directive does not cover all types of damage to the environment. It only covers 'environmental damage' which is one or more of: 'damage to protected species and natural habitats or in a site of special scientific interest', 'damage to water' and 'land damage';
- The Directive introduces two types of liability: fault-based liability in respect of environmental damage to protected species and natural habitats from all other occupational activities and strict liability in respect of environmental damage, caused by a specified range of 'occupational activities' (described in Annex III of the ELD);
- Reporting environmental damage - operators are required to take immediate steps to prevent damage or further damage and to notify the enforcing authority; and

- Role of enforcing authority - the authority must establish if it is 'environmental damage' and identify a responsible operator.

A number of legal systems already exist in the United Kingdom which provide for the remediation of environmental damage. Under these regimes, action is taken in the public interest by public authorities such as local authorities or the Environment Agency. They can require damage to be put right by those responsible for it, or put the damage right themselves and then recover the costs afterwards from those responsible (Defra, 2008c).

The Regulations will supplement existing environmental protection legislation such as the Environmental Protection Act 1990, the Water Resources Act 1991 or the Wildlife and Countryside Act 1981 and the Control of Major Accident Hazards Regulations 1999. Those pieces of legislation will still apply, and to the extent that they impose additional obligations to those in these Regulations, will still need to be complied with (Defra, 2008c).

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**Appendix C**  
**Information pertaining to areas of conservation importance**  
**on the Essex coast**

## L14.1 Ramsar sites

**Table 1: Qualifying features of the Stour & Orwell Estuaries Ramsar (JNCC, 2008t)**

<b>Qualifying features of the Stour &amp; Orwell Estuaries Ramsar (JNCC, 2008t)</b>
<i>Ramsar criterion 2</i>
The site supports seven nationally-scarce plant species and five British Red Data Book invertebrates.
<i>Ramsar criterion 5</i>
The site supports a notable assemblage of wintering wetland birds (63,017 waterfowl – 5yr peak mean).
<i>Ramsar criterion 6</i>
Qualifying species / populations (as identified at designation). <b>Species with peak counts in spring/autumn:</b> <ul style="list-style-type: none"> <li>• Common redshank <i>Tringa totanus totanus</i>.</li> </ul> <b>Species with peak counts in winter:</b> <ul style="list-style-type: none"> <li>• Dark-bellied Brent Goose <i>Branta bernicla bernicla</i>;</li> <li>• Northern pintail <i>Anas acuta</i>;</li> <li>• Grey plover <i>Pluvialis squatarola</i>;</li> <li>• Red knot <i>Calidris canutus islandica</i>;</li> <li>• Dunlin <i>Calidris alpina alpina</i>;</li> <li>• Black-tailed godwit <i>Limosa limosa islandica</i>; and</li> <li>• Common redshank <i>Tringa totanus totanus</i>.</li> </ul>

**Table 2: Qualifying features of Hamford Water Ramsar (JNCC, 2008u)**

<b>Qualifying features for Hamford Water Ramsar (JNCC, 2008u)</b>
<i>Ramsar criterion 6</i>
Qualifying species / populations (as identified at designation): <b>Species with peak counts in spring/autumn:</b> <ul style="list-style-type: none"> <li>• Ringed plover <i>Charadrius hiaticula</i>;</li> <li>• Common redshank <i>Tringa totanus totanus</i>;</li> </ul> <b>Species with peak counts in winter:</b> <ul style="list-style-type: none"> <li>• Dark-bellied Brent Goose <i>Branta bernicla bernicla</i>; and</li> <li>• Black-tailed godwit <i>Limosa limosa islandica</i>.</li> </ul>

**Table 3: Qualifying features of the Colne Estuary Ramsar (JNCC, 2008v)**

<b>Qualifying features for the Colne Estuary Ramsar (JNCC, 2008v)</b>
<i>Ramsar criterion 1</i>
The site is important due to the extent and diversity of saltmarsh present. This site and the four other sites in the Mid-Essex Coast complex include a total of 3,237ha, representing approximately 70% of the saltmarsh habitat in Essex and 7% of the total saltmarsh in Britain.
<i>Ramsar criterion 2</i>
The site supports 12 species of nationally scarce plants and at least 38 British Red Data Book invertebrate species.
<i>Ramsar criterion 3</i>
This site supports a full and representative sequence of saltmarsh plant communities covering the range of variation in Britain.
<i>Ramsar criterion 5</i>
Qualifying species / populations (as identified at designation): <b>Species with peak counts in winter:</b>

<b>Qualifying features for the Colne Estuary Ramsar (JNCC, 2008v)</b>
32,041 waterfowl (5yr peak mean)
<i>Ramsar criterion 6</i>
Qualifying species / populations (as identified at designation): <b>Species with peak counts in winter:</b> <ul style="list-style-type: none"> <li>• Dark-bellied Brent goose <i>Branta bernicla bernicla</i>; and</li> <li>• Common redshank <i>Tringa totanus totanus</i>.</li> </ul>

**Table 4: Qualifying features of the Crouch & Roach Estuaries Ramsar (JNCC, 2008w)**

<b>Qualifying features for the Crouch &amp; Roach Estuaries Ramsar (JNCC, 2008w)</b>
<i>Ramsar criterion 5</i>
Qualifying species / populations (as identified at designation): <b>Species with peak counts in winter:</b> 32,867 waterfowl (5yr peak mean)
<i>Ramsar criterion 6</i>
Qualifying species / populations (as identified at designation): <b>Species with peak counts in spring/autumn:</b> <ul style="list-style-type: none"> <li>• Dark-bellied Brent goose <i>Branta bernicla bernicla</i>.</li> </ul> <b>Species with peak counts in winter:</b> <ul style="list-style-type: none"> <li>• Grey plover <i>Pluvialis squatarola</i>;</li> <li>• Red knot <i>Calidris canutus islandica</i>.</li> </ul>

**Table 5: Qualifying features of the Blackwater Estuary Ramsar (JNCC, 2008x)**

<b>Qualifying features for the Blackwater Estuary Ramsar (JNCC, 2008x)</b>
<i>Ramsar criterion 1</i>
This site, and the four others in the Mid-Essex Coast complex, includes a total of 3,237ha that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain.
<i>Ramsar criterion 2</i>
The site is home to at least 16 British Red Data Book species.
<i>Ramsar criterion 3</i>
This site supports a full and representative sequence of saltmarsh plant communities covering the range of variation in Britain.
<i>Ramsar criterion 5</i>
Qualifying species / populations (as identified at designation): <b>Species with peak counts in winter:</b> 105,061 waterfowl (5yr peak mean)
<i>Ramsar criterion 6</i>
Qualifying species / populations (as identified at designation): <b>Species with peak counts in winter:</b> <ul style="list-style-type: none"> <li>• Dark-bellied Brent goose <i>Branta bernicla bernicla</i>;</li> <li>• Black-tailed godwit <i>Limosa limosa islandica</i>;</li> <li>• Grey plover <i>Pluvialis squatarola</i>; and</li> <li>• Dunlin <i>Calidris alpina alpina</i>.</li> </ul>

**Table 6: Qualifying features of the Dengie Ramsar (JNCC, 2008y)**

<b>Qualifying features for the Dengie Ramsar (JNCC, 2008y)</b>
<i>Ramsar criterion 1</i>
This site, and the four others in the Mid-Essex Coast complex, includes a total of 3,237ha that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain.
<i>Ramsar criterion 2</i>
The site supports a number of rare plant and animal species including 11 nationally scarce plants and three British Red Data Book species.
<i>Ramsar criterion 3</i>
This site supports a full and representative sequence of saltmarsh plant communities covering the range of variation in Britain.
<i>Ramsar criterion 5</i>
Qualifying species / populations (as identified at designation): <b>Species with peak counts in winter:</b> 43,828 waterfowl (5yr peak mean)
<i>Ramsar criterion 6</i>
Qualifying species / populations (as identified at designation): <b>Species with peak counts in winter:</b> <ul style="list-style-type: none"> <li>• Dark-bellied Brent goose <i>Branta bernicla bernicla</i>;</li> <li>• Grey plover <i>Pluvialis squatarola</i>; and</li> <li>• Red knot <i>Calidris canutus islandica</i>.</li> </ul>

**Table 7: Qualifying features of the Foulness Ramsar (JNCC, 2008z)**

<b>Qualifying features for the Foulness Ramsar (JNCC, 2008z)</b>
<i>Ramsar criterion 1</i>
This site, and the four others in the Mid-Essex Coast complex, includes a total of 3,237ha that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain.
<i>Ramsar criterion 2</i>
The site supports a number of nationally-rare and nationally-scarce plant species, and British Red Data Book invertebrates.
<i>Ramsar criterion 3</i>
This site supports a full and representative sequence of saltmarsh plant communities covering the range of variation in Britain.
<i>Ramsar criterion 5</i>
Qualifying species / populations (as identified at designation): <b>Species with peak counts in winter:</b> 82,148 waterfowl (5yr peak mean)
<i>Ramsar criterion 6</i>
Qualifying species / populations (as identified at designation): <b>Species with peak counts in spring/autumn:</b> <ul style="list-style-type: none"> <li>• Common redshank <i>Tringa totanus totanus</i>.</li> </ul> <b>Species with peak counts in winter:</b> <ul style="list-style-type: none"> <li>• Dark-bellied Brent goose <i>Branta bernicla bernicla</i>;</li> <li>• Eurasian oystercatcher <i>Haematopus ostralegus ostralegus</i>;</li> <li>• Grey plover <i>Pluvialis squatarola</i>;</li> <li>• Bar-tailed Godwit <i>Limosa lapponica lapponica</i>; and</li> <li>• Red knot <i>Calidris canutus islandica</i>.</li> </ul>

**Table 8: Qualifying features of the Benfleet and Southend Marshes Ramsar (JNCC, 2008aa)**

<b>Qualifying features for the Benfleet and Southend Marshes Ramsar (JNCC, 2008aa)</b>
<i>Ramsar criterion 5</i>
Qualifying species / populations (as identified at designation): <b>Species with peak counts in winter:</b> 32,867 waterfowl (5yr peak mean)
<i>Ramsar criterion 6</i>
Qualifying species / populations (as identified at designation): <b>Species with peak counts in spring/autumn:</b> <ul style="list-style-type: none"> <li>• Dark-bellied Brent goose <i>Branta bernicla bernicla</i>.</li> </ul> <b>Species with peak counts in winter:</b> <ul style="list-style-type: none"> <li>• Grey plover <i>Pluvialis squatarola</i>;</li> <li>• Red knot <i>Calidris canutus islandica</i>.</li> </ul>

**Table 9: Qualifying features of the Abberton Reservoir Ramsar (JNCC, 2008ab)**

<b>Qualifying features of the Abberton Reservoir Ramsar (JNCC, 2008ab)</b>
<i>Ramsar criterion 5</i>
The site supports a notable assemblage of wetland over-wintering birds (23,787 waterfowl – 5 yr peak mean 1998/99-2002/2003).
<i>Ramsar criterion 6</i>
Qualifying species / populations (as identified at designation). <b>Species with peak counts in spring/autumn:</b> <ul style="list-style-type: none"> <li>• Gadwall <i>Anas strepera strepera</i>; and</li> <li>• Northern shoveler <i>Anas clypeata</i>.</li> </ul> <b>Species with peak counts in winter:</b> <ul style="list-style-type: none"> <li>• Eurasian wigeon <i>Anas Penelope</i>.</li> </ul>

## 2. Special Areas of Conservation (SAC)

**Table 10: Qualifying features of Essex Estuaries SAC site (JNCC, 2008ac)**

<b>Qualifying features for the Essex Estuaries SAC site (JNCC, 2008ac)</b>	
<b>Qualifying feature</b>	<b>Description</b>
<i>Annex I habitats that are a primary reason for selection of this site</i>	
Estuaries	
Mudflats and sandflats not covered by seawater at low tide	
Salicornia and other annuals colonising sand and mud	
<i>Spartina</i> swards ( <i>Spartinion maritimae</i> )	
Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> )	
Mediterranean and thermo-Atlantic halophilous scrubs ( <i>Sarcocornetea fruticosi</i> )	
<i>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</i>	
Sandbanks which are slightly covered by seawater all the time	



### 3. Special Protection Areas (SPA)

**Table 11: Qualifying features of the Stour & Orwell Estuaries SPA (JNCC, 2008ad)**

<b>Qualifying features for the Stour &amp; Orwell Estuaries SPA (JNCC, 2008ad)</b>
<i>Article 4.1 Qualification (79/409/EEC)</i>
<b>During the breeding season the area regularly supports:</b>
<ul style="list-style-type: none"> <li>• Avocet <i>Recurvirostra avosetta</i>;</li> </ul>
<i>Article 4.2 Qualification (79/409/EEC)</i>
<b>Over winter the area regularly supports:</b>
<ul style="list-style-type: none"> <li>• Redshank <i>Tringa totanus</i>.</li> <li>• Pintail <i>Anas acuta</i>;</li> <li>• Dark-bellied Brent goose <i>Branta bernicla bernicla</i>;</li> <li>• Dunlin <i>Calidris alpina alpina</i>;</li> <li>• Black-tailed godwit <i>Limosa limosa islandica</i>;</li> <li>• Grey plover <i>Pluvialis squatarola</i>; and</li> <li>• Knot <i>Calidris canuta</i>.</li> </ul>

**Table 12: Qualifying features of the Hamford Water SPA (JNCC, 2008ae)**

<b>Qualifying features of the Hamford Water SPA (JNCC, 2008ae)</b>
<i>Article 4.1 Qualification (79/409/EEC)</i>
<b>During the breeding season the area regularly supports:</b>
<ul style="list-style-type: none"> <li>• Little tern <i>Sterna albrifrons</i>.</li> </ul>
<i>Article 4.2 Qualification (79/409/EEC)</i>
<b>Over winter the area regularly supports:</b>
<ul style="list-style-type: none"> <li>• Common teal <i>Anas crecca</i>;</li> <li>• Dark-bellied Brent goose <i>Branta bernicla bernicla</i>;</li> <li>• Ringed plover <i>Charadrius hiaticula</i>;</li> <li>• Black-tailed godwit <i>Limosa limosa islandica</i>;</li> <li>• Grey plover <i>Pluvialis squatarola</i>;</li> <li>• Shelduck <i>Tadorna tadorna</i>; and</li> <li>• Redshank <i>Tringa totanus</i>.</li> </ul>

**Table 13: Qualifying features of the Colne Estuary SPA (JNCC, 2008af)**

<b>Qualifying features of the Colne Estuary SPA (JNCC, 2008af)</b>
<i>Article 4.1 Qualification (79/409/EEC)</i>
<b>During the breeding season the area regularly supports:</b>
<ul style="list-style-type: none"> <li>• Little tern <i>Sterna albrifrons</i>.</li> </ul>
<b>Over winter the area regularly supports:</b>
<ul style="list-style-type: none"> <li>• Hen harrier <i>Circus cyaneus</i>;</li> </ul>
<i>Article 4.2 Qualification (79/409/EEC)</i>
<b>During the breeding season the area regularly supports:</b>
<ul style="list-style-type: none"> <li>• Common pochard <i>Aythya farina</i>; and</li> <li>• Ringed plover <i>Charadrius hiaticula</i>.</li> </ul>
<b>Over winter the area regularly supports:</b>
<ul style="list-style-type: none"> <li>• Dark-bellied Brent goose <i>Branta bernicla bernicla</i>; and</li> <li>• Redshank <i>Tringa totanus</i>.</li> </ul>
<i>Article 4.2 Qualification (79/409/EEC): An Internationally Important Assemblage of Birds</i>

<b>Qualifying features of the Colne Estuary SPA (JNCC, 2008af)</b>
<b>Over winter the area regularly supports:</b> 38,600 wildfowl (5 year peak mean 01/04/1998) including Dark-bellied Brent goose <i>Branta bernicla bernicla</i> and Redshank <i>Tringa Totanus</i>

**Table 17: Qualifying features of the Crouch and Roach estuaries SPA (JNCC, 2008ag)**

<b>Qualifying features of the Crouch and Roach estuaries SPA (JNCC, 2008ag)</b>
<i>Article 4.1 Qualification (79/409/EEC)</i>
<b>Over winter the area regularly supports:</b> <ul style="list-style-type: none"> <li>• Hen Harrier <i>Circus cyaneus</i>.</li> </ul>
<i>Article 4.2 Qualification (79/409/EEC)</i>
<b>Over winter the area regularly supports:</b> <ul style="list-style-type: none"> <li>• Dark-bellied Brent goose <i>Branta bernicla bernicla</i></li> </ul>
<i>Article 4.2 Qualification (79/409/EEC): An Internationally Important Assemblage of Birds</i>
18,607 waterfowl (5 year peak mean 30/06/1999) including Dark-bellied Brent goose <i>Branta bernicla bernicla</i> .

**Table 15: Qualifying features of the Blackwater Estuary SPA (JNCC, 2008ah)**

<b>Qualifying features of the Blackwater Estuary SPA (JNCC, 2008ah)</b>
<i>Article 4.1 Qualification (79/409/EEC)</i>
<b>During the breeding season the area regularly supports:</b> <ul style="list-style-type: none"> <li>• Little tern <i>Sterna albifrons</i>.</li> </ul>
<b>Over winter the area regularly supports:</b> <ul style="list-style-type: none"> <li>• Hen harrier <i>Circus cyaneus</i>.</li> </ul>
<i>Article 4.2 Qualification (79/409/EEC)</i>
<b>During the breeding season the area regularly supports:</b> <ul style="list-style-type: none"> <li>• Common Pochard <i>Aythya farina</i>;</li> <li>• Ringed plover <i>Charadrius hiaticula</i>;</li> </ul>
<b>Over winter the area regularly supports:</b> <ul style="list-style-type: none"> <li>• Dunlin <i>Calidris alpina alpina</i>;</li> <li>• Ringed plover <i>Charadrius hiaticula</i>;</li> <li>• Black-tailed godwit <i>Limosa limosa islandica</i>;</li> <li>• Grey plover <i>Pluvialis squatarola</i>; and</li> <li>• Dark-bellied Brent goose <i>Branta bernicla bernicla</i>.</li> </ul>
<i>Article 4.2 Qualification (79/409/EEC): An Internationally Important Assemblage of Birds</i>
<b>Over winter the area regularly supports:</b> 109,964 waterfowl (5 year peak mean 01/04/1998) including Dark-bellied Brent goose <i>Branta bernicla bernicla</i> , Ringed plover <i>Charadrius hiaticula</i> ; Grey plover <i>Pluvialis squatarola</i> , Dunlin <i>Calidris alpina alpina</i> and Black-tailed godwit <i>Limosa limosa islandica</i> .

**Table 16: Qualifying features of the Dengie SPA (JNCC, 2008ai)**

<b>Qualifying features of the Dengie SPA (JNCC, 2008ai)</b>
<i>Article 4.1 Qualification (79/409/EEC)</i>
<b>Over winter the area regularly supports:</b> <ul style="list-style-type: none"> <li>• Hen Harrier <i>Circus cyaneus</i>.</li> </ul>
<i>Article 4.2 Qualification (79/409/EEC)</i>

<b>Qualifying features of the Dengie SPA (JNCC, 2008ai)</b>
<p><b>Over winter the area regularly supports:</b></p> <ul style="list-style-type: none"> <li>• Dark-bellied Brent goose <i>Branta bernicla bernicla</i>;</li> <li>• Knot <i>Calidris canuta</i>; and</li> <li>• Grey plover <i>Pluvialis squatarola</i>.</li> </ul>
<p><i>Article 4.2 Qualification (79/409/EEC): An Internationally Important Assemblage of Birds</i></p>
<p><b>Over winter the area regularly supports:</b></p> <p>31,454 waterfowl (5 year peak mean 01/04/1998) including Dark-bellied Brent goose <i>Branta bernicla bernicla</i>, Knot <i>Calidris canuta</i> and Grey plover <i>Pluvialis squatarola</i>.</p>

**Table 18: Qualifying features of the Foulness SPA (JNCC, 2008aj)**

<b>Qualifying features of the Foulness SPA (JNCC, 2008aj)</b>
<p><i>Article 4.1 Qualification (79/409/EEC)</i></p>
<p><b>During the breeding season the area regularly supports:</b></p> <ul style="list-style-type: none"> <li>• Avocet <i>Recurvirostra avosetta</i>;</li> <li>• Little tern <i>Sterna albrifrons</i>;</li> <li>• Common tern <i>Sterna hirundo</i>; and</li> <li>• Sandwich tern <i>Sterna sandvicensis</i>.</li> </ul> <p><b>Over winter the area regularly supports;</b></p> <ul style="list-style-type: none"> <li>• Hen Harrier <i>Circus cyaneus</i>;</li> <li>• Bar-tailed godwit <i>Limosa lapponica</i>; and</li> <li>• Avocet <i>Recurvirostra avosetta</i>.</li> </ul>
<p><i>Article 4.2 Qualification (79/409/EEC)</i></p>
<p><b>During the breeding season the area regularly supports:</b></p> <ul style="list-style-type: none"> <li>• Ringed plover <i>Charadrius hiaticula</i>;</li> </ul> <p><b>Over winter the area regularly supports:</b></p> <ul style="list-style-type: none"> <li>• Dark-bellied Brent goose <i>Branta bernicla bernicla</i>;</li> <li>• Knot <i>Calidris canutus</i>;</li> <li>• Oystercatcher <i>Haematopus ostralegus</i>;</li> <li>• Grey plover <i>Pluvialis squatarola</i>;</li> <li>• Redshank <i>Tringa totanus</i>.</li> </ul>
<p><i>Article 4.2 Qualification (79/409/EEC): An Internationally Important Assemblage of Birds</i></p>
<p><b>Over winter the area regularly supports:</b></p> <p>107,999 waterfowl (5 year peak mean 01/04/1998)</p>

**Table 19: Qualifying features of the Benfleet and Southend Marshes SPA (JNCC, 2008ak)**

<b>Qualifying features of the Benfleet and Southend Marshes SPA (JNCC, 2008ak)</b>
<p><i>Article 4.2 Qualification (79/409/EEC)</i></p>
<p><b>Over winter the area regularly supports;</b></p> <ul style="list-style-type: none"> <li>• Dark-bellied Brent goose <i>Branta bernicla bernicla</i>;</li> <li>• Dunlin <i>Calidris alpina alpina</i>;</li> <li>• Knot <i>Calidris canutus</i>;</li> <li>• Ringed plover <i>Charadrius hiaticula</i>; and</li> <li>• Grey plover <i>Pluvialis squatarola</i>.</li> </ul>
<p><i>Article 4.2 Qualification (79/409/EEC): An Internationally Important Assemblage of Birds</i></p>
<p><b>Over winter the area regularly supports:</b></p> <p>34,789 waterfowl (5 year peak mean 30/06/1999)</p>

**Table 14: Qualifying features of the Abberton Reservoir SPA (JNCC, 2008a)**

<b>Qualifying features of the Abberton Reservoir SPA (JNCC, 2008a)</b>
<i>Article 4.2 Qualification (79/409/EEC)</i>
<p><b>During the breeding season the area regularly supports:</b></p> <ul style="list-style-type: none"> <li>• Great Cormorant <i>Phalacrocorax carbo</i>.</li> </ul> <p><b>Over winter the area regularly supports:</b></p> <ul style="list-style-type: none"> <li>• Common teal <i>Anas crecca</i>;</li> <li>• Common Pochard <i>Aythya farina</i>;</li> <li>• Northern shoveler <i>Anas clypeata</i>;</li> <li>• Eurasian wigeon <i>Anas Penelope</i>;</li> <li>• Gadwall <i>Anas strepera</i>;</li> <li>• Tufted Duck <i>Aythya fuligula</i>;</li> <li>• Common goldeneye <i>Bucephala clangula</i>;</li> <li>• Eurasian Coot <i>Fulica Atra</i>; and</li> <li>• Great crested grebe <i>Podiceps cristatus</i>.</li> </ul> <p>Over winter the area regularly supports 39,763 waterfowl (5yr peak mean 01/04/1998).</p>

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**Appendix D**  
**Further baseline information**

## **L15 CHARACTERISATION OF LAND USE AND ENVIRONMENT**

### **L15.1 Unit 1 - Little Oakley to Landguard Point**

#### *Primary area of search*

This frontage covers the estuaries of the River Stour up to Stratford St Mary and the River Orwell up to Ipswich. Most of the land surrounding the estuaries falls outside the 1 in 1000 year flood risk zone and where this is the case there are no man-made defences.

Notable exceptions are the ports of Harwich and Felixstowe that have substantial economic value from passenger ferry services and cargo shipping. The ports are protected by a variety of defences. Parts of Ipswich are also within the flood risk zone, with numerous marinas along the River Orwell that have both recreational and economic value. Harwich also gives recreational value through a golf club, its museums and sites of historic importance.

The Stour and Orwell Estuaries are of international importance, comprising extensive mudflats, low cliffs, saltmarsh and small areas of vegetated shingle on the lower reaches. It provides habitats for an important assemblage of wetland birds and internationally important numbers of wintering and passage wildfowl and waders. The site also holds several nationally scarce plants and British Red Data Book invertebrates.

The Cattawade Marshes SSSI lies at the head of the Stour Estuary and is situated between the freshwater and tidal channels of the River Stour. These grazing marshes with associated their open water and fen habitats are of major importance for the diversity of their breeding bird community, which includes species that have become uncommon throughout lowland Britain as a result of habitat loss.

The Harwich Foreshore SSSI yields the only fossil flora attributable to the lowest division of the Eocene London Clay. Its composition is typical of the formation and specimens are abundant. Association of the plants with ash bands within the Clay may aid correlations elsewhere in the basin since they form useful marker horizons. This is a recently discovered site with great research potential.

### **L15.2 Unit 2 - Walton-on-the-Naze to Little Oakley**

#### *Primary area of search*

The land associated with this frontage in the 1 in 1000 yr flood risk zone includes the islands and the low lying land surrounding Hamford Water. The defences comprise revetments and sea banks except for sections where natural defences are present.

There are no significant settlements within the flood zone; however, some properties do lie within the zone around the periphery of Hamford Water. The B1414 crosses the flood zone at Beaumont Key and the B1043 is at risk near Kirby-le-Soken. Titchmarsh Marina also provides recreational and economic value.

Hamford Water National Nature Reserve, Ramsar and SSSI site is a large, shallow estuarine basin comprising tidal creeks and islands, intertidal mud and sand flats, and

saltmarsh supporting rare plants and internationally important species/populations of migratory waterfowl. The site is of international importance for breeding Little Terns and wintering nark-bellied Brent Geese, wildfowl and waders and of national importance for many other bird species. It also supports communities of coastal plants which are rare or extremely local in Britain, including Hog's Fennel, *Peucedanum officinale* which is found elsewhere only in Kent.

### **L15.3 Unit 3 - Colne Point to Walton-on-the-Naze**

#### *Area of search*

There is less low lying land within this frontage than most of the other frontages, with the exceptions being St Osyth Marsh, Seawick, Holland Haven Marshes and part of Walton-On-The-Naze. These areas are predominantly protected by a combination of revetments and sea banks. The large settlements of Clacton-On-Sea and Frinton-On-Sea are protected by a variety of defences, primarily sea walls and groynes, although are mostly above the 1 in 1000 year flood zone.

St Osyth Marsh comprises drained agricultural land, protected by a revetment, with the settlements of Seawick and Jaywick to the east including a substantial caravan park which is at risk of flooding. Jaywick Golf Club provides local recreational value and falls within the 1 in 1000 year flood zone, which also includes parts of Clacton Cliffs and Foreshore SSSI. The foreshore and cliff exposures and excavations in the Clacton district have provided opportunities for the study of one of the most important Pleistocene interglacial deposits in Britain, while the Holland-on-Sea Cliffs SSSI represents a stratigraphic site of considerable importance. These sites can be precisely attributed to the Anglian glaciation, providing a fixed dating point within the terrace sequence of the eastern London Basin and a means of correlation with sequences where the Anglian is represented elsewhere in southern Britain and on the continent.

The seafront at Clacton-On-Sea has important recreational and tourism value with attractions including the beach and pier. Walton-On-The-Naze is another important tourist destination with its frontage and pier. Although the majority of these settlements are above the flood risk zone they are at risk from coastal erosion and as such heavily defended.

Holland Haven Marshes SSSI represents an outstanding example of a freshwater to brackish water transition and includes a number of nationally and locally scarce species. Holland Haven Country Park situated on the floodplain of Holland Brook is important both for conservation and recreational value. Part of Walton-On-The-Naze is also within the flood zone, with several buildings and a caravan site at risk. There are several Martello Towers along this part of the coast, which are small defensive forts built in the 19<sup>th</sup> century and which are of historical significance.



#### **L15.4 Unit 4 - East Mersea to Colne Point**

##### *Area of search*

This frontage comprises the low lying land of the Colne Estuary, which has flood defences along the majority of the frontage. Between Colne Point and Sandy Point, a revetment protects the agricultural land of St Oysth Marsh. At Point Clear, a large caravan site lies within the 1 in 1000 year flood zone in addition to another Martello Tower, an associated battery and a museum, all of which is protected by a revetment. These features give this location significant value as a tourist destination. The camping and caravan site at Brightlingsea also provides amenity and tourist value.

The majority of the land within the 1 in 1000 flood zone lies within the river flood plain and agricultural areas and are protected by various defences. The flood zone extends into central Colchester where numerous buildings located by the river are at risk from flooding along with several roads and the railway. Colchester is protected by a variety of defences including sea walls. The Wick Marsh - Langenhoe Marsh - Fingringhoe Marsh area has military importance as a Ministry of Defence firing range and is also within the flood risk zone.

The Colne Estuary Ramsar, SAC, SPA, SSSI and NNR is of international importance for wintering Brent Geese and Black-tailed Godwit and of national importance for breeding Little Terns and five other species of wintering waders and wildfowl. The variety of habitats which include mudflat, saltmarsh, grazing marsh, sand and shingle spits, disused gravel pits and reed beds, support outstanding assemblages of invertebrates and plants. Two areas of foreshore at East Mersea are of geological importance, while Colne Point and St. Osyth Marsh are of geomorphological interest.

#### **L15.5 Unit 5 - Sales Point to East Mersea**

##### *Area of search*

This unit covers the low lying land surrounding the Blackwater Estuary extending inland to Maldon. Defences are for the most part revetments and sea banks, except for sections of sea wall around Maldon and at a few other locations.

The area within the 1 in 1000 year flood zone is for the most part agricultural land with sporadic farm buildings. There is however several settlements incorporated in this zone; St Lawrence, Maryland, Marylandsea, parts of Maldon and Goldhanger. Sections of several B-Roads along with numerous minor roads are also included throughout the flood zone. The campsites at St Lawrence, Maryland Creek and Vaulty Manor provide amenity value. There are several marinas in the estuary that have recreational, amenity and economic value. The site of the Battle of Maldon and National Trust Property is a valuable tourist attraction.

Bradwell Nuclear Power Station is currently being decommissioned but there are plans for a new development on the site, inundation or undermining of this site would cause numerous issues.

Blackwater Estuary NNR and SSSI is the largest estuary in Essex north of the Thames and, is one of the largest estuarine complexes in East Anglia. The mudflats, fringed by saltmarsh on the upper shores support internationally and nationally important numbers of overwintering waterfowl. Shingle and shell banks and offshore islands are also a feature of the tidal flats. The surrounding terrestrial habitats; the sea wall, ancient grazing marsh and its associated fleet and ditch systems, plus semi-improved grassland are also of high conservation interest. This rich mosaic of habitats supports an outstanding assemblage of nationally scarce plants and a nationally important assemblage of rare invertebrates.

Northerney Island Nature Reserve (National Trust), Ray Island Nature Reserve (National Trust) and several other local nature reserves further highlights the conservation value of much of the flood risk zone.

#### **L15.6 Unit 6 – Holliwell Point (North) to Sales Point**

##### *Area of search*

Within this frontage the 1 in 1000 year flood zone is quite extensive and defences extend along its entire length, consisting of a revetment along the majority of the frontage except for the stretch in the vicinity of St Peter's Chapel. The flood zone is almost exclusively drained agricultural land with sporadic farm buildings and some minor roads as well as the Dengie and Bradwell Marshes. Othona Roman Fort, a Saxon Shorefort and St Peters Chapel have important value historically and as tourist attractions.

The Dengie NNR, Ramsar, SPA and SSSI saltmarsh is the largest continuous example of its type in Essex. The foreshore, saltmarsh and beaches support an outstanding assemblage of rare coastal flora and internationally and nationally important wintering populations of wildfowl and waders, as well as supporting a range of breeding coastal birds in summer. Bradwell Cockle Spit Nature Reserve consists of saltmarsh and shellbank habitats which support numerous species of breeding bird species.

#### **L15.7 Unit 7 – Courtsend/Foulness Point to Holliwell Point (North)**

##### *Area of search*

Within this unit, the land within the 1 in 1000 year flood zone includes the low lying areas surrounding the Roach and Crouch Estuaries, with the southern section of the flood zone overlapping with that of Frontage H. The flood defences are typical of the region, with the majority being revetments and sea banks with small sections of sea wall. More substantial defences are present around the larger settlements such as South Woodham Ferrers and Rochford.

The settlements within the flood zone include parts of Rochford, South Woodham Ferrers and Burnham-On-Crouch. Infrastructure located within the flood zone includes several minor roads and the railway line between Woodham Ferrers and Burnham-On-Crouch, along with the station at Althorne.

The marinas at Burnham-On-Crouch, Althorne and North Fambridge provide recreational and economical value, along with the campsites around Burnham-On-Crouch. Foulness and Potton Islands have significant military importance as firing ranges for the Ministry of Defence

The Crouch and Roach Estuaries Ramsar, SPA and SSSI site is of international importance for avian species, with additional interest being provided by the aquatic and terrestrial invertebrates and an outstanding assemblage of nationally scarce plants.

**L15.8 Unit 8 – North Shoebury to Courtsend / Foulness Point**

**L15.9 Area of search**

This land in this unit is low lying and overlaps with the 1 in 1000 year flood zone of Frontage G. The defences are continuous and mostly in the form of revetments or sea bank, except for a stretch of sea wall at North Shoebury.

The majority of the flood zone includes the Ministry of Defence controlled firing ranges on Havengore and Foulness Islands, which extend offshore onto Maplin Sands and have significant military importance. The area numerous associated buildings including the hamlets of Churchend and Courtsend which are at below the 1 in 1000 year flood level. The Broomway public right of way across Maplin Sands has important amenity value

Foulness Ramsar, SPA and SSSI is part of an open coast estuarine system comprising grazing marsh, saltmarsh, intertidal mudflats and sandflats which support nationally rare and nationally scarce plants, and nationally and internationally important populations of breeding, migratory and wintering waterfowl

**L15.10 Unit 9 – Two-Tree Island to North Shoebury**

*Area of search*

The land in the 1 in 1000 year flood zone in this area is fairly limited comprising small sections of the seafront of Southend-On-Sea. There are a variety of defences including sea walls, groynes and revetments.

Some properties lie within the 1 in 1000 year flood zone at Shoeburyness, South church and small areas of the seafront at Southend. Sections of the B1016 and the railway line at Leigh-On-Sea are within the flood zone. The golf course at Southchurch provides recreational value. The seafront at Southend-On-Sea has important recreational and tourism value with its attractions including the beach, pier, aquarium and museum, while Shoeburyness has military importance as a Ministry of Defence firing range.

Benfleet and Southend SSSI comprise an extensive series of salt marshes, mudflats, scrub and grassland which support a diverse flora and fauna. The south-facing slopes of the downs, composed of London Clay capped by sand, represent the line of former river cliffs with several re-entrant valleys.

**Appendix E**  
**Consideration of the Potential Effects of SMP Policy on**  
**Environmental Receptors**

Potential positive effects of SMP policy on SEA Environmental Receptors

SMP OPTION	POSITIVE IMPACT	ENVIRONMENTAL RECEPTORS (BASED ON S1 1633)									
		AIR & CLIMATE	WATER	SOIL	LANDSCAPE	HISTORIC ENVIRONMENT	HABITATS	SPECIES	POPULATION AND COMMUNITIES		
<b>Hold the line (HTL)</b>	Protection of communities and infrastructure located within the coastal flood zone;	<b>The SMP is not considered likely to have any effect on parameters for air quality.</b>		The protection of water abstraction sources	The protection of agricultural land	Protection of key features in the coastal landscape	Protection of key historical assets			Protection of key community assets	
	Protection of habitat landward of defences;				The protection of soil as an integral element of habitat	Protection of key features in the coastal landscape		Protection of freshwater, saline or terrestrial habitat	Protection of freshwater, saline or terrestrial habitat		
	Protects freshwater resources (e.g. abstractions & boreholes);			The protection of water abstraction sources	The prevention of salinisation of soils						Protection of key community assets
	Provides stability to areas of coastline, within a wider management context;					Provision of a natural and dynamic coastal landscape		Protection of freshwater, saline or terrestrial habitat	Protection of freshwater, saline or terrestrial habitat	Protection of key community assets	
	Protects economic assets located behind defences; and						Protection of key historical assets			Protection of key community assets	
	Provides protection to ecological, cultural and historical assets landward of the defences.					Protection of key features in the coastal landscape	Protection of key historical assets	Protection of freshwater, saline or terrestrial habitat	Protection of freshwater, saline or terrestrial habitat	Protection of key community assets	
<b>Advance the line (ATL)</b>	Provides additional space for communities;				May provide for increased areas of agricultural land						Provides opportunity to increase area of land available for coastal communities
	Protection of communities and infrastructure located within the coastal flood zone;				The protection of agricultural land	Protection of key features in the coastal landscape					Protection of key community assets
	Protection of habitat landward of defences;				The protection of soil as an integral element of habitat			Protection of freshwater, saline or terrestrial habitat	Protection of freshwater, saline or terrestrial habitat		
	Protects freshwater resources (e.g. abstractions & boreholes);			The protection of water abstraction sources						Protection of key community assets	
	Protects economic assets located behind defences; and				The protection of agricultural land		Protection of key historical assets			Protection of key community assets	
	Provides protection to ecological, cultural and historical assets landward of the defences.					Protection of key features in the coastal landscape	Protection of key historical assets	Protection of freshwater, saline or terrestrial habitat	Protection of freshwater, saline or terrestrial habitat	Protection of key community assets	
<b>Managed realignment (MR)</b>	Coastal habitats allowed to move landwards under rising sea levels				Provision of a natural and dynamic coastal landscape		Provides for a dynamic transition of coastal habitat	Provides for a dynamic transition of coastal habitat			
	Creation of habitat to aid UKBAP; (United Kingdom Biodiversity Action Plan) and local BAP (Biodiversity Action Plan) targets;				Provision of a natural and dynamic coastal landscape		Provides for a dynamic transition of coastal habitat	Provides for a dynamic transition of coastal habitat			

SMP OPTION	POSITIVE IMPACT	ENVIRONMENTAL RECEPTORS (BASED ON S1 1633)							
		AIR & CLIMATE	WATER	SOIL	LANDSCAPE	HISTORIC ENVIRONMENT	HABITATS	SPECIES	POPULATION AND COMMUNITIES
	Habitat created for juvenile fish and other aquatic organisms (benefits to environment and fishing communities);						Provides for a dynamic transition of coastal habitat	Provides for a dynamic transition of coastal habitat	Protects the viability of commercial and recreational fishing
	Reduces flood risk;								Protection of key community assets
	Promotes natural coastal processes;		May lead to enhanced water quality		Provision of a natural and dynamic coastal landscape		Provides for a dynamic transition of coastal habitat	Provides for a dynamic transition of coastal habitat	
	Contributes towards a more natural management of the coast; and		May lead to enhanced water quality		Provision of a natural and dynamic coastal landscape		Provides for a dynamic transition of coastal habitat	Provides for a dynamic transition of coastal habitat	
	Creation of high tide roosts and feeding areas.				Provision of a natural and dynamic coastal landscape		Provides for a dynamic transition of coastal habitat	Provides for a dynamic transition of coastal habitat	
No active intervention (NAI)	Coastal habitats allowed to move landwards under rising sea levels;				Provision of a natural and dynamic coastal landscape		Provides for a dynamic transition of coastal habitat	Provides for a dynamic transition of coastal habitat	
	Promotes natural coastal processes; and	May lead to enhanced water quality		Provision of a natural and dynamic coastal landscape		Provides for a dynamic transition of coastal habitat	Provides for a dynamic transition of coastal habitat		
	Contributes towards a more natural management of the coast.			Provision of a natural and dynamic coastal landscape		Provides for a dynamic transition of coastal habitat	Provides for a dynamic transition of coastal habitat		

Potential negative effects of SMP Policy on SEA Environmental Receptors

SMP OPTION	NEGATIVE IMPACT	ENVIRONMENTAL RECEPTORS (BASED ON SI 1633)								
		AIR & CLIMATE	WATER	SOIL	LANDSCAPE	HISTORIC ENVIRONMENT	HABITATS	SPECIES	POPULATION AND COMMUNITIES	
Hold the line (HTL)	Coastal squeeze (loss of habitat);	The SMP is not considered likely to have any effect on parameters for air quality or climatic factors.				Loss of intertidal elements from the coastal landscape	Loss of known or undiscovered archaeological resources	Loss of habitat	Reduction in abundance and diversity of species	Loss of amenity from habitat and the function habitat provides to the community
	Interruption of coastal processes;			Adverse effects on water quality through turbidity changes etc.		Reduction in the dynamic quality of the coastal landscape		Shifts in habitat composition or function	Reduction in abundance and diversity of species	
	May increase flood and coastal erosion risk elsewhere;			Potential degradation of soil quality through intrusion			Loss of known or undiscovered archaeological resources	Loss of habitat	Reduction in abundance and diversity of species	Increased risk to existing community features
	Promotes unsustainable land use practices with the coastal flood zone;									Impacts on sustainability of communities
	Diverts limited resources away from an adaptation response to rising sea levels; and						Loss of known or undiscovered archaeological resources	Loss of habitat	Reduction in abundance and diversity of species	Effects on the resourcing of other community related activities
	Requires ongoing commitment to future investment in maintenance and improvement.					Introduction of defence features into the area which detract from the coastal landscape	Need for expenditure on site investigation prior to loss through inundation			Potential impacts of expenditure on flood defence and the knock on effects of this to other areas of public and private expenditure
Advance the line (ATL)	Reduction in extent of coastal habitat;					Loss of intertidal elements from the coastal landscape	Loss of known or undiscovered archaeological resources	Loss of habitat	Reduction in abundance and diversity of species	Loss of amenity from habitat and the function habitat provides to the community
	Change in functionality of habitat;							Shifts in habitat functionality	Reduction in abundance and diversity of species	Loss of amenity from habitat and the function habitat provides to the community
	Increased coastal squeeze;					Loss of intertidal elements from the coastal landscape	Loss of known or undiscovered archaeological resources	Loss of habitat	Reduction in abundance and diversity of species	Loss of amenity from habitat and the function habitat provides to the community
	Interruption of coastal processes;			Adverse effects on water quality through turbidity changes etc.				Shifts in habitat functionality	Reduction in abundance and diversity of species	Loss of amenity from habitat and the function habitat provides to the community
	Effect on marine habitat;						Loss of habitat and shifts in habitat composition	Reduction in abundance and diversity of species	Loss of amenity from habitat and the function habitat provides to the	

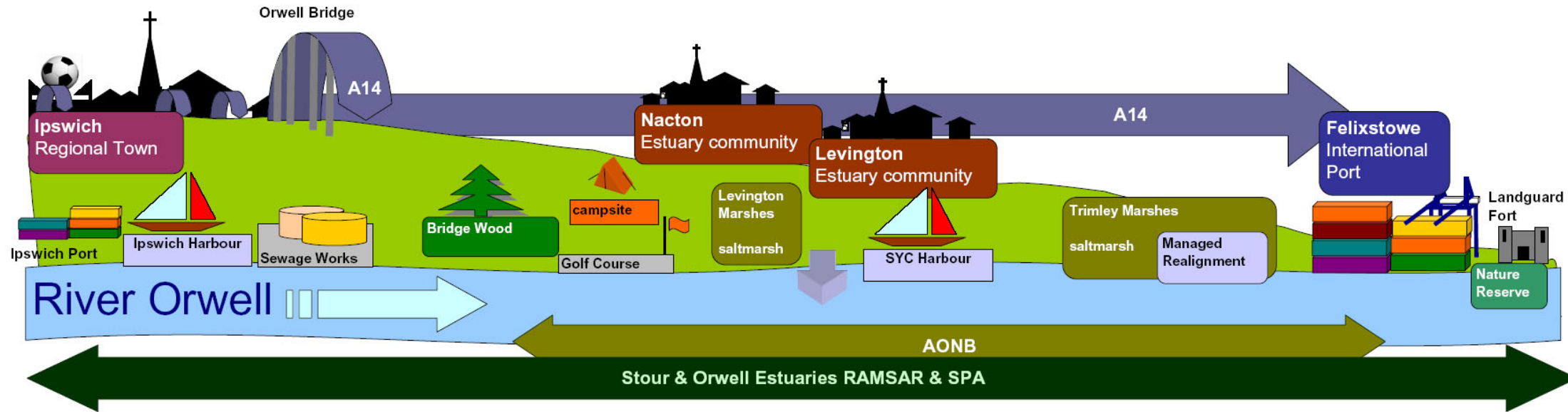
SMP OPTION	NEGATIVE IMPACT	ENVIRONMENTAL RECEPTORS (BASED ON SI 1633)							
		AIR & CLIMATE	WATER	SOIL	LANDSCAPE	HISTORIC ENVIRONMENT	HABITATS	SPECIES	POPULATION AND COMMUNITIES
									community
	May increase rate of coastal erosion either side of the advanced line.		Adverse effects on water quality through turbidity changes etc.	Potential degradation of soil quality through intrusion	Loss of intertidal elements from the coastal landscape	Loss of known or undiscovered archaeological resources	Loss of habitat and shifts in habitat composition	Reduction in abundance and diversity of species	Impacts on other features important for community purposes
Managed realignment (MR)	Reduction in extent of habitat landwards of defences;				Shifts in the habitat mosaic as a function of the local landscape	Loss of known or undiscovered archaeological resources	Loss of habitat	Reduction in abundance and diversity of species	Loss of amenity from habitat and the function habitat provides to the community
	Change in nature of habitat to landward of defence;				Shifts in the habitat mosaic as a function of the local landscape		Loss of habitat and shifts in habitat composition	Reduction in abundance and diversity of species	Loss of amenity from habitat and the function habitat provides to the community
	Impact upon aquifers and abstractions;		Loss of abstraction points and intrusion into aquifers						Impacts on water supply to communities
	Loss of communities or community assets; and		Loss of abstraction points and intrusion into aquifers	Potential degradation of soil quality through intrusion		Loss of heritage features			Reduction in the amenity of coastal communities
	Loss of heritage and cultural features;					Loss of heritage features			Reduction in the amenity of coastal communities
	Loss of agricultural land			Loss of agricultural land/soil					Impacts on the character of local communities and the local economy
No active intervention (NAI)	Lack of certainty of effects and time for adaptation;						Loss of habitat and shifts in habitat composition	Reduction in abundance and diversity of species	Provision of community features in unsustainable locations
	Increased risk of inundation to landward habitats under rising sea levels;					Loss of known or undiscovered archaeological resources	Loss of habitat and shifts in habitat composition	Reduction in abundance and diversity of species	Loss of amenity from habitat and the function habitat provides to the community
	Impact upon aquifers and abstractions;		Loss of abstraction points and intrusion into aquifers						Impacts on water supply to communities
	Loss of communities or community assets; and		Loss of abstraction points and intrusion into aquifers	Loss of agricultural land/soil		Loss of heritage features			Reduction in the amenity of coastal communities
	Loss of heritage and cultural features.					Loss of heritage features			Reduction in the amenity of coastal communities



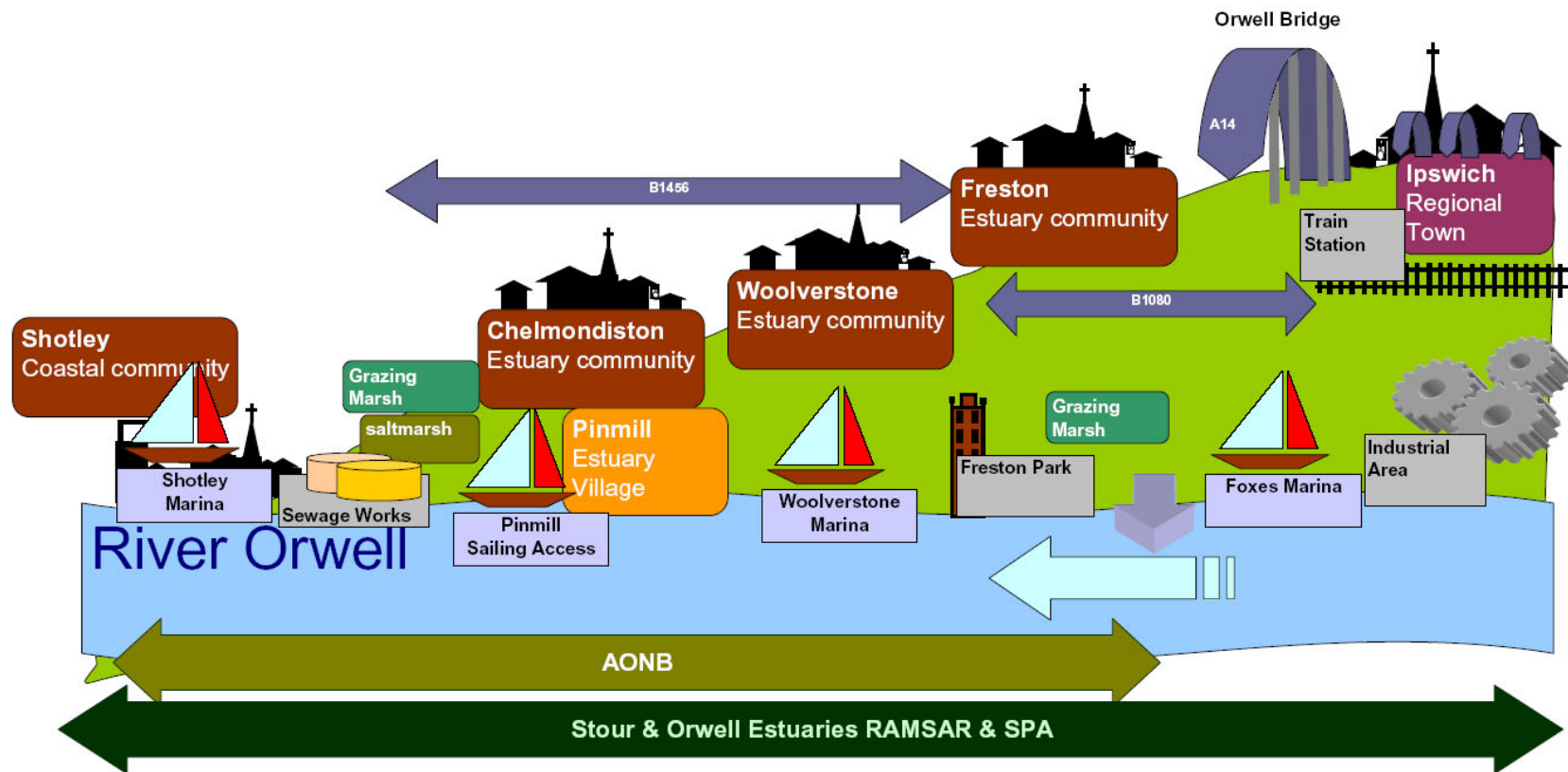
**Appendix F**  
**Cross Section Diagrams**

**River Orwell Mid-Estuary View**

River Orwell North Bank



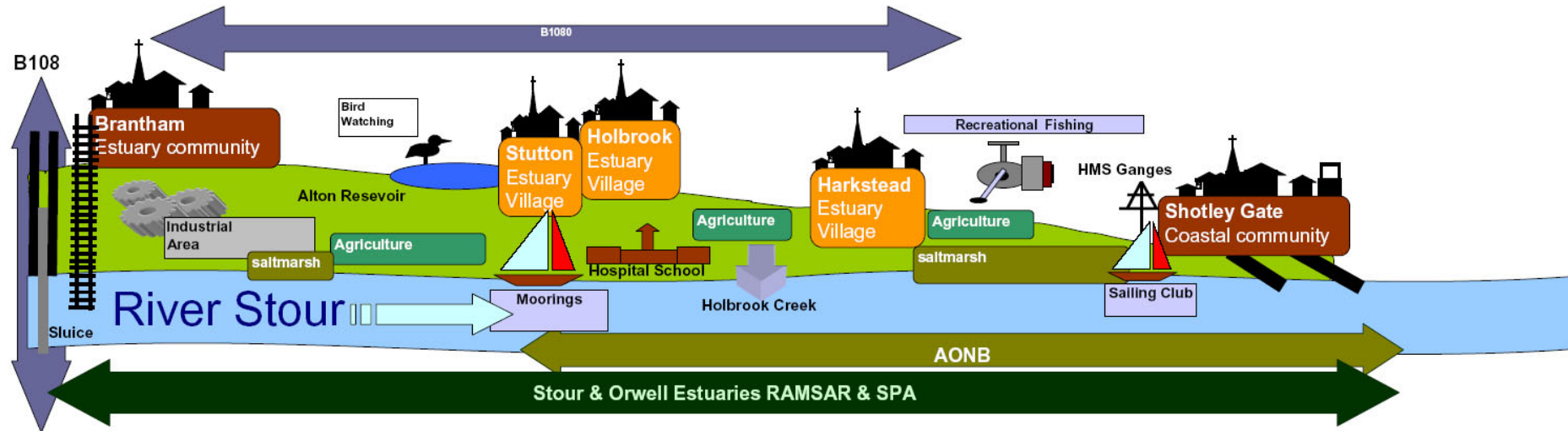
River Orwell South Bank



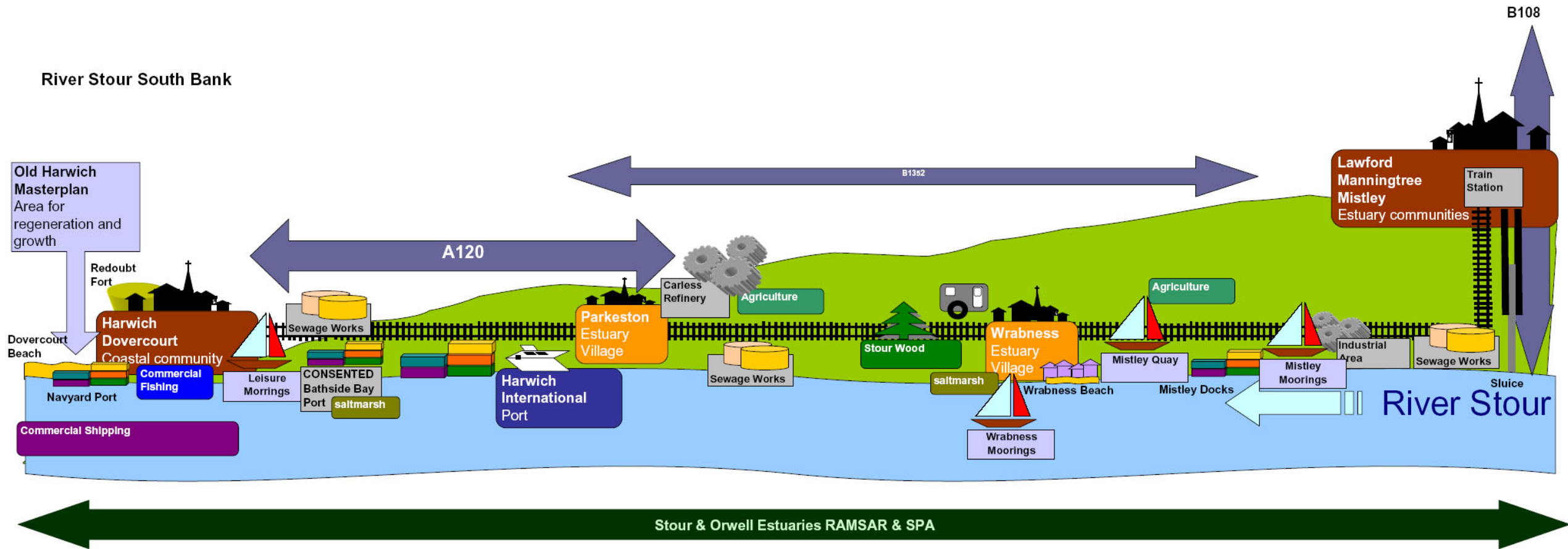
Cross-sectional representation of River Stour

**River Stour Mid-Estuary View**

River Stour North Bank

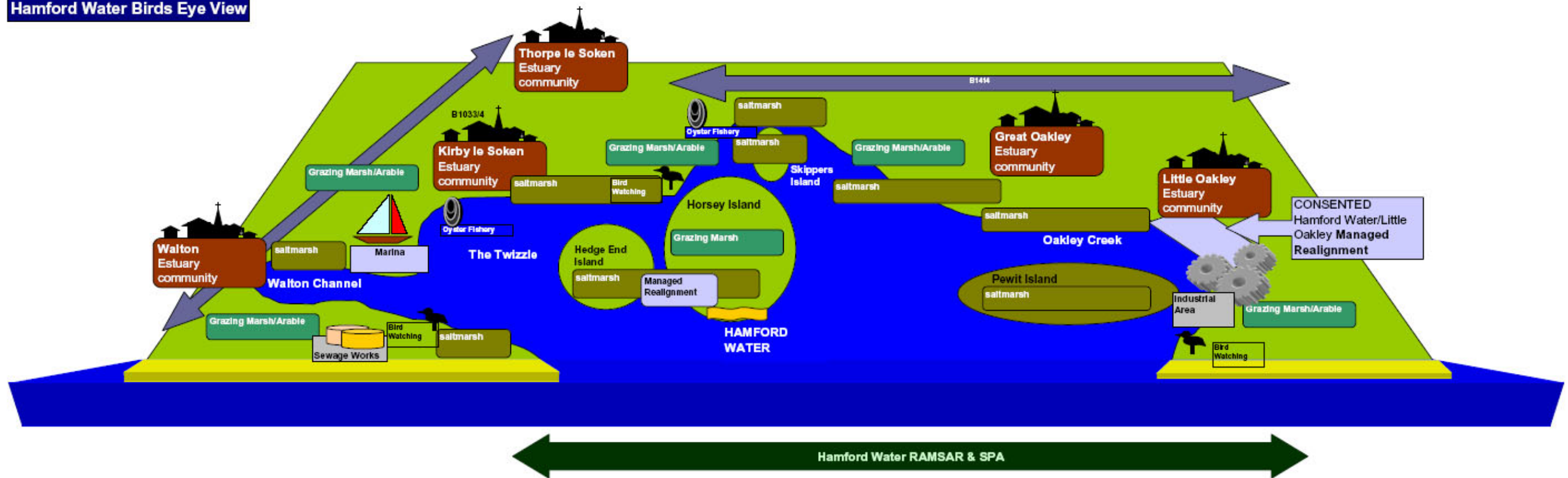


River Stour South Bank



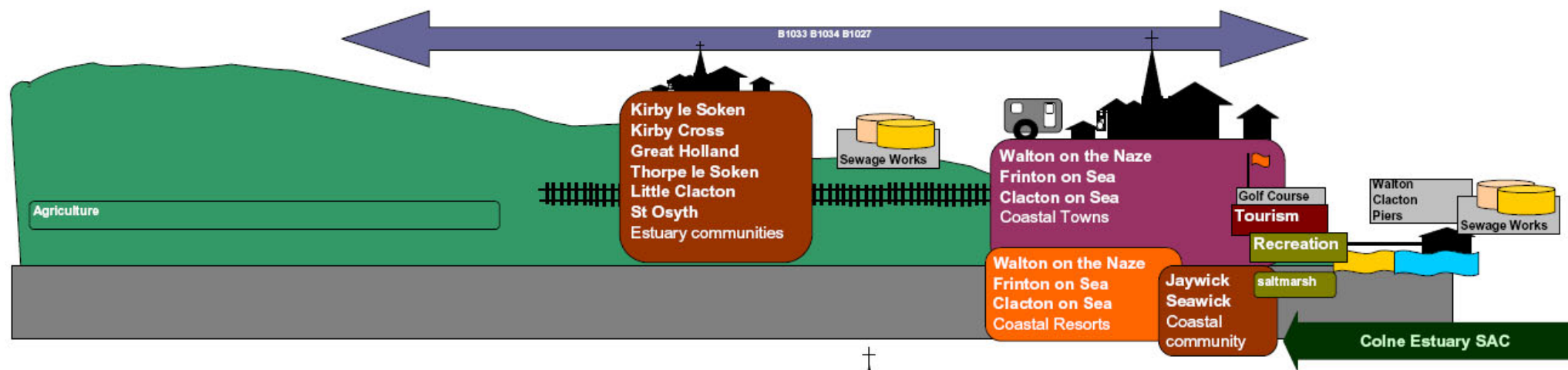
Cross-sectional representation of Hamford Water

Hamford Water Birds Eye View

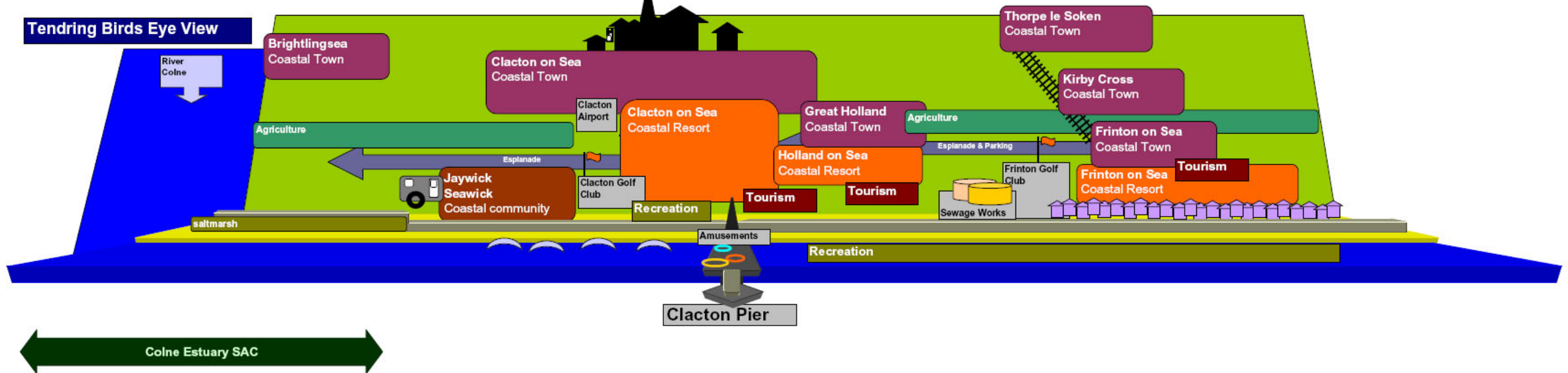


Cross-sectional representation of Tendring Peninsula

**Tendring Peninsula Cross Section**

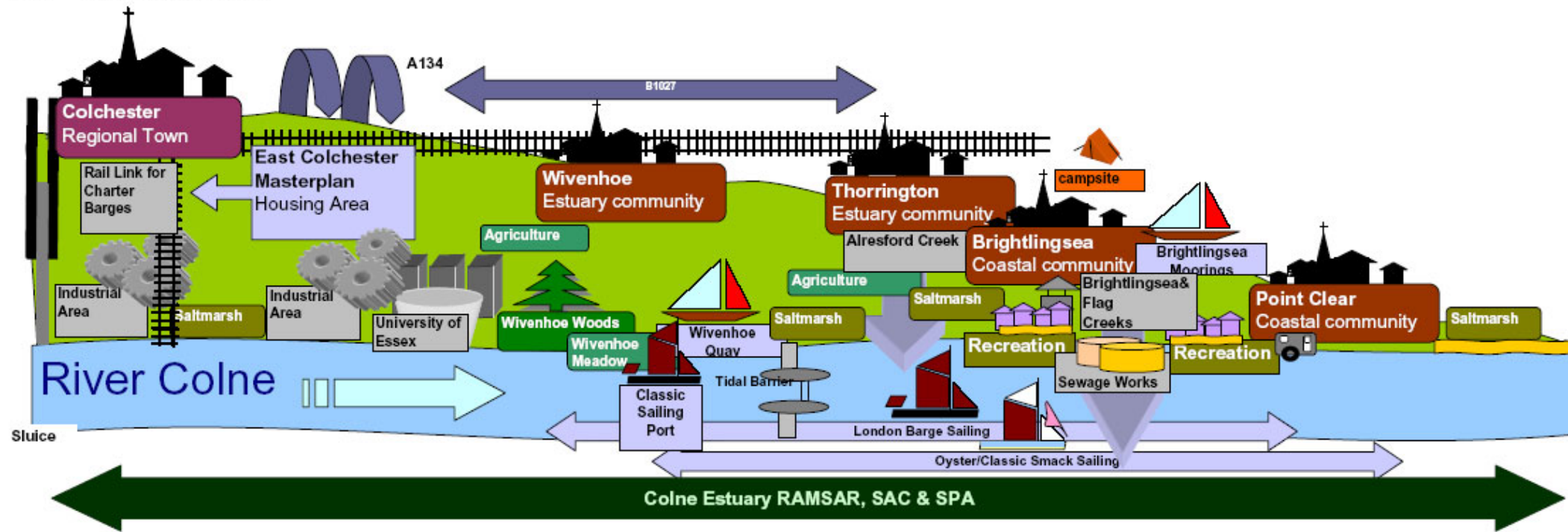


**Tendring Birds Eye View**

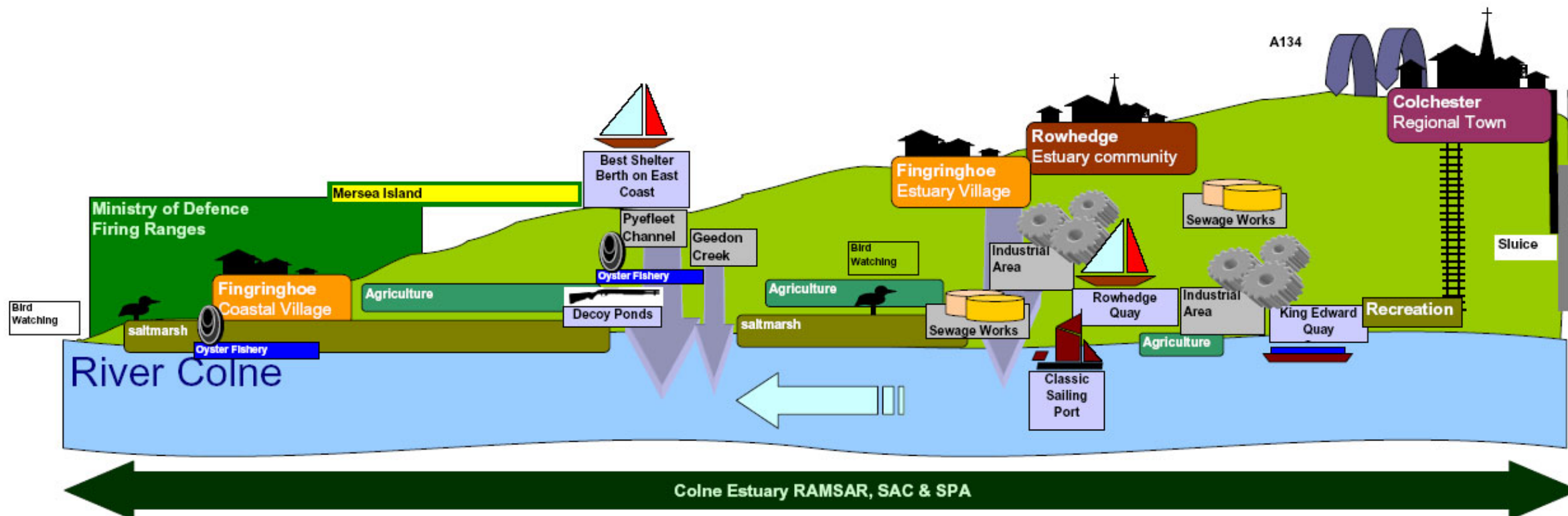


**River Colne Mid-Estuary View**

River Colne North Bank

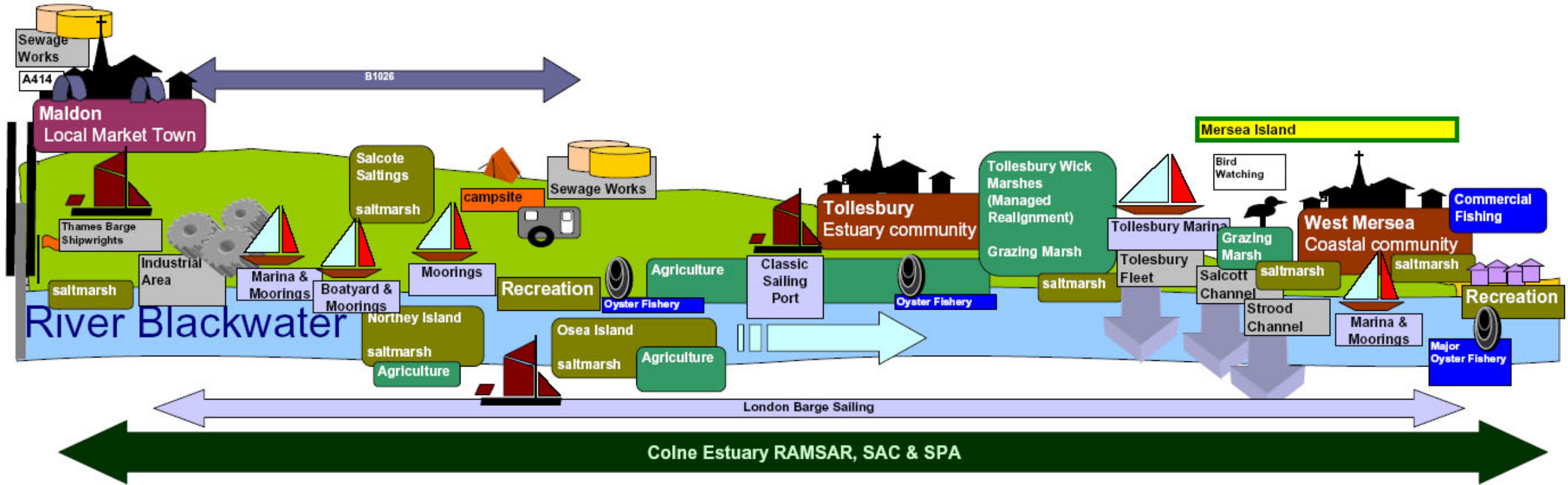


River Colne South Bank

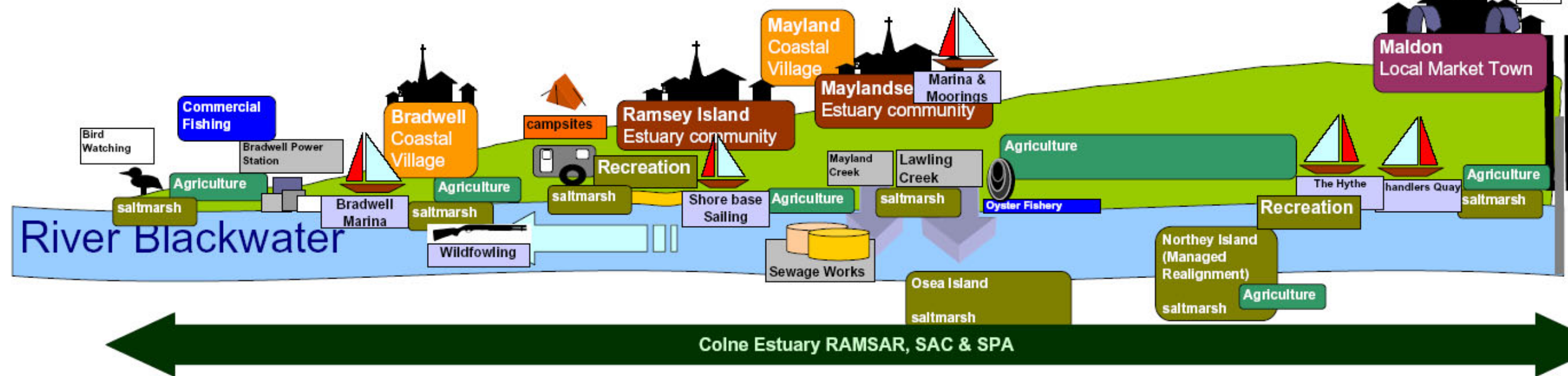


**River Blackwater Mid-Estuary View**

**River Blackwater North Bank**

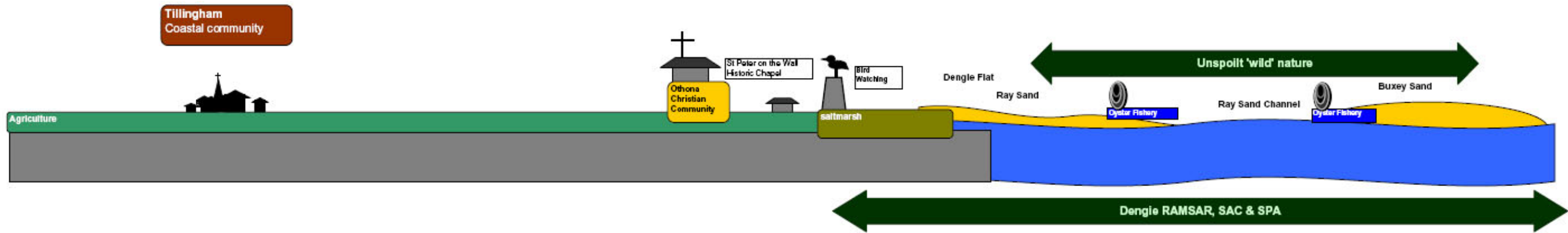


**River Blackwater South Bank**



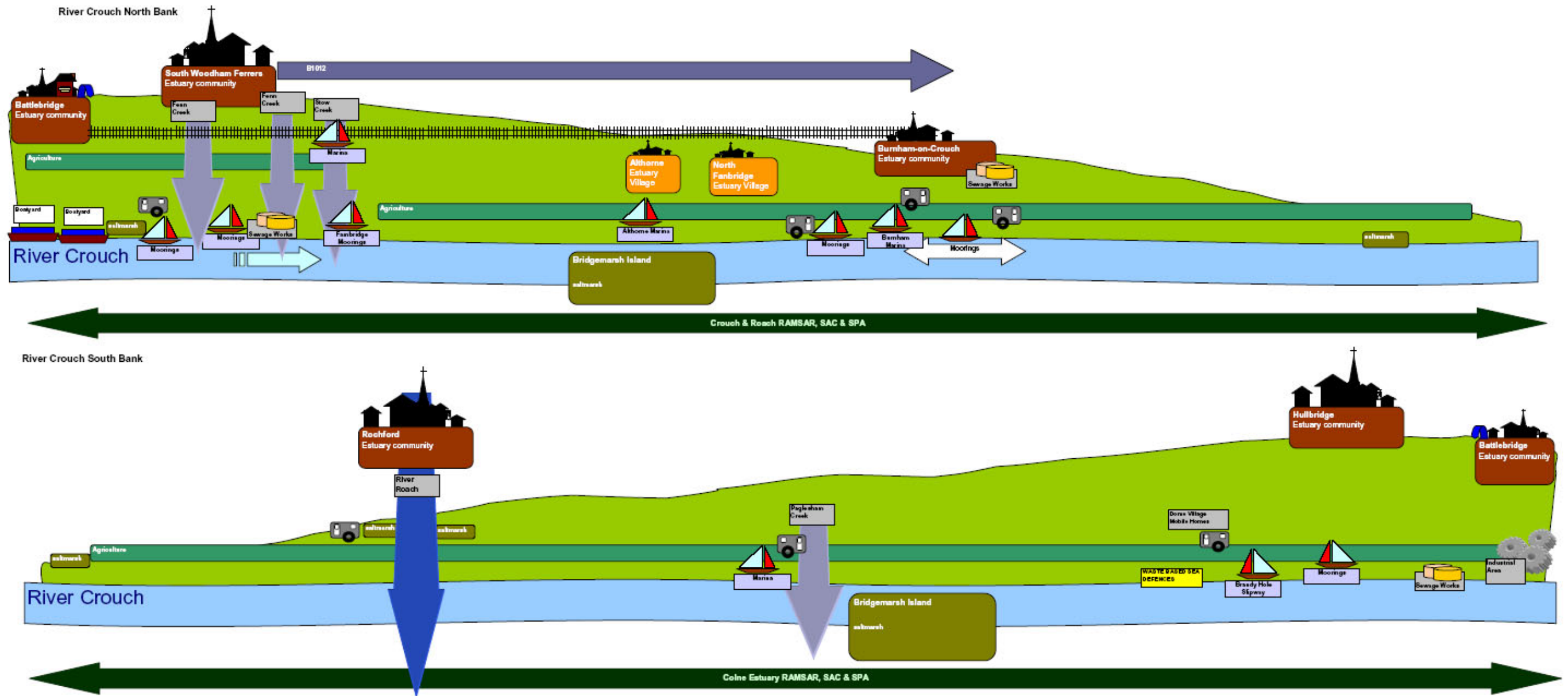
Cross-sectional representation of Dengie Flat

Dengie Flat Zone Cross Section

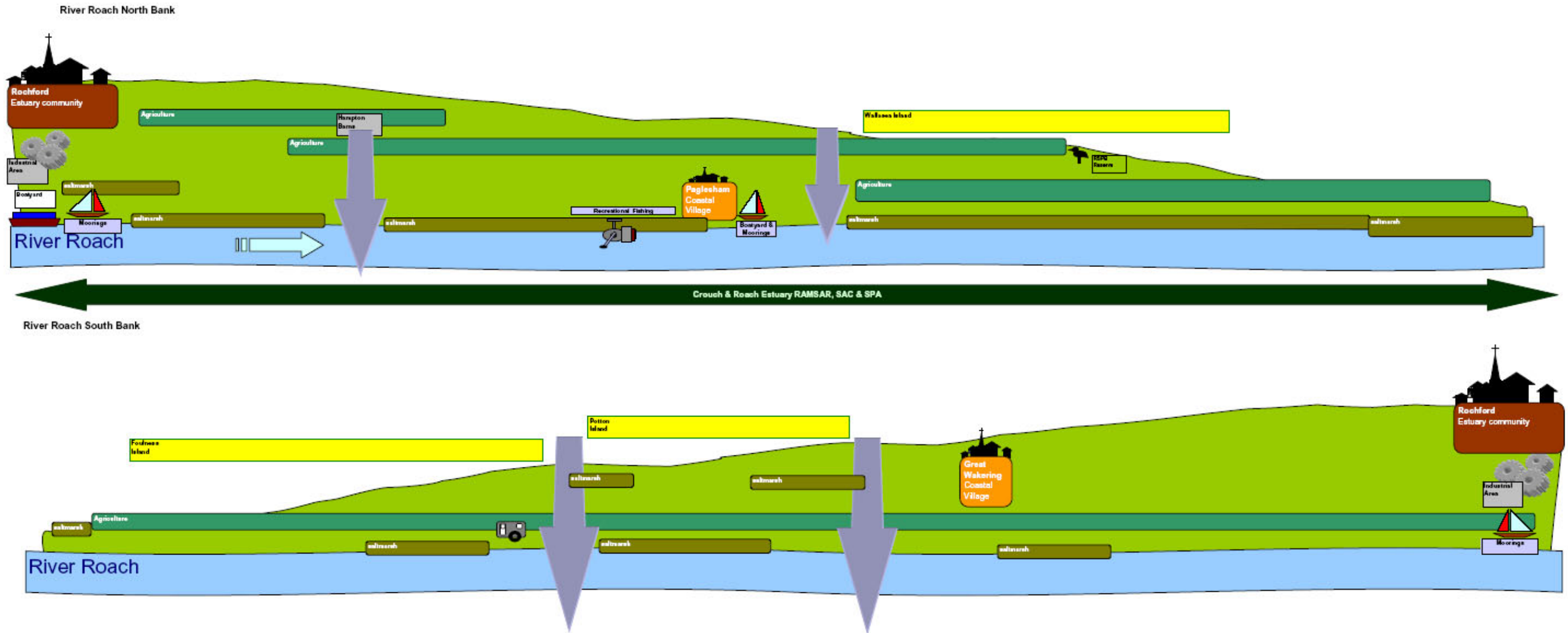




Cross-sectional representation of River Crouch

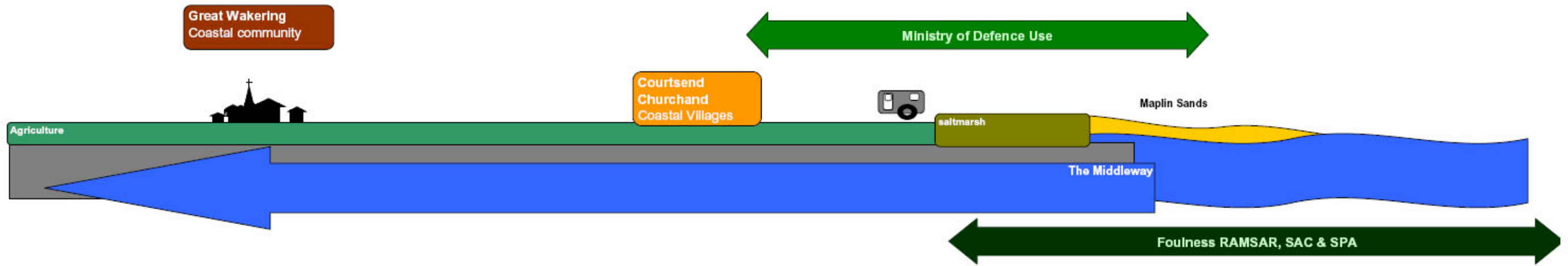


Cross-sectional representation of River Roach



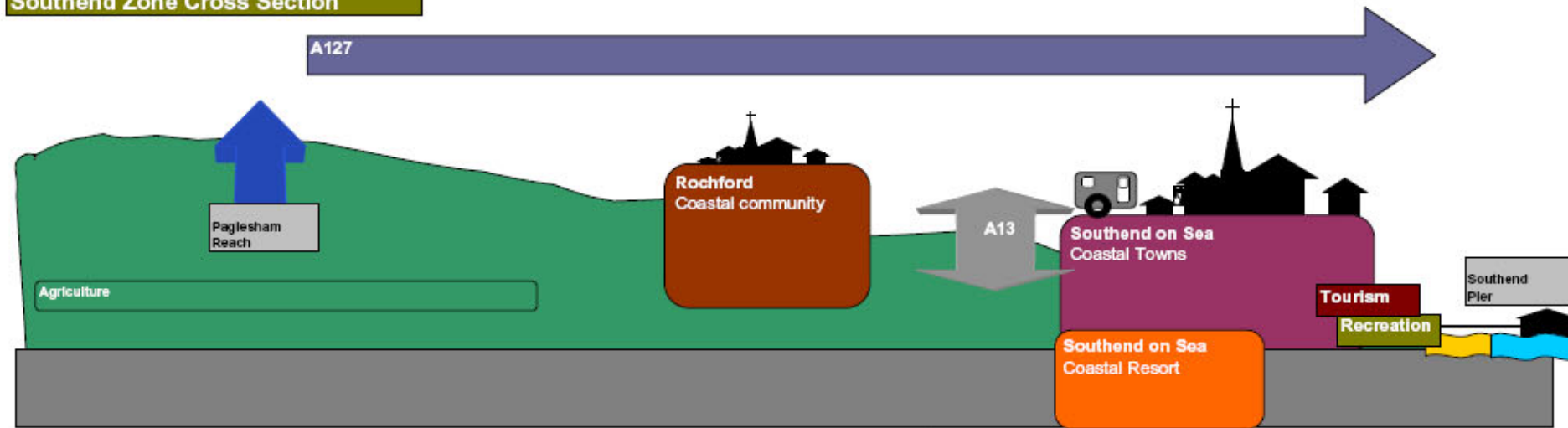
Cross-sectional representation of Foulness

Foulness Zone Cross Section

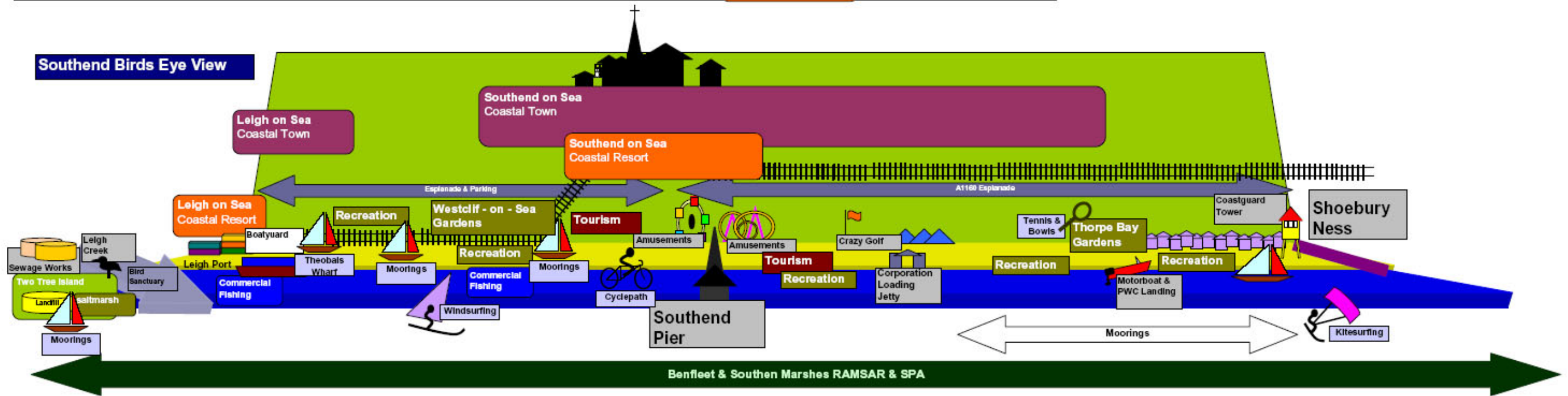


Cross-sectional representation of Southend

Southend Zone Cross Section



Southend Birds Eye View



## **ANNEX V**

### **SMP policy table**

PDZ	Policy		
	Now - 2025	2025 - 2055	2055 - 2105
A1	AtL	HtL	HtL
A2	HtL	MR2	HtL
A3a	HtL	MR2	NAI
A3b	HtL	HtL	HtL
A4a	MR1	MR1	MR1
A4b	NAI	NAI	NAI
A5	HtL	HtL	HtL
A6	MR1	MR1	MR1
A7a	NAI	NAI	NAI
A7b	MR1	MR1	MR1
A8a	MR2	HtL	HtL
A8b	HtL	MR2	HtL
A8c	MR1	MR1	MR1
A9a,d,f	HtL	HtL	HtL
A9b	NAI	NAI	NAI
A9c,e	MR1	MR1	MR1
A10a,c,e	HtL	HtL	HtL
A10b,g	NAI	NAI	NAI
A10d,f	MR1	MR1	MR1
A11a	AtL	HtL	HtL
A11b	HtL	HtL	HtL
B1	HtL	HtL	HtL
B2	HtL	MR2	HtL
B3	HtL	HtL	HtL
B3a	HtL	HtL	MR2
B4a	MR2	HtL	HtL
B4b	HtL	HtL	HtL
B5	HtL	HtL	MR2
B6a	NAI	NAI	NAI
B6b	MR1	MR1	MR1
C1	HtL	HtL	HtL
C2	HtL	HtL	MR2
C3	HtL	HtL	HtL
C4	HtL	MR2 / HtL	MR2 / HtL
D1a	HtL	HtL	HtL
D1b	HtL	MR2	HtL
D2	HtL	MR2	HtL
D3	HtL	MR2	HtL
D4	HtL	HtL	HtL
D5	HtL	MR2	HtL
D6a and D6b	HtL	HtL	HtL
D7	HtL	HtL	HtL
D8a	HtL	MR2	NAI

PDZ	Policy		
	Now - 2025	2025 - 2055	2055 - 2105
D8b	HtL	HtL	HtL
D8c	HtL	HtL	HtL
E1	HtL	HtL	MR2
E2	HtL	MR2	HtL
E3	HtL	HtL	HtL
E4a	HtL	MR2	HtL
E4b	HtL	HtL	HtL
F1	HtL	HtL	HtL
F2	HtL	HtL	HtL
F3	HtL	HtL	MR2
F4	HtL	HtL	HtL
F5	HtL	HtL	MR2
F6	HtL	HtL	HtL
F7	HtL	HtL	HtL
F8	HtL	HtL	HtL
F9	HtL	HtL	HtL
F9a	HtL	MR2	HtL
F9b	HtL	HtL	HtL
F10	HtL	HtL	HtL
F11a,b	NAI	NAI	NAI
F11c	HtL	HtL	HtL
F12	HtL	HtL	MR2
F13	HtL	HtL	HtL
F14	MR2	HtL	HtL
F15	HtL	HtL	HtL
G1	HtL	HtL	HtL
G2	HtL	HtL	HtL
G3	HtL	HtL	HtL
H1	HtL	HtL	HtL
H2a	HtL	MR2	HtL
H2b	HtL	HtL	MR2
H3	HtL	HtL	HtL
H4	HtL	HtL	HtL
H5	HtL	HtL	HtL
H6	HtL	HtL	HtL
H7	HtL	HtL	HtL
H8a	HtL	HtL	HtL
H8b	HtL	MR2	HtL
H9	NAI	NAI	NAI
H10	MR2	HtL	HtL
H11a	HtL	MR2	HtL
H11b	HtL	HtL	MR2
H12	HtL	HtL	HtL
H13	HtL	HtL	HtL
H14	HtL	HtL	HtL

PDZ	Policy		
	Now - 2025	2025 - 2055	2055 - 2105
H15	HtL	HtL	HtL
H16	HtL	HtL	HtL
I1a	HtL	HtL	HtL
I1b	HtL	HtL	HtL
I1c	HtL	HtL	MR2
J1	HtL	HtL	HtL