

Rochford - Strategic Environmental Assessment Baseline  
Information Profile

Prepared for Rochford District Council

By

Essex County Council

## **Contents**

Introduction.....	3
Biodiversity Flora and Fauna.....	4
Landscape Character.....	26
Air Quality.....	34
Water.....	41
Soil.....	54
Climatic Factors.....	64
Built Environment.....	73
Population and Human Health.....	87
Cultural Heritage and Material Assets.....	102
Significant Issues and Trends.....	110
Bibliography.....	112

## Introduction

The SEA Directive (2001/42/EC) was introduced to ensure that the environmental impacts of certain plans and programmes are recognised and assessed before plan implementation. The SEA Directive requires that all local authorities collect and maintain an environmental baseline dataset.

In response to this aspect under the SEA legislation, it was proposed under the auspices of the Essex Planning Officer's Association that the task of collating information and establishing the necessary collation, analysis, interpretation and monitoring mechanisms to inform this process could be more effectively undertaken centrally by Essex County Council. In this way a Service Level Agreement has been drawn up between Essex County Council and many of the Districts and Boroughs in the county including Rochford District Council, to which this report specifically addresses.

This Service Level Agreement involves the collation of data from internal and external sources and also from the District Councils themselves. Appendix 1 sets out the initial datasets identified as being relevant within the agreement. However, this list is not meant to be comprehensive but be indicative, requiring constant review in order to satisfy the purpose for which it is intended. Hence this has allowed the data collection to be tailored to fit the needs and requirements of the District, so that additional data to that specified in the Service Level Agreement has been assembled. The entire dataset is categorised into the following topic areas covered by the SEA legislation and includes the following:

- Biodiversity, flora and fauna
- Water
- Soil
- Air quality
- Climatic factors
- Built environment
- Population and health
- Heritage

The purpose of this report is to draw together the initial data collected for Rochford District. This report includes national, regional/county and more local level data enabling comparison of Rochford District Council's performance. Furthermore, international, national and more local level targets and standards are also reviewed within this report to provide the necessary context and also to facilitate the focussing of resources into areas of non-compliance or significant failure. This report also examines limitations of the data collected.

In this way Rochford District Council will be in accordance with the SEA Directive in relation to this aspect of baseline information collation and will be in an informed position with regards to environmental issues and policy making.

## **Biodiversity Flora and Fauna**

### ***Introduction***

Biodiversity flora and fauna simply describes all living things, the variety of life on earth, all plants, animals and the places in which they live. Much of what makes the environment we inhabit special is linked to biodiversity. Equally much of what comprises biodiversity, as part of a natural system, also has a function in the system we live in. Pollution can be filtered, flood waters alleviated, and air cleaned by biodiversity.

### ***International/National Position***

The UK is bound by the terms of the EC Birds and Habitats Directives and the Ramsar Convention. The Conservation (Natural Habitats &c.) Regulations 1994 (the 'Habitats Regulations') provide for the selection of candidate Special Areas of Conservation (cSACs) and the classification of Special Areas of Conservation (SACs), pursuant to the Habitats Directive. They apply specific provisions of the Habitats Directive to cSACs, SACs as well as to Special Protection Areas (SPAs) classified under the Birds Directive. Special considerations therefore apply to SPAs, cSACs and, in future, to SACs (all of which are defined as 'European sites').

The Convention on Biological Diversity was signed following the June 1992 Rio 'Earth Summit'. The UK government was one of these signatories and began to fulfill their commitment in 1993 when they published the UK Action Plan. By 1995, the UK Biodiversity Steering Group had published action plans for many species and habitats. The Essex Biodiversity Action Plan (EBAP) was published in 1999 (Essex County Council and Essex Wildlife Trust) and currently contains action plans for 25 species and 10 habitats.

The protection and management of internationally designated sites set out above is achieved by a combination of the provisions in the Habitats Regulations and section 28 of the Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000. This places specific requirements on local authorities to comply and relate to key service areas including land use, transport planning and land management.

### ***Regional/County Position***

Within Essex there are two SACs, the Essex Estuaries site in the east of the county, and Epping Forest in the west, with the former having an area of 46110.02ha and being situated closest to Rochford District. Other sites within the East of England area include Wormley-Hoddesdonpark Woods in Hertfordshire, Orfordness-Shingle Street and Minsmere to Walberswick Heaths and Marshes in Suffolk, Breckland in Norfolk and Fenland in Cambridgeshire.

There are a number of SPAs on the regions coast, for example the Blackwater Estuary (Mid-Essex Coast Phase 4) and Colne Estuary (Mid-Essex Coast Phase 2) in Essex, the Alde and Ore Estuaries in Suffolk and the Thames Estuary and Marshes in Kent. The Ouse Washes in Cambridgeshire and Norfolk and Abberton Reservoir in Essex are also significant inland SPAs. The majority of SPA sites in the East of England are also Ramsars. Within Rochford the Crouch and Roach Estuaries and Foulness are designated as RAMSARS and SPAs. Figure 1 shows sites of international and European importance within Essex.

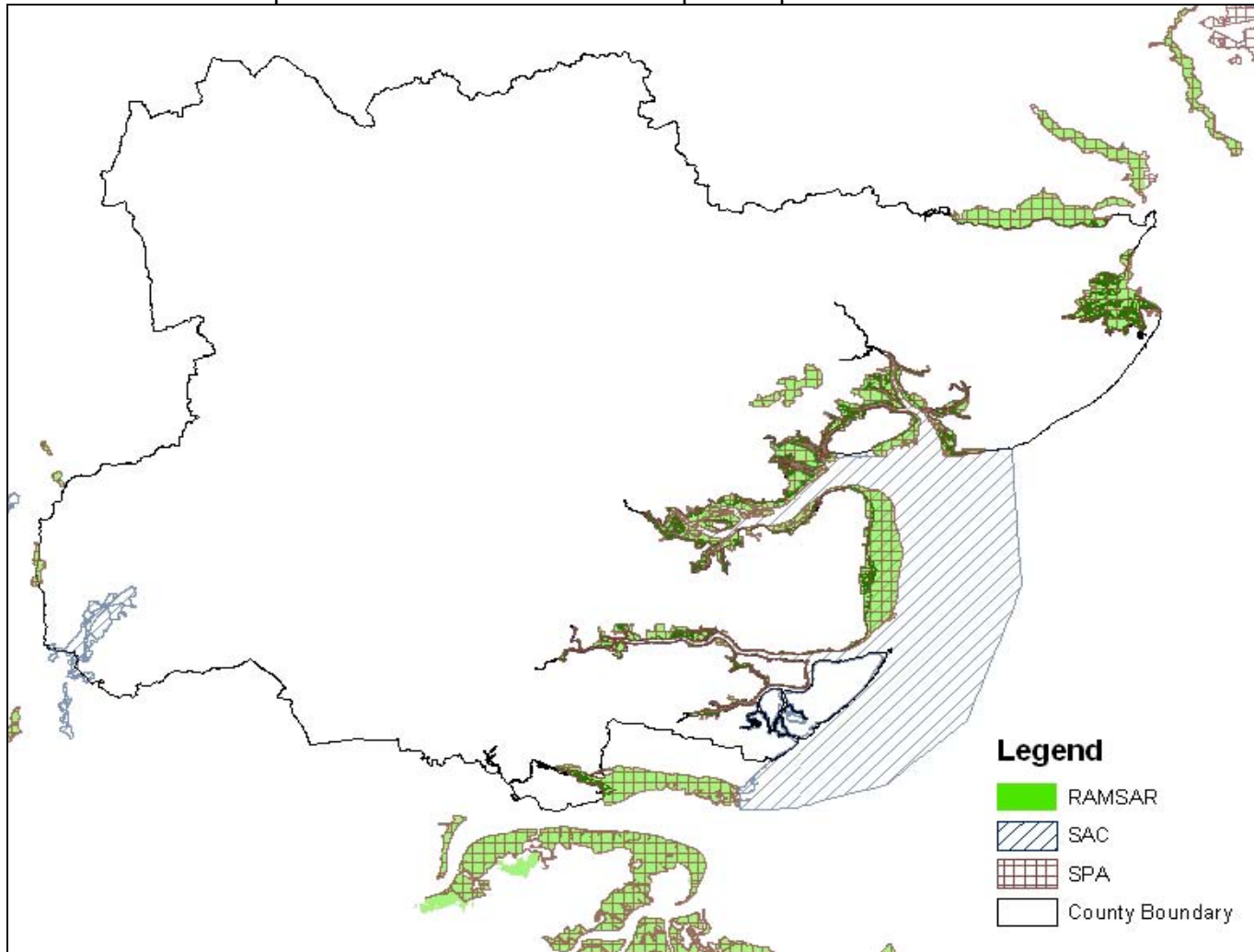
The East of England contains 567 Sites of Special Scientific Interest (SSSIs), covering 6.6% of the land area (Our Environment, Our Future: The Regional Environment Strategy for the East of England. East of England Regional Assembly and East of England Environment Forum, July 2003). The condition of these sites is reasonable, with 66.09% of the total area being in a favourable condition, and 77.70% meeting the PSA target of bringing 95% of all nationally important wildlife sites into a favourable condition by 2010 (English Nature, September 2005). The greatest area of SSSIs is concentrated on the east coast of Essex, with sites such as the Dengie, Colne Estuary and Hamford Water. Rochford District has 3 SSSIs, with the largest site by far being Foulness, at 10946.15ha.

There are a number of National Nature Reserves (NNRs) in the East of England, including Hatfield Forest, Hamford Water, Hales Wood and the Dengie. Dedham Vale Area of Outstanding Natural Beauty (AONB) is located on the Essex-Suffolk border and is composed of the lowland valley of the River Stour, and associated water meadows and copses. The Suffolk Coast and Heaths, the Norfolk Coast and the Chilterns AONBs are situated relatively close to Rochford District, with the Surrey Hills and Kent Downs AONBs a little further a field. Figure 2 displays sites of national importance within Essex.

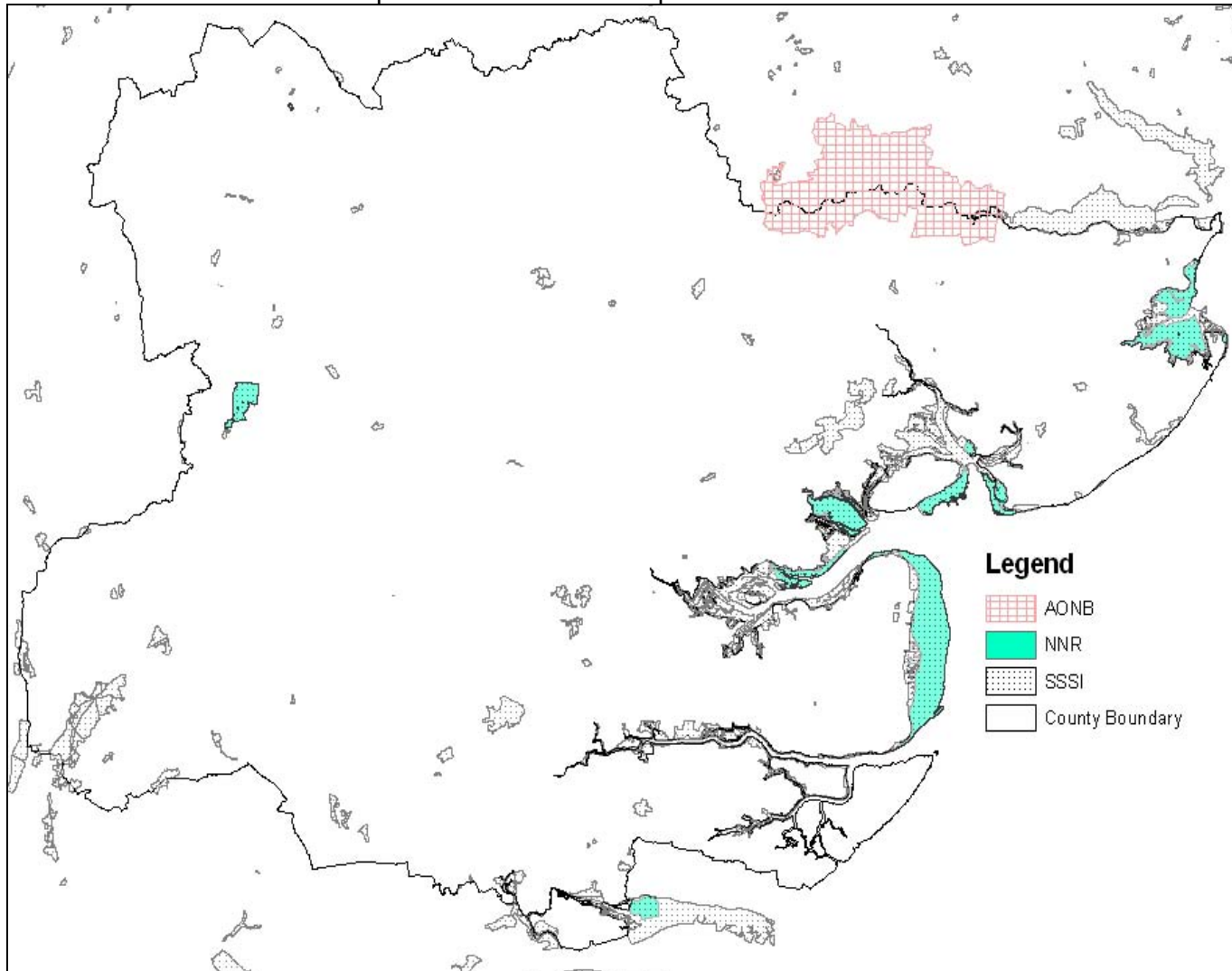
Woodland comprises the second largest land-use in the East of England, covering 7.3% of the land area (Our Environment, Our Future: The Regional Environment Strategy for the East of England. East of England Regional Assembly and East of England Environment Forum, July 2003). Within Essex, the land cover of ancient woodland is 2.45%, of which 1.96% is semi-natural ancient woodland and 0.48% is planted ancient woodland. Woodland cover in Essex is displayed in figure 3.

The existing regional strategy for Essex is 'saved' RPG9 – South East. This will be superseded by RSS14 (Regional Spatial Strategy for the East of England. East of England Regional Assembly, 2004). RSS14 will set out a strategy to guide development in the East of England for the next 20 years. A number of the policies in RSS14 will address the aims set out in The Regional Environment Strategy, Our Environment, Our Future (East of England Regional Assembly and East of England Environment Forum, July 2003). National planning guidance for biodiversity (PPG9) has recently been revised and replaced with Planning Policy Statement 9 (PPS 9): Biodiversity and Geological Conservation, which is accompanied by a Circular setting out statutory provision and a Best Practice Guide. The aim of PPS 9 is to ensure that policies in regional spatial strategies and local development documents are in line with the Government's broader policy objectives for biodiversity.

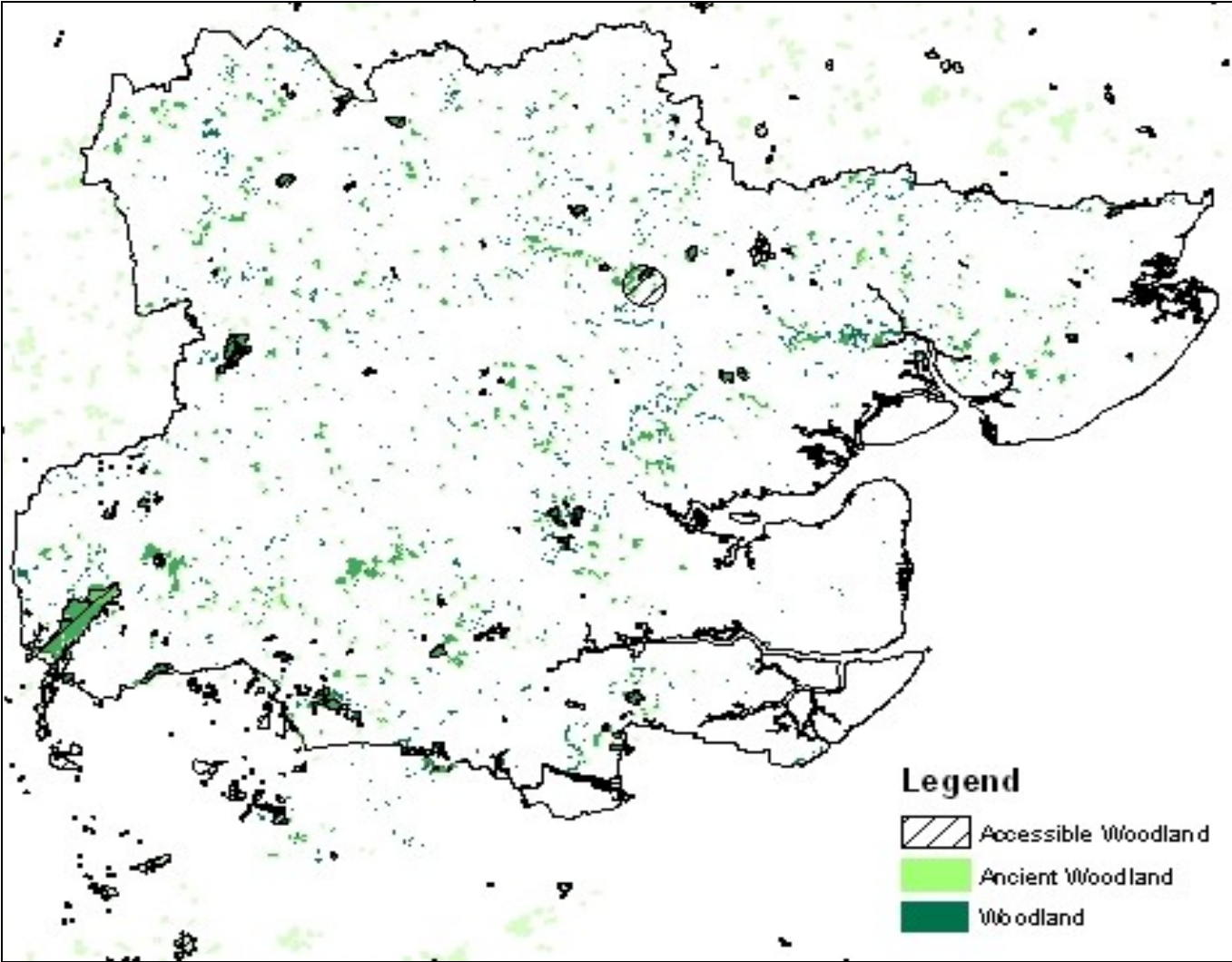
Map1: Sites of International and European Importance within Essex



Map 2: Sites of National Importance within Essex



Map 3: Woodland within Essex





### **Standards/Targets**

National PSA Targets 2005-2008 (DEFRA):

- Bring into favourable condition by 2010 95% of all nationally important wildlife sites, compared to 60% of sites currently estimated to be in such condition.

- Care for our living heritage and preserve natural diversity by reversing the long term decline in the number of farmland birds by 2020, as measured annually against underlying trends.

### **Rochford Position**

Policy CS2 within the Rochford District Replacement Local Plan (Rochford District Council, February 2006) is part of the core strategy, highlighting the importance of protecting and enhancing the built and natural environment. It states that the local planning authority will protect, sustain and enhance the District's natural resources and cultural heritage through the application of the policies and proposals in the Plan for future generations to enjoy, and to ensure that new development contributes to environmental quality. This is also included within planning objective I5 and within the Community Strategy (Rochford District Council, 2004). Planning objectives N1 and N2 within the Local Plan relate to such protection, conservation and enhancement of the landscape character and quality, and the safeguarding of visually and historically important trees and woodland. Planning objectives N4 and N5 relate to the protection, conservation and enhancement of species, areas and features of nature conservation importance and the rural undeveloped coastline. Planning objective I7 also highlights the need for definition and protection of the undeveloped coast and areas of ecological interest.

Policy NR3 - Tree Protection states that development that adversely affects the amenity value or viability of individual trees, groups of trees or woodlands that are considered ancient or form an important part of the landscape or townscape, will be refused.

Policy NR4 within the Local Plan relates to biodiversity on development sites. The policy states that measures to facilitate and encourage biodiversity must be included within applications for development proposals.

Policy NR5 – European and International Sites states that proposals for development which may affect an SAC (either candidate or designated), RAMSAR site or SPA 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, 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.

Policy NR6 concerns SSSIs, stating that proposals for development which are likely to have an adverse impact, either directly or indirectly, on a SSSI will not be permitted unless the justification for the development clearly outweighs the national nature conservation interest of the site.

Policy NR7 relates to Species Protection. It declares that planning permission will not be granted for development likely to cause harm to species protected under English and/or European Law. Development will only be permitted if it can be demonstrated

that the justification for the proposal clearly outweighs the need to safeguard the nature conservation value of the species or its habitat. In such cases conditions will be imposed or a legal agreement drawn up.

Policy NR10 relates to the Coastal Protection Belt, documenting that within this area 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, its historic features, wildlife or geological features.

Policy NR13 – Creation of Intertidal Habitats states that this will be permitted provided that 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.

Table 1: EBAP targets (Essex County Council and Essex Wildlife Trust, 1999): Habitats

Habitats	Rochford District responsibility	Actions/Targets
Ancient Species and/or Rich Hedgerows and Green Lanes	Yes	<ul style="list-style-type: none"> <li>To maintain overall numbers of hedgerow trees within each county or district at least at current levels by planting or natural regeneration, in order to ensure a balanced age structure.</li> </ul>
Ancient Woodland	Yes	<ul style="list-style-type: none"> <li>Halt the further loss of ancient woodland and ensure no more areas are lost in the future.</li> <li>Continue work to develop markets for a range of woodland products to help establish sustainable woodland management.</li> <li>Ensure that future woodland management considers the need to maintain levels of dead wood, veteran trees, and other habitats such as ponds, rides and glades where appropriate.</li> </ul>
Cereal Field Margins	No	<ul style="list-style-type: none"> <li>Maintain, improve and restore by management the biodiversity of some 500 to 750 hectares of cereal field margins in Essex by 2010.</li> </ul>
Coastal Marsh	Yes	<ul style="list-style-type: none"> <li>Maintain existing extent of habitat within county.</li> <li>Ensure no further degradation of habitat. Where loss of low value habitat is likely, appropriate mitigation and creation of equivalent.</li> <li>Restore any grazing marsh which has fallen into disuse/poor condition within last 20 years by 2010.</li> <li>Recreate sufficient habitat to increase the habitat area to 1980s levels (500ha) by 2010.</li> </ul>
Seagrass Beds	No	<ul style="list-style-type: none"> <li>Increase knowledge of distribution, extent and quality of eelgrass (<i>Zostera spp.</i>) beds in Essex. Determine relative distribution of different species and surveys needed to assess changes in distribution.</li> <li>Increase knowledge of ecology of <i>Zostera</i> beds and assess importance as habitat for marine invertebrates.</li> <li>Identify and qualify natural and human factors affecting eelgrass beds.</li> <li>Seek to halt decline in <i>Zostera</i> population from human impacts.</li> <li>Seek to increase size of <i>Zostera</i> resource.</li> <li>Raise profile and public awareness of eelgrass beds and associated species.</li> </ul>

Saline Lagoons	Yes	<ul style="list-style-type: none"> <li>• Extent and distribution of habitat should be maintained, within a framework of sustainable coastline management.</li> <li>• Quality of extant sites should be improved (all protected sites to be in optimal condition by 2010).</li> <li>• Sufficient new sites should be created and appropriately managed by 2010 to offset losses over past 50 years, and by 2020 to offset anticipated losses (through sea level rise and coastal realignment) up to 2050.</li> </ul>
Urban Areas	Yes	<ul style="list-style-type: none"> <li>• To ensure biodiversity issues contribute significantly to the development of sustainable green towns and cities.</li> <li>• To develop up-to-date and accessible information on urban ecological resources.</li> <li>• To maintain and enhance the value and integrity of key wildlife sites, wildlife features and strategic natural networks across urban areas.</li> <li>• To increase awareness and understanding of the value and management of the range of 'urban' habitats, especially those supporting key populations of important species.</li> <li>• To provide accessible natural open space for environmental education and the informal enjoyment of nature.</li> <li>• To stimulate local action to benefit wildlife, through LA21 and other community initiatives.</li> </ul>

In terms of performance against EBAP targets set out above, steps are afoot to develop an internet-based National Biodiversity Archive Record (BAR) to facilitate individual agency performance in delivering National and Local BAP targets.

### **Current Position**

As shown in maps 4,5 and 8 and graphs 1 and 2, Rochford District has a number of designated natural areas. There are 2 RAMSARs (also designated as SPAs), the Crouch and Roach Estuaries and Foulness. The Rochford District coast is also designated as part of the Essex Estuaries SAC. In total there are 3 SSSIs and 175.87ha of ancient woodland, which is mostly semi-natural ancient woodland. There are 59 County Wildlife Sites (CWS) within the District, with a total area of 15969.30ha. There are also 4 LNRs, with the largest being Hockley Woods at 91.50ha. There are no NNRs or AONBs within the District.

The Crouch and Roach Estuaries Ramsar and SPA site is an area of 1745.11ha on the eastern coast of Rochford District. As stated in the Local Plan in paragraph 8.27, this site qualifies as an SPA because it supports internationally important assemblages of waterfowl (wildfowl and waders) and regularly occurring migratory species. Foulness has SPA status for similar reasons, whilst also supporting internationally important breeding populations of regularly occurring species such as the Sandwich Tern (*Sterna sandvicensis*), Common Tern (*Sterna hirundo*), Little Tern (*Sterna albifrons*) and Avocet (*Recurvirostra avosetta*); and nationally important breeding populations of regularly occurring migratory species, primarily the Ringed Plover (*Charadrius hiaticula*).

The Crouch and Roach Estuaries site has been designated as a RAMSAR due to the extent and diversity of saltmarsh habitat present. The site supports a number of rare,

vulnerable or endangered species or subspecies of plant and animal, including 13 nationally scarce plant species. The site regularly supports an average of 3,074 Dark-bellied Brent Geese (*Branta bernicla bernicla*) over winter, which represents around 1% of the Western Siberia/Western Europe population. Nationally important birds include the Northern Harrier (*Circus cyaneus*) and the Ruff (*Philomachus pugnax*). Nationally important plants species at the site include the Slender Hare's-ear *Bupleurum tenuissimum*, Divided Sedge *Carex divisa*, Sea Barley *Hordeum marinum*, Golden-samphire *Inula crithmoides*, Lax-Flowered Sea-lavender *Limonium humile*, Curved Hard Grass *Parapholis incurva*, Borrers Saltmarsh Grass *Puccinellia fasciculata*, Stiff Saltmarsh Grass *Puccinellia rupestris*, Spiral Tasselweed *Ruppia cirrhosa*, One Flowed Glasswort *Salicornia pusilla*, Small Cord Grass *Spartina maritima*, Shrubby Sea Blite *Suaeda vera* and Sea Clover *Trifolium squamosum*. Several nationally important invertebrate species are also present such as the scarce Emerald Damselfly *Lestes dryas*, the Shorefly *Parydroptera discoomyzina*, the Large Horsefly *Hybomitra expollicata*, the beetles *Graptodytes bilineatus* and *Malachius vulneratus* and the Ground Lackey Moth *Malacosoma castrensis*. This site is suffering from erosion, resulting in the intertidal zone along the Crouch and Roach Estuaries being squeezed between the sea walls of both banks and the river channel.

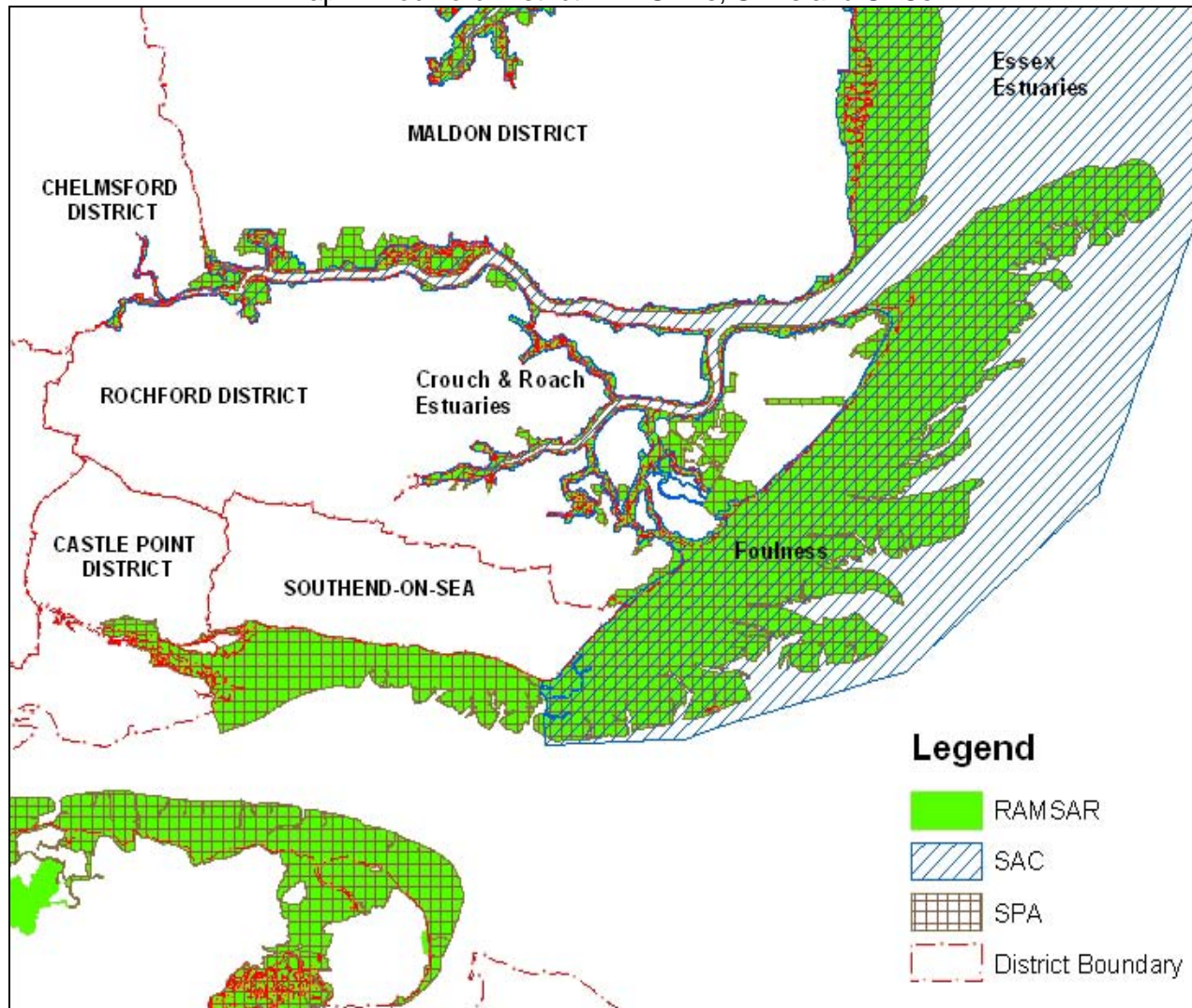
The Foulness RAMSAR has also been designated as such due to its' saltmarsh habitat and its' provides habitat for numerous bird species. The area supports up to 107,999 waterbirds including Dark-bellied Brent Goose *Branta bernicla bernicla* (an average of 13,075 individuals representing 4.4% of the Western Siberia/Western Europe population), Redshank *Tringa totanus* (an average of 1,369 individuals representing 0.8% of the Eastern Atlantic wintering population), Bar-tailed Godwit *Limosa lapponica* (an average of 7,639 individuals representing 6.6% of the Western Palearctic wintering population), Knot *Calidris canutus* (an average of 40,429 individuals representing 11.7% of the Northeastern Canada/Greenland/Iceland/Northwestern Europe population), Oystercatcher *Haematopus ostralegus* (an average of 11,756 individuals representing 1.3% of the Europe & Northern/Western Africa population) and Grey Plover *Pluvialis squatarola* (an average of 4,209 individuals representing 2.5% of the Eastern Atlantic wintering population). Pioneer saltmarsh vegetation communities present include Small Cord Grass *Spartina maritima*, Perennial Glasswort *Salicornia perennis* and Shrubby Sea Blite *Suaeda vera*, with more mature saltmarsh communities including Pedunculate Sea-purslane *Atriplex pedunculata*. Species-rich perennial saltmarsh and drift-like communities contain Shrubby Sea Blite *Suaeda vera* and Eelgrass *Zostera sp.* beds. Brackish water vegetation is primarily composed of Sea Club-rush *Bolboschoenus maritimus* and the areas of grazing marsh include species such as Marsh Foxtail *Alopecurus geniculatus* and Schreber Meadow Barley *Hordeum secalinum*. Nationally important invertebrates at Foulness include the Emerald Damselfly *Lestes dryas*, micro-moth *Aethes margarotana*, Ground Lackey Moth *Malacosoma castrensis* and Lagoon Sand Shrimp *Gammarus insensibilis*.

The Essex Estuaries candidate SAC (cSAC) incorporates Foulness and the Crouch and Roach Estuaries from the point of the highest astronomical tide out to sea. The site has attained cSAC status due to the presence of habitats such as pioneer saltmarsh, cordgrass swards, Atlantic salt meadows, Mediterranean saltmarsh scrubs, estuaries, intertidal mudflats and sandflats and subtidal sandbanks.

The Essex SPAs and cSAC have been collectively designated as the Essex Estuaries European Marine Site, since these sites are continuously or intermittently

covered by tidal waters. This site stretches from the coast at Jaywick to Shoeburyness and from the line of highest astronomical tide out to sea.

Map 4: Rochford District RAMSARs, SPAs and SACs



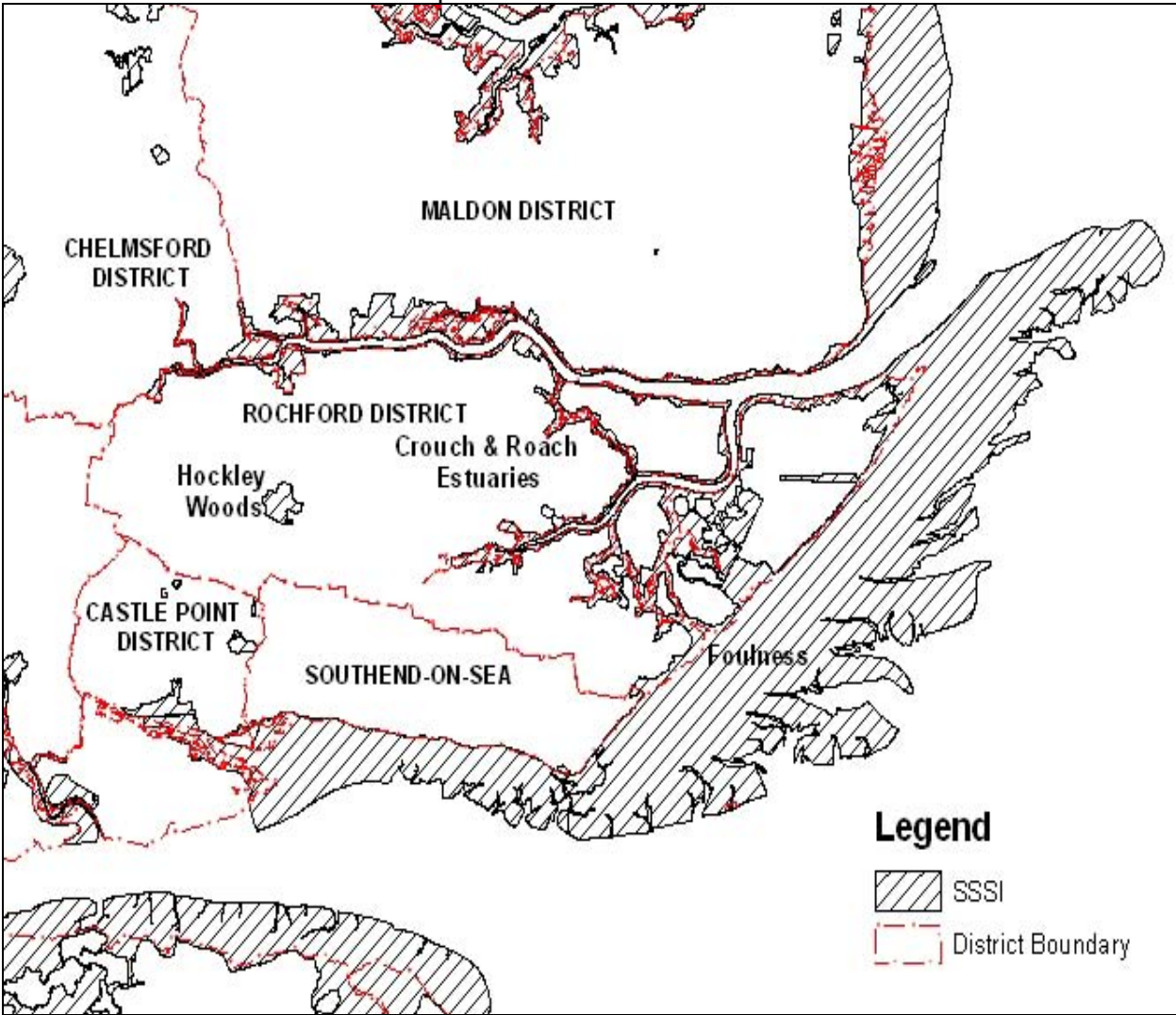
As can be seen in map 5, there are 3 SSSIs within Rochford District at Hockley Woods, Foulness and the Crouch and Roach Estuaries. As can be seen from figure 6, the condition of SSSIs within Rochford District is quite variable. The condition of District SSSIs is similar to the state of Essex sites (graphs 1 and 2), since there are a high percentage of sites in 'favourable' and 'unfavourable declining' conditions. Hockley Woods is in a 100% 'favourable' state, but this is the smallest of the SSSIs in the District, at 92.12ha. It is composed of mixed and yew ancient coppice woodland including Great Bull Wood, Great Hawkwell Wood, Beeches Wood and Parson's Snipe. Species include a Sessile Oak *Quercus petraea* population, which is probably the largest population in eastern England. The woodland is mainly Oak standards, over Hornbeam *Carpinus betulus* or Sweet Chestnut *Castanea sativa* coppice. Pedunculate Oak *Quercus robur*, Birch *Betula spp.*, Wild Service Tree *Sorbus torminalis* and Wild Cherry *Prunus avium* are also present. The ground flora is dominated by Bramble *Rubus fruticosus agg.* and Creeping Soft-grass *Holcus mollis* with significant areas of Bracken *Pteridium aquilinum*. Common Cow-wheat *Melampyrum pratense*, Slender St. John's-wort *Hypericum pulchrum*, Wood Melick *Melica uniflora* and Yellow Archangel *Lamiastrum galeobdolon* are also abundant. Heath Dog-violet *Viola cania*, Great Woodrush *Luzula sylvatica* and Narrow-leaved Everlasting-pea *Lathyrus sylvestris* are found in more open areas. Three species of orchid have also been recorded, including Bird's Nest Orchid *Neottia nidus-avis*. The site includes a seasonally wet pond with Waterviolet *Hottonia palustris*, an uncommon and declining plant in Essex.

Foulness SSSI is also in a reasonable condition with 77.93% of its area being in a 'favourable' condition (this equates to a considerable site area of 8530.33ha). However, most of the remaining land area is classified as being in an 'unfavourable declining' state. This is a result of coastal squeeze between the sea and coastal defences, with the mud and saltmarsh of the intertidal zone being eroded. Inappropriate scrub control is also a factor leading to an 'unfavourable declining/no change' classification. The habitats and species present at this site have been discussed previously.

The two units of the Crouch and Roach Estuaries SSSI that fall into Rochford District are of most concern with regards to site condition. 90.25% of the SSSI area in the District is in an 'unfavourable declining' state, with the remaining area being classed as 'unfavourable no change.' Unit 34 is composed of littoral sediment, and as is the case at Foulness, is subject to coastal squeeze, leading to an adverse condition. Unit 55 however is suffering from low water levels, which is detrimental to the maintenance of this area of grazing marsh. The site has been previously explored through its' RAMSAR and SPA designations.

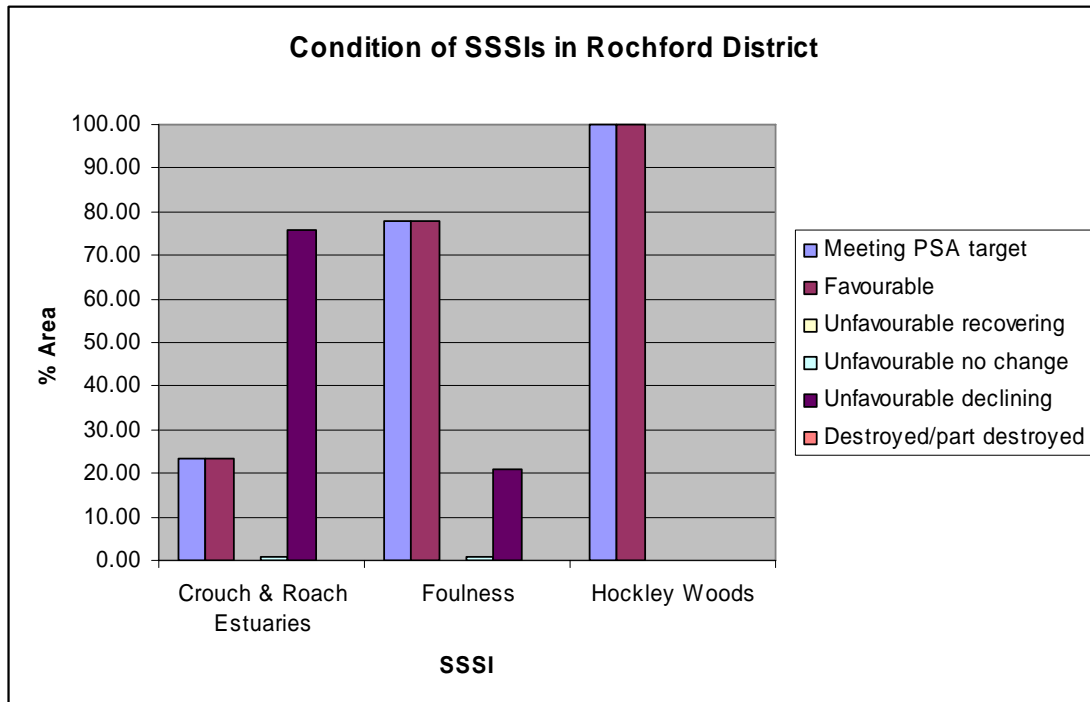


Map 5: Rochford District SSSIs

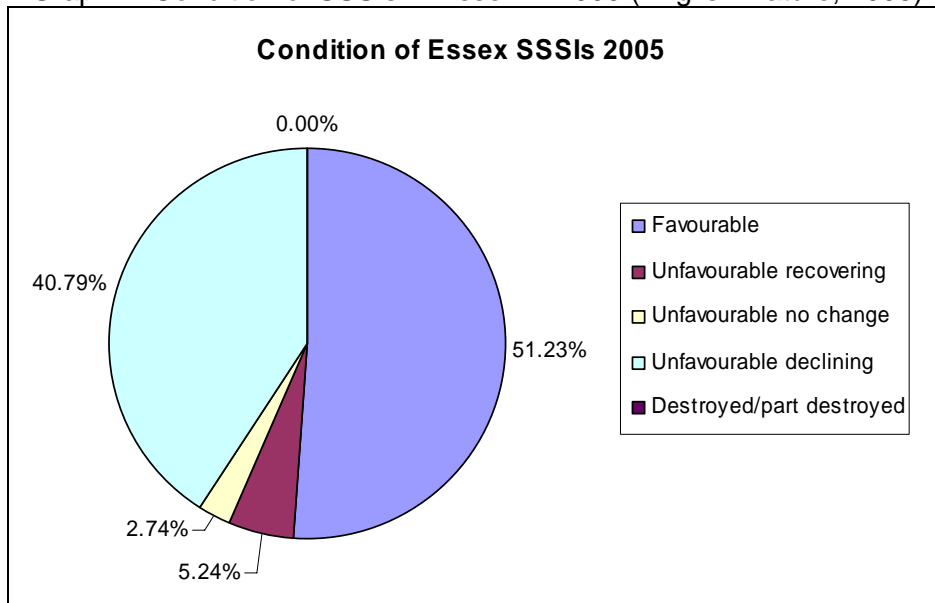




Graph 1: Condition of SSSIs in Rochford District in 2005 (English Nature, 2005)

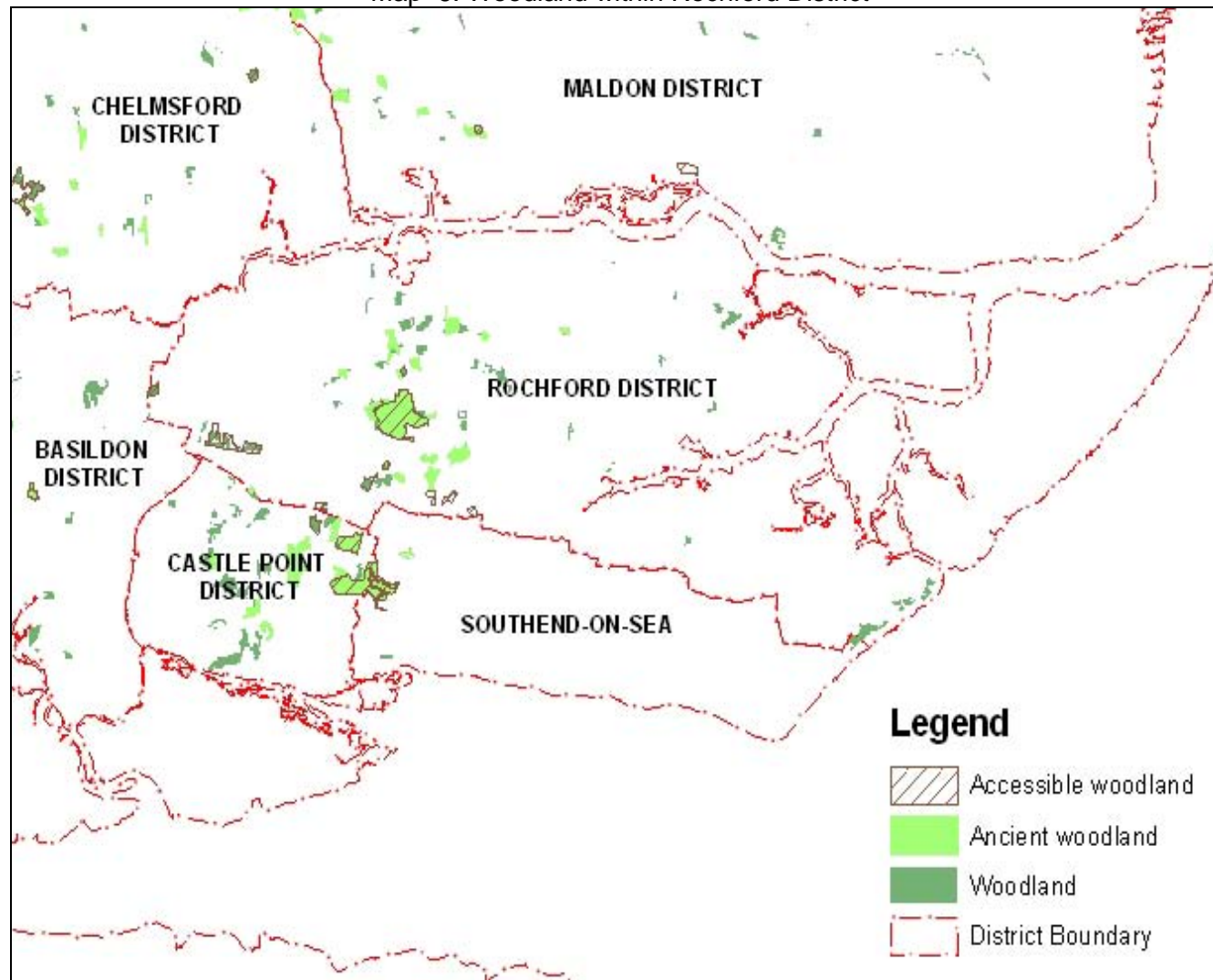


Graph 2: Condition of SSSIs in Essex in 2005 (English Nature, 2005)



Ancient woodland is land continuously wooded since 1600AD in England and Wales. Areas of ancient woodland that have never been cleared or replanted are known as semi-natural ancient woodland. Rochford District has a total ancient woodland cover of 1.04% of the land area, scattered throughout the District, composed of 1.03% semi-natural ancient woodland and 0.01% planted ancient woodland. When compared to the distribution in Essex, Rochford has only a small area of ancient woodland, considerably less than districts such as Uttlesford, Braintree and Epping Forest. Accessibility to ancient woodland within the District is quite poor, with the only site being Hockley Woods. Other accessible areas of woodland include Pound Wood at 21.84ha, Daws Heath at 8.12ha and woodland to the west of Rayleigh (35.03ha).

Map 6: Woodland within Rochford District



As seen in map 7 below, there are a reasonable number of County Wildlife Sites scattered throughout Rochford District. Based on the 1990 Essex Wildlife Trust Survey and as displayed in graph 3, Rochford District contains 59 CWSs of which 89.06% of the total area is coastal, 7.74% is grassland, 1.69% is mosaic habitat types, 1.20% is woodland and the remaining area is classified as freshwater aquatic. The largest CWS is Foulness, which has been discussed previously.

Another example of a coastal CWS is Paglesham Seawall. This 4.5ha site includes species such as Slender Hare's-ear (*Bupleurum tenuissimum*), Staff Saltmarsh-grass (*Puccinellia rupestris*), Saltmarsh Rush (*Juncus gerardii*), Sea Barley (*Hordeum Marinum*), Lesser Sea-spurrey (*Spergularia marina*) and Sea Hard-grass (*Parapholis strigosa*). The section to the west of Stannetts Lake has an acidic grassland sward with much Sheep's Sorrel (*Rumex acetosella*) and Common Bent-grass (*Agrostis capillaris*). The wall also has a good population of Adders.

Edwards Hall Fields is an 11.9ha grassland site comprised of four fields. The presence of ridge-and-furrow patterning suggests that these meadows have been grassland for several centuries and therefore represent a very rare Essex habitat. A good range of grasses and herbs can be found, reflecting the varied drainage of the site due to both the ridge-and-furrow and the general northerly slope. Common Bent-grass (*Agrostis capillaris*), Sweet Vernal Grass (*Anthoxanthum odoratum*), Sheep's Sorrel (*Rumex acetosella*), Black Knapweed (*Centaurea nigra*) and Crested Dog's-tail (*Cynosurus cristatus*) are typical species. To the south of the park, a section of one field is hedged off as a separate paddock, with the closely cropped grass forming a different habitat to the taller swards of the park. Further habitat diversity is provided by several old, thick hedges which bound the fields.

Great Wakering Common is also a significant site of 5.8ha. It provides a wide range of habitats, with a consequently diverse flora and fauna. A wide variety of grasses and herbs include Spreading Meadow-grass (*Poa subcaerulea*) which is rare in Essex, Lady's Bedstraw (*Galium verum*), Grass Vetchling (*Lathyrus nissolia*) and Wild Celery (*Apium graveolens*) amongst a sward of Sea Couch (*Elymus pycnanthus*), Creeping Bent-grass (*Agrostis stolonifera*), Cock's-foot (*Dactylis glomerata*), Yorkshire Fog (*Holcus lanatus*) and Ryegrass (*Lolium perenne*). A pond to the south side and the northern boundary ditch provide important brackish aquatic habitat for species such as Divided Sedge (*Carex divisa*), Common Reed (*Phragmites australis*), Snipe *Gallinago gallinago*, Reed and Sedge Warblers *Acrocephalus scirpaceus* and *Acrocephalus schoenobaenus* respectively, and numerous dragonflies and damselflies. Further habitat is provided by boundary hedges and scrub scattered throughout the common.

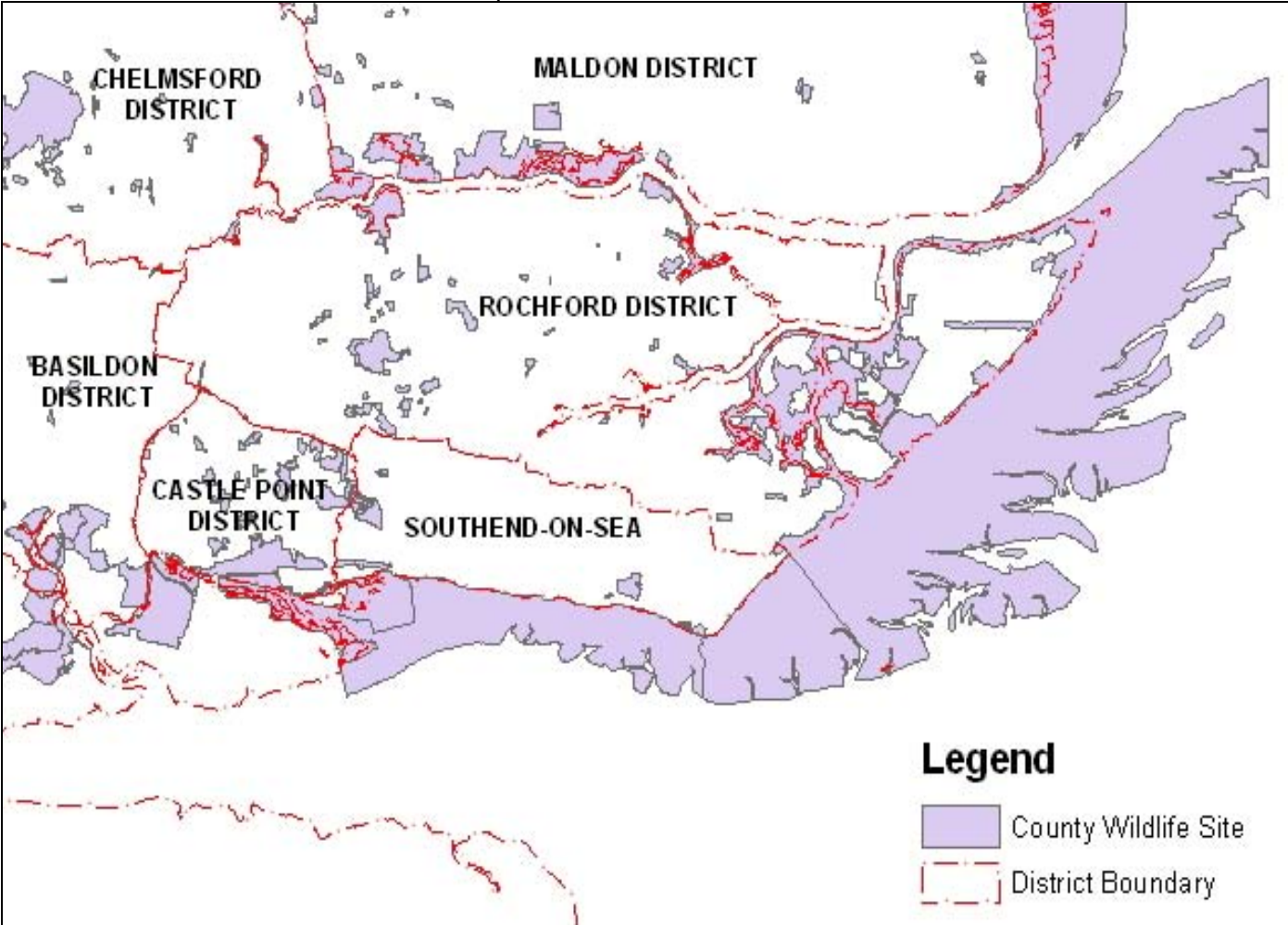
Star Lane Pits are former clay pits, with overlying sands and gravel forming an interesting mosaic of scrub, rough grassland and aquatic habitats. This 7.0ha site is mainly composed of Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*) and Grey Willow (*Salix cinerea*), with some Dogwood (*Cornus sanguinea*) and Wild Clematis (*Clematis vitalba*). The lakes, stocked with fish, have beds of Reedmace (*Typha spp.*) and Common Reed (*Phragmites australis*) which, in turn, support Reed and Sedge Warblers (*Acrocephalus scirpaceus* and *Acrocephalus schoenobaenus*). The rare Essex water-plant Hemlock Water-dropwort (*Oenanthe crocata*) has been recorded. The often shallow water provides a good habitat for aquatic invertebrates, including dragonflies and damselflies.

Bartonhall Grove represents one of the few large blocks of woodland (3.3ha) to be found away from the Rayleigh Hills complex. The canopy comprises Ash (*Fraxinus*

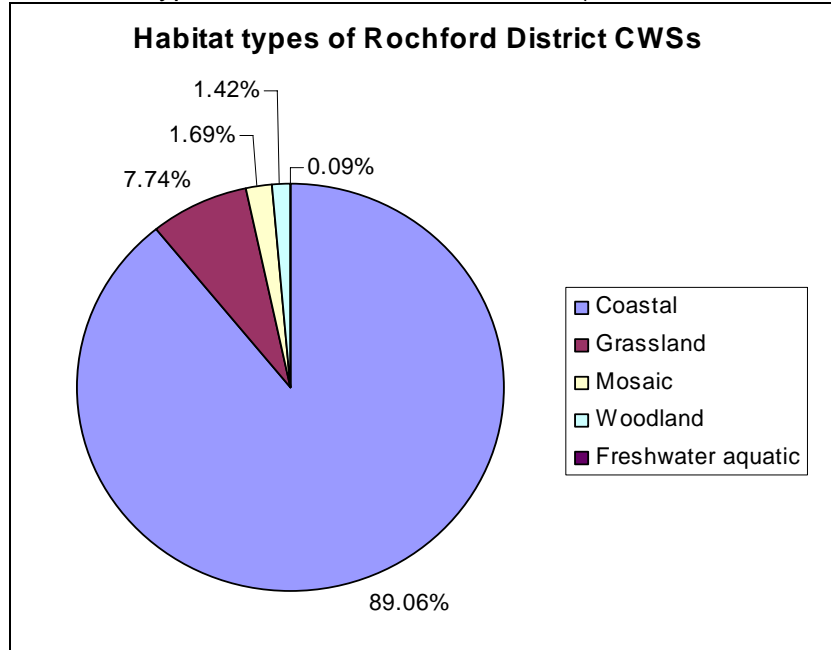
*excelsior*), Field Maple (*Acer campestre*) and Pedunculate Oak (*Quercus robur*) to the south, with Elm (*Ulmus sp.*) more common to the north. Dead standing Elm trunks provide a good habitat for fungi and invertebrates. A wide range of woodland birds have also been recorded.

The two freshwater aquatic CWSs within Rochford District are Butts Hill Pond, north of Canewdon and Stannetts Lake and Creek. The former is the smaller of the two sites, at 0.28ha, and consists of a small pond with surrounding grassland and hedgerows. The site has a good aquatic flora and fauna, including the nationally threatened Great Crested Newt (*Triturus cristatus*). Stannetts Lake and Creek is a 14.09ha settling lagoon located on the Roach Estuary to the west of Paglesham Eastend. It supports a variety of resident, overwintering and breeding wildfowl and waders. It provides an important roosting/resting site at the edge of the Roach Estuary. The adjacent brackish creek provides additional breeding and feeding habitat.

Map 7: Rochford District CWSs



Graph 3: Habitat Types of Rochford District CWSs (Essex Wildlife Trust, 1990)



Rochford District has a total of 4 LNRs, with the largest by far being Hockley Woods at 91.50ha, which was declared an LNR in 1995 and has been discussed previously. Magnolia Fields is a 9.71ha site managed by Hawkwell Parish Council, comprised of grazed pastures, rough unmanaged grassland, scrub and maturing woodland. The three pastures to the north-west are closely cropped and display a species rich flora which includes Pale Flax (*Linum bienne*), Blue Fleabane (*Erigeron acer*) and Meadow Barley (*Hordeum secalinum*) amongst a sward of Common Bent-grass (*Agrostis capillaris*) and Crested Dog's-tail (*Cynosurus cristatus*). To the south-east stretches a series of fields with thick hedges, inundation grassland and sedge/rush beds and woodland of Hawthorn (*Crataegus monogyna*), Field Maple (*Acer campestre*) and Pedunculate Oak (*Quercus robur*). Much of the value of this area lies in its variety of habitats. Many scarce Essex plants have been recorded from these fields, including Yellow Rattle (*Rhinanthus minor*), Fairy Flax (*Linum catharticum*), Carnation Sedge (*Carex panicea*) and Yellow-wort (*Blackstonia perfoliata*). The maintenance or recreation of a short, open sward will be necessary for the conservation of such species. Some potential habitat (to the south) has been badly damaged by dumping and has been excluded from the current CWS.

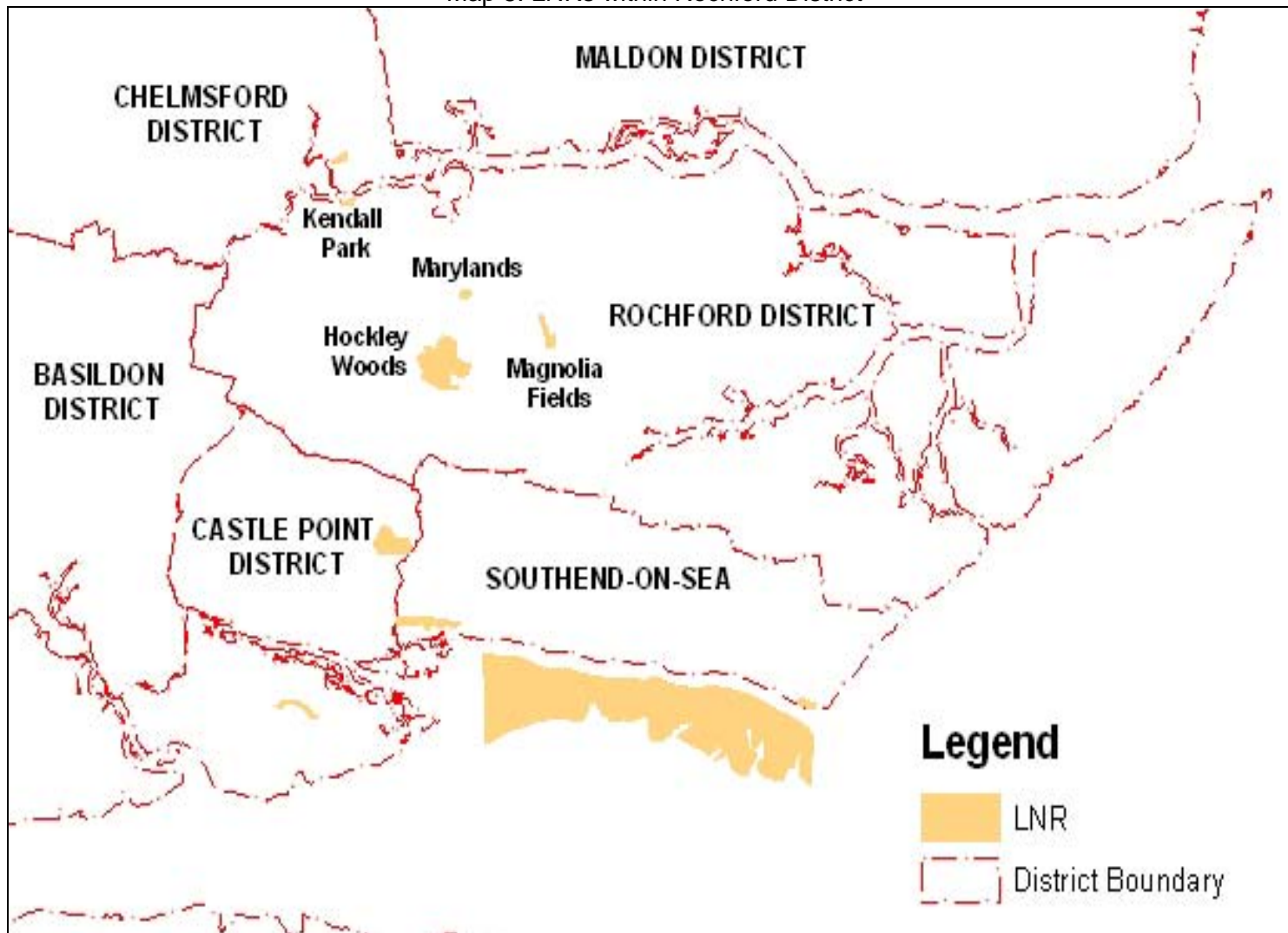
Marylands is a 3.69ha site which was designated as an LNR in 2000. The site consists of old Hornbeam (*Carpinus betulus*) coppice throughout, with Pedunculate Oak (*Quercus robur*), Maple (*Acer campestre*), Bluebell (*Hyacinthoides non-scripta*), Midland Hawthorn (*Crataegus laevigata*), Wood Melick (*Melica uniflora*), Yellow Archangel (*Galeobdolon luteum*), Creeping Soft-grass (*Holcus mollis*) and Wood Millet (*Milium effusum*). Early Purple Orchid (*Orchis mascula*) and Greater Butterfly Orchid (*Platanthera chlorantha*) have also been recorded. This rich flora may be under threat, given the widespread public access and dumping of garden rubbish that occurs.

Kendall Park is a 2.74ha site managed by Hullbridge Parish Council.

The Rochford District Local Plan states in paragraphs 8.37 and 8.38 that an extension of the Southend-on-Sea Foreshore LNR into Rochford District to include the Maplin Bund is due to be declared. In addition to the 4 designated LNRs discussed, the Essex Wildlife Trust owns nature reserves at Lion Creek and Lower Raypits, Canewdon.



Map 8: LNRs within Rochford District





### ***Compliance with targets***

Hockley Woods is the only SSSI of the three within Rochford District which is currently complying with the PSA target of bringing 95% of all nationally important wildlife sites into a favourable condition by 2010. The SSSIs that are currently not complying with the PSA target include the large area of Foulness, where 77.93% of the SSSI is compliant with the PSA target, and the Crouch and Roach Estuaries which are 0.00% compliant. The condition of these sites need to improve in order to meet this target. There is unfortunately no data available at present indicating the population of farmland birds or progress with EBAP targets.

### ***Data Limitations***

County Wildlife Sites have not been assessed since 1990, and so the number, area and habitat composition of these sites may have changed considerably since then. There is unfortunately a lack of data available regarding the condition of woodland, which would be useful in determining its contribution to biodiversity within the District. The current development of a national Biodiversity Archive Record system (BAR), which is due to be launched over this year, will provide the mechanism for individual agencies to record their performance locally against BAP targets.

### ***Summary***

- 2 out of the 3 SSSIs in the District are not meeting the PSA target and are in an 'unfavourable no change' and 'unfavourable declining' state.
- Poor condition of SSSIs can be attributed to coastal squeeze, low water levels and inappropriate scrub control.
- There is little ancient woodland within the District, but accessibility to other woodland sites is reasonable.

## **Landscape Character**

### ***Introduction***

Since the end of the ice-age over 10,000 years ago, the processes and patterns of landform, land cover and land use change have combined to create the contemporary appearance of the Essex landscape.

The landscape includes visible, physical components such as landform, vegetation, land use, settlement, visible spatial components, for example scale, pattern, texture and non visible components which could include sound and cultural associations.

Successive phases of human activity have influenced the development and character of the landscape in different ways.

From an understanding of the component parts of the landscape, it is possible to identify how particular combinations of these interact to create distinctive character. This then allows the classification of the landscape into areas that share common combinations of components (Landscape Character Types), and single, unique areas which are discrete geographical areas of a landscape type (Landscape Character Areas) (Essex Landscape Character Assessment, Essex County Council, July 2002).

### ***National position***

The Landscape Assessment emerged in the 1980s as a tool to separate the classification and description of landscape character (what makes one area 'different' or 'distinct' from another) from landscape evaluation. During recent years emphasis has been placed on the role of landscape character and the process has become known as Landscape Character Assessment (LCA). Assessments have therefore been based upon the Landscape Character Assessment Guidance for England and Scotland, The Countryside Agency, published in 2002.

PPS1 Delivering Sustainable Development (2005) states that policies should be based on a proper assessment of the character of the surrounding built and natural environment, and should take account of the defining characteristics of each local area and consider the protection of the wider countryside and the impact of development on landscape quality. PPG7 contains a specific section on the character of the countryside and makes reference to the Character of England Map which contains information on landscape, wildlife and natural features. It states that the character approach "*should help in accommodating necessary change without sacrificing local character. It can help ensure that development respects and enhances the distinctive character of the land and the built environment.*"

PPG 15 Planning and the Historical Environment (1994) states that in the countryside, the details of patterns of fields and farms, of hedgerows and walls, and of hamlets and villages are among the most highly valued aspects of our environment. It notes that "*the physical survivals of our past are to be valued and protected for their own sake, as a central part of our cultural heritage... their presence adds to the quality of our lives, by enhancing the familiar and cherished local scene and sustaining the sense of local distinctiveness which is so important an aspect of the character of our towns, villages and countryside.*"

The Rural White Paper (2000), *Our Countryside: The Future – A Fair Deal for Rural England* deals with importance of understanding, evaluating and protecting countryside character and diversity. In particular it stresses the need to find ways of “ensuring that the valued features and attributes of the whole countryside are conserved and enhanced”. It cites this guidance as a means to help those carrying out character assessment at sub-regional level, using the national character map as a starting point and guide and as a tool for local authorities to maintain the local countryside and its distinctive features.

### ***Regional/County Position***

The East of England region contains 22 different countryside character areas and there are dramatic and often sharp contrasts in the landscape range. Policy ENV2 in RSS14 (Regional Spatial Strategy for the East of England, East of England Regional Assembly, 2004) states that the diversity and local distinctiveness of landscape character throughout the East of England should be protected and enhanced by use of area-wide strategies based on character assessments in order to set long-term goals for landscape change, particularly in the regional growth areas identified with RSS14.

Essex is a county of low hills and undulating valleys, with extensive areas of low flat land near to the coast. The altitude rises very gently from the coast toward the north-west, reaching approximately 30m around Chelmsford and just over 130m to the west of Saffron Walden. This gentle rise is interrupted by a series of low hills and ridges, the highest of which is Danbury at 116m. The county has a large number of rivers, largely as a consequence of the proportion of clay soils. These are an important part of the county’s topography, character and identity.

The Essex coast forms part of the Greater Thames complex of estuaries and stretches for over 300 miles. It is of international importance for nature conservation, supporting an abundance of birds and wildlife, ranging over extensive rural landscapes and retaining many archaeological and historical features.

Policy NR4 of the Essex and Southend-on-Sea Replacement Structure Plan (April 2001) states that until Landscape Character Assessment has been completed, SLAs will be taken to identify areas where conservation or restoration of existing character should be given high priority. The Maldon District Replacement Local Plan (November 2005) states that when completed, the Landscape Character Assessment for the District will be used in conjunction with the policy on Special Landscape Areas (policy CC6). This policy states that 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.

### ***Rochford Position***

Policy NR1 - Special Landscape Areas (SLAs) states that development within the three Special Landscape Areas identified in the District will not be allowed unless its location, size, siting, design, materials and landscaping accord with the character of the area.

Policy NR2 relates to the historic landscape, stating that development which would adversely affect the historic importance, existing landscape character or physical appearance of ancient woodlands or landscapes will not be permitted. Development which borders areas identified as ancient landscapes/woodlands will be required to

incorporate native natural buffering to mitigate against any potential damage both during construction and from subsequent use.

### **Current Position**

A study of Landscape Character Areas (LCAs) in Essex was carried out by Chris Blandford Associates in 2003 on behalf of Essex County Council. This which classifies Rochford District into a number of Character Areas. These Areas are characterised by:

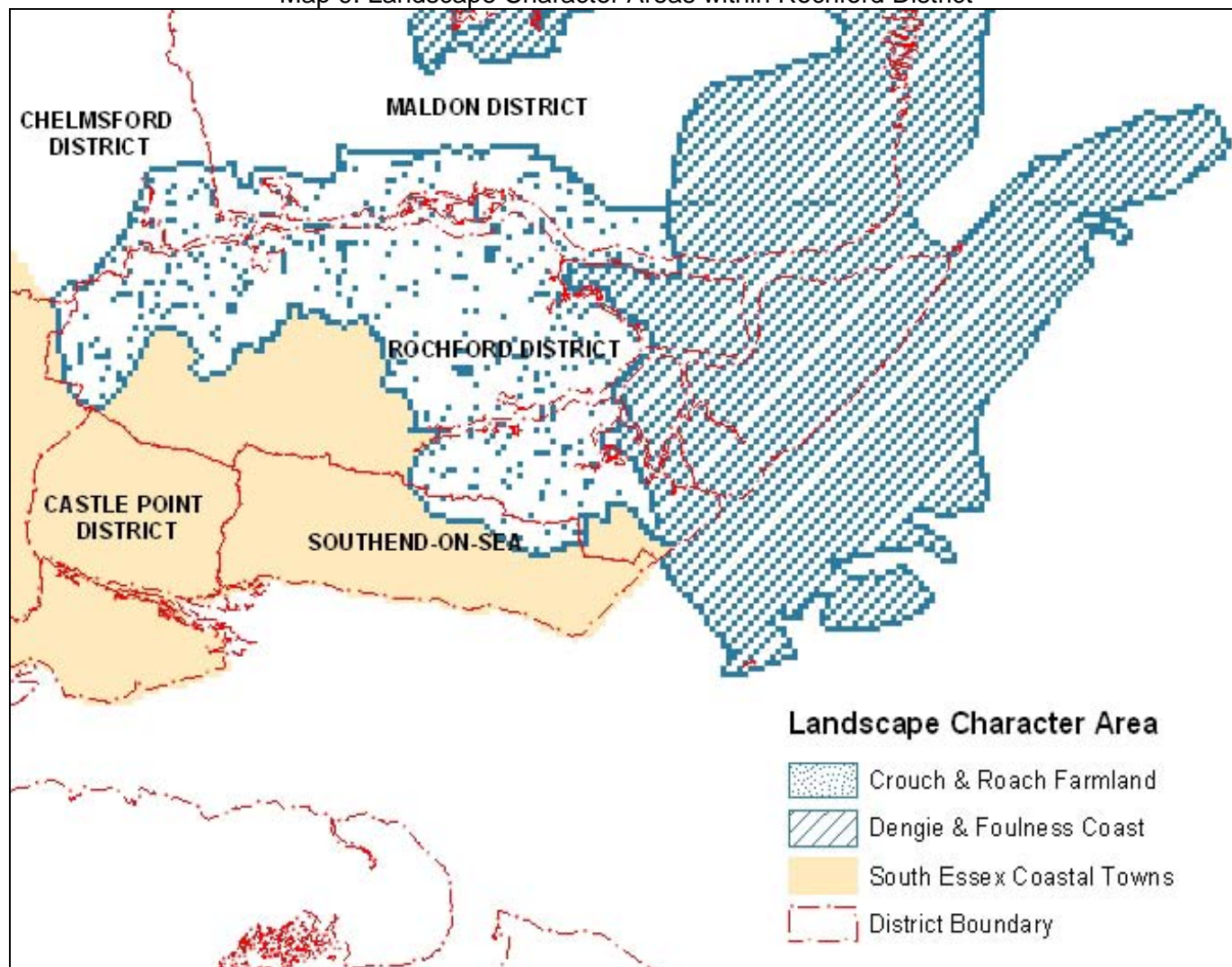
- Crouch and Roach Farmland
  - Saltmarsh, grazing marsh and ancient woodland
  - Narrow margins of flat low lying marshland and saltmarshes next to the Roach, broader areas adjacent to the Crouch
  - Very widely dispersed small copses, some small woodlands near Hockley
  - Scattered hedgerow Oak and Ash trees
  - Many hedgerows are fragmented
  - Occasional Elms, but these have largely been lost.
  
- Dengie and Foulness
  - Large areas of flat low lying land below 5m elevation
  - To the south, land broken into a series of islands by the lower Crouch and Roach estuaries and connecting creeks
  - Beyond sea wall in east both narrow and large areas of saltmarsh and vast tidal sands/mudflats such as Maplin Sands
  - Saltmarsh, pockets of coastal grazing marsh, sea wall grassland and shoreline vegetation
  - Generally very sparse tree cover
  - A few isolated copses and trees around farmsteads
  - Some isolated trees/scrub on older reclaimed marshes.
  
- South Essex Coastal Towns
  - Coastal grazing marshes, reedbeds marsh, extensive ancient woodland including Sessile Oak woods, unimproved meadows
  - High concentration of woodland at Daws Heath, including small and large blocks of interlocking deciduous woodland
  - Some secondary woodland associated with previous plotland areas
  - Absence of woodland/trees on flat low lying marshes
  - Condition of woodlands and hedgerows is moderate.

As shown in table 2 below, the sensitivity of these LCAs to different developments/changes is quite variable. The most sensitive areas are the Dengie and Foulness, which are highly sensitive to 8 out of the 10 developments. The Crouch and Roach Farmland is also reasonably sensitive to change, being highly sensitive to 4 out of 10 of the developments. The development that has the greatest potential impact upon these 3 LCAs is utilities development, such as masts and pylons, with all LCAs being highly sensitive to such development. Other types of change of concern are major urban extensions, commercial/warehouse estate/port development, developments with individual large/bulky buildings and a decline in traditional countryside management. Map 9 shows the District's LCAs.

Table 2: Landscape sensitivity level to developments/changes in Rochford District

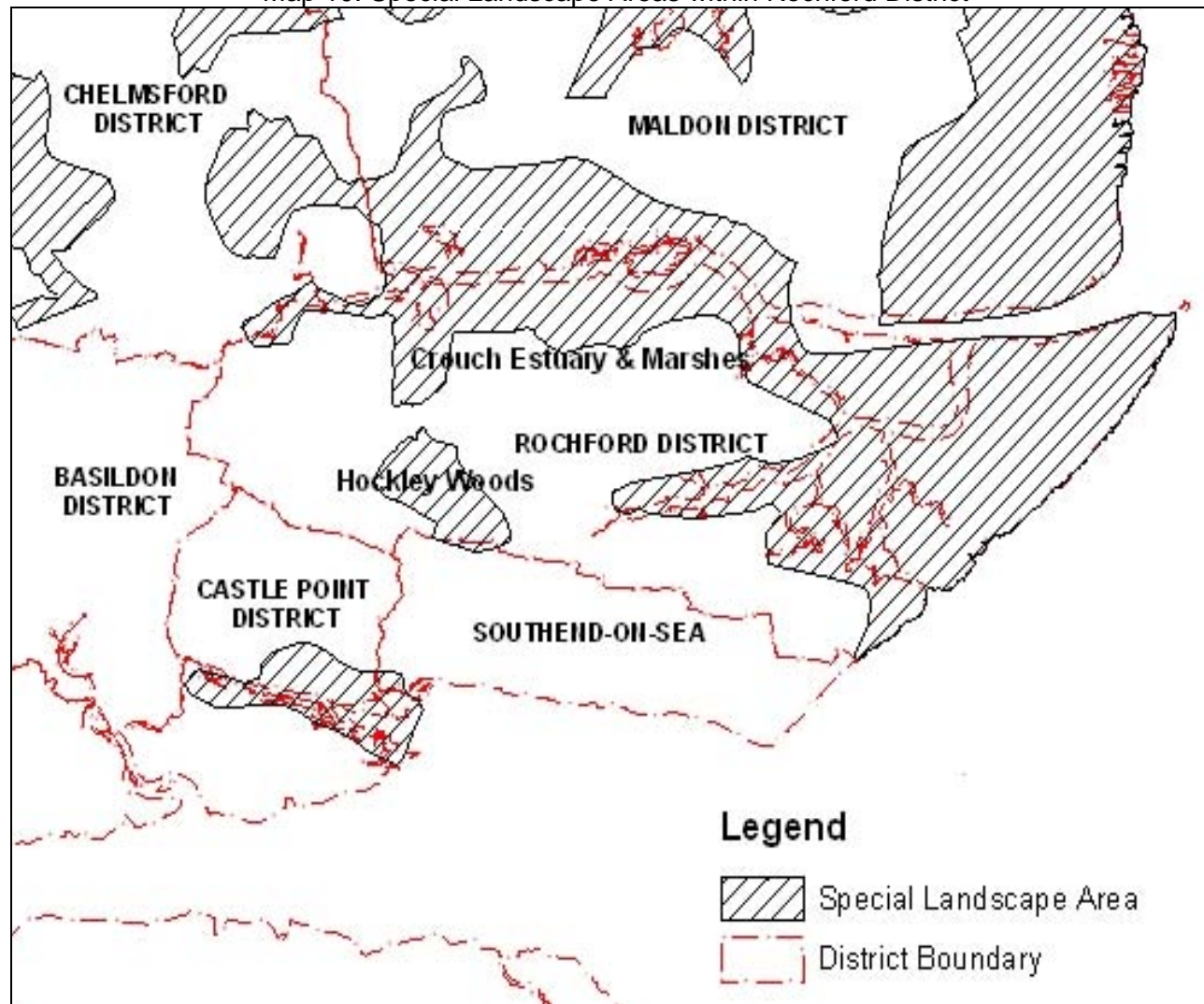
Type/Scale of Development/Change	Landscape Character Area		
	Crouch & Roach Farmland	Dengie & Foulness	South Essex Coastal Towns
Major urban extensions (>5ha) and new settlements	H	H	M
Small urban extensions (<5ha)	M	H	L
Major transportation developments/improvements	M	H	M
Commercial/warehouse estate/port development	H	H	M
Developments with individual large/bulky buildings	H	H	L
Large scale 'open uses'	M	M	M
Mineral extraction/waste disposal	M	H	M
Incremental small-scale developments	M	M	L
Utilities development i.e. masts, pylons	H	H	H
Decline in traditional countryside management	M	H	H

Map 9: Landscape Character Areas within Rochford District



Special Landscape Areas (SLAs) are also located within the District. These have been implemented to protect the visual quality of important areas defined in Local Plans. As shown in map 10, the main SLA is the Crouch Estuary and Marshes, which incorporates much of the District. A smaller SLA in the area is Hockley Woods, which contains a complex of ancient woodland and farmland.

Map 10: Special Landscape Areas within Rochford District





### ***Data Limitations***

The only Landscape Character Assessment available at present was that carried out by Chris Blandford Associates for Essex County Council. This County wide assessment covers Rochford District, but not in the same detail as a District wide assessment. As LCAs are not restricted by District boundaries, some Councils, including Maldon, Brentwood and Uttlesford have jointly commissioned Chris Blandford Associates to carry out a more detailed assessment. However until Rochford commissions such an assessment data is limited to the County wide 2003 Landscape Character Assessment.

### ***Summary***

- There are three Landscape Character Areas identified within the District: Crouch and Roach Farmland, Dengie and Foulness and South Essex Coastal Towns.
- The sensitivity of LCAs in the district to different developments and changes is quite variable. The most sensitive areas are the Dengie and Foulness, which are highly sensitive to 8 out of the 10 developments.
- The development that has the greatest potential impact upon these 3 LCAs is utilities development, such as masts and pylons, with all LCAs being highly sensitive to such development.

## Air Quality

### *Introduction*

The quality of our air affects both human health and life quality, and the natural environment. Poor air quality can also affect the health of our ecosystems, and can adversely affect our built cultural heritage.

Local air quality is affected by emissions from industrial activity, airports, power stations and natural sources, but road transport accounts for around 40% of UK Nitrogen dioxide emissions. Additionally, diesel vehicles are a significant source of the emissions of fine particulates.

### *International/National Position*

The Air Quality Framework Directive 1996, together with four daughter directives (see table 3), set out limit values for a series of pollutants which are mandatory for all member states to report progress upon.

The Environment Act 1995 requires local authorities to carry out studies of air quality in their areas to assess whether there are likely to be exceedences of air quality standards by 2005. These standards have been set by the Government in the National Air Quality Strategy (NAQS) (2000), which looks at major pollutants on a national scale, and which either conform or are more stringent than limit values set out in the EU framework below.

As part of the National Air Quality Strategy, the Government sets air quality targets for Nitrogen dioxide, Sulphur dioxide, ozone, Carbon monoxide, particulates, lead, 1,3 - butadiene and benzene. These targets are based on risk to human health. As a statutory duty under Part IV of the Environment Act 1995, each District / Borough Council have been carrying out an annual Air Quality Review and Assessment (AQRA) to determine the levels of air pollution in their area, with annual reporting to DEFRA.

Where areas fail to meet the standards, the Environment Act 1995 requires Air Quality Management Areas (AQMAs) to be established and specific action plans implemented to improve air quality in those areas.

The quality of air is constantly changing and so to be of any value, monitoring needs to occur continuously at several sites to measure trends over space and time.

Table 3: EU AIR quality framework directive daughter directives (Air Quality Framework Directive, 1996)

<b>Year</b>	<b>Protocol</b>	<b>Entered into force</b>
1999	To abate acidification, eutrophication and ground-level ozone	17 May 2005
1998	Persistent organic pollutants (POPs)	23 October 2003.
1998	Heavy metals	29 December 2003.
1994	Further reduction of sulphur emissions	5 August 1998.
1991	<u>Control of emissions of volatile organic compounds or their transboundary fluxes</u>	29 September 1997
1988	Control of nitrogen oxides or their transboundary fluxes	14 February 1991
1985	<u>Reduction of sulphur emissions or their transboundary fluxes by at least 30%</u>	2 September 1987
1984	Long-term financing of the cooperative programme for monitoring and valuation of the long-range transmission of air	28 January 1988.

**Standards/Targets**

Table 4: NAQS air quality standards (The Air Quality Strategy for England, Scotland, Wales and Northern Ireland. DEFRA in partnership with the Scottish Executive, The National Assembly for Wales and the Department of the Environment for Northern Ireland, 2000.)

Pollutant	Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25µg/m <sup>3</sup> (5ppb)	running annual mean	31 December 2003
	5µg/m <sup>3</sup> (1.5ppb)	annual mean	31 December 2010
1,3-Butadiene	2.25µg/m <sup>3</sup> (1ppb)	running annual mean	31 December 2003
Carbon monoxide	10mg/m <sup>3</sup> (8.6ppm)	running 8 hour mean	31 December 2003
Lead	0.5µg/m <sup>3</sup>	annual mean	31 December 2004
	0.25µg/m <sup>3</sup>	annual mean	31 December 2008
Nitrogen dioxide	200µg/m <sup>3</sup> (105ppb) not to be exceeded more than 18 times a year	1 hour mean	31 December 2005
	40µg/m <sup>3</sup> (21ppb)	annual mean	31 December 2005
Particles (PM <sub>10</sub> )	50µg/m <sup>3</sup> not to be exceeded more than 35 times a year	24 hour mean	31 December 2004
	40µg/m <sup>3</sup>	annual mean	31 December 2004
Sulphur dioxide	350µg/m <sup>3</sup> (132ppb) not to be exceeded more than 24 times a year	1 hour mean	31 December 2004
	125µg/m <sup>3</sup> (47ppb) not to be exceeded more than 3 times a year	24 hour mean	31 December 2004
	266µg/m <sup>3</sup> (100ppb) not to be exceeded more than 35 times a year	15 minute mean	31 December 2005

National PSA target:

- To improve air quality by meeting Air Quality Strategy targets for Carbon monoxide, lead, Nitrogen dioxide, particles, Sulphur dioxide, benzene and 1,3-butadiene.

**Regional/County Position**

Air quality in Essex is generally good. Most industrial processes in Essex are concentrated along the Thames Estuary. The air quality in Essex is influenced by its close proximity to mainland Europe. A total of 43 AQMAs have been designated within the East of England region, as shown in table 6. There are currently 10 AQMAs within the county, 8 of which were newly introduced in 2005. Seven of these are concentrated in Brentwood Borough, 2 in Colchester Borough and 1 in Chelmsford Borough. However, this figure may change with the review of this years Progress Reports submitted by the District Councils to DEFRA.

Air Quality Action Plans have been put in place for the problem areas. Within Essex, the Colchester Action Plan advocates the reduction of traffic volumes associated with redevelopment of the area, in order to meet air quality targets by 2008. Development of an Action Plan for the Brentwood AQMAs is still underway. The Chelmsford AQMA has only just been designated, and so an Action Plan is not yet in place.

Table 5: AQMAs within the East of England (Air Quality Archive, 2005)

<b>Council</b>	<b>Number of AQMAs</b>	<b>Pollutant</b>
Bedford BC	4	SO <sub>2</sub> , NO <sub>2</sub>
Breckland DC	1	PM <sub>10</sub>
Brentwood BC	7	NO <sub>2</sub>
Broxbourne BC	3	NO <sub>2</sub> , PM <sub>10</sub>
Cambridge City	1	NO <sub>2</sub>
Chelmsford	1	NO <sub>2</sub>
Colchester	2	NO <sub>2</sub>
Fenland DC	2	SO <sub>2</sub> , PM <sub>10</sub>
Hertsmere BC	6	NO <sub>2</sub>
Kings Lynn and West Norfolk BC	2	NO <sub>2</sub> , PM <sub>10</sub>
Luton UA	2	NO <sub>2</sub>
Mid Bedfordshire DC	1	SO <sub>2</sub>
Norwich City	3	NO <sub>2</sub>
South Bedfordshire DC	1	NO <sub>2</sub>
St Albans City	3	NO <sub>2</sub>
Three Rivers DC	5	NO <sub>2</sub>

Within Essex the primary elements of concern relate to pollution from transport, specifically Nitrogen dioxide and particulates, specifically PM<sub>10</sub>. The delivery of the PM<sub>10</sub> requirements of the 1995 Act are coordinated through the Essex Air Quality Consortium, which includes the District Environmental Health, the County Council Environmental Strategy Team, Highways and Transport, Essex University, the BAA and the Environment Agency.

### ***Rochford Position***

The national and regional/county legislation is relevant at a district level, since the district councils are responsible for the formation of air quality strategies and their implementation.

One of Rochford District's corporate objectives within the Rochford District Replacement Local Plan (Rochford District Council, December 2005) is to promote a green and sustainable environment (objective 3). Related planning objectives include T2, to ensure the full consideration of the need for sustainable development in transport development proposals.

Part of Rochford District Council's core strategy within the Local Plan relates to a reduction in the need to travel (policy CS3). It states that it is the Council's aim to ensure that development reduces the length, number and duration of motorised journeys, particularly at peak hours and that it encourages the use of alternative modes of transport to help protect the quality of the built environment. Planning objective T1 is also related to this. Planning objective T5 regards retaining a good bus network and its extension to developing areas (e.g. rural areas). T6 relates to retaining and improving all aspects of rail services. Planning objective T11 promotes walking and cycling as the preferred modes of travel wherever possible, by the creation of safe routes.

Core strategy objective CS10 – Energy and Water Conservation states that it is the Council’s aim to reduce energy consumption by reducing the need to travel and encouraging the use of energy efficient transport.

Planning objective I6 concerns making provision for transportation improvements to effect the most environmentally sustainable, efficient and convenient movement of goods and people.

Planning objective T8 relates to the implementation of traffic management schemes, including traffic calming, to ease vehicle flow and deal with environmental issues and highway congestion.

Planning objectives for pollution include ensuring a high level of environmental protection throughout the district (P1), ensuring that new development or uses have no adverse impact on land, water or air pollution (P2) and ensuring that existing development and uses are safeguarded from potentially polluting development (P3).

Policy PN1 of the Local Plan relates to potentially polluting uses. It states that development that may be liable to cause pollution of water, air or soil or pollution through noise, smell, smoke, fumes, gases, steam, dust, vibration, light, or heat, electromagnetic radiation or other polluting emissions will only be permitted if:

- a) the health, safety and amenity of users of the site or surrounding land are not put at significant risk;
- b) the quality and enjoyment of the environment would not be damaged or put at risk; and
- c) national air quality objectives would not be breached.

Policy PN4 - Air Quality highlights that the Council will consider the potential effects of a development on local air quality when determining planning applications. Consideration will be given to the impact caused by both the construction and operation phases of the development, together with the traffic generated through this. Development that significantly increases air pollution will not be permitted.

### ***Current Position***

The implementation of AQRA requirements by the Environmental Health department at Rochford District Council has led to the identification of 7 potentially significant junctions with a daily flow of greater than 10,000 vehicles. These are as follows:

1. A129/A127 Rayleigh Weir Underpass
2. A127/A130 Junction
3. Rawreth Lane/A130 Chelmsford Road Junction
4. High Street/Eastwood Road Junction, Rayleigh
5. Hockley Road/High Street A129 Junction, Rayleigh
6. Hall Road/West Street Junction, Rochford
7. Southend Road/Sutton Road Junction, Rochford

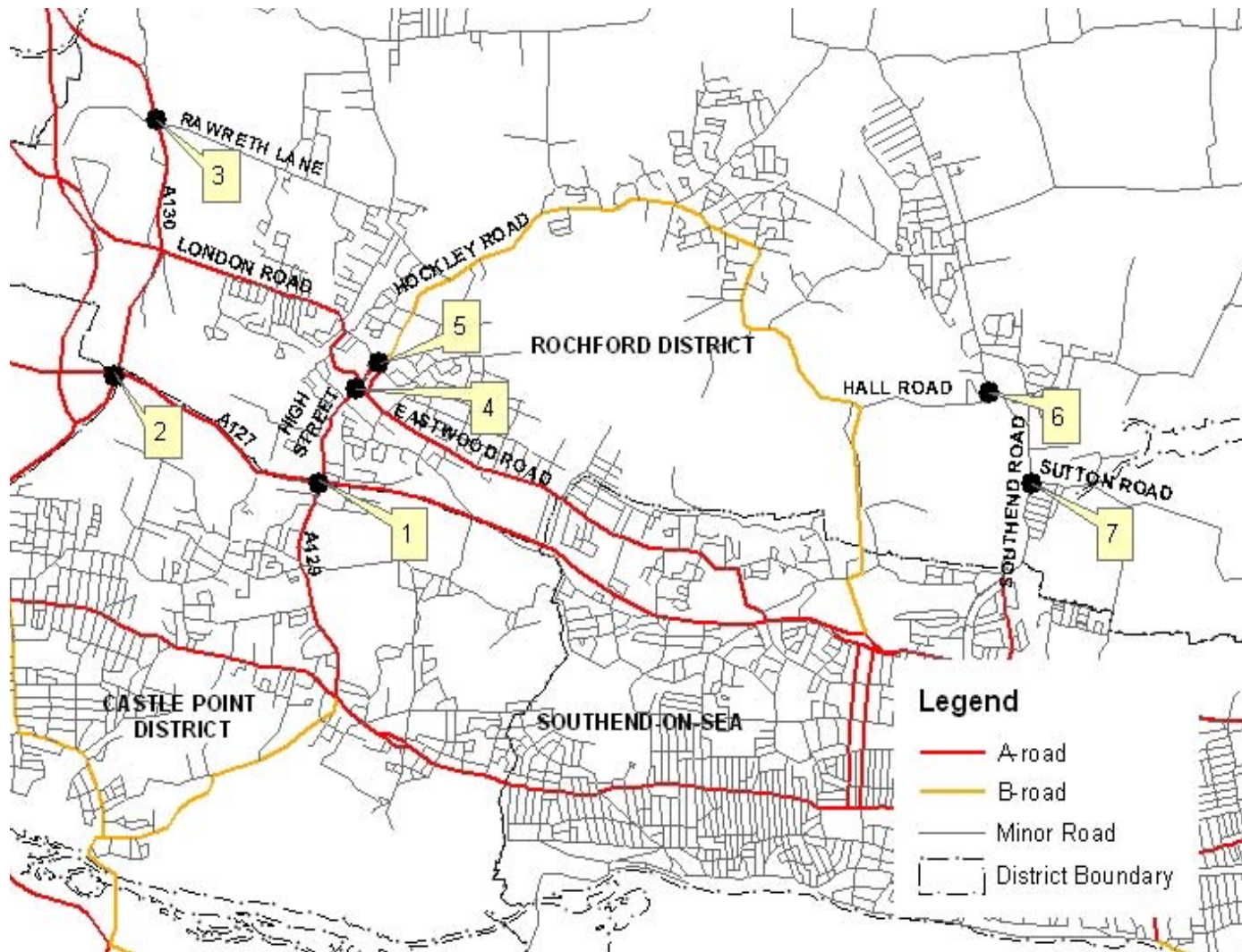
At all of these junctions the predicted 2005 annual mean Nitrogen dioxide concentration, 2004 PM<sub>10</sub> concentration and exceedences all meet the NAQS standards (Rochford District Council: Local Air Quality Management – Updating and Screening Assessment, October 2003). The highest predicted Nitrogen dioxide concentration in 2005 is at the High Street/Eastwood Road junction, with a predicted annual mean concentration of 39.3 µg/m<sup>3</sup>. However, this is only a modelled prediction. The maximum predicted annual mean PM<sub>10</sub> concentration in 2004 is 30.5

$\mu\text{g}/\text{m}^3$ , at the aforementioned junction, which is below the annual average objective of  $40 \mu\text{g}/\text{m}^3$ . The estimated number of exceedences of the daily mean objective is 30, which is below the 35 exceedences allowed in a year.

As a result of this the High Street/Eastwood Road junction has become a site for Nitrogen dioxide diffusion tube monitoring. The actual 2004 and 2005 Nitrogen dioxide concentrations at 3 roadside sites has been found to exceed or almost exceed the annual mean objective value of  $40 \mu\text{g}/\text{m}^3$ . These measurements range from  $38.1 \mu\text{g}/\text{m}^3$  to  $42.8 \mu\text{g}/\text{m}^3$ . The other diffusion tube monitoring sites, at Rochford Market Square and Bedloes Corner have been found to have Nitrogen dioxide concentrations well below the annual mean objective in 2004 and 2005, ranging from  $27.4 \mu\text{g}/\text{m}^3$  to  $30.9 \mu\text{g}/\text{m}^3$ .

$\text{PM}_{10}$  monitoring was undertaken from May to August 2004 at the Rawreth Industrial Estate. The site chosen was to the east of the estate in closest proximity to the T J Cottis site, which has been the main source of reported dust complaints. Monitoring was undertaken under worse case conditions during the summer months. During the 3 months of monitoring, there were 7 days where the 24-hour mean objective of  $50 \mu\text{g}/\text{m}^3$  was exceeded. The range of concentrations measured during the monitoring period was  $11.3 \mu\text{g}/\text{m}^3$  to  $57.6 \mu\text{g}/\text{m}^3$ , with a period mean of  $31.4 \mu\text{g}/\text{m}^3$  (Rochford District Council: Local Air Quality Management – Detailed Assessment Report, November 2004). This site is due to be monitored for  $\text{PM}_{10}$  in the summer of 2006.

Map 11: Potentially Significant Junctions in Rochford District



Rochford District has one road of concern regarding congestion (with a ratio of flow to congestion reference flow of <0.79), the A130.

### ***Compliance with targets***

NAQS objectives are predicted to be met at all significant junctions identified within the District.

The actual 2004 and 2005 Nitrogen dioxide concentration at 3 roadside sites at the High Street/Eastwood Road junction has been found to exceed or almost exceed the annual mean objective value of 40  $\mu\text{g}/\text{m}^3$ .

At the Rochford Market Square and Bedloes Corner, Nitrogen dioxide concentrations have been found to be well below the annual mean objective in 2004 and 2005, ranging from 27.4  $\mu\text{g}/\text{m}^3$  to 30.9  $\mu\text{g}/\text{m}^3$ .

During the monitoring of Rawreth Industrial Estate for  $\text{PM}_{10}$  in summer 2004, there were 7 days where the 24-hour mean objective of 50  $\mu\text{g}/\text{m}^3$  was exceeded.

### ***Data Limitations***

The data used here derives from the annual assessments for DEFRA which are considerably more accurate than national background figures and provide the best and most accurate information available. As part of the LAQM (Local Air Quality Management) process, every 3 years Local Authorities are required to submit more detailed assessments of air quality than the annual reviews. The next detailed assessment will take place in 2006/07 and will provide a greater insight into air quality in the district and county alike.

### ***Summary***

- Seven significant junctions with traffic flows of more than 10,000 vehicles per day have been identified in the District. At all of these junctions the predicted 2005 annual mean Nitrogen dioxide concentration, 2004  $\text{PM}_{10}$  concentration and exceedences all meet the NAQS objectives.
- The High Street/Eastwood Road junction has become a site for Nitrogen dioxide diffusion tube monitoring. The actual 2004 and 2005 Nitrogen dioxide at 3 roadside sites has been found to exceed or almost exceed the annual mean objective value of 40  $\mu\text{g}/\text{m}^3$ .
- The other Nitrogen dioxide diffusion tube monitoring sites, at Rochford Market Square and Bedloes Corner, have been found to have concentrations well below the annual mean objective in 2004 and 2005, ranging from 27.4  $\mu\text{g}/\text{m}^3$  to 30.9  $\mu\text{g}/\text{m}^3$ .
- During the monitoring of Rawreth Industrial Estate for  $\text{PM}_{10}$  in summer 2004, there were 7 days where the 24-hour mean objective of 50  $\mu\text{g}/\text{m}^3$  was exceeded. This site is due to be monitored for  $\text{PM}_{10}$  in the summer of 2006.
- There is one road of concern with regard to congestion within the District.



## **Water**

### ***Introduction***

Achieving a balance between the demand of competing uses of water is extremely important in the Eastern Region, since it is the driest region in the country (Our Environment, Our Future: The Regional Environment Strategy for the East of England. East of England Regional Assembly and East of England Environment Forum, July 2003).

In addition to the ever increasing demand from human uses, water contributes to the natural environment, having ecological, aesthetic, scientific, educational and recreational value.

### ***International/National Position***

The Water Framework Directive 2000/60/EC (WFD) rationalises and updates existing EC water legislation, introducing an integrated and coordinated approach to water management, through a statutory system of analysis and planning based upon the river basin. Its objective is to establish a Community framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater, in order to prevent and reduce pollution, promote sustainable water use, protect the aquatic environment, improve the status of aquatic ecosystems and mitigate the effects of floods and droughts. DEFRA has responsibility for the implementation of the WFD in the UK, with much of the implementation work being undertaken by the Environment Agency. At present, analysis of surface and groundwater characteristics, review of the environmental impact of human activity, economic analysis of water use (article 5) and the establishment of registers of protected areas (articles 6 and 7) is being undertaken. The Water Framework Directive target is for all inland and coastal waters to reach 'good status' by 2015 (status to be defined in terms of ecological, chemical, quantitative status).

Physical development can affect water resources and water quality. The government, within the Water Framework Directive, want to ensure that land use planning guidance reflects the pressures this can put on water, including over the long term to reflect the influence of climate change (e.g. from hotter and drier summers). Water can also be an influence on urban regeneration and must be taken into consideration within regeneration plans.

The Water Resources (Environmental Impact Assessment) (England and Wales) Regulations 2003 SI No. 164, administered by the Environment Agency, requires EIA to be carried out for water management projects that involve the abstraction or impoundment of water. Projects involving the abstraction of water are only included if the amounts abstracted exceed 20 cubic metres in any 24 hours.

The control of water abstraction was introduced by the Water Resources Act 1963. It has been the Environment Agency's responsibility to ensure that water resources development does not cause river flows or groundwater levels to fall below those required to meet the needs of aquatic habitats and other water uses. Amendments to the original Act have been made via the Water Act 1989, the Water Resources Act 1991 and the Water Act 2003. The latter discusses the regulation of the water industry and other provisions encouraging more efficient use of water resources. Provisions in the Water Act 2003 provide enforcement authorities (the Secretary of State, the National Assembly for Wales and Ofwat) with powers to impose civil financial penalties of up to 10% of turnover on statutory undertakers and licensed

water suppliers. Penalties can be imposed for contraventions of appointment conditions, licence conditions, certain statutory or other requirements, or for failure to achieve prescribed standards of performance of water supply or sewerage services.

The Government's strategic vision 'Directing the Flow - priorities for future water policy' (DEFRA, 2002) identifies the main future priorities and direction over the longer term for the inland and coastal water environment, water resources and the water and sewerage industry. This is to be implemented by the Environment Agency.

Making Space for Water: Taking forward a new Government strategy for flood & coastal erosion risk management (DEFRA, DfT, ODPM and HM Treasury, 2005) advocates a holistic approach that addresses all forms of flooding and coastal erosion, through a range of Government policies. This means looking at groundwater, surface run-off and urban flooding and embeds sustainable development across flood and coastal erosion risk management policies.

Planning Policy Guidance 25: Development and flood risk (ODPM, 2001) is intended to strengthen the existing policy in support of the Government's aims on flood and coastal defence, namely to reduce the risks to people, and the developed and natural environment from flooding. PPG 20: Coastal planning (ODPM, 1992) highlights the role of the planning system to reconcile development requirements with the need to protect, conserve and, where appropriate, improve the landscape, environmental quality, wildlife habitats and recreational opportunities of the coast.

### **Standards/Targets**

- WFD target for all inland and coastal waters to reach 'good status' by 2015 (status to be defined in terms of ecological, chemical, quantitative status) (Water Framework Directive 2000/60/EC).

- The Government does not have a specific PSA target to measure river water quality. However, monitored river lengths have a baseline assessment called the River Quality Objectives (RQO), which is the level of water quality that a river should achieve in order to be suitable for its agreed uses. The River Quality Objective is 91% compliance by 2006 for rivers in England and Wales (Environment Agency).

- DEFRA's Public Service Agreement (2005-2008): target is to achieve 95% by area of SSSI in favourable or recovering condition by 2010. One of the major tools for achieving this will be for public bodies, including the water companies, to deliver their SSSI responsibilities, namely water quality and abstraction.

- Environmental Quality Standards (EQS): for a large number of substances (List 1 and 2 dangerous substances, from the EC Dangerous Substances Directive (76/464/EEC)).

- Shellfish Waters standards: this is administered by DEFRA and implemented in England and Wales by the Environment Agency. The standards have been met if the following percentage of the samples analysed do not exceed the limit values:

- 100% for metals and organohalogen compounds
- 95% for salinity and dissolved oxygen
- 75% for other substances

(European Community (EC) Shellfish Waters Directive (79/923/EEC)).

- Freshwater Fish Directive: sets criteria to protect the quality of certain rivers, lakes and reservoirs that contain sustainable populations of salmonid and/or cyprinid fish (EC Freshwater Fish Directive (78/659/EEC)).
- Bacteria standards: mandatory standards which should not be exceeded:
  - 10,000 total coliforms per 100 millilitres (ml) of water
  - 2,000 faecal coliforms per 100ml of water
 (EC Bathing Water Directive (76/160/EEC)).
- Surface Water Abstraction Directive: controls quality of water from rivers, lakes and reservoirs that is used to supply public drinking water (75/440/EEC).
- Urban Waste Water Treatment Directive: sets limits that sewage treatment works must meet, depending on their size and nature of the receiving waters (91/271/EEC).

### ***Regional/County Position***

The Environment Agency's regional water resources strategies 'Water resources for the future' are the 25 year plans for water resources, with Essex falling under the Anglian strategy. Water company water resources plans submitted to the Environment Agency show how the water industry intend to provide sufficient water to meet customers' needs for water in Essex, while protecting and enhancing the environment. The Environment Agency's 'Managing Water Abstraction' provides a national framework for the Catchment Abstraction Management Strategies (CAMS) process. The Environment Agency is developing CAMS for every catchment in England and Wales. The Combined Essex (North and South Essex) CAMS is currently being formulated, with publication of the consultation document due in June 2006 and the final version in September 2006.

The long-term future water supply in Essex is dependent on the increase of reservoir capacity at Abberton, so that the current storage capacity is increased by 60%. This scheme is due for completion in 2014. Infrastructural improvements to the Ely Ouse to Essex Rivers Transfer Scheme are also of importance, as set out in the Environment Agency Water Strategy and within the RSS14 East of England Plan. Over 160,000 properties are at risk of flooding in the East of England. Paragraph 4.71 of the draft East of England Plan (EERA, 2004) states that flood risk must be considered at all stages of the planning and development process to avoid potential damage to property and loss of life. The South Essex Catchment Flood Management Plan is currently being formulated. The North Essex Catchment Flood Management Plan Scoping Report was published in August 2005 (Environment Agency) and is currently at the consultation stage. The final version is due for release in July 2006 and considers the Stour, Colne, Chelmer, Blackwater and Holland Brook catchments, assessing how flood risks might change over the next 50-100 years, and how they might be managed.

The Essex Coastal Strategy (Essex County Council, 1994) aims to encourage the sustainable use of the coast, in order to ensure its protection. A Shoreline Management Plan for Essex has also been put together (Environment Agency, 2003), and has shown the need to know how the estuaries will be affected by sea level rise associated with climate change, and other changes in the future. The launch of the Crouch and Roach Flood Management Strategy in September 2005 aims to reduce flood risk and help plan future investment that will create more sustainable estuaries for the benefit of both people and the environment.

In terms of coastal defence, within Essex there are a number of schemes in operation, including regulated tidal exchange at Abbots Hall on the Salcott Estuary (a tributary of the Blackwater Estuary), which was in place until 1996 and has been superseded by managed realignment of the area. Managed realignment is also occurring at Orplands, Northey Island and Tollesbury on the Blackwater Estuary and at Wallasea Island and Hullbridge on the River Crouch. Foreshore recharge has taken place at Horsey Island in Hamford Water (due to wave damage in the 1990s) and Pewet Island on the Dengie Peninsula (carried out in 1992 and 1995 due to saltmarsh erosion).

### ***Rochford Position***

Planning objective N6 within the Rochford District Replacement Local Plan (Rochford District Council, December 2005) relates to a reduction in the risk of flooding of development. Policy NR11 similarly states that 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. Within developed parts of the 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. Within sparsely developed and undeveloped areas of the flood risk area, commercial, industrial and new residential development will not be permitted apart from in exceptional cases.

Policy PN1 – Potentially Polluting Uses states that development that may be liable to cause pollution of water, air or soil or pollution through noise, smell, smoke, fumes, gases, steam, dust, vibration, light, or heat, electromagnetic radiation or other polluting emissions will only be permitted if:

- a) The health, safety and amenity of users of the site or surrounding land are not put at significant risk;
- b) The quality and enjoyment of the environment would not be damaged or put at risk; and
- c) National air quality objectives would not be breached.

Pollution planning objectives P1 and P2 relate to ensuring a high level of environmental protection within the District, ensuring that new development/uses have no adverse impact on land, water or air pollution and that existing development/uses are safeguarded from potentially polluting development. Policy PN3 relates to the protection of water quality. This policy highlights that development affecting the water environment and associated lands will only be permitted where the provision of water is not detrimental to existing abstractions, river flows, fisheries, amenity or nature conservation; and it would not lead to an unacceptable deterioration in the quality or potential yield of coastal, surface and groundwater resources.

Policy NR12 – Sustainable Drainage Systems highlights that where there is a perceived risk of flooding from surface water run-off arising from the development, the Local Planning Authority will require the submission of a flood risk assessment in order to properly consider the proposal. The assessment must include details of sustainable drainage systems to be incorporated into the development, to ensure that any risk of flooding is not increased by surface water runoff arising there from.

Policy UT1 – Foul and Surface Water Requirements states that when considering proposals for new development or changes of use, the Local Planning Authority will take account of the availability and capacity of foul and surface water sewers and sewage treatment works, together with any increased risk of flooding from greater discharges from such works.

Core strategy policy CS10 relates to energy and water conservation through promoting development of environmentally efficient buildings and water conservation measures. Policy HP7 – Energy and Water Conservation also highlights this.

River quality is monitored by the Environment Agency using a system of General Quality Assessment. This system classes rivers into very good, good, fairly good, fair, poor and bad according to the chemical/biological quality of the water.

Essex & Suffolk Water supply Rochford District, with Anglian Water providing sewerage services. Essex and Suffolk Water obtain their water almost entirely from two pumped storage reservoirs Abberton and Hanningfield. In an average year 70% of water is drawn from these sources, with the rest supplied from outside the county. In a dry year up to a third of water required is derived from the Ely Ouse to Essex Transfer Scheme, where water is transferred from the Denver in Norfolk via pipelines and pumping stations to the River Stour and the Blackwater (Our Water Resources Plan 2005. Essex and Suffolk Water, 2005).

Rochford District is covered by the Combined Essex (North and South) CAMS. This is due for publication in Autumn 2006.

### ***Current Position***

#### Water Quality

Water courses associated with Rochford District are the Roach, Crouch, Eastwood Brook, Hawkwell Brook/Roach, Prittle Brook and Rayleigh Brook. There is also a reservoir present at Rochford. In 1999-2001 only two river stretches investigated were compliant with their targets (Hawkwell Brook/Roach headwaters to Eastwood Brook confluence and Prittle Brook from the headwaters to the tidal limit), with the remaining 6 stretches being classified as 'marginal' or 'significant failure.' The majority of water courses in the District as a whole were ranked as Grade D/fair (54.03%) or Grade C/fairly good (39.67%) for chemistry GQA in 2004. The river stretch of most concern with regard to chemistry is Eastwood Brook from the headwaters to Southend Airport, which is classed as Grade E/poor. Five river stretches are graded D/fair, including Eastwood Brook (Rayleigh Brook – Roach), Hawkwell Brook/Roach (headwaters to the tidal limit), Rayleigh Brook/Nobles Ditch (Rayleigh East Sewage Treatment Works – Eastwood Brook) and Rochford Reservoir. However, three of these sites have recently improved in water quality, from Grade E/poor to Grade D/fair.

In terms of biology GQA, in 2004 the District's rivers were classified as Grade D (53.95%) and Grade E (46.05%). The river stretches with the poorest biological quality are the two Hawkwell Brook/Roach sites, graded as E.

Essex and indeed the East of England and beyond are classified as being within a Nitrate Vulnerable Zone. In 2004 the 49.73% of water courses were ranked as Grade 5/high. The percentage length of rivers classed as Grade 6/very high nitrate GQA has approximately halved since 1990, with 34.68% ranked Grade 6 in 2004. Eastwood Brook from headwaters to Southend Airport and Prittle Brook from headwaters to the tidal limit are performing comparatively well in terms of nitrate

GQA quality, being ranked as Grade 3/moderately low and Grade 4/moderate respectively.

All rivers within the District were ranked as Grade 5/very high or Grade 6/excessively high in terms of phosphates GQA in 2002-2004. Only two sites are classed as Grade 5; Eastwood Brook (headwaters to Southend Airport) and Prittle Brook (headwaters to the tidal limit).

All of the river water bodies assessed for the Water Framework Directive have been classified as being 'at risk' or 'probably at risk' (based on the assessment of each body in relation to point and diffuse source pollution, water abstraction, physical or morphological alteration and alien species.) The only lake assessed in the District was Stannetts Creek Lagoon, which was found to be 'probably not at risk'. The transitional waters of the Crouch and the Thames were also assessed to be 'at risk'.

The River Quality Objective River Ecosystem (RE) Classification has ranked the majority of Essex rivers in 2004 within the RE2 (58.9% of rivers) and RE3 (23.5%) classifications. This is equivalent to water of good quality and suitable for fish species (RE2) and water of fair quality and suitable for high class coarse fish populations (RE3) (Environment Agency personal communication, 2005).

Rochford District rivers are not in line with the Essex trend, since the majority of Rochford stretches are classified as RE3. Hawkwell Brook/Roach (headwaters to Eastwood Brook confluence) has been graded RE4, which is defined as water of fair quality and suitable for coarse fish populations. However, Eastwood Brook from the headwaters to Southend Airport and from here to Rayleigh Brook has been recorded as RE2.

In terms of estuary quality, in 2004 the Crouch and Roach have been classed as Grade A or B in all the stretches investigated.

#### Water Resources

There are several minor aquifers within Rochford District, as shown in figure 14. Figure 15 shows major and minor aquifers within the county. There is also a trunk main water supply from further north, near to Ware and a small volume from Hadham. Transfer from Grafham Water in the Anglian Water region is also of importance. The District is not self-sufficient in terms of water resources and relies upon water from elsewhere in the Essex and Suffolk Water supply area. The company manages 110 service reservoirs and water towers through 8613 km of mains and maintains 25 treatment works. The area of supply is divided into 51 water supply zones. The company's Water Quality Report 2004 states that the majority of groundwater abstracted in the region is of high quality and only requires simple disinfection, iron and manganese removal and plumbosolvency control measures prior to supply.

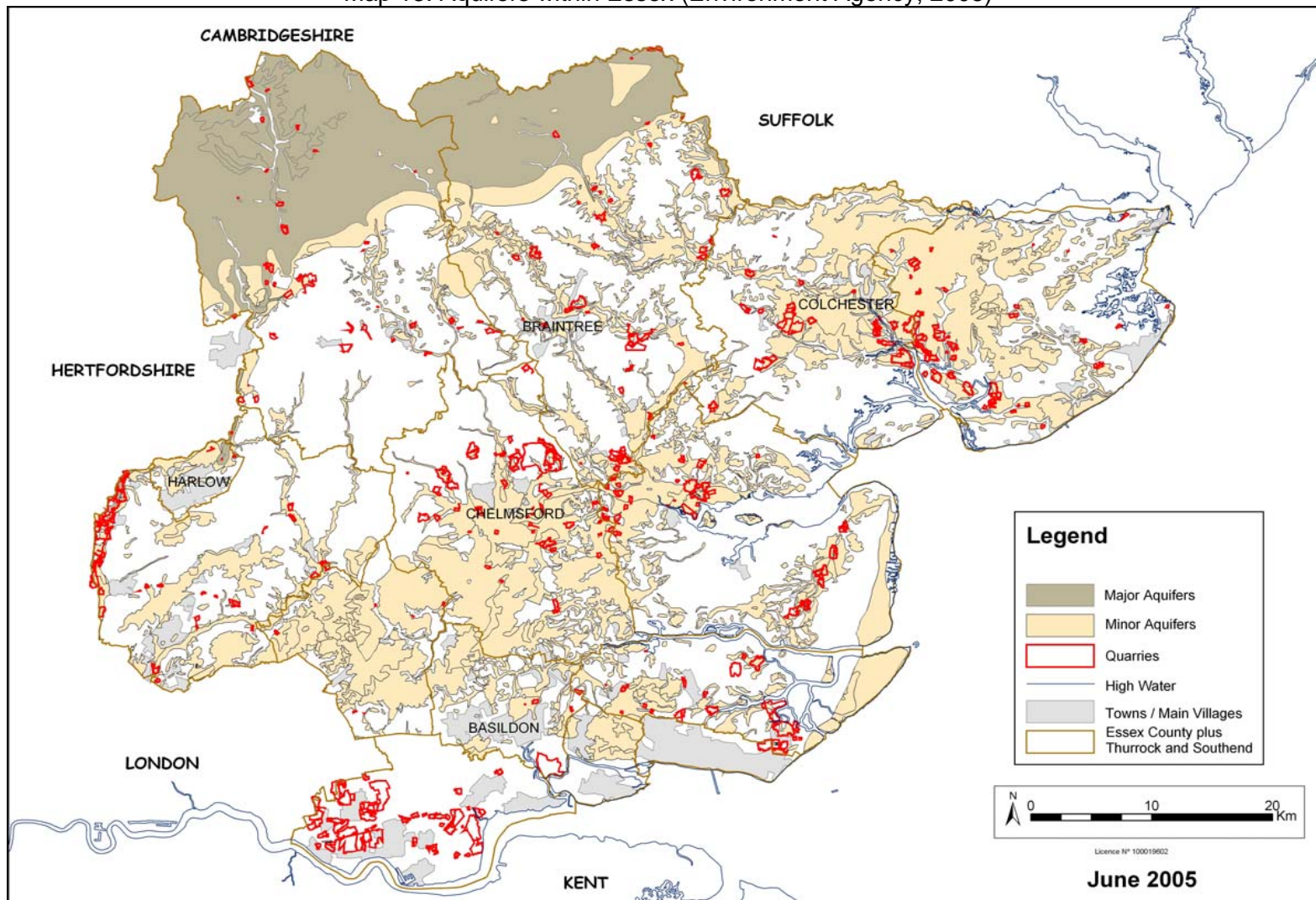
Essex and Suffolk Water supply over 1.7 million households and businesses with an average 489 million litres of water each day. The leakage rate for Essex and Suffolk Water's supply area (Northumbrian South supply area), which includes Rochford District, is the lowest in the country (Our Water Resources Plan 2005. Essex and Suffolk Water, 2005). Graph 4 shows that leakage rates have improved from 72Ml/day in 2000-01 to 70Ml/day in 2003-04. Leakage rate has remained relatively constant except for 2002-03 which saw a drop to 67Ml/day. The fact that it rose again in 2003-04 may have been a result of weather fluctuations causing London clay ground movement and consequent leakage outbreaks.

The majority of domestic water in Essex (64%) is utilised for personal washing and toilet flushing (graph 5). All water companies in Essex have active water management plans aimed at encouraging water savings and efficiencies and to educate the public and raise awareness. Three types of audit have been undertaken within the Essex and Suffolk Water supply area through the Water 21 programme. In August 2002 in Witham and Maldon full water audits were carried out for the 4,207 customers who wished to participate. DIY audits were distributed to 1,940 customers in Essex and a further 724 customers were given audits by the Essex Energy Advice Centre. A total of 29,884 save-a-flush devices were distributed, mainly to customers participating in the Water 21 audits. A large number of other water-saving devices were distributed during these projects, including almost 1,500 waterbutts, 17,500 trigger hose guns and 15,000 tap washers (Environment, Society and Economy: Performance report 2002/03, Northumbrian Water).

**Map 12: Aquifers within Rochford District (Environment Agency, 2005)**

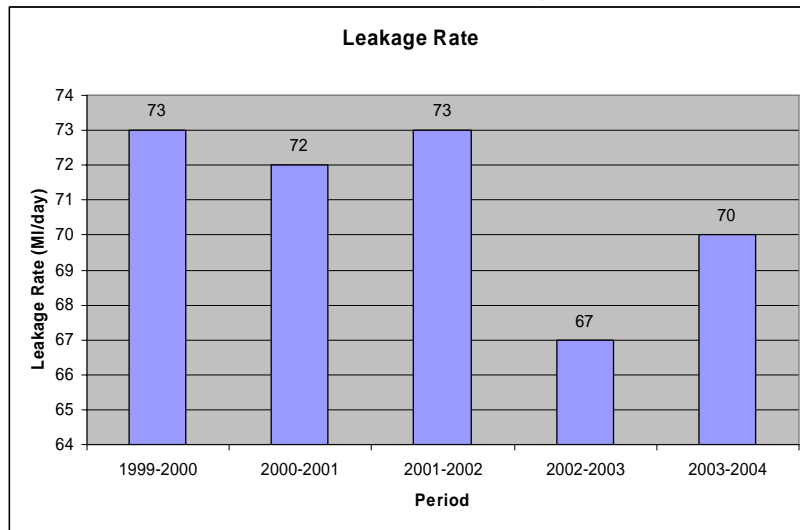


Map 13: Aquifers within Essex (Environment Agency, 2005)

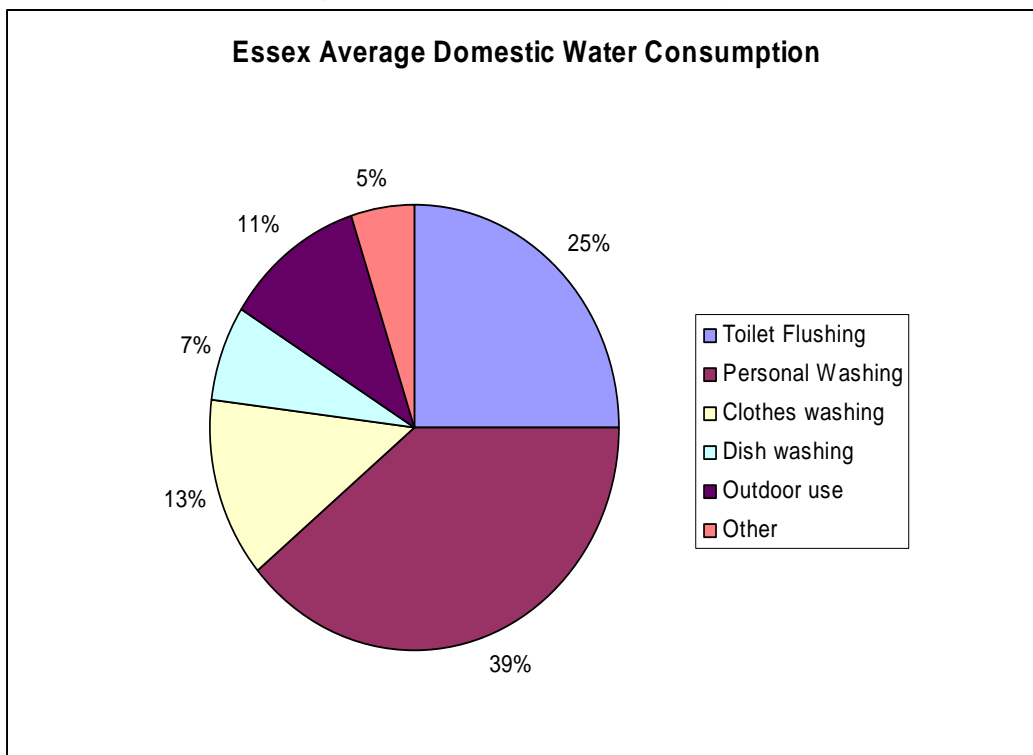




Graph 4: Leakage rates for Northumbrian South Supply Area (Security of supply, leakage and the efficient use of water 2003-04 report. Ofwat, December 2004)



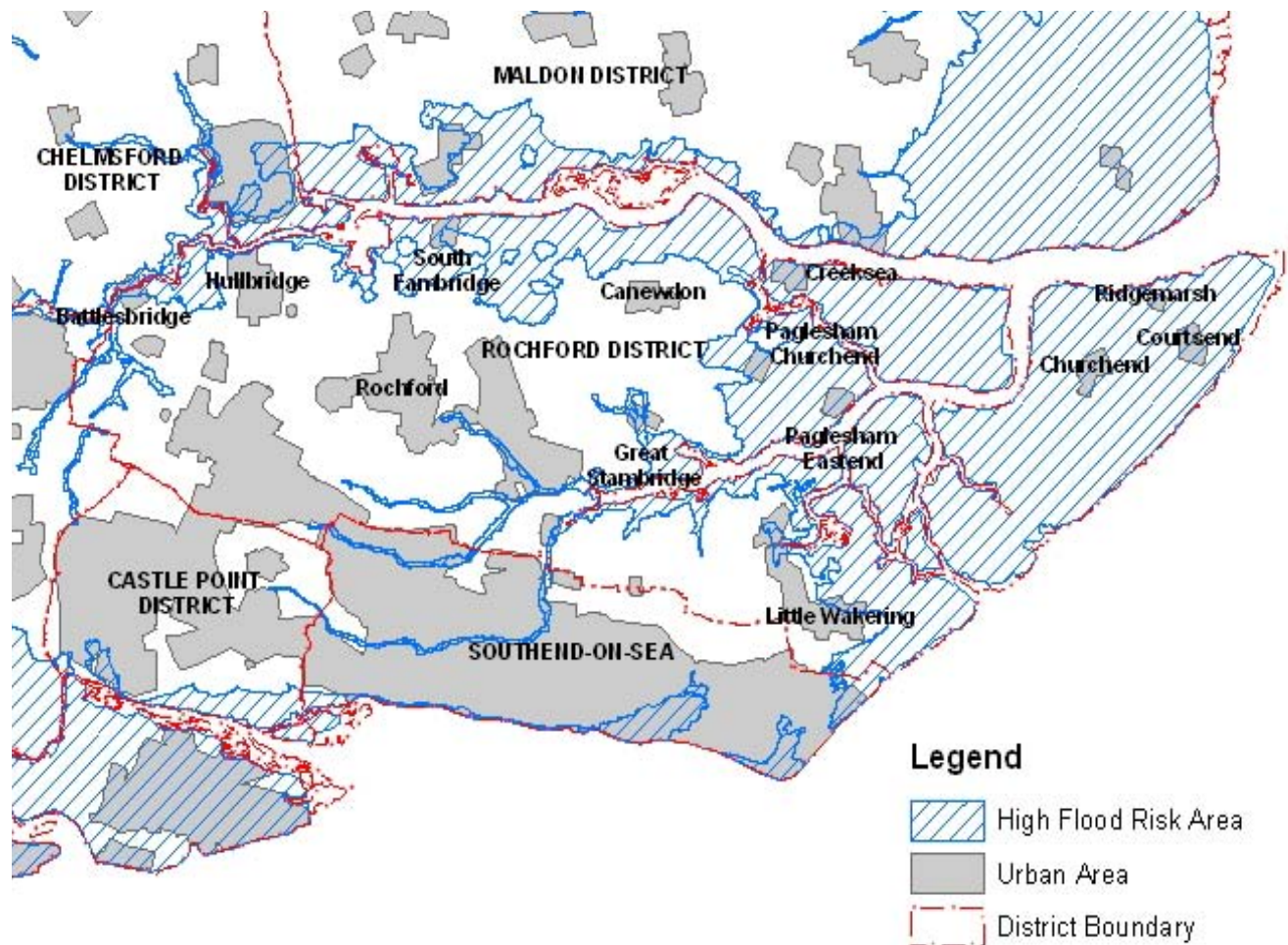
Graph 5: Average Domestic Water Consumption in Essex (Essex & Suffolk Water personal communication, 2005)



## Flooding

The area at a high risk of flooding is considerable, as shown in map 14 below. Managed retreat has occurred at Brandy Hole on the Crouch Estuary, with 12.0ha of land having been created. This form of coastal management is also being implemented at Wallasea Island.

Map 14: High Flood Risk Areas in Rochford District



## Map 15: Indicative Flood Map (Environment Agency)

### ***Compliance with targets***

There were only two river stretches compliant with targets in 1999-2001, Hawkwell Brook/Roach headwaters to Eastwood Brook confluence and Prittle Brook from the headwaters to the tidal limit.

None of the river stretches investigated within Rochford District are meeting the target of 'good' status by 2015, as set out in the Water Framework Directive. The river stretches in the most favourable condition are Eastwood Brook from Southend Airport to Rayleigh Brook and Prittle Brook from the headwaters to the tidal limit, which were graded C/fairly good for chemical GQA in 2000-2002. In fact, 39.67% of rivers in the District were graded C for this period. In terms of biological GQA, no river stretches were classified as Grade A, B or C, and so are not meeting the target status. The River Quality Objective target of 91% compliance is currently not being met at an Essex level (Rochford District data is not available). In 2004 71.1% of Essex rivers were compliant with the water quality required for their agreed uses

(Environment Agency personal communication, 2005), which falls significantly below the 91% national compliance target set for 2006.

Hockley Woods is the only SSSI of the three within Rochford District which is currently complying with the PSA target of 95% of all nationally important wildlife sites to be brought into a favourable condition by 2010. The SSSIs that are currently not complying with the PSA target include the large area of Foulness, where 77.93% of the SSSI is compliant with the PSA target, and the Crouch and Roach Estuaries units within the District, which are 0.00% compliant.

There is unfortunately no data available concerning Environmental Quality Standards. There are no shellfish waters or bathing waters within Rochford District. There is no data regarding compliance with the Freshwater Fish Directive or with the Urban Waste Water Treatment Directive.

In 2004 water quality was 99.95% compliant with the Surface Water Abstraction Directive (Water Quality Report 2004. Essex and Suffolk Water, 2005).

### ***Data Limitations***

There are no accessibility or frequency problems with Environment Agency data regarding river quality data. This monitoring forms part of national targets to improve river quality. The indicator concerning river stretches complying with targets is not a very reliable measure of river quality, since the target may only be for a river stretch to reach a fair or fairly good standard. The classification system that determines Environmental Quality Standards is currently under review to improve data reliability. Unfortunately, data is not available at a district level for consumption or leakage; hence water company data has had to be used for this purpose.

### ***Summary***

- Only two river stretches measured within the District were compliant with targets in 1999-2001.
- None of the river stretches investigated in the District are meeting the target of rivers reaching 'good' status by 2015, associated with the Water Framework Directive.
- Chemical GQA for the majority of the District's rivers is fair or fairly good.
- GQA for biology has classified most rivers as Grade D or E.
- Rochford District rivers are ranked as Grade 5/high or Grade 6/excessively high for phosphates.
- Most rivers are classified as Grades 5 or 6 (very high/excessively high) for nitrates.
- All river water bodies have been found through the Water Framework Directive assessments to be 'at risk' or 'probably at risk'.
- There is a considerable area of land at a high risk of flooding within the District.

- 1 of the 3 SSSIs within the District are currently meeting the PSA target of bringing sites into favourable or recovering condition.
- In 2004 water quality was 99.95% compliant with the Surface Water Abstraction Directive.

## **Soil**

### ***Introduction***

The soil types of Essex have helped shape the landscape, wildlife and economy of the County. The Boulder Clay region of the north-west and central Essex has soils which are a rich crop producing resource. Roads, lanes and field boundaries are related to both topography and soil types, with the pattern suggesting change over a long period of time.

Soils are subject to pollution resulting from man's activities both past and present. The surface geology and the hydrological processes that take place within them provide the pathway by which contamination can extend its impacts on the natural environment and human health.

### ***International/National Position***

The Council of Europe's European Soil Charter (1972) recognised the significance of soil as a resource. In response to concerns about the degradation of soils in the EU, the European Commission adopted a Communication "Towards a Thematic Strategy for Soil Protection" in April 2002. The European Union has decided to adopt this strategy as part of its aim of protection and preservation of natural resources, and is due for adoption in November 2005.

The EU directive on environmental risk assessment provides the closest piece of EU legislation in terms of contaminated land and requires it to be put into member states law. Part 2a of the Environmental Protection Act 1990 as amended in 1995, placed a statutory duty on local authorities to prepare contaminated land strategies. Section 57 of the 1995 amendment established a series of regulations, most notably the Contaminated Land Regulations. The regime involves putting in place a management system for the identification, assessment/investigation and remediation of contaminated land. The local authority strategies are required to set out a framework and timetable for ongoing assessment of land within its administrative boundaries. Where land is identified as being at risk in terms of contamination the Local Authority is required through the strategy to investigate. If the land is determined as contaminated, it is statutorily required to seek those at liability for its contamination and enforce its remediation under the "polluter pays" principle. Such land is required to be recorded on a public register. The Environment Agency estimates that in England and Wales 67,000 hectares are affected to some extent by chemical contamination and around 44,000 hectares of land affected by chemical contamination have undergone some form of remediation (Environment Agency, September 2005).

In A Better Quality of Life (May 1999) the Government made a commitment to ensure that soil protection received equal priority to that of air and water in the future. The publication of the First Soil Action Plan for England 2004-2006 (May 2004) builds on the earlier Draft Soil Strategy for England (March 2001). A total of 52 actions are set out concerning issues ranging from soil management on farms to soils in the planning system, soils and biodiversity, contamination of soils and the role of soils in conserving cultural heritage and landscape. All of these actions are focussed upon more sustainable soil use and protection.

The Agricultural Land Classification (ALC) system divides land into five grades, with Grade 3 subdivided into sub-grades 3a and 3b. The 'best and most versatile land' is

categorised as Grades 1, 2 and 3a, as discussed in Planning Policy Statement 7: Sustainable Development in Rural Areas (ODPM, 2004). This is the land which is most productive, efficient and can best deliver future crops for food and non-food uses. The importance of this agricultural land protection policy is highlighted in Foundations for our Future – DEFRA's Sustainable Development Strategy (June 2002). The UK Strategy for Sustainable Development – A better quality of life (May, 1999) and PPS 7 (ODPM, 2004) also discuss this further.

Planning Policy Statement 9: Biological and Geological Conservation (ODPM, 2005) highlights the importance of conserving the diversity of geology. In relation to geological conservation, the Government's planning objectives are 'to promote sustainable development by ensuring that biological and geological diversity are conserved and enhanced' and 'to conserve, enhance and restore the diversity of England's wildlife and geology by sustaining, and where possible improving, the quality and extent of natural habitat and geological and geomorphological sites; the natural physical processes on which they depend; and the populations of naturally occurring species which they support.'

### **Standards/Targets**

Best Value Performance Indicators 2005/06 (ODPM, February 2005):

-Identify the number of 'sites of potential concern' [within the local authority area], with respect to land contamination.

-Identify the number of sites for which sufficient detailed information is available to decide whether remediation of land is necessary, as a percentage of all 'sites of potential concern.'

### **Regional/County Position**

The geology of the county can be seen in figure 19. Essex makes up the eastern section of the London Basin, formed by the laying down of chalk in the Cretaceous, and this layer comes to the surface in the north-west of the county. Three broad regions within Essex are apparent:

- Coastal: Estuaries and their hinterlands, mostly on the London Clays (deposited during the Eocene) and marshes formed from marine and fluvial deposits.
- Mid-Essex zone: Area running from south-west to north-east Essex.
  - To the north-east the geology consists of:
    - Kesgrave Formations (sands and gravels from pre-diversion Thames terraces)
    - Glacial outwash
  - To the south-west the geology consists of:
    - Acidic soils from Bagshot Beds (fine sands above Claygate Beds)
    - Acidic soils from Claygate Beds (sand/clay layer above London Clays)
    - London Clays (exposed in the valleys)
    - Glacial outwash
- Essex till: North-west of Essex was affected by the Anglian cold phase, leading to the deposition of boulder clays which have been made fertile by their chalk content (The Essex Landscape. Essex Record Office, 1999).

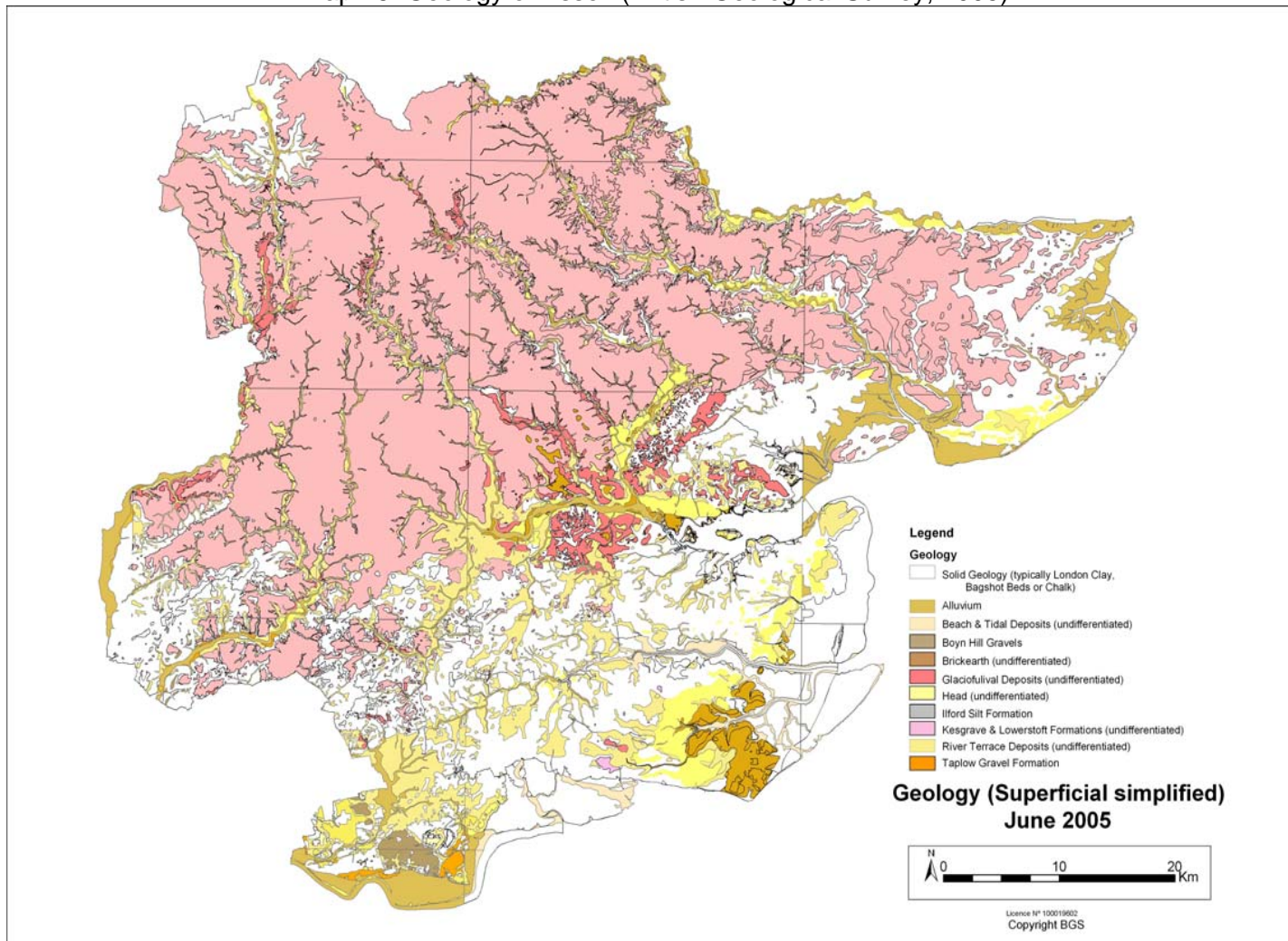
The East of England has 58% of the country's Grade 1 and 2 land, with 72% of agricultural land in the region under cultivation, compared to 29% nationally (Our

Environment, Our Future: The Regional Environment Strategy for the East of England. East of England Regional Assembly and East of England Environment Forum, July 2003). As can be seen from map 16, the majority of agricultural land within Essex can be broadly classified as Grade 2 in the north and Grade 3 to the south. This is related to the location of the Essex till, with better quality land located in the north-west of the county. There are also significant areas of Grade 1 agricultural land within Tendring and Rochford districts.

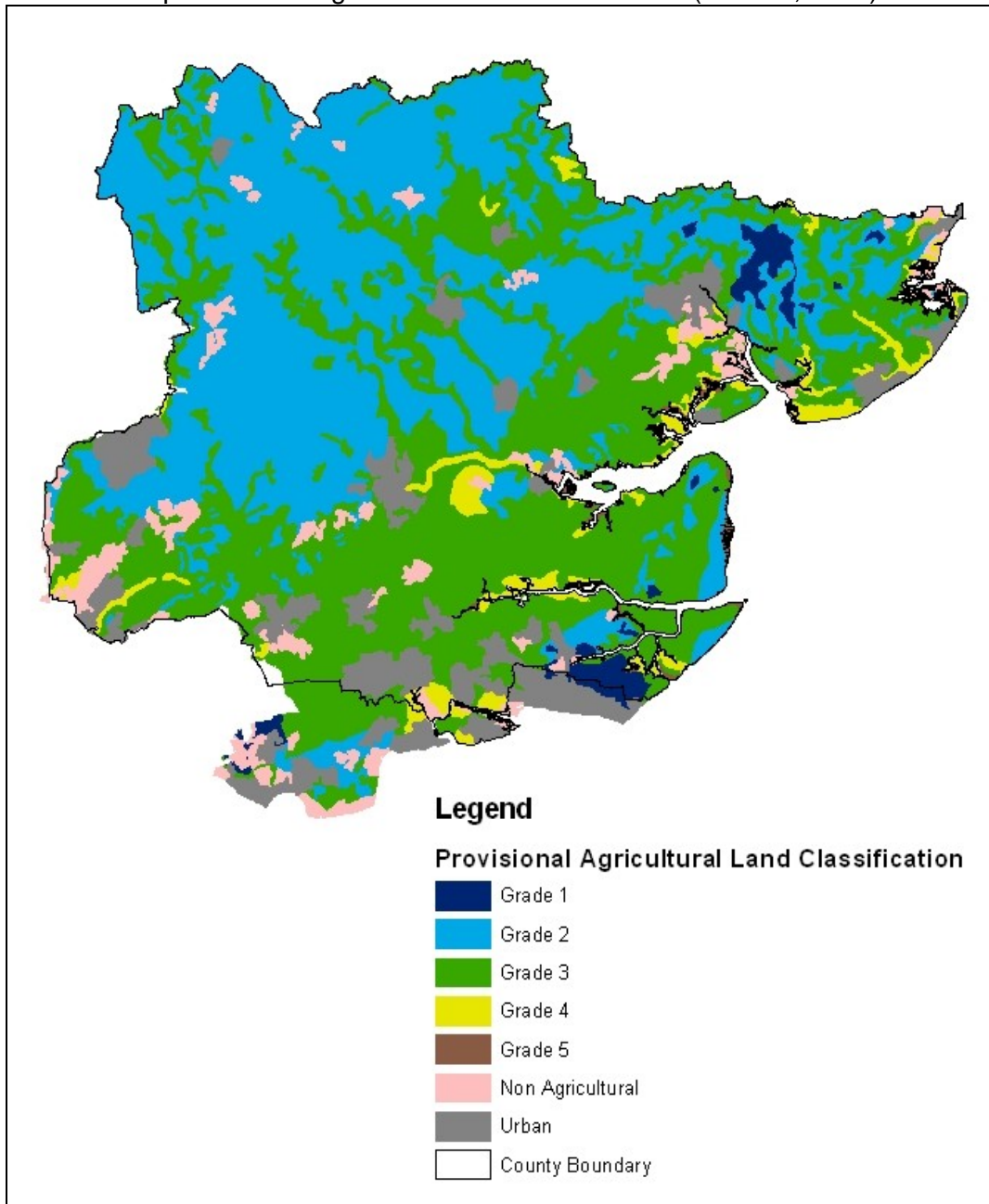
In general, substances' potential to cause land contamination problems are assessed for their toxicity to humans, the aquatic environment, ecosystems, their effect on materials and structures used on sites, their persistence in the soil, their tendency to bioaccumulate and the likelihood of the substance occurring in significant concentrations at many sites. Essex was largely agricultural until the 1950s and 1960s and so most land contamination is likely to relate to this, such as pollution from tanneries and abattoirs. Other land contamination can result from sewage treatment, disused railways and nuclear facilities.



Map 16: Geology of Essex (British Geological Survey, 2005)



Map 17: Essex Agricultural Land Classification (DEFRA, 2005)



### ***Rochford Position***

The geological stratigraphy of Essex is shown in table 6 below and map 18 displays the surface geology of Rochford District. The District is composed of London Clay and Claygate and Bagshot Beds in the west, which were deposited in the Eocene. Sands and gravels are also present, and are attributed to the former course and migration of the River Medway during the Quaternary. The Medway laid down the High-level East Essex Gravels, which survive as degraded gravels at Dawes Heath and Ashingdon. Following the diversion of the Thames up to 450,000BP, the Thames combined with the Medway in the late stage of the Anglian, carving a channel from Southend, through Asheldham and East Mersea to Clacton. The channel moved progressively eastwards, resulting in beds of gravel, the Low-level east Essex

Gravels at Southchurch, Rochford, Shoeburyness, Barling and the Dengie (Essex Record Office, 1999).

Table 6: Geological Stratigraphy of Essex (Essex RIGS Group, 2001)

<b>Period or Epoch</b>	<b>Geological Formations in Essex</b>
Holocene	Recent peat and alluvium
Pleistocene	River terrace deposits Boulder clay and glacial gravel Kesgrave Sands and Gravels Norwich Crag (Chillesford Sand)
Pliocene	Red Crag
Miocene	No evidence in Essex
Oligocene	No evidence in Essex
Eocene	Bagshot Beds London Clay Blackheath and Oldhaven Beds
Palaeocene	Woolwich and Reading Beds Thanet Sand
Cretaceous	Chalk (Lower, Middle and Upper) Gault and Upper Greensand (beneath Essex)
Jurassic	No evidence beneath Essex
Triassic	No evidence beneath Essex
Permian	No evidence beneath Essex
Carboniferous	No evidence beneath Essex
Devonian	Shales and mudstones occur beneath Essex
Silurian	Shales and mudstones occur beneath Essex
Ordovician	No evidence beneath Essex
Cambrian	No evidence beneath Essex
Precambrian	No evidence beneath Essex

Planning objective N3 within the Rochford District Replacement Local Plan (Rochford District Council, December 2005) relates to the safeguarding of the best and most versatile agricultural land.

Policy PN2 within the Local Plan regards contaminated land. Planning applications for development on or adjacent to land which may have been contaminated by a previous use must include evidence that the possibility of contamination has been investigated, and proposals for dealing with any remediation works are included. Development will only be permitted where:

- a) it would not give rise to significant harm or significant risk of significant harm to health or the environment, or cause pollution of controlled waters;
- b) it safeguards users or occupiers of the site or neighbouring land; and
- c) it protects the environment and any buildings or services from contamination during its implementation and in the future.

Pollution planning objectives within the Local Plan include ensuring a high level of environmental protection (P1), that new development/uses have no adverse impact on land, water or air pollution (P2), and that existing development/uses are safeguarded from potentially polluting development (P3).

Policy PN1 – Potentially Polluting Uses states that development that may be liable to cause pollution of water, air or soil or pollution through noise, smell, smoke, fumes, gases, steam, dust, vibration, light, or heat, electromagnetic radiation or other polluting emissions will only be permitted if:

- a) The health, safety and amenity of users of the site or surrounding land are not put at significant risk;
- b) The quality and enjoyment of the environment would not be damaged or put at risk; and
- c) National air quality objectives would not be breached.

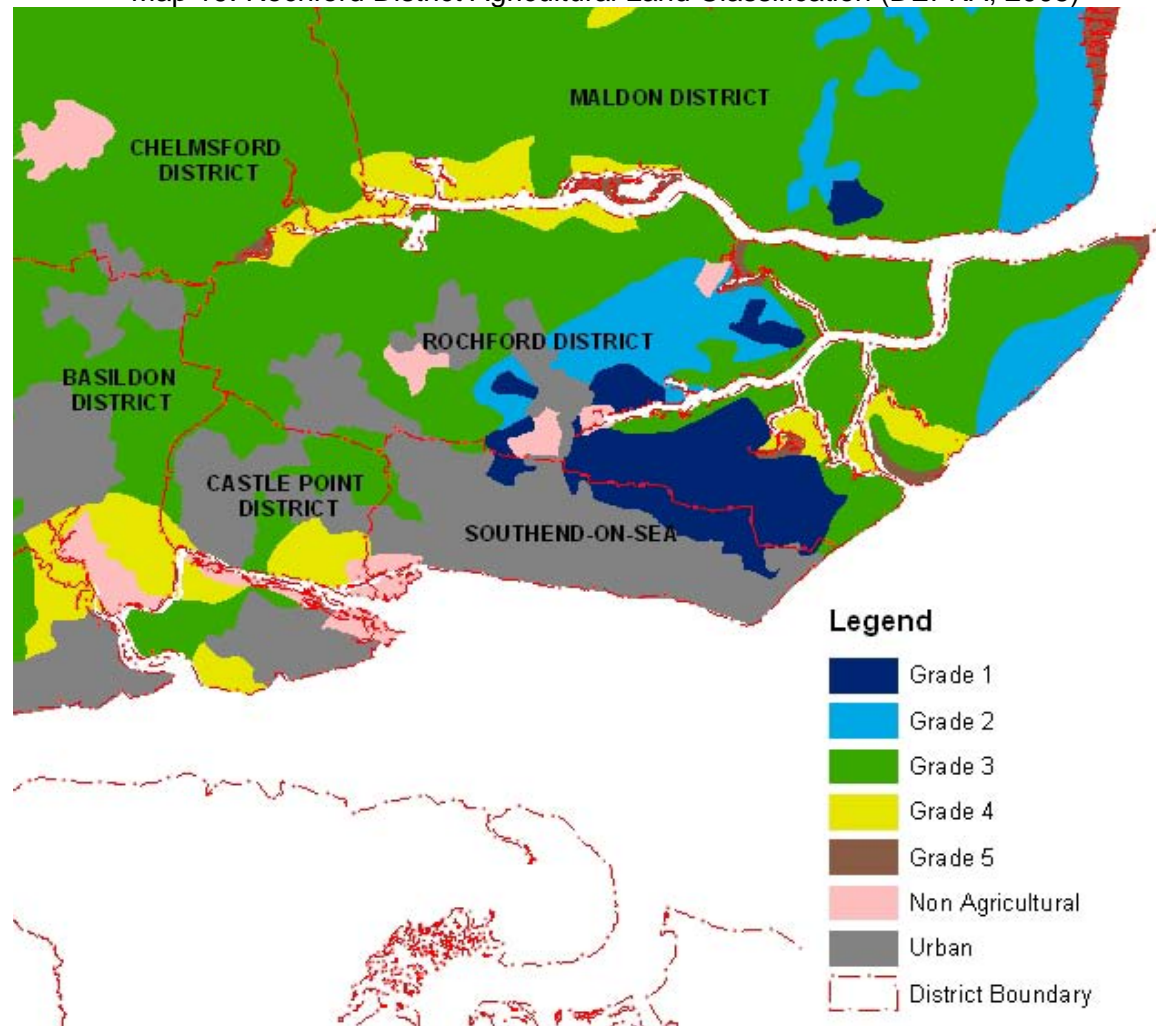
Map 18: Surface Geology of Rochford District (British Geological Survey, 2005)

### ***Current Position***

Paragraph 8.16 of the Local Plan states that more than 30% of the agricultural land in Rochford District is Grade 1 and 2. This land is found to the east of the settlements of Rochford and Ashingdon, between the Crouch Estuary and the built-up areas of Southend-on-Sea, and between the settlements of Rochford and Hawkwell. As displayed in map 19, the majority of remaining agricultural land is classed as Grade 3, with a small area of Grade 4 land. Grades 1, 2 and 3 fall under the 'best and most versatile land' category defined in PPS 7.

The present dominant land use within the District is agricultural. Land contamination may also result from Southend airport, and the manufacturing, engineering, printing and plastics industries. Historically agriculture and activities such as brickmaking and boat building have been of importance, and so contaminated land may also be associated with these. The Local Authority, in line with the legislative context set out in the preceding sections, has been taking forward the review and assessment process in relation to identifying and addressing contaminated land in the District. There are however budgetary restraints at a district level, and so potentially contaminated land can be identified, but investigation and if necessary, remediation are often too costly to be undertaken.

Map 19: Rochford District Agricultural Land Classification (DEFRA, 2005)



### ***Data Limitations***

Unfortunately, reliable data regarding contaminated land is not available, since funding is often not available at a district level. The introduction of a BVPI for 2005/06, aimed at recording sites of interest and the number of sites actively investigated in relation to contaminated land is likely to stimulate progress towards prioritisation and assessment and establishing a contaminated land register. The land assessments required before development can also be followed up, helping to formulate a record of land contamination in the district.

### ***Summary***

- The majority of agricultural land within the district is classified as Grade 3, with large areas of Grade 2 and Grade 1 land.



## **Climatic Factors**

### ***International/National Position***

The main objective of the Kyoto Protocol is the prevention of "dangerous anthropogenic [man-made] interference with the climate system". The EU is committed under the Kyoto Protocol to reduce greenhouse gas emissions by 8% from 1990 levels by 2008-2012. Reductions in the three most important gases (Carbon dioxide, methane, and Nitrous oxide) will be measured against a base year of 1990 (with exceptions for some countries with economies in transition). The EU and its Member States ratified the Kyoto Protocol in late May 2002.

The 1992 Earth Summit resulted in the international adoption of the global action plan for sustainable development, Agenda 21. This is aimed at addressing pressing issues affecting the international community, including climatic concerns. In the UK this has been disaggregated to the production of Local Agenda 21 strategies at local authority and district level. In this way, collective implementation of Local Agenda 21 at a grassroots level can make progress towards the achievement of the global Agenda 21 action plan. The 2002 Johannesburg Summit addressed the progress made towards reaching these targets, and discussed mechanisms of better achieving these objectives in the future.

The European Union's Sustainable Development Strategy (EU SDS) was adopted in 2001 and has set out to tackle climate change, natural resource protection, sustainable transport, ageing population, public health and the global dimension of sustainable development. Sustainable consumption and production is also advocated within 'Securing the Future – UK Government Sustainable Development Strategy' (March 2005). The intended mechanism to combat climate change is to meet the commitments under the Kyoto Protocol and then to reduce greenhouse gas emissions by an average of 1% per year over 1990 levels up to 2020 (EU SDS. European Commission, 2001).

The Sixth Environmental Action Plan 2005 (6th EAP) (European Commission) consists of four key environmental issues: climate change, biodiversity and nature conservation, environment and health, resources and waste. To address these priorities the Plan's strategic actions are improving implementation of existing legislation, integrating environmental concerns into the decisions taken under other policies, finding new ways of working with the markets and consumers and encouraging better land use planning and management decisions.

### ***Regional/County Position***

The Sustainable Development Framework for the East of England (EERA and Sustainable Development Round Table, 2001) highlights the need to raise awareness and education regarding climate change and waste issues, amongst other topics. The Strategic Waste Management Assessment (September 2000), undertaken by the Environment Agency, shows that in 1998/99 the regions' commercial and industrial waste arising totalled 6.1 million tonnes, with a further 7 million tonnes of construction and demolition waste produced. Most of this material and the 3 million tonnes of waste imported mainly from the London area were disposed of in landfill sites (Regional Environment Strategy for the East of England – Our Environment, Our Future. EERA and East of England Environment Forum, July 2003). The minimisation of waste, promotion of re-use, recycling, composting and



alternative treatments, and the adoption of lifestyle changes such as water and energy efficiency are seen as key objectives regionally.

'Our Environment, Our Future' discusses the continuing growth in car ownership and use, with the resultant congestion around major roads in the region and Greenhouse gas emission. The region also has a number of international airports, with Stansted and Luton specifically experiencing rapid growth. The Strategy advocates the need for the first priority to be a reduction in the need to travel, and then encouragement to utilise more sustainable modes of transport. The need for energy conservation and increased efficiency of new buildings and their appliances is also discussed in relation to reducing Greenhouse gas emissions. The importance of energy from renewable sources is also stressed, since at present only 0.45% of the East of England's energy is produced from renewable sources.

Climate change in Essex has been predicted through the use of the UKCIP02 Climate Change Scenarios (Hulme *et al.*, 2002) and published within the 'Climate Change in Essex' report (HR Wallingford, November 2005). These projections are for the 2080s and are as follows:

- Winter temperatures will increase by 2-3°C
- Summer temperatures will increase by 3-5°C
- Winter precipitation will increase by 13-25%
- Summer precipitation will increase by 24-47%
- Average sea levels will increase by 26-86cm\*
- Extreme sea levels will increase by 80-140cm\*

\*including regional isostatic subsidence as well as climate change.

The key required actions that have emerged from this study include improved water conservation, reduced carbon emissions, the protection of people and property from the consequences of flooding, and the effects of heat and UV radiation and the promotion of sustainable tourism.

The 'Living with Climate Change in the East of England' report (Stage 1 Interim Report. EERA and Sustainable Development Roundtable, February 2003) concluded that the East of England should aim to work with, rather than against climate change, and to reduce the risk from the potentially adverse impacts of climate change. 'A Sustainable Development Framework for the East of England' (EERA and East of England Sustainable Development Round Table, October 2001), suggests that preparing for climate change now will benefit the economy (for example through minimising storm damage), social issues (e.g. avoiding disruption as a result of flooding) and potentially the environment (for example new habitats and the preservation of historic sites).

### **Standards/Targets**

Public Service Agreement targets:

- To reduce Greenhouse gas emissions to 12.5% below 1990 levels in line with the Kyoto commitment and move towards a 20% reduction in carbon dioxide emissions below 1990 levels by 2010 (Public Service Agreement 2005-2008, DEFRA).
- To enable at least 25% of household waste to be recycled/composted by 2005-06, with further improvement by 2008 (Public Service Agreement 2005-2008, DEFRA).

Energy White Paper target:

- UK to cut CO<sub>2</sub> emissions by 60% by 2050 (Energy White Paper. February 2003).

East of England target of producing 14% (including offshore) of its electricity needs from renewable sources by 2010 (Making Renewable Energy a Reality – Setting a Challenging Target for the Eastern Region. ESD and Global to Local, 2001).

### ***Rochford Position***

Within the Rochford District Replacement Local Plan (Rochford District Council, December 2005), a corporate objective is the promotion of a green and sustainable environment (objective 3). This ties in with policy CS1 – Moving Towards Sustainable Development. It states that the Council aims to maintain and improve the environmental wealth of the district by only permitting development that is environmentally, socially and economically sustainable.

Policy CS10 promotes energy and water conservation through:

- (a) promoting the development of environmentally efficient buildings and the use of energy efficient heating, lighting, cooling, ventilation and other powered systems;
- (b) reducing the need to travel and encouraging the use of energy efficient transport;
- (c) promoting water conservation measures.

Policy HP7 – Energy and Water Conservation states that the local planning authority will require developers to provide a statement of the measures that are to be taken to ensure the construction of environmentally efficient buildings and the use of energy efficient heating, lighting and other powered systems, reducing the need to travel and encouraging the use of energy efficient transport and ensuring water conservation.

Planning objective U4 relates to meeting the needs of renewable energy generators that are appropriate to the needs of residents and the character of the district.

Policy UT3 – Renewable Energy states that proposals for the development of renewable sources of energy, or proposals which include some element of renewable energy, will be encouraged, particularly where there are benefits to the local community. Renewable energy proposals will be permitted provided that the proposed development would not adversely affect:

- i. The special character of the Coastal Protection Belt, SLAs, Areas of Ancient Landscape, sites of nature conservation (including avian flyways) or heritage conservation interest; and
- ii. The amenity of nearby dwellings or residential areas.

Minor domestic renewable energy schemes will be encouraged providing they meet criteria i and ii.

Policy PN1 relates to potentially polluting uses, stating that development that may be liable to cause pollution of water, air or soil or pollution through noise, smell, smoke, fumes, gases, steam, dust, vibration, light, or heat, electromagnetic radiation or other polluting emissions will only be permitted if:

- i) The health, safety and amenity of users of the site or surrounding land are not put at significant risk;
- ii) The quality and enjoyment of the environment would not be damaged or put at risk; and
- iii) National air quality objectives would not be breached.

Theme 3 within the Economic Development Strategy for Rochford District (Rochford District Council, October 2005) relates to supporting town centre and industrial estate enhancement initiatives aimed at improving the environment, ensuring the area is economically prosperous and competitive. In order to achieve this, one of the

associated actions (3.2) aims to develop recycling initiatives with the business community for industrial estates, in order to improve cost effectiveness of waste disposal and improve the environment. This is to be carried out from 2003-2007.

The Community Strategy Action Plan (Rochford District Council, April 2004) includes an action to investigate the options for an expansion of the kerbside recycling scheme across the District. In 2005/06 the District Council plans to expand this to 95% of households, and to 97% in 2006/07. The target for the percentage of waste recycled/composted for 2005/06 is 18%, increasing to a target of 22% in 2006/07 and 2007/08 (Our Performance Plan 2005. Rochford District Council, June 2005). The investigation of the options for a pilot scheme offering local small businesses access to civic amenity sites and recycling facilities was also proposed for completion by March 2005 in the Community Strategy Action Plan.

Reduction of the need to travel within the District is a core strategy objective within the Local Plan (CS3). It is the Council's aim to ensure that development reduces the length, number and duration of motorised journeys, particularly at peak hours and that it encourages the use of alternative modes of transport to help protect the quality of the built environment.

A number of objectives and policies within the Local Plan also link into this. Planning objectives T1 and T2 relate to reducing the need to travel, the development of sustainable transport alternatives and the consideration of sustainable development in transport development proposals. Planning objective T5 concerns the Council aiming to retain a good bus network with extensions into developing areas. T6 involves retaining and improving rail services and T11 promotes walking and cycling wherever possible as preferred modes of travel through the creation of safe routes. This is linked into an objective within the Community Strategy Action Plan, to develop plans that maximise the potential of the Green Grid and Greenways concept across the District, through the production of a Green Grid Strategy by 2009. Continuing work to upgrade specific cycleways is also an objective within the Action Plan, including a Hall Road Rochford link to the town centre, Ashingdon Road link to Ironwell Lane and to Hall Road, and Little Wheatley estate in Rayleigh. This is to be completed by 2007. An objective from the Community Strategy also regards working in partnership to promote and improve public transport services. Planning objective I6 further emphasises the point, stating that it is necessary to make provision for improvements to effect the most environmentally sustainable, efficient and convenient movement of goods and people.

Policy TP1 relates to sustainable transport, stating that the local planning authority will develop and implement a sustainable approach to transport planning, based on managing the demand for travel and distribution, which is integrated with land use planning, and which aims to:-

1. Reduce the need to travel;
2. Reduce the growth in the length, duration and number of motorised journeys;
3. Encourage alternative means of travel which have less environmental impact;
4. Reduce reliance on the private car and road haulage.

Policy TP5 – Public Transport stipulates that development must be well related to existing public transport infrastructure, particularly in rural areas. Where such developments are not well located to such infrastructure, then contributions towards the provision of public transport and alternatives to private car use will be sought. Development that fails to promote sustainable transport choices will be refused.

Policy TP6 regards the safeguarding and promotion of walking, cycling and horseriding routes. Planning permission will not be granted for development affecting existing cycling, walking and horseriding routes unless the proposals include either the maintenance or diversion of the route, to one which is no less attractive, safe and convenient for public use.

Cycling and walking will be promoted as an alternative to using the car especially for shorter distance trips. Development must ensure the:

1. Provision of a safe and convenient network of dedicated cycle and pedestrian routes linking homes, workplaces, community facilities and transport interchanges and also the provision of secure cycle parking at centres of attraction;
2. Use of traffic management measures to improve conditions for pedestrians, the mobility impaired and cyclists;
3. Provision in new development and transport schemes for pedestrians, the mobility impaired and cyclists;
4. Provision of good access and secure cycle parking facilities at public transport interchanges; and
5. Parking spaces should be provided in accordance with standards.

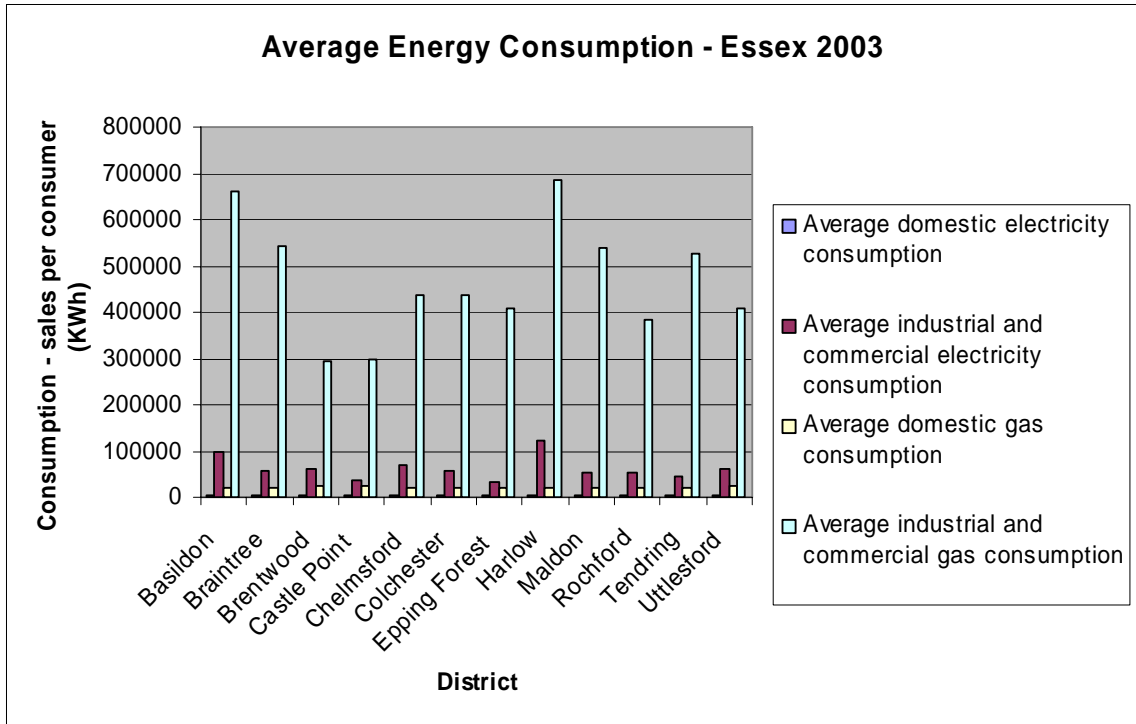
### ***Current Position***

Energy consumption and its' perceived effect on climate change is a major concern. The production of the vast majority of energy within Essex currently requires the use of fossil fuels which are not renewable. There is a renewable energy scheme at Barling within the District, the co-firing of biomass with fossil fuels, which has a generating capacity of 2443KW. This decreases reliance upon fossil fuels. The average energy consumption for all the districts is displayed in graph 6. All figures for gas and electricity usage within the District (both domestic and industrial/commercial) are below the Essex average, except for domestic gas consumption. Average domestic electricity consumption in 2003 was 4,969KWh (equating to 2,136.67kg of Carbon dioxide). Domestic gas consumption was 22,059KWh (4,191.21kg of Carbon dioxide) compared to the Essex average of 20,956KWh (3,981.64kg of Carbon dioxide). In terms of industrial and commercial usage, electricity consumption in 2003 was 52,837KWh (22,719.91kg of Carbon dioxide) and average gas usage was 382,372KWh (72,650.68kg of Carbon dioxide).

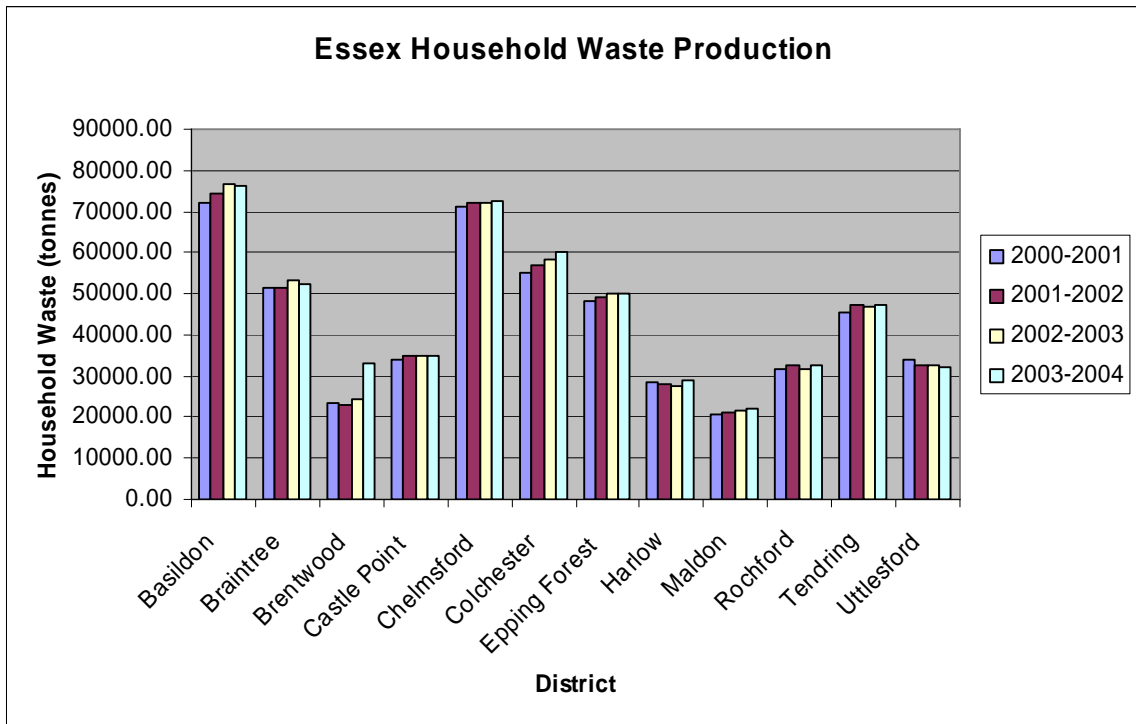
In terms of waste, Rochford District produced 32,724.10 tonnes of household waste in 2003/04, and as shown in graph 7, is one of the lower producers of household waste. This is also the trend for municipal waste production, with 32,724.05 tonnes produced in 2003/04 (see graph 8). The PSA target for waste is at least 25% recycling/composting of household waste by 2005-06 (Public Service Agreement 2005-2008, DEFRA). The figure in Rochford District stood at 10.3% in 2003/04, which makes it the lowest recycler of household waste in Essex. There is clearly much work to be done to progress towards this target.

As shown in graphs 9 and 10, car ownership within Rochford District is similar to trends in ownership at a county level, with the majority of households owning 1 car/van (42.18% of households in the District and 43.30% within Essex). The percentage of Rochford's population travelling to work by public transport is 19.25%, which is slightly higher than the Essex figure of 13.00%. However, the preferred mode of transport is by car (driver and passengers), with 63.37% of the Rochford District population and 69.00% of Essex's population travelling to work in this way.

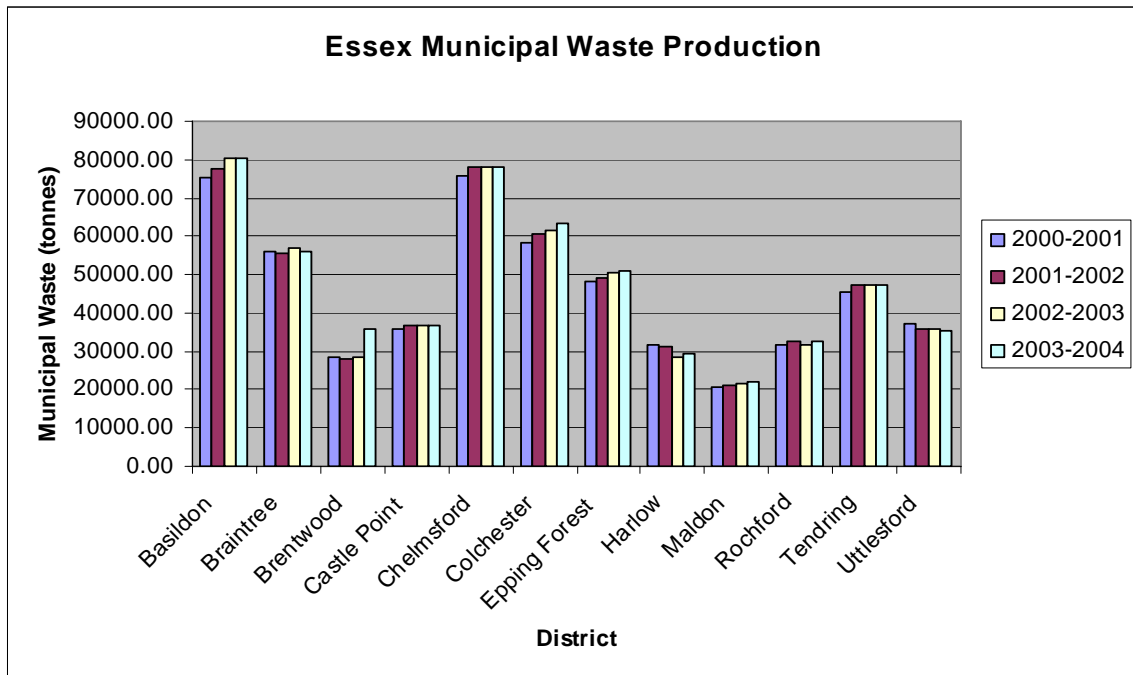
Graph 6: Average energy consumption Essex 2003 (DTI, 2004/2005)



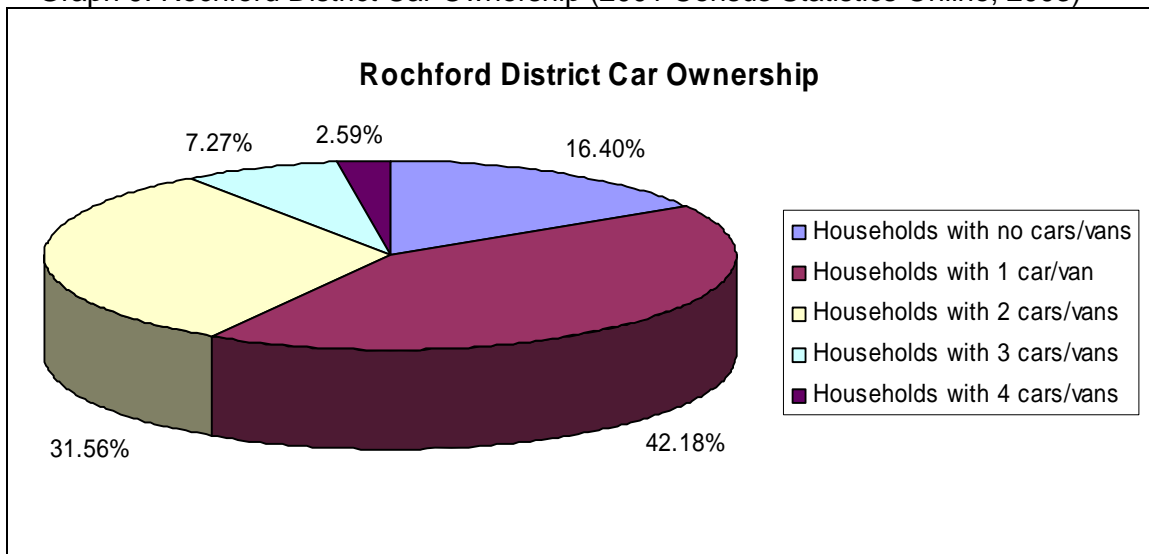
Graph 7: Essex household waste production (Draft Joint Municipal Waste Management Strategy for Essex (2005-2030). Essex County and District/Borough Councils, 2005)



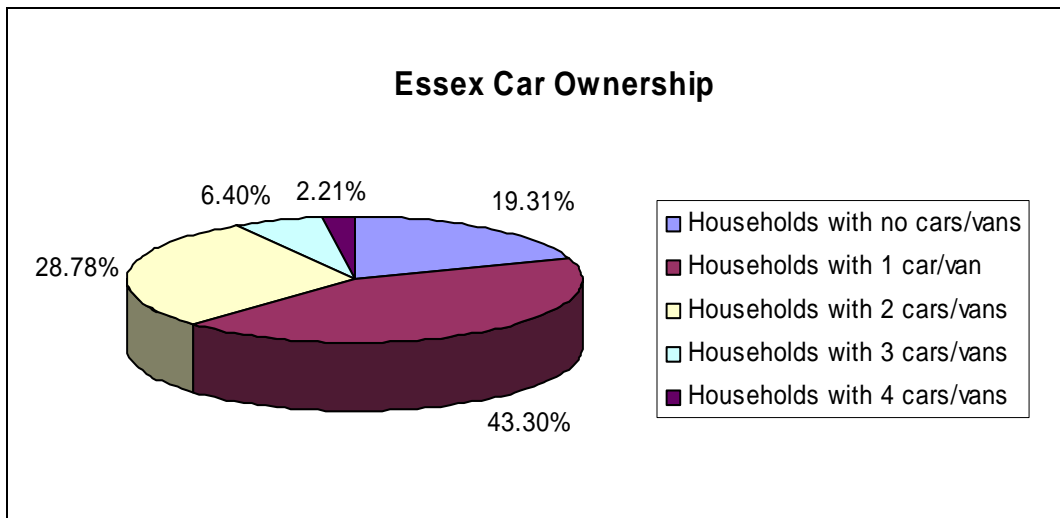
Graph 8: Essex municipal waste production (Draft Joint Municipal Waste Management Strategy for Essex (2005 to 2030). Essex County and District/Borough Councils, 2005)



Graph 9: Rochford District Car Ownership (2001 Census Statistics Online, 2003)



Graph 10: Essex Car Ownership (2001 Census Statistics Online, 2003)



### ***Compliance with Targets***

Rochford District currently has one renewable energy scheme which therefore contributes to the East of England producing 14% of its electricity requirements from renewable sources by 2010. Through the use of renewables, Rochford District is also contributing to the reduction of Greenhouse gas emissions (PSA target) and more specifically Carbon dioxide emissions (Energy White Paper target). The District is performing poorly in recycling terms, and significant improvement is required to play their part in helping the nation to progress towards the PSA target.

### ***Data Limitations***

Energy data is based upon a national figure, and does not include all suppliers, which may lead to data inaccuracy. The data from the DTI concerning the proportion of energy produced from renewable sources does not include energy from photo-voltaic cells, and so the total figures published may be misleading.

The amendment to Building Regulations in 2002 has resulted in the requirement of a calculation of the Standard Assessment Procedure (SAP) rating for all new dwellings and those converted through material change of use. At present there is little available data regarding this, due to the implementation of the amendment being in its infancy, but with time and subsequent development, data will become more abundant. Within Our Performance Plan 2005 (Rochford District Council, June 2005), the average SAP rating of Local Authority owned dwellings has been included, in line with Best Value Performance Indicator 63. Targets have been set for 2005/06, a rating of 65, for 2006/07 a SAP rating of 68 and 2007/08 a value of 70. The 2004/05 SAP rating was 65 and in 2003/04 it was 56. The implementation of this BVPI will allow more data to become available regarding SAP ratings in the future.

### ***Summary***

- Rochford District has one renewable energy scheme and is therefore contributing to the East of England meeting the 14% electricity generation from renewable sources target.
- Average domestic gas consumption in the District in 2003 was slightly greater than the Essex average, however domestic and industrial/commercial

electricity and industrial/commercial gas consumption within the District were below the Essex averages.

- The District produces a relatively low amount of household and municipal waste compared to other Districts in the county.
- Rochford District is performing poorly in recycling terms (10.3%), which needs to increase significantly in order to meet the Government PSA target of 25% recycling/composting of waste by 2005/06 (and improvement by 2008).



## **Built Environment**

### ***Introduction***

Built Environment includes roads and other transport corridors, but also housing and residential areas, commercial centres, pipelines and utilities, all of which have particular influences on the urban environment. The built environment also concerns design in its widest sense, involving the design of individual buildings, the definition of public spaces, streets and vistas and the context for future development.

Recent Government guidance promotes good design both in the layout and individual design of buildings. The aim is to make the urban environment a more attractive place for people to live, work and play. It emphasises the importance of achieving the correct balance between the size of buildings and the spaces surrounding them.

The built environment creates the atmosphere for social interaction within our settlements and generates an environment in which work and recreation can be undertaken with pleasure

### ***International/National Position***

As a result of the European Spatial Development Perspective (ESDP, 1999), the emphasis for national and regional planning in the UK and other parts of Europe is being placed upon regional planning.

The Government's Sustainable Communities Plan (ODPM, 2002) lays out the mechanism for achieving sustainable communities in urban and rural areas. It is concerned with housing supply issues and aims to tackle this by increasing the pace of construction and the provision of affordable dwellings. Four growth areas are specified in the plan; the Thames Gateway, the London-Stansted-Cambridge-Peterborough corridor, Milton Keynes South Midlands and Ashford.

### ***Regional/County Position***

Three of the four growth areas specified in The Sustainable Communities Plan (ODPM, 2002) are located in the East of England. Furthermore, Regional Planning Guidance for the South East and the above mentioned Plan have specified Harlow and the Lee Valley as a priority area for regeneration (PAER), due to its high level of deprivation. The vision for this sub-region is 'to create a sustainable employment-led growth corridor, conserving and delivering a high quality environment by capitalising on its role as a key aviation gateway, realising its potential for sustainable growth and regeneration, and capitalising on its potential as a focus for hi-tech, knowledge-based employment, related to the Cambridge clusters and London' (East of England Plan, 2004). As a result of this, it is necessary to review the Green belt boundary in this area so that the most appropriate areas for new development can be identified.

### ***Standards/Targets***

PSA Targets:

- Land use (percentage of new homes on Brownfield sites). Achieve a more sustainable balance between housing availability and the demand for housing in all English regions, while protecting the countryside and the sustainability of existing

towns and cities through specific measures to be set out in the Service Delivery Agreement. (ODPM)

Headline targets (East of England Plan, 2004):

- That the Region should seek to achieve regional economic aspirations set out in the Regional Economic Strategy (RES) (taking account of the statement of synergy between the RES and Regional Spatial Strategy (RSS), as set out in the RES taking account of the statement of synergy between the RES and draft RSS, as set out in the RES).

- That the region should meet the housing needs of all sections of the community. This means meeting the needs arising from the natural change in the existing resident population and ensuring that the region provides sufficient additional housing to allow for a realistic level of in-migration from other regions (mainly London) to deliver the wider needs of London, the East of England, and the South East based on continuing to meet the present levels of in-migration. This target is subject to the caveat that London and the South East must implement corresponding policies to accommodate such pressures, by means of a matching approach to in-migration into the South East region, and increased housing supply within London to meet a higher proportion of the capital's overall needs. EERA notes that the Draft London Plan aims to accommodate London's growth within its own boundaries and that the Examination in Public Panel Report proposes increasing the housing provision target within London to meet this aim

- Increasing the provision of affordable housing from the present level of approximately 10-12% of total housing supply, to at least 30% of total housing supply.

### ***Rochford Position***

A corporate objective within the Rochford District Replacement Local Plan (Rochford District Council, December 2005) is to work towards a safer and more caring community (objective 2). This is highlighted in policy HP10 – Crime Prevention, which states that all new development schemes will be expected to reflect the crime prevention guidelines on design and layout included in LPSPG4. In addition, the Local Planning Authority will consult the Police and other relevant specialist groups for advice and guidance on appropriate crime prevention measures within new development schemes.

A vision for the Rochford District Community Strategy (Rochford District Council, April 2004) is to reduce both the level and fear of crime, and to make the District a safer place for people to live in, work in or visit. This is to be achieved through the increased visibility of the Police (increased availability of Patrol officers in peak demand times through introducing a new shift pattern by 2004), a reduction in the incidence and fear of crime and anti-social behaviour (through the recruitment of Police Community Support Officers up to 2005), and an increase in the usage of youth facilities including the provision of a mobile unit. Crime surveys of local businesses to identify the need for anti-crime initiatives by April 2004 and the continuing promotion of the 'Too Fast, Too Furious, 2 Dead' speed reduction campaign are also advocated.

The key target relating to crime is to secure a 13.5% reduction in crime during the period 2005-2008 (Our Performance Plan. Rochford District Council, June 2005). The Crime and Disorder Reduction Strategy 2005-2008 (Rochford District Council,

2005) includes a number of primary objectives based around reducing crime in general (e.g. reducing the number of dwelling burglaries by 15% by 31<sup>st</sup> March 2008), anti-social behaviour (e.g. address social and environmental factors that can facilitate this) and domestic violence (e.g. initiate and develop awareness raising and education programmes that reach all sections of the community). Drugs and alcohol use (e.g. developing and implementing an effective local licensing policy) and enhancing quality of life (e.g. reducing fear of crime within the community) are also being targeted.

Rochford District Council includes within its' Local Plan a number of objectives/policies related to sustainable development. Corporate objective 3 involves the promotion of a green and sustainable environment. Policy CS1 – Moving Towards Sustainable Development takes this further, stating that it is the Council's aim to maintain or improve the environmental wealth of the district by only permitting development that is environmentally, socially and economically sustainable.

There are a number of policies/objectives within the Local Plan relating to the built environment as a whole. These include policy CS10 – Energy and Water Conservation, which states that it is the Council's aim to reduce energy and water consumption by promoting the development of environmentally efficient buildings and the use of energy efficient heating, lighting, cooling, ventilation and other powered systems and promoting water conservation measures.

Planning objective B3 aims to encourage a high standard of design for new buildings and development and to secure improvements to the environment generally. B4 relates to encouraging the use of materials that reinforce the local character of the area. Planning objective I9 concerns encouraging good design and the use of design statements, with the early consideration of landscaping issues in development proposals.

Planning objective R12 seeks to prevent the process of coalescence of the settlements within Rochford District with Southend-on-Sea or settlements in adjacent districts, with objective R13 aiming to prevent the coalescence of towns and villages within the District. Objective R15 promotes the process of urban regeneration in settlements within Rochford District and R16 relates to the prevention of creeping, incremental and cumulative development, such as garden extensions and residential extensions, which are detrimental to the green belt and the rural environment more generally.

A number of objectives/policies relate to the protection and enhancement of the built environment. Planning objective I5 aims to retain, conserve and enhance the built and natural environments, including the architectural and historical heritage, flora, fauna and their habitats. Policy CS7 – Conserving and Enhancing Heritage states that it is the Council's aim to:

- a. Conserve and enhance buildings and their settings and areas of architectural and historic significance;
- b. Conserve, protect and enhance green spaces, hard landscaped spaces, as well as spaces between buildings that make a contribution to an area or the district; and
- c. Encourage a high standard of design for new development that respects and enhances the environmental quality and character of the district's urban and rural heritage.

Policy CS2 also picks up on this, highlighting the importance of protecting and enhancing the built and natural environment. It states that the local planning authority

will protect, sustain and enhance the district's natural resources and cultural heritage through the application of the policies and proposals in the plan for future generations to enjoy, and to ensure that new development contributes to environmental quality.

The Community Strategy further includes an aim to protect and enhance the natural and built environment for present and future generations. This is to be achieved through measures such as continuing to work on the cleanliness and overall appearance of the District and increasing awareness of sustainability issues and participation in recycling activities.

Planning objectives I3 and I4 are applicable to housing provision within the District. The former involves enhancing the quality of life of inhabitants by providing the best possible environment, and satisfying social needs by making accessible provision for the necessary health, housing, educational, community and leisure facilities in the interests of the total well being of all groups within the population. The latter aims to ensure the availability of land for housing, commercial and industrial uses.

A number of strategic housing priorities are stated within the Housing Strategy 2004/07 (Rochford District Council, 2004). These include:

1. To ensure provision of sufficient affordable and sustainable housing for local people, including those with special needs, which take account of cost, size and location requirements.
2. To ensure all homes are of a suitable standard for modern living and for the promotion of safety and good health, concentrating on Council housing and private homes where the occupier is unable to maintain the property.
3. To improve our performance in preventing and dealing with homelessness.
4. To ensure that older persons housing, care and support needs are effectively addressed.

Actions to achieve these priorities include the development of 49 affordable rented Registered Social Landlord (RSL) homes during 2004-2006, with 27 allocated at the former Read's Nursery site and 22 at the former Hardwick House site. To ensure a suitable standard of housing, all Council properties must comply with the Decent Homes Standard by 2010, as a minimum. Energy efficiency is also to be tackled through annual surveys to track changes in home energy efficiency, increased efficiency of Council homes through the provision of better loft insulation and more efficient gas central heating boilers (158 homes were identified for improvements for 2004-2006).

There are many planning objectives within the Local Plan relating specifically to housing. Objective HO1 aims to make provision between 1996 and 2011 for sufficient housing to meet the requirements of the Essex and Southend-on-Sea Structure Plan. HO2 involves limiting the development of new market housing to the existing built-up areas of the District. Objective HO3 relates to the delivery of a mix of housing types and tenures that best meet the populations' needs. HO4 states the aim to produce new housing to high design standards, using sympathetic materials that reflect the key principles of traditional Essex towns and villages. Objective HO6 regards the protection and enhancement of residential amenity whilst simultaneously seeking to make best use of the existing housing stock through re-use, conversion and sub-division. HO7 concerns making best use of previously developed land within urban areas for new housing. HO8 aims to ensure that new housing complies with the key principles of sustainable development. Planning Objective HO9 involves increasing the supply of affordable housing in the District including homes for rent through RSLs and through Shared Ownership Schemes.

Policy CS4 – Accessible and High Quality Housing and Services within the Local Plan states that it is the Council’s aim to promote more compact patterns of development on all types of site through use of appropriate densities, which minimise land requirements, and mixed-use developments, which provide more balanced, better integrated housing, employment, education, shopping, leisure and other community facilities in closer proximity. Development that is poorly located with respect to services will not be acceptable unless it can be proven that the development would resolve existing safety, amenity or environmental problems

Policy CS6 – Promoting Good Design and Design Statements, states that good quality design will be encouraged which:

- (a) Takes into account the existing form and nature character of the site and its surroundings;
- (b) Relates to the locality in terms of scale, layout, proportion, materials and detailing;
- (c) Includes landscaping arrangements which reduce the visual impact of and positively enhance the proposal and its surroundings;
- (d) Minimises the risk of crime; and
- (e) Provides adequate space for the storage, recycling and collection of waste.

Policy CS8 relates to retaining character of place, and aims to protect and enhance the District’s identity. Assessment of the design and quality of development proposals will take account:

- (a) The contribution to local identity and sense of place;
- (b) Suitability of the overall design and appearance of the proposed development, when assessed in relationship with surrounding buildings, spaces, vegetation, water areas and other features of the street scene; and
- (c) Use, and where appropriate re-use, of local and traditional materials or suitable artificial alternatives.

Policy HP1 relates to overall housing provision. It states that provision is made for 3050 dwellings net in the district between 1996 and 2011, and to achieve that provision residential development will be permitted within the defined settlements. Within these settlements encouragement will be given to residential intensification, sub-division of dwellings, the re-use of vacant, redundant or underused land and ‘living over the shop.’

Policy HP2 sets out housing site allocations to be built on development sites as follows:

- Reads Nursery, Rawreth Land, Rayleigh (estimated capacity of 72)
- Baron Court Kennels, Rawreth Lane, Rayleigh (24)
- Park School, Rawreth Lane, Rayleigh (120)
- Playing Fields, Rochford County Primary School, Ashingdon Road, Rochford (25)
- Main Road, Hawkwell (36)
- Rochford supermarket site, Stambridge Mills, Rochford (149).

Policy HP3 relates to the density of new residential development, which must be not less than 30 dwellings per hectare. The character of individual sites and surroundings and the efficient use of land will determine the acceptable density for a site within this range, but in town centres and areas with good transport links, higher densities above this range may be acceptable.

Policy HP4 relates to design statements, stating that the Local Planning Authority will require developers to prepare a design statement for all new housing schemes of more than 12 dwellings to be submitted with the planning application. All statements will be expected to outline the key design elements of the scheme and to provide an assessment against the principles of sustainable development outlined in the Local Plan, including impacts on biodiversity and nature conservation.

Policy HP5 - Infrastructure highlights that the Local Planning Authority will explore all means at their disposal, including planning gain contributions from developers, to ensure the provision and, where appropriate, within housing development sites or within an appropriate distance, of affordable housing, adequate shopping facilities, health care facilities, education facilities, transportation infrastructure (for buses and cycling in particular), nurseries, playgroups and minor infrastructure, including public telephone kiosks, and letter posting boxes.

Policy HP6 – Design and Layout stipulates that the Local Planning Authority will expect new housing schemes and alterations/extensions to existing housing to be to a high standard of layout and design, taking into account issues such as accessibility, car parking, density, gardens and play space, landscaping, impact on designated sites, Conservation Areas and listed buildings, scale and form.

Policy HP7 – Energy and Water Conservation states that the local planning authority will require developers to provide a statement of the measures that are to be taken to ensure the construction of environmentally efficient buildings and the use of energy efficient heating, lighting and other powered systems, reducing the need to travel and encouraging the use of energy efficient transport and ensuring water conservation.

Policy HP8 – Affordable Housing states that in new residential development schemes of more than 25 dwellings or residential sites of 1 hectare or more, the Local Planning Authority will expect not less than 15% of the new dwellings to be provided as affordable housing to meet local needs.

Policy HP9 – Rural Exceptions highlights that the Local Planning Authority will consider proposals for the provision of affordable housing in rural areas subject to:

- i. It being demonstrated that there is an identified local need;
- ii. It not being possible to satisfy these needs in any other way;
- iii. There being access to local services;
- iv. The housing being legally available for local people in perpetuity; and
- v. The protection of biodiversity interests on and surrounding the site.

Policy HP11 – Flatted Accommodation states that in considering proposals for purpose built flatted accommodation, the Local Planning Authority will have regard to the impact of traffic on the amenities of surrounding dwellings, the relationship of storage and communal areas to surrounding dwellings and private garden areas, in areas of single family dwellings, the compatibility of the proposed scheme with its surroundings in terms of height, bulk and spaciousness of the site and to the guidance in LPSPG1 and LPSPG2 on layout, design and parking standards.

Policy HP12 – Sheltered Housing stipulates that the Local Planning Authority will require in developments of 25 or more dwellings that 10% of the units are designed, or capable of easy adaptation to, housing for long term needs. Similarly HP13 states that the LPA requires developers to include the provision of 'lifetime' mobility housing within new estates.

Policy HP14 – Backland Development states that in considering applications for the development of backland sites for housing purposes, the Local Planning Authority will have regard to adequate access, the relationship to new/existing buildings, the scale and visual appearance of the proposed development the guidance in LPSPG1 and LPSPG2 on layout, design and parking standards.

Policy HP15 – Loss of Dwellings stipulates that development proposals that result in a material net loss of existing dwellings in a residential area will be refused.

Policy HP16 regards the sub-division of dwellings, stating that the Local Planning Authority supports in principle the sub-division of single dwelling houses within residential areas into smaller units subject to LPSPG1 and LPSPG2 on housing design and layout, and car parking, and to the following criteria:

- (a) The provision of suitable private amenity space;
- (b) The design and appearance of the property;
- (c) The impact on the amenities of adjoining properties; and
- (d) The internal layout of the proposed conversion.

Policy HP17 relates to ‘living over the shop’, highlighting that the Local Planning Authority will encourage the use of the upper floors of shops and other commercial premises, by granting permission where required, for accommodation that is self-contained and has separate access from the street and can provide a satisfactory standard of residential convenience and amenity.

Policy HP19 – Caravan Parks states that planning applications for new caravan parks and applications for extensions to existing sites will be refused. Environmental improvements within existing sites will be encouraged.

Policy HP20 – Gypsy Sites states that applicants must demonstrate that they have considered alternative non-green belt locations for their development. Once this is demonstrated, the local planning authority will have regard to the following criteria in considering applications made by Gypsies for private sites for settled occupation:

- (a) Any opportunity thereby afforded to clear unauthorised sites;
- (b) The avoidance of disturbance, including disturbance at unsocial hours, affecting neighbouring land or premises;
- (c) The practicability of adequately screening (where accepted) any working or storage areas by establishing new or maintaining or reinforcing existing plantations or mounds;
- (d) The protection of the best and most versatile agricultural land, historic woodlands, ancient landscapes, wildlife habitats or areas designated for their special scientific interest;
- (e) The adequacy of arrangements for access, for parking and manoeuvring of vehicles and (where appropriate) for the storage of goods and materials;
- (f) The availability of services; and
- (g) The arrangements made for securing the site in the event of its seasonal or other temporary periods of non-occupation.

Planning Objective I7 within the Local Plan aims to define and protect the inner and outer boundaries of Metropolitan Green Belt, the undeveloped coast and areas of ecological interest. More specifically, policy R1 – Development within the Green Belt, states that there is a general presumption against inappropriate development, with planning permission only being granted in very special circumstances. These are:

- (a) Development required for agriculture or forestry in accordance with policies R3, R4, R8 and R9;
- (b) The extension, alteration or replacement of existing dwellings in accordance with the criteria defined in policies R2, R5 and R6;
- (c) Limited affordable housing for local community needs within or immediately adjoining existing villages, in accordance with the criteria defined in Policy H9;
- (d) Essential small-scale facilities for outdoor sport and outdoor recreation in accordance with PPG2;
- (e) The re-use or adaptation of existing buildings in accordance with the criteria defined in Policy R9;
- (f) Mineral extraction and related restoration;
- (g) Cemeteries, or other uses of land which fulfil the objectives of the Green Belt;
- (h) The provision of agricultural or forestry dwellings in accordance with the criteria defined in policy R3.

Development which may be permitted under this policy should preserve the openness of the Green Belt and should not conflict with the main purposes of including land within it. Any development which is permitted should be of a scale, design and siting such that the character of the countryside is not harmed and nature conservation interests are protected.

Policy R2 - Rural Settlements Areas within the Green Belt states that within the following rural settlement areas proposals for extensions to dwellings in these areas as defined on the Proposals Map and in LPSPG3 will be permitted if the appearance of the extension is in keeping with the scale and character of the dwelling and with its setting; the extension will not be visually intrusive in the open character of the surrounding countryside; and the extension would not harm the amenity of nearby residents.

- (a) Central Avenue/Pevensey Gardens, Hullbridge
- (b) Pooles Land, Hullbridge
- (c) Windsor Gardens, Hawkwell;
- (d) Rectory Road/Hall Road, Hawkwell;
- (e) Barling Road/Rebels Lane, Great Wakering;
- (f) Stonebridge, Barling;
- (g) Hall Road, Rochford;
- (h) Kingsman Farm Road, Hullbridge; and,
- (i) Bullwood Hall Lane and High Road, Hockley,

Policy R3 regards agricultural and forestry dwellings, highlighting that within the Green Belt planning permission will be granted for permanent dwellings for agricultural and forestry workers, provided that it is essential for the proper functioning of the enterprise, plus a number of other criteria. Policy R4 – Temporary Agricultural Dwellings documents that within the Green Belt planning permission will be granted for the stationing of mobile homes for agricultural workers, provided that they are required for the functioning and development of the enterprise.

Policy R5 regards the extension of dwellings in the Green Belt, stating that their size will be restricted. Planning permission will be granted for extensions provided that they do not harm the character of the countryside, amongst other more specific stipulations. Policy R6 relates to the replacement or rebuild of existing dwellings in the Green Belt. This policy highlights that replacement/rebuild of existing dwellings will be permitted taking account of criteria relating to size, condition of the original dwelling and location.



Policy R10 concerns new retail uses with the Green Belt. Planning permission will not be granted for the construction of new buildings for retail use, or for the re-use of existing buildings for the sale of comparison goods. The reuse of buildings for retail may be permitted if the proposal is for a general store positioned to serve the local community or a farm shop situated on an agricultural holding.

Policies R11 and R12 regards cemeteries within the District. The former states that allocation has been made for the extension of the Hall Road cemetery in Rochford. The latter states that permission will be granted for the provision of new cemeteries, or the extension of existing cemeteries, provided that the site is in close proximity to one (or more) of the district's main settlements, and it is readily accessible by car and, ideally, public transport.

Paragraph 4.14 of the Local Plan documents the general strategy with regard to employment. It states that the Council will seek to maintain and increase appropriate levels of employment and economic activity in the District, commensurate with environmental considerations and the capacity of the infrastructure. This will be achieved by the other provisions of the Local Plan and the activities of other relevant agencies, and when considered necessary *ad hoc* initiatives by the Council related to the resources that may be available from time to time.

Policy CS5 relates to encouraging economic regeneration. It states that the Council aims to work with partners to consolidate the local economy and attract new investment. Also land will be allocated for industrial and commercial uses, whilst striving to maintain and enhance the vitality and viability of the town and village centres as attractive places to visit and shop. Corporate objective 4 further seeks to encourage a thriving community. This is picked up in planning objective 18, which seeks to enable the existing business community to function as efficiently as possible, and to support economic and regeneration development throughout the district.

Theme 2 within the Economic Development Strategy for Rochford District (Rochford District Council, October 2005) concerns working with partners to develop the skills of the local workforce to meet the needs of businesses now and in the future, to maintain low levels of unemployment and to encourage jobs that add value to the local economy. Included within this are 4 actions (Action Plan 2004-2007) to implement this objective. Action 2.1 aims to encourage business to access training for their workforce. As a result of this, in 2005 82 people participated in training, 21 obtained NVQ's through 28 businesses participating in the 'Profit for Learning' scheme. Action 2.3 concerns targeting businesses in conjunction with Business Link for Essex to achieve the Investors In People Award, recognising the need to train and develop staff. This is for implementation from 2003 to 2007, with 1 business in the District being accredited with Investors In People in 2005. Action 2.4 relates to promoting the use of graduate skills to small business of the Shell Technology Enterprise Programme managed by Essex County Council. The associated timescale is also 2003-2007, with 2 projects initiated in 2005.

Theme 3 within the Economic Development Strategy regards the support of town centre and industrial estate enhancement initiatives aimed at improving the environment and ensuring the area is economically prosperous and competitive. Associated actions include 3.1 which seeks to maintain liaison with the Chambers of Trade to maintain quality and environment of town centres from 2003-2007. Action 3.2 concerns the development of recycling initiatives within the business community,

for industrial estates to improve cost-effectiveness of waste disposal and improve the environment. This is to be achieved over a timescale of 2003-2007.

Theme 4 within the Economic Development Strategy aims to work with partners to ensure that businesses, including rural businesses, have access to quality and effective business support initiatives locally. Actions to implement this include working with Business Link for Essex, Enterprise Agencies and Chambers of Trade and Commerce, and other agencies to promote the range of advice and support available, in order to reduce the number of business failures and increase opportunities for business growth. In 2004/05 there were 1078 enquiries in Rochford District, with 251 being pre-start up and 56 start up business enquiries. This action is due to run until 2007. Actions 4.2 and 4.3 involve the production of a Business Directory every 3 years to promote business to business contact (published August 2005), and the publication of an annual newsletter (2004-2007) to inform businesses of support and funding opportunities available.

Theme 5 relates to the facilitation of appropriate local transport and infrastructure developments. Action 5.2 regards the preservation of airport-related employment through liaison with London Southend Airport from 2003-2007.

Theme 6 relates to developing tourism and heritage initiatives which provide new local employment and wealth generation opportunities, visitor attractions aimed at improving access to recreational facilities and provide heritage into the future. Action 6.1 aims to work with Essex County Council, EEDA and TGSE to encourage the development of a wider choice of overnight accommodation, in order to encourage tourism. This is to be implemented from 2003 to 2007.

Theme 7 concerns taking advantage of inward investment opportunities to secure the future economic prosperity of the District. This has been achieved through working with businesses to identify opportunities for site and infrastructure improvement, with £40,000 funding being found for industrial estate improvements in 2005.

Planning objective E1 concerns making provision between 1996 and 2011 for sufficient employment land to meet the requirements of the Essex and Southend-on-Sea Replacement Structure Plan. This links in with objective I4 which seeks to ensure the availability of land for housing, commercial and industrial uses. Objective E2 relates to the use of land-use planning policies to promote sustainable employment growth, which reflects the needs of both urban and rural areas. E3 states that it is necessary to ensure that a mix of sizes and types of land and unit are available to meet the needs of businesses and to encourage inward investment, particularly with regard to small starter units. Planning objective E4 seeks to link with the District Council's adopted Economic Development Strategy, in order to assist with the promotion, availability and use of employment land. E5 relates to improving the overall quality and appearance of business estates, with design statements being required for new builds.

Policy EB1 – Existing Sites and the Allocation of New Sites states that within those areas proposed for use or currently used primarily for employment purposes, applications for development within classes B1 (Business), B2 (General Industrial land B8 Storage) of the Use Classes Order (1987) will be permitted, providing that the following criteria are met:

- i. The impact of development on the characteristics of the Metropolitan Green Belt and other designated sites;
- ii. The ecological value of the site and adjoining land;
- iii. The availability of land or buildings available for employment;

- iv. The implications of on and off-site traffic generation;
- v. The balance of non-industrial uses;
- vi. Evidence of demand for the particular type of development proposed;
- vii. The suitability of the area for the proposed use more generally; and
- viii. Any other benefits offered by the scheme.

Policy EB2 relates to making the best use of available land. In determining proposals for development for business, industry and warehousing on sites which are not already allocated, the local planning authority will consider how the development will improve its surroundings, the appearance of buildings, screening, any harmful impacts on neighbouring uses, site access, layout and the protection and enhancement of nature conservation interests.

Policy EB3 – Non-Conforming Uses states that where existing employment development inhibits the development of land for an allocated purpose, or has a serious adverse effect on residential or rural amenities, the Council will consider using its powers, including compulsory purchase powers, to secure its relocation or extinguishment.

Policy EB5 – Design Statements states that such a statement must accompany proposals for all major employment development (over 1000m of floor space and / or a site area of 1 hectare). On smaller, but complex or sensitive sites a design statement will also be requested. Such a statement should include an analysis and evaluation of the site and its context, design principles and a design solution.

Policy EB6 – Landscaping highlights that the local planning authority will require that landscaping proposals form an integral part of any proposal for employment development or design statement. The local planning authority will seek additional landscaping measures including improvements to existing features to reduce the impact of development on established sites and their settings. The Council will have particular regard to the impact of:

- Lighting, including that for security purposes;
- Hard and soft landscaping measures; and
- Buffer zones

It states that special attention must be paid to on-site earth mounding or planting to protect and enhance the amenities, ecological value and appearance of the surroundings in general, and of neighbouring properties of nature conservation sites in particular. Proposals for the long-term management and maintenance of landscaping proposals must also be included, which will be subject to conditions. Both the design and management of landscaping schemes should identify, protect and enhance nature conservation interests on-site and in surrounding areas.

Policy SAT1 – District and Local Shopping Centres and Shops states that in the urban areas outside the town centres of Rayleigh, Hockley and Rochford, new retail development will be permitted if:

- (a) The proposal is within or adjacent to an established local shopping centre;
- (b) The proposal will serve an identifiable local need;
- (c) It is of a size appropriate to the scale and character of the centre;
- (d) It would not adversely affect the vitality and viability of the centre or other centres; and
- (e) It would be readily accessible by public transport, bicycle or on foot.

Policy SAT2 – New Retail, Commercial and Leisure Development states that the Local Planning Authority shall adopt a sequential approach to consider the suitability of proposals for retail, commercial, public offices, entertainment, leisure and other

such proposals. The preferred location for such proposals shall be within the Town Centre boundaries of Rayleigh, Rochford and Hockley, followed by edge-of-centre sites, district and local centres, and out-of-centre sites. Having demonstrated a need for any retail development proposals, applications for retail and other such development as covered by this policy outside a town centre, will be determined having regard to the following factors:

- (a) the availability of any alternative site or sites whether allocated for the proposed use, or otherwise within a Town Centre;
- (b) the quantitative and qualitative need for the amount of floorspace proposed;
- (c) the likely impact of the development on the vitality and viability of existing town centres, including the evening economy, and on the rural economy;
- (d) the accessibility of the application site by a choice of means of transport;
- (e) the likely effect of the proposal on overall travel patterns and car use; and,
- (f) the likely harm of the proposal to the foregoing strategy.

Policy TP9 concerns London Southend Airport and highlights that within the defined area, planning permission will be granted for development that will support the operation of London Southend Airport as a regional air transport and aircraft maintenance facility, including the full realisation of its potential for increases in passenger and freight traffic, subject to there being no detriment to the local environment and nature conservation and adequate access arrangements.

Policy TP10 relates to aviation and noise, stating that in dealing with applications for development in areas likely to be affected by noise from London Southend Airport, consideration will be given to imposing conditions requiring adequate sound insulation to buildings and in extreme cases permission may be refused.

Policy PN5 regards noise generating development, stating that the District Council will expect noise generating development to be designed and operated in such a way that minimises the impact of noise nuisance on the environment. In considering proposals, the following will be taken into account:

- i. the proximity of existing or proposed noise sensitive developments;
- ii. the cumulative impact of noisy development;
- iii. the time and nature of the noise; and
- iv. the nature of the surrounding area.

Policy PN6 concerns noise sensitive development (including housing, schools and hospitals), stating that such development should not be exposed to noise nuisance from existing noise generating sources, or programmed developments.

Policy LT21 – Sports Causing Noise or Disturbance states that proposals for sport and leisure facilities and activities likely to cause noise or disturbance will be permitted where there will be no serious adverse effects on:

- a) occupiers of nearby residential properties plots;
- b) existing flora and fauna (for example overwintering birds);
- c) traffic impact or highway safety;

by virtue of the scale, siting, design, construction or operation of the activity.

Policy PN7 discusses light pollution, highlighting that details of any lighting scheme required as part of any new development should be submitted as part of the planning application. Applicants will be expected to demonstrate that the scheme proposed is the minimum needed for security and working purposes. Schemes will be refused that adversely affect:

- (a) Residential and commercial areas;
- (b) Areas of nature conservation interest;

- (c) Highway safety; and
- (d) The night sky.

Policy LT22 regards floodlighting. It stipulates that applications for development involving external lighting will only be acceptable if the following can be demonstrated:

- i. The lighting is designed to be as directional as possible using the minimum number of lights required with the aim of reducing light pollution;
- ii. A curfew time of 10.00 p.m.; and
- iii. Consideration is given to the effect of light upon local residents, vehicle users, pedestrians, local wildlife and the night sky.

### ***Current Position***

In terms of recorded crime, in January-March 2004, Rochford District had lower rates (14.1 per 1000 population) than the Essex average (22.3 per 1000), and falls significantly below the England and Wales average (27.8 per 1000 population).

The residential composition of the District consists of 85.75% owner occupied and 8.34% social rented compared to the Essex average of 75.83% owner occupied and 15.48% social rented housing. None of the Local Authority owned accommodation has been deemed unfit, although 37.5% of Local Authority dwellings fall below the 'Decent Homes Standard', which is one of the highest figures for Essex districts. In terms of house building, from 1996 to 2005 there were 2381 housing completions within the District. The average house prices in Rochford District for detached are slightly higher at £337,842 than the Essex average of £316,944. Prices for terraced housing and flats/maisonettes are also slightly above the Essex average.

The area of greenfield land lost to residential development from 1991-2001 was 165ha compared to 187ha in neighbouring Maldon District, 207ha in Chelmsford, 46ha in Castle Point and 220ha in Basildon District. The percentage of new homes built on previously developed land in 2004/05 was 90.1%. Within Our Performance Plan 2005 (Rochford District Council, June 2005), targets associated with this are 80% for 2005/06, 70% for 2006/07 and 60% for 2007/08. However, due to the limited availability of previously developed land such targeting is unreliable.

The area of designated Green Belt land within the District has remained at 12,770ha, which is reasonable compared to some other Districts.

In terms of economic development the District does not feature in the National 100 Retail Ranking index (or within the 2004 top 50 ranking). However, the major employment areas of people working in the District are the wholesale and retail sector (15.29%), financial intermediation (13.72%), manufacturing (13.22%) and real estate, renting and business activities (12.38%). The wholesale and retail trade is the most prominent employment sector in Essex (16.98%), with manufacturing (13.40%) and real estate, renting and business activities (12.87%) also of significance. The District has an unemployment rate of 2.4% which is lower than the Essex average of 3.5%.

Paragraph 11.16 of the Local Plan states that background noise levels in the District are quite low, so that the introduction of noise generating development will be especially disruptive. There is unfortunately no comparable Essex level data at present.

## **Summary**

- Significantly lower crime rates than the Essex average.
- 37.5% of Local Authority dwellings fall below the 'Decent Homes Standard', one of the highest figures for Essex districts.
- Average house prices in the District are generally slightly higher than the Essex average.
- The most prominent sectors of employment within the District are wholesale and retail, financial intermediation, manufacturing and real estate, renting and business activities.

## Population and Human Health

### International/National Position

In mid-2004 the UK was home to 59.8 million people, of which 50.1 million lived in England. The average age was 38.6 years, an increase on 1971 when it was 34.1 years. In mid-2004 approximately one in five people in the UK were aged under 16 and one in six people were aged 65 or over.

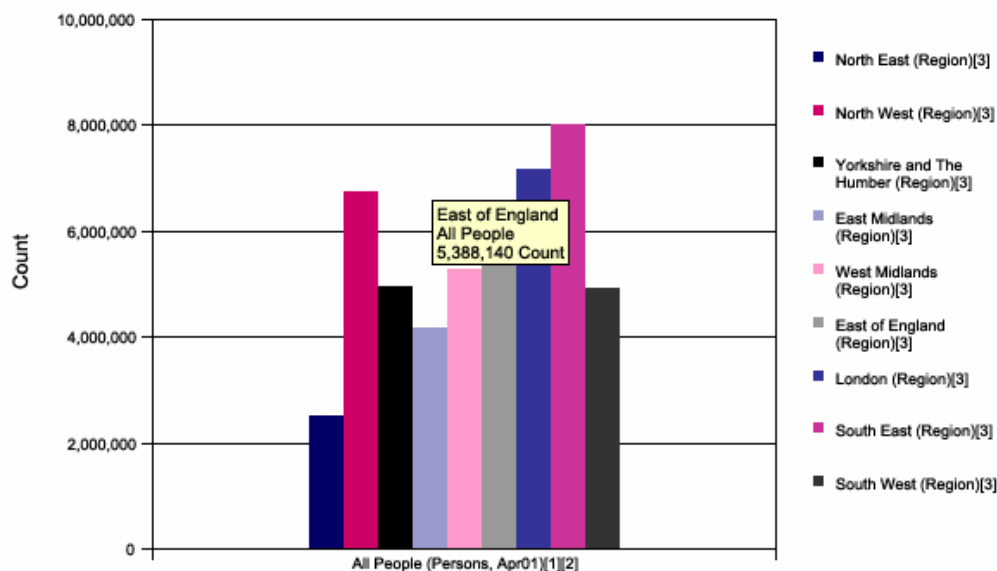
The UK has a growing population. It grew by 281,200 people in the year to mid-2004, and the average growth per year has been 0.4 per cent since mid-2001. The UK population increased by 7.0 per cent since 1971, from 55.9 million. Growth has been faster in more recent years. Between mid-1991 and mid-2003 the population grew by an annual rate of 0.3 per cent.

The UK has an ageing population. This is the result of declines both in fertility rates and in the mortality rate. This has led to a declining proportion of the population aged under 16 and an increasing proportion aged 65 and over.

In every year since 1901, with the exception of 1976, there have been more births than deaths in the UK and the population has grown due to natural change. Until the mid-1990s, this natural increase was the main driver of population growth. Since the late 1990s, although there has still been natural increase, net international migration into the UK from abroad has been an increasingly important factor in population change.

### Regional/County Position

Graph 11: Total 'All People' population figures for regions across England.

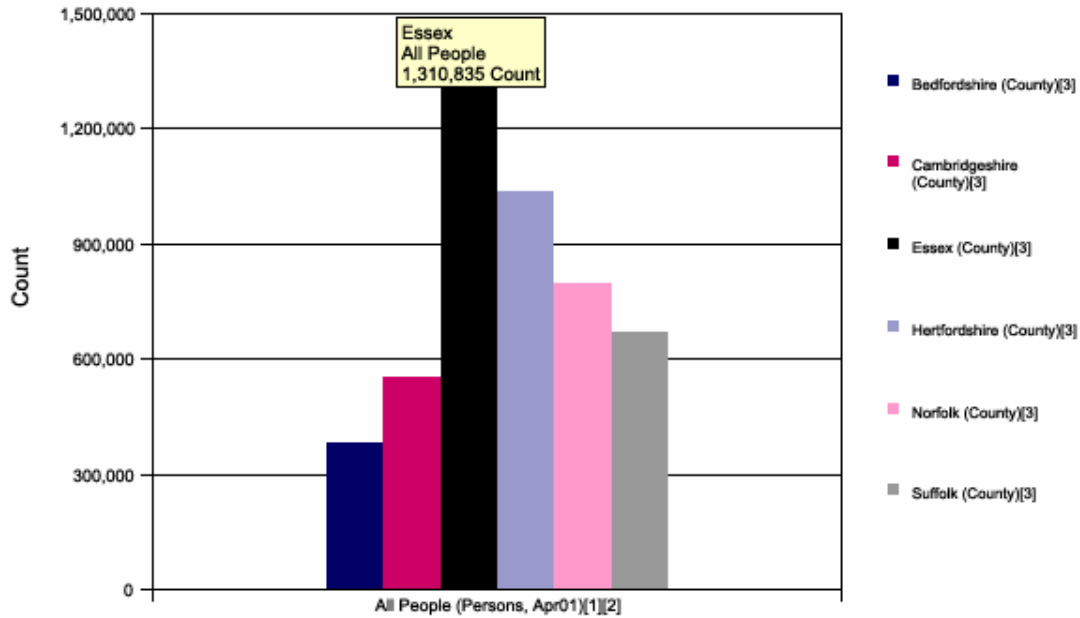


Source = National Statistics Online

Graph 11 illustrates the total 'All People' populations for the different regions across England. The Graph illustrates the East of England as having a population of approximately 5.4 Million. This is in contrast to the South East region which has the highest population of all the regions at approximately 8 million people. The region

with the smallest relative population is the north East with approximately 2.5 million people.

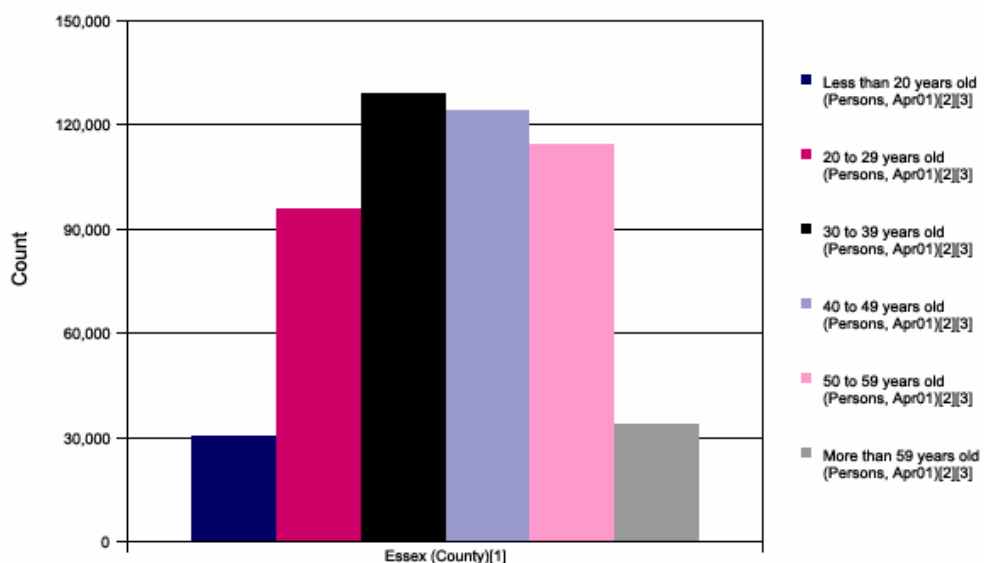
Graph 12: Total 'All People' population figures for the different counties in the East Region.



Source = National Statistics Online

Graph 12 is similar in that it shows 'All People' population figures for the different counties across the East of England region. It shows Essex has the largest population when compared with other counties at approximately 1.3 million. In comparison the county with the smallest population is Bedfordshire with approximately 400,000 people, around one third of the population of Essex. This therefore puts the Essex County as having the highest population out when compared with the other counties in the East of England.

Graph 13: Population by age group across the county of Essex.





Source = National Statistics Online

Graph 13 shows the population of the County of Essex broken down into age group. This shows the population of Essex being predominately in the 20 to 59 age group with a small proportion of young residents (less than 20 years old) and a small proportion of people of retirement age (more than 59 years old).

### ***Standards/Targets***

PSA target:

- Population: no relevant target.

- Employment: Demonstrate progress by spring 2006 on increasing the employment rate and reducing the unemployment rate over the economic cycle. (HMT and DWP)

- Health (expected years of healthy life): Reduce substantially the mortality rates from the major killer diseases by 2010: from heart disease by at least 40 per cent in people under 75; from cancer by at least 20 per cent in people under 75 (DoH)

- Education (qualifications at 19): Raise standards in schools and colleges so that: the proportion of those aged 16 who get qualifications equivalent to 5 GCSEs at Grade A\* to C rises by 2 percentage points a year; and in all schools at least 20 per cent of pupils achieve this standard by 2004, rising to 25 per cent by 2006 (DfES)

### ***Rochford Position***

An objective of the Community Strategy (Rochford District Council, April 2004) is to improve and promote the social, physical and mental health of everyone in the District by providing a variety of choices for leisure and free-time pursuits and first-class healthcare. This is to be carried out through improving access to quality health services for all residents, improving the health and wellbeing of particular groups, encouraging walking and cycling and increasing access to and the use of leisure, educational and recreational facilities. Specific actions within the Community Strategy Action Plan to address this include the construction of a health satellite clinic in West Rayleigh by 2009, subject to finding a suitable site. Preparation for the development of Rochford hospital as the main mental health service for South East Essex is also highlighted, which is due for completion by the end of 2006/2007.

Planning objective U5 from the Rochford District Replacement Local Plan (Rochford District Council, December 2005) relates to ensuring education and healthcare facilities are accessible to all, and that appropriate allocations are made within the Local Plan.

Corporate objective 5 seeks to improve the quality of life for people in the District. Planning objective I3 elaborates on this, improving quality of life through providing the best possible environment, and satisfying social needs by making accessible provision for the necessary health, housing, educational, community and leisure facilities in the interests of the total well being of all groups within the population.

There are a number of planning objectives within the Local Plan which relate to the provision/availability of leisure facilities. Objective L1 regards providing for and encouraging the provision of leisure and other community facilities and to counter, where possible, deficiencies that have arisen from past high rates of housing development. L2 relates to facilitating the provision of leisure facilities in the

countryside that can be met through dual use of school facilities, the use and provision of village halls, or appropriate conversions of farm buildings. Objective L4 seeks opportunities to improve and increase public access to the countryside, where appropriate, for recreational purposes, including the promotion of the use of more sustainable methods of transport such as walking, cycling and horse riding, so far as this is compatible with the need to safeguard natural resources, wildlife interests and rural conservation.

There are currently 3 leisure/sports centres operating within Rochford District. Of these Great Wakering Sports Centre and Clements Hall Leisure Centre are both owned by the District Council and run by Holmes Places Leisure Management. Figures for Great Wakering Sports Centre show an increase in visitor numbers of 42% from 12,385 in 2003/04 to 17,895 in 2004/05. Clements Hall Leisure Centre shows an increase in user figures of 8% from 536,012 in 2003/04 to 581,196 in 2004/05. A third District owned leisure centre in Rayleigh is currently under construction and should be completed in mid 2006. The Warehouse Centre in Rayleigh is the only privately owned leisure centre and is currently run by a charitable Christian organisation. The Community Strategy Action Plan included an objective to refurbish Clements Hall Leisure Centre, to provide new and upgraded facilities by July 2004. The construction of the New Rayleigh Leisure Centre is also planned for completion by May 2006. The Rochford District Leisure Card was also due to be launched by the end of 2004, which enables the District's residents to become members of local leisure facilities with a 25% discount on the joining fee and annual subscription.

An objective included within the Community Strategy Action Plan is to complete the creation and development of the Cherry Orchard Jubilee Country Park. The site has undergone planting, access works and the excavation of a lake, and was formally opened in 2002. When complete the Park will provide woodland walks, lakes and bridleways within the Roach Valley. Policy LT3 within the Local Plan states that the Council will establish and retain a Country Park, as defined, between Rayleigh and Rochford.

Policy LT1 – Rural Issues states that leisure and tourism proposals in rural areas will be permitted provided that the rural landscape, biodiversity and the character of the area will not be adversely affected by reason of the size, scale and design of the proposal, or by the intensity activity associated with the use.

Planning objective L3 relates to ensuring that new areas of open space enhance the surrounding countryside and the Green Belt and improve the environmental quality of the area, whilst protecting good quality agricultural land and the viability of agricultural holdings.

Policy LT2 – Public Playing Pitch Provision states that new proposals for public playing pitches, including the provision of synthetic playing pitches, will be required to meet all of the following criteria:

- (a) The finished site should be level, free draining and of sufficient size to accommodate the proposed pitches;
- (b) It should be located where there is convenient access for the local communities;
- (c) The proposed pitches are for public use;
- (d) Vehicular access to the site from the highway can be accommodated without creating a highway hazard;

- (e) It should not have an adverse impact on residential amenity, nature conservation interests or the character of the countryside;
- (f) The Local Planning Authority is satisfied that provision has been made for the area's long term retention and maintenance.

Policy LT4 relates to public open space, stating that the Council will pursue the acquisition and layout/landscaping of land off Malyons Lane (Hullbridge) and land north of Brays Land (Rochford), which have already been allocated in the Local Plan. Land at South Fambridge will also be allocated as public open space. The policy also highlights that a deficiency in allotment provision has been identified within Hockley and Hawkwell, and so the District Council will assist these Parish Councils to increase provision.

Policy LT5 – New Public Open Space states that new proposals for informal open space will be required to meet the following criteria:

- The location should have easy pedestrian access from the defined settlement it serves;
- It should not have an adverse impact on residential amenity or the character of the countryside;
- The proposed area is for public use and should remain so in perpetuity;
- The Local Planning Authority is satisfied that provision has been made for the area's long term retention and maintenance;
- The proposal should provide a local facility in scale with the community it serves; and
- Existing natural features should be retained and enhanced with the implementation of a landscaping scheme involving the planting of native species.

Policy LT6 – Protection of Open Space states that only in exceptional circumstances will the Council grant permission that would lead to the loss of existing playing pitches, children's play spaces, formal recreation areas, informal open spaces including allotments and amenity areas, whether in public or private ownership. Where open space is lost the Council will, other than in exceptional circumstances, expect open space or recreational provision of equivalent value to be provided.

Policy LT7 relates to safeguarding open space, highlighting that areas of public and private open space in towns and villages that play an important key role in the street scene, have a high townscape value, are of importance to nature conservation or are intrinsic to the character of the area, will be safeguarded. Planning applications for the development of such sites that would be detrimental to these features will be refused.

Policy LT8 – Indoor Sports and Leisure Facilities states that proposals for sports and recreation facilities will be permitted provided that the proposal meets the following criteria:

- Provides sufficient benefit to outweigh the loss of the existing land use;
- Will allow satisfactory access to the site, provide adequate off-street parking and the adjoining roads are capable of taking any increase in traffic;
- Should have nearby links to public transport;
- Will have no adverse impact regarding noise disturbance on the locality;
- Will have no adverse impact on the visual amenities of the area;
- Will have regard to the existence of similar facilities with the locality; and

- Conforms to other policies of the Plan including the irreversible loss of the best and most versatile agricultural land (Grades 1, 2 and 3a), Metropolitan Green Belt, SSSIs or other sites of nature conservation interest, SLAs and the Coastal Protection Belt.

Policy LT9101 – Children’s Play Facilities stipulates that the Council will seek opportunities to provide and improve children’s play space, having special regard to the needs of older children. On new housing schemes developers will provide:

- a) A play space in accordance with the adopted standards of the District Council’s criteria contained in LPSPG1; or
- b) Enhancement of existing play space where all or part of the proposed development lies within 400m of the centre of existing play space; or
- c) A combination of (a) and (b); or
- d) Where the above cannot be fulfilled, the LPA will seek to negotiate a commuted sum from developers to be paid to the District Council for the provision or enhancement of children’s play space.

Policy LT1012 sets out the criteria to which new play space must comply:

- a) It will be easily accessible by local residents, secure and easily visible;
- b) It will be equipped according to the standards of the District Council;
- c) A commuted sum is provided for the long-term maintenance of the open space;
- d) It will not have an adverse impact on residential amenity, nature conservation interests or character of the countryside;
- e) The play space is for public use in perpetuity;
- f) Pedestrian access exists or will be provided via a footpath giving safe access to the site.

The Homelessness Strategy (Rochford District Council, July 2003) includes 20 aims within its Action Plan. These include preventing homelessness arising/recurring by providing housing advice services in the most cost-effective way (action reference 3). The associated action required is the review of housing advice services, inviting external agencies to tender for the provision of such services and the evaluation of these outcomes. This is currently an ongoing objective and is being reviewed for the next Homelessness Strategy due for publication in 2006. Action reference 5 aims to prevent homelessness arising/recurring by improving the availability of private rented housing, through discussion with private landlords on the schemes required, assessment of options and finally the implementation and evaluation of the scheme. As a result of this a rent and deposit scheme was put in place in April 2005. Action reference 16 seeks to provide a customer focussed approach by ensuring that health services fully engage with homelessness. This is to be carried out through the production and implementation of an improvement plan for PCT/health service providers, which is still ongoing and being reviewed for the next Homelessness Strategy. Our Performance Plan 2005 (Rochford District Council, June 2005) states that in 2005/06 there will be a 5% reduction in the number of vulnerable households in temporary accommodation.

The Community Strategy includes an objective relating to education. It aims to enable all residents to access high quality education, training and skills development opportunities to ensure a thriving local economy now and in the future. This is to be achieved through increasing opportunities for people of all ages to receive a good education and to gain new skills, increasing the facilities for learning within the District and working together to identify and address local learning needs. Actions within the Community Strategy Action Plan relating to these include the widening of adult participation in lifelong learning opportunities through increased numbers of

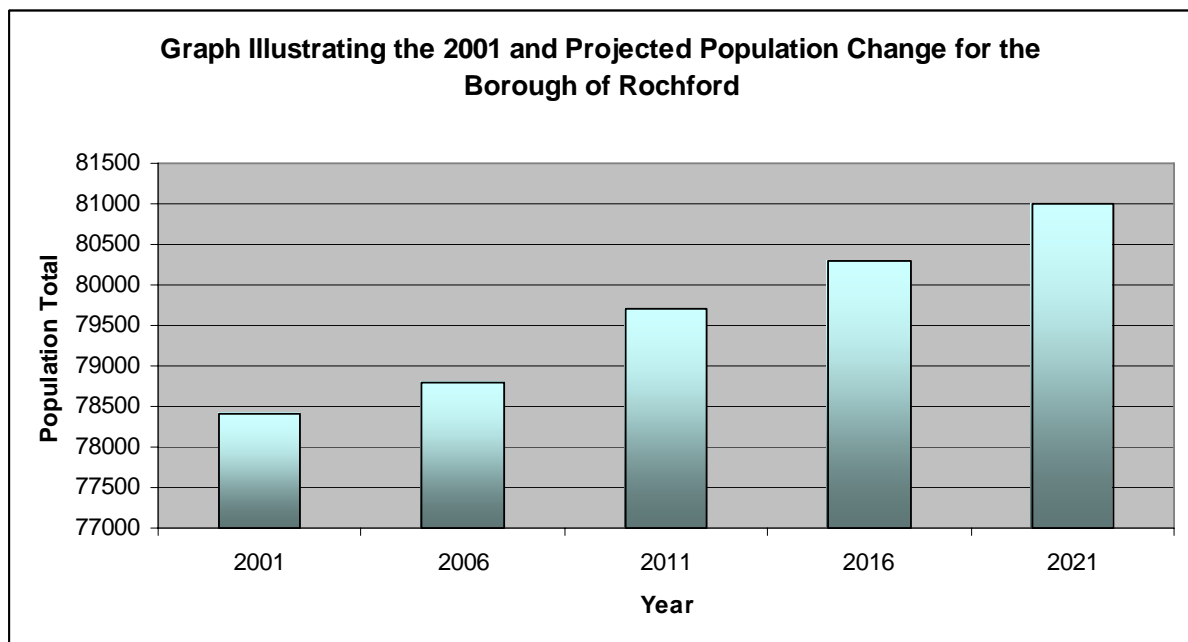
adults attending college courses by 2005, increasing the number of local employers whose staff are receiving training by 2005 and developing the Extended Schools Programme (consultation and forward planning to be completed by July 2004).

**Current Position**

The resident population of Rochford district, as measured in the 2001 Census, was 78,489 of which 49 per cent were male and 51 per cent were female. The sex composition of Rochford District is similar to that of Essex County Council in 2001 with 48.8% of the Essex population male and 51.2% female. In 2001, 20 per cent of the resident population were aged under 16, 57 per cent were aged between 16 and 59, and 23 per cent were aged 60 and over. The mean average age was 40. This compared with an average age of 39 within England and Wales.

In analysing the social, economic and environmental characteristics of Rochford District it is important to be aware of the projected population change anticipated for the district. This will provide an understanding as to the amount of population change likely to be experienced within the district of Rochford. Graph one illustrates the 2001 and the future projected population change for the District of Rochford.

Graph 14

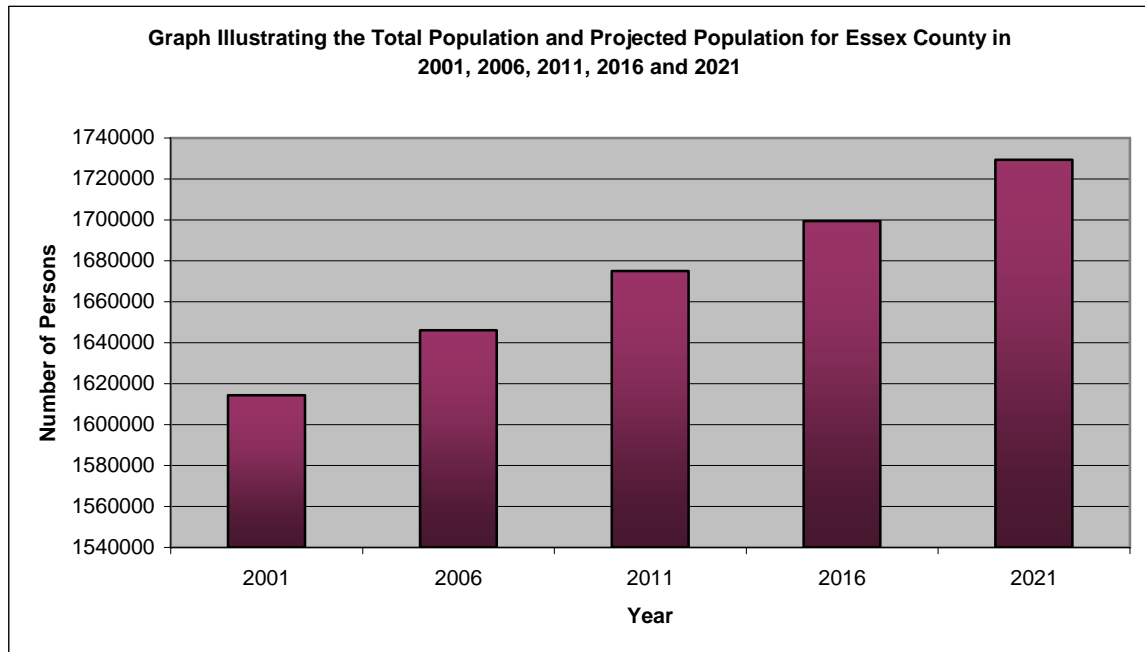


Source; Total Regional Planning Guidance 14 Submission, 29<sup>th</sup> March 2005 (Note the population projection assumes dwelling provision will be implemented at the annual average rate of provision set out in policy H2 of the Regional Spatial Strategy 14.)

Graph 14 demonstrates the population within the Rochford District in 2001 and the projected alterations in the population size assuming the dwelling provision outlined in the Draft East of England Plan (2004) will be implemented within Rochford. In 2001 the population of Rochford was 78, 400 persons, it is anticipated that by 2021 the population within the District will be 81, 000 persons. The total population within Rochford District is therefore expected to increase by 3.2% throughout the period 2001-2021. Graph 15 illustrates the total population change anticipated for Essex

allowing comparison between the total growth rate for Essex and that of the District of Rochford.

Graph 15



Source; Total Regional Planning Guidance 14 Submission, 29<sup>th</sup> March 2005 (Note the population projection assumes dwelling provision will be implemented at the annual average rate of provision set out in policy H2 of the Regional Spatial Strategy 14.)

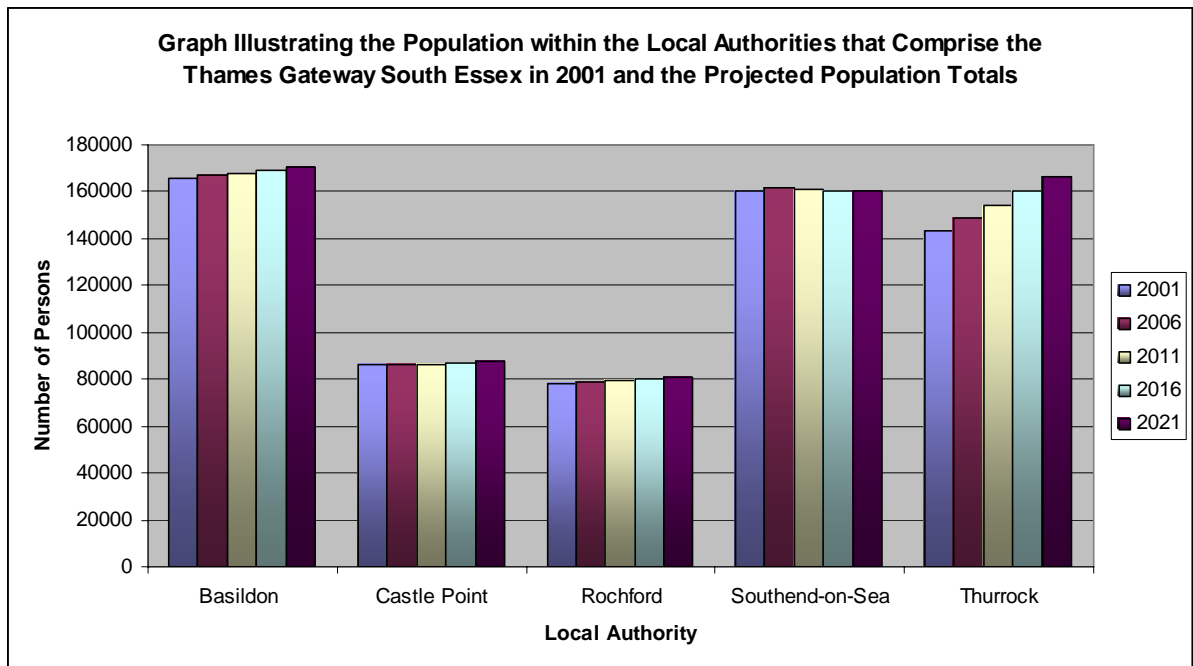
Graph 15 demonstrates that the population within the County of Essex in 2001 was 1,614,400 persons and is anticipated to increase by 2021 to 1,729,400 persons. The total population increase for Essex from 2001-2021 is 6.6%, therefore the projected population increase for the District of Rochford is 50.1% less than the anticipated rise in population throughout Essex.

### Thames Gateway South Essex Sub Regional

The Thames Gateway South Essex sub-region comprises of the five authorities of Basildon, Castle Point, Rochford, Southend-on-Sea and Thurrock and it forms the largest urban area within the East of England. It comprises of a mix of urban and natural environments and at 2001 the population total for the sub region was 633,800 representing approximately 12% of the East of England regional total.

Graph 16 illustrates the population within the local authorities that comprise the Thames Gateway South Essex and the projected population growth from 2001-2021. The population growth figures are based on the number of housing anticipated to be constructed as outlined in the Draft East of England Plan (2004).

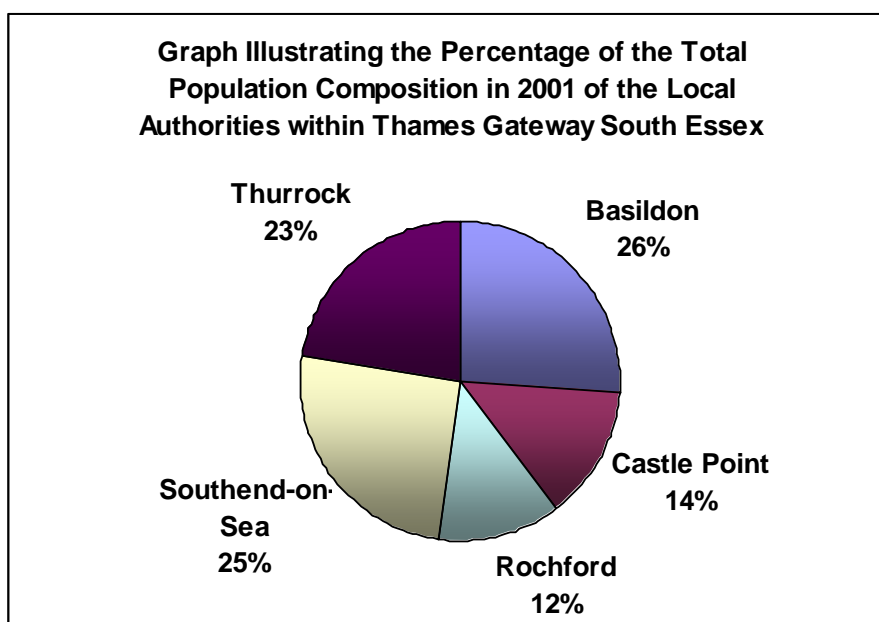
Graph 16



Source; Total Regional Planning Guidance 14 Submission, 29<sup>th</sup> March 2005 (Note the population projection assumes dwelling provision will be implemented at the annual average rate of provision set out in policy H2 of the Regional Spatial Strategy 14.)

Graph 16 demonstrates that the District of Rochford is anticipated to continue to have the lowest population total of all the Thames Gateway South Essex districts. Furthermore the increase in population throughout this period is expected to remain fairly constant as the total population is predicted to increase by 3.2%. Clearly Thurrock is expected to experience the greatest increase in population throughout this period. Graph 17 illustrates the proportion of the population within Thames Gateway South Essex that live within each district authority.

Graph 17



Source; Adapted from Total Regional Planning Guidance 14 Submission, 29<sup>th</sup> March 2005 (Note the population projection assumes dwelling provision will be implemented at the annual average rate of provision set out in policy H2 of the Regional Spatial Strategy 14.)

Graph 17 illustrates that in 2001 Rochford (12%) contains the least proportion of the population within Thames Gateway South Essex, whilst the neighbouring authorities of Basildon (26%) and Southend-on-Sea (25%) have the greatest proportion of the population in the sub region.

#### Population Density

Table 7 shows the number of persons per hectare and the average household size within the District of Rochford, Essex County, the East of England region and England and Wales in 2001.

Table 7

Population Density within Rochford District, the County of Essex, the east of England region and England and Wales in 2001

<b>Density</b>	<b>Rochford District</b>	<b>Essex County</b>	<b>East of England Region</b>	<b>England &amp; Wales</b>
<b>Number of People Per Hectare</b>	<b>4.6</b>	<b>3.8</b>	<b>2.8</b>	<b>3.4</b>
<b>Average Household Size</b>	<b>2.44</b>	<b>2.38</b>	<b>2.37</b>	<b>2.36</b>

Source : Office for National Statistics, 2001

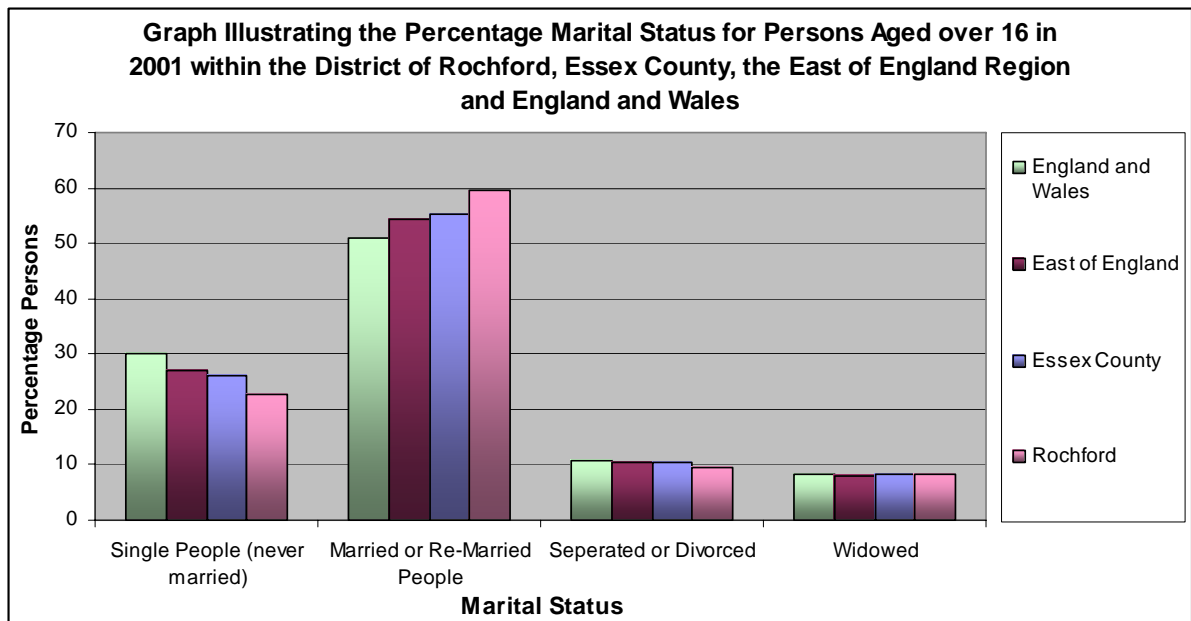
Table 7 clearly demonstrates that the District of Rochford contains more persons per hectare than the County of Essex (3.8 persons), the East of England region (2.8 persons) and England and Wales (3.4 persons). The average number of persons per hectare within the East of England region is of greatest divergence to the trend displayed by the District of Rochford in 2001. Table 7 also outlines the average household size and indicates that in 2001 the District of Rochford contained a marginally greater average household size than Essex County, the East of England Region and England and Wales.

#### Marital Status

Graph 18 illustrates the marital status of persons aged over 16 years within the District of Rochford, the County of Essex, the East of England Region and England and Wales in 2001.

Graph 18





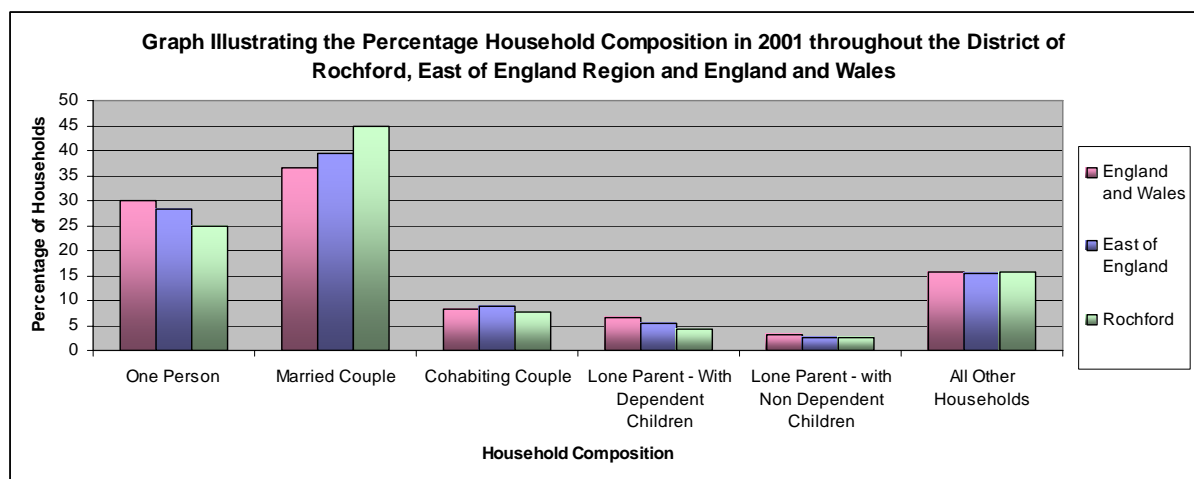
Source; Office for National Statistics, 2001

Graph 18 illustrates that the percentage of persons that are widowed within the District of Rochford is similar to the trends displayed at the County, regional and national scale. The percentage of persons that are separated or divorced throughout the District of Rochford is marginally less than the other comparators. However the percentage of persons that are married or re-married within Rochford (59.7%) is greater than the percentage for Essex (55.2%), the east of England Region (54.3%) and England and Wales (50.9%). The number of single people within the District of Rochford (22.6%) is less than that of the comparators. Marital status clearly will influence the type and design of residential dwelling demanded within a local authority.

#### Household Composition and Type

Graph 19 outlines the percentage household composition for persons within England and Wales, the East of England region and the District of Rochford in 2001.

Graph 19



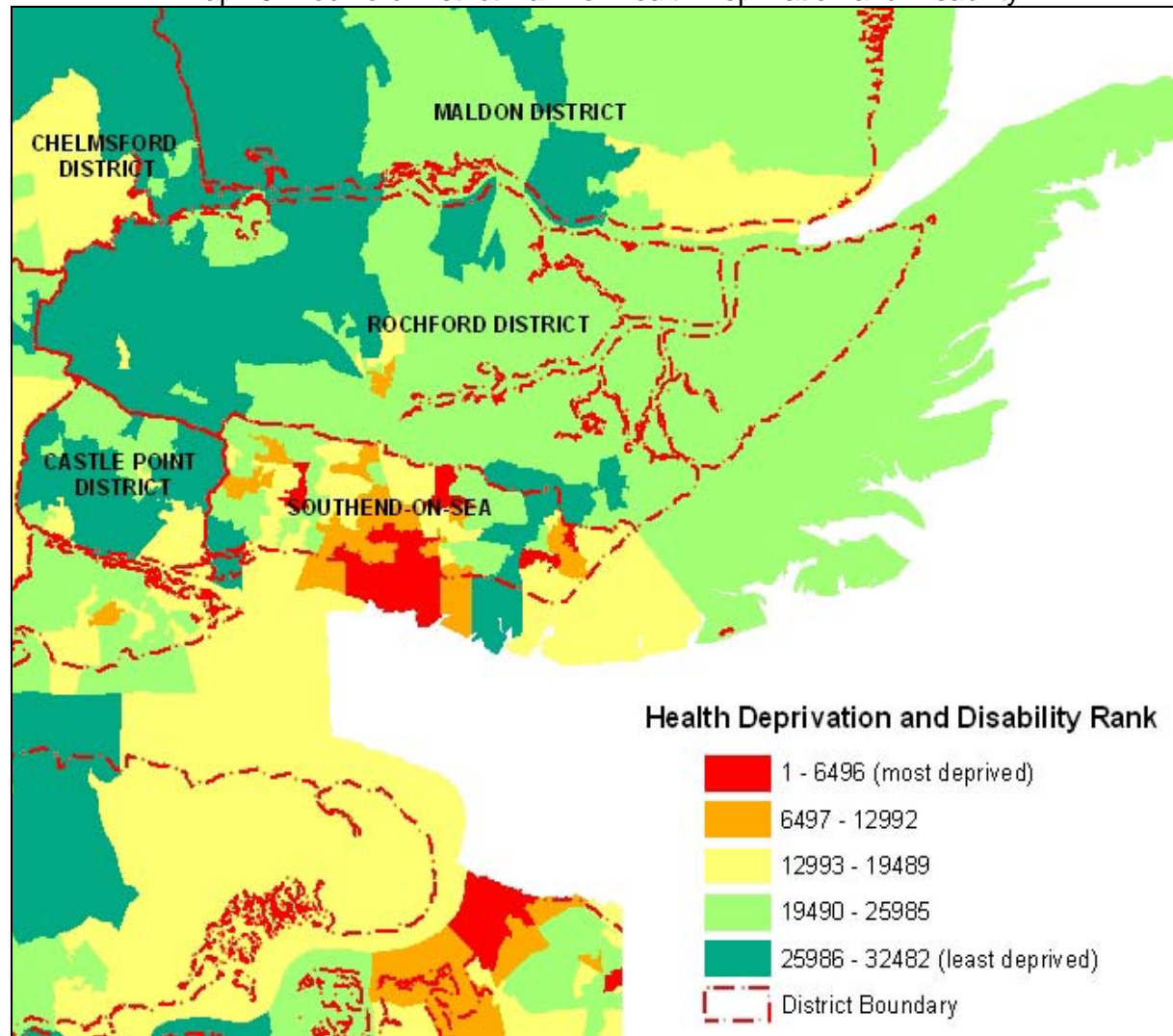
Source; Office for National Statistics, 2001

Graph 19 illustrates that the household composition for the District of Rochford, the East of England region and England and Wales in 2001. Rochford (24.9%) contains a marginally lower proportion of one person occupancy households than the East of England (28.3%) and England and Wales (30.0%). The District of Rochford also displays a divergence to the regional and national trend, as there is a greater proportion of married persons with the district. However the district demonstrates similar trends in the number of cohabiting couples, lone parents with dependent children and lone parents with non dependent children. It is important that when deciding upon the type of dwelling to construct or potential design implications for residential dwellings regard should be given to the household composition to ensure that housing needs continue to be adequately addressed.

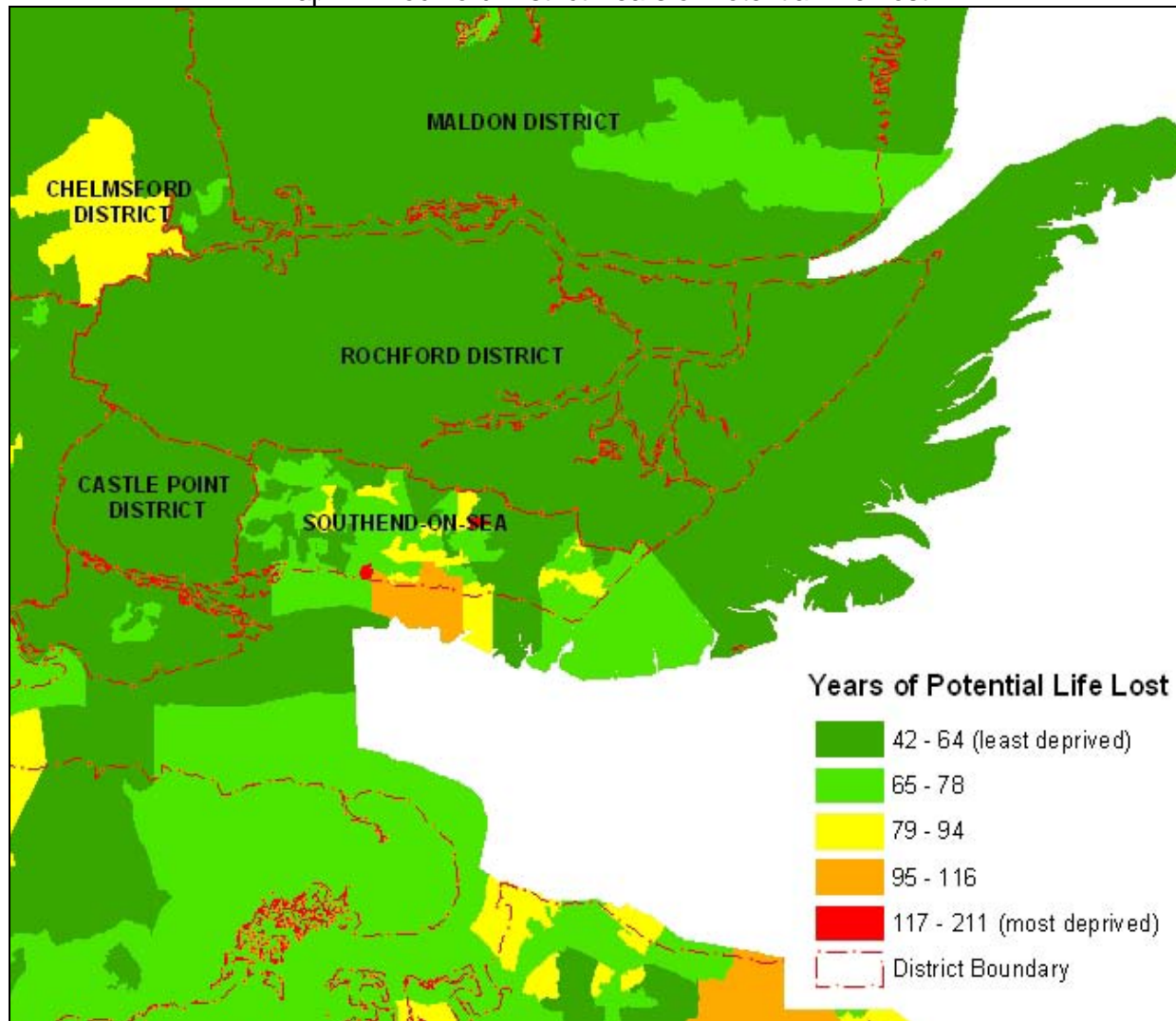
In terms of health of its households the District has a similar percentage of those in 'not good health' than Essex as a whole, 7.20% compared to 7.65%. The percentage of the population suffering from long term illness in the District (15.80%) is also similar to the Essex figure of 16.40%. The life expectancy of males in Rochford District is slightly higher than the Essex average, at 78.5 years and 77.7 years respectively. Female life expectancy is also slightly higher than the Essex average (82.2 years compared to 81.5 years). The number of those killed and seriously injured in road accidents in the District is quite low compared to other districts. The number of fatal road accidents in the District in 2004 was 4, compared to Epping Forest District with 17 fatal accidents, the highest in the county. Those seriously injured in the District totalled 41 in 2004, compared to the greatest number of seriously injured, 119 in Colchester District. The number of slight injuries (182) was also significantly lower than Chelmsford District, where the greatest number occurred (520).

Indices of Multiple Deprivation place Rochford with a rank of average score of 316 with the Rank of Income Scale being 299 and Employment Scale of 302. This compares to the Essex average of 121 and Rank of Income and Rank of Employment Scale of 5. The rank of health deprivation and disability and years of potential life lost in Rochford District are displayed in figures 33 and 34 below. The majority of the District falls under the 'least deprived' category. Satisfaction with local authority facilities within the District is quite high for sports and leisure facilities (53% satisfaction in 2003/04) and libraries (72% in 2003/04). However, satisfaction with museums (22%) and theatres and concert halls (38%) suggests a need for improvement in these facilities. Targets for 2006/07 with regard to residents' satisfaction have been set within Our Performance Plan 2005 (Rochford District Council, June 2005). The target for satisfaction with Local Authority sports and leisure facilities for 2006/07 is 60% and for parks and open spaces, a figure of 80%. Rochford District has adopted a general policy of providing 2.5 hectares of open space per 1000 population. In all urban settlements, residential areas should be within half a kilometre of a large open space (at least 2 hectares) or within one fifth of a kilometre of a small open space (at least 0.4 hectares).

Map 20: Rochford District Rank of Health Deprivation and Disability



Map 21: Rochford District Years of Potential Life Lost



Rochford District records 56 households as homeless in 2002/03, which is low compared to the other districts for which data is available. The District has a similar socioeconomic classification to Essex as a whole.

In 2004 the percentage of 15 year olds achieving 5 or more A\*-C grades at GCSE level (and equivalent) in Rochford District was 67.3%, which is significantly greater than the Essex average of 55.4% and the national mean of 53.7%. Furthermore, regarding the educational attainment of the working age population, the percentage of those without a Level 2 qualification for 2003/04 was 31.1% in Rochford District, compared with a figure of 34.7% nationally.

### ***Data Limitations***

Some of the data sourced from the 2001 Census results will not be updated until the next Census in 2011; therefore alternative sources may have to be located for the future supply of data.

### ***Summary***

- Indices of Multiple Deprivation place Rochford District with a rank of average score of 316, a rank of income scale of 299 and rank of employment scale of 302.
- The percentage of 15 year olds achieving 5 or more A\*-C grades at GCSE level (and equivalent) in 2004 was 67.3%, which is considerably higher than the Essex average of 55.4% and the national mean of 53.7%.
- Educational attainment of the working age population, the percentage of those without a Level 2 qualification for 2003/04 was 31.1%, compared with a figure of 34.7% nationally.

## **Cultural Heritage and Material Assets**

### ***International/National Position***

Under the Treaties of Rome (1957) and Maastricht (1992) and the Draft European Constitution (2003), conservation of European cultural heritage is a consideration for all EU activities. There are however no EU Directives covering cultural heritage. Almost all European countries have ratified the Council of Europe's Valletta Convention (1992) and the Granada Convention (1985) on Archaeological Heritage, and many (though not yet the UK) are signatories to the Florence Convention (2000) on European Landscape. Most European countries have signed (although several including the UK have not yet ratified) the UN Economic Commission for Europe Aarhus Convention (1998) on Environmental Information. Increasingly, cultural heritage is being recognised as an important aspect of sustainable development, as is reflected in the Council of Europe's Guiding Principles for Sustainable Spatial Development of the European Continent (2002), in the EU SEA Directive (2001) and the EIA Directive (1985).

Although the current framework, 'A better quality of life: a strategy for sustainable development for the UK' (DEFRA, 1999) refers to cultural heritage, it is not a major aspect of UK sustainability at a strategic level. However, with the publication of the Government's statement 'The Historic Environment: A Force for Our Future' (DCMS 2001), the importance of the historic environment to people's quality of life is highlighted. Within development planning, the historic environment has become a more significant aspect of sustainability, as exemplified by PPG15 and 16 for example. PPG 16 provides guidance on how archaeology is to be dealt with in the planning framework; PPG15 provides similar advice with respect to listed buildings and conservation areas. Further guidance documentation regarding heritage includes English Heritage's statement on sustainability (English Heritage, 1997) and a joint statement by English Heritage, English Nature and the Countryside Agency (Countryside Agency *et al.*, 2001).

### ***Regional/County Position***

In the East of England there are 57,643 listed buildings, 211 registered parks and gardens, a registered battlefield at Maldon, approximately 1,600 scheduled monuments and 1,100 areas of special architectural or historic interest, designated as Conservation Areas. English Heritage has identified 2% of the region's listed buildings as being 'at risk of decay' (Our Environment, Our Future: The Regional Environment Strategy for the East of England. East of England Regional Assembly and East of England Environment Forum, July 2003). It is difficult to quantify the archaeological resource, but there are approximately 150,000 archaeological sites currently recorded on County Sites and Monuments Records.

The existing regional strategy for Essex is 'saved' RPG9 – South East. This will be superseded by RSS14 (Regional Spatial Strategy for the East of England). RSS14 will set out a strategy to guide development in the East of England for the next 20 years. A number of the policies in RSS14 will address the aims set out in The Regional Environment Strategy, Our Environment, Our Future (July 2003).

The historic environment has to be managed, conserved and enhanced in a holistic way. Most of what is regarded as the natural environment is actually a human creation often of considerable antiquity, so that an integrated approach to the natural and historic environment is necessary. Regional Spatial Strategies and Local

Development Frameworks provide mechanisms through which this can be achieved. Accordingly, in recognition of the Governments clear intention set out in 'Force for our Future' in promotion of cross department and inter-agency working in management of the historic environment, Countryside Agency, English Heritage, English Nature and the Environment Agency have recently issued Environmental quality in Spatial Planning: incorporating the natural, built, and historic environment, and rural issues into plans and strategies (Countryside Agency *et al.*, 2005). This seeks to promote a holistic approach to planning for the natural and historic environment, by encouraging the incorporation of appropriate policies in Regional Spatial Strategies and Local Development Frameworks.

Historic Landscape Characterisation (sponsored by English Heritage) is being completed on a county-by-county basis. The HLC approach is related to two national frameworks – the Countryside Agency's 'Countryside Character Map' which itself recognises the fundamental historic character of the countryside, and English Heritage's 'Atlas of Settlement Diversity'. Most recently English Heritage in partnership with Essex County Council and Kent County Council has carried out a Historic Environment Characterisation Project for Thames Gateway which is the first attempt to develop a holistic approach characterizing the historic environment. Similar studies have been commissioned by Rochford and Chelmsford Districts to inform the creation of their LDFs. Such characterization can be of use in understanding the capacity and sensitivity of areas in accommodating new development, or in assessing particular planning proposals as they come forward.

Outside the planning system a critical means for enhancing the conservation and management of the historic environment in rural areas is provided by the Environmental Stewardship scheme administered by DEFRA. Environmental Stewardship provides funding to farmers who manage their land sensitively and effectively, with a primary objective being to protect the historic environment.

### ***Rochford Position***

Rochford contains a rich and varied heritage and archaeological resource. The Essex Historic Environment Record (HER) maintained by Essex County Council contains nearly 1500 records including 327 listed buildings and 1126 archaeological records which includes 5 Scheduled Monuments. A detailed summary of the historic Environment can be found in the Rochford District Historic Environment Characterisation Report (Essex County Council and Rochford District Council, 2005) produced for the Local Development Framework.

The geological foundation of the District has had a profound impact on the nature and location of human settlement in the area with the geological deposits containing the evidence for Palaeolithic remains, with particularly important sites in the Barling region. The Mesolithic period is particularly well represented especially along the Crouch Estuary, with flint assemblages indicating a date of 8000-6800 BC.

Occupation of Neolithic, Bronze Age and Iron Age is present across the District with a significant expansion of settlement in the Bronze and Iron Ages.

The District was exploited throughout the Roman period. The free draining soils were exploited for grain production, with the coastal marshes exploited for grazing sheep and salt production. Numerous red hills associated with salt production have been found along the coast. These resources were exploited by a series of farms across the District.

Evidence of Saxon settlement is plentiful with many of the place-names appearing to refer to early settlements. A range of cemeteries or burial goods have been recovered from the District including the recent finding of an early Saxon cemetery at Rayleigh and the Royal tomb just over the border at Prittlewell.

The medieval towns comprise the castle town of Rayleigh and the market town of Rochford (both described in the Historic Town Surveys). The medieval settlement pattern was generally dispersed in character with Church/Hall complexes providing focal points. The church and hall are generally in close proximity to each other, however in the coastal parishes the church tends to be located on high ground with the hall placed close to the marsh or creek, so as to benefit from access to the sea.

Throughout the post-medieval period Rochford remained essentially rural, with the sheep pastured on the marshes remaining an important part of the economy.

The modern period saw significant development and changes, both in the agricultural industry and in towns. New developments including the construction of the railways brought expansion of the urban areas especially around Rayleigh and Hockley. During both World Wars the District was heavily defended. These had a marked effect on the historic environment of the area, with the construction of the General Headquarters Defence line running through the District and the important airfield at Rochford.

Corporate objective 6 from the Rochford District Replacement Local Plan (Rochford District Council, December 2005) is to maintain and enhance local heritage and culture. This is also highlighted in several other objectives/policies. Planning objective I5 aims to retain, conserve and enhance the built and natural environments, including the architectural and historical heritage, flora, fauna and their habitats, throughout the district. Objective B1 is more specific to heritage and the historic environment, highlighting the importance of protecting and enhancing the historic character of settlements, particularly within the Conservation Areas. The retention of all listed buildings, SAMs, other nationally important monuments and important archaeological sites and their settings is also discussed.

Policy CS7 further links to the above, stating that it is the Council's aim to:

- (a) Conserve and enhance buildings and their settings and areas of architectural and historic significance;
- (b) Conserve, protect and enhance green spaces, hard landscaped spaces, as well as spaces between buildings that make a contribution to an area or the district; and
- (c) Encourage a high standard of design for new development that respects and enhances the environmental quality and character of the district's urban and rural heritage.

Planning objective B2 states that a detailed assessment of each Conservation Area should be formulated and published, indicating townscape features, buildings and spaces that distinguish the character of each Conservation Area, which are to be taken into consideration as supplementary planning guidance when new development is being proposed.

There are also a number of policies within the Local Plan which relate to Conservation Areas. Policy BC1 – Conservation Areas General, states that the Local Planning Authority will preserve and enhance the character and appearance of Conservation Areas, including the buildings, open spaces, trees, views and other



aspects of the environment that contribute to the character of such areas. Applications for new buildings, extensions and alterations within, or affecting, Conservation Areas, will be permitted provided that the following design criteria are met:-

- (a) The design and siting of the proposal respects the townscape character, and the proposal logically forms a part of the larger composition of the area in which it is situated;
- (b) The mass of the proposal is in scale and harmony with adjoining buildings and the area as a whole, and the volumes making up its block form are proportioned such that they form a satisfactory composition with each other and with adjoining buildings;
- (c) The proposal uses appropriate architectural detailing to reinforce the character of the Conservation Area within which it is sited. Architectural details in the new building would be expected to complement the existing development;
- (d) The external materials are appropriate to the particular building and to the character of the area; and,
- (e) In the case of shopfronts, the proposal exhibits a high standard of shopfront design, reflecting the traditional character of the particular Conservation Area.

Policy BC2 – Demolition within Conservation Areas states that consent for the demolition of a building in a Conservation Area will only be granted in cases such as the building to be demolished is of no architectural/historical interest and makes no positive contribution to the character/appearance of the Conservation Area. Demolition can also occur if detailed plans for the after-use of the site have been submitted to, and approved by, the Local Planning Authority. If sufficient evidence has been provided to display that the building is beyond reasonable repair (having regard to its structural condition, the cost of repairing and maintaining it in relation to its importance, and to the value derived from its continued use; and that every effort has been made to find compatible alternative uses for the building and to sell it on the open market at a price reflecting its structural condition), then it may be demolished.

Planning objective N2 relates to the safeguarding of visually and historically important trees and woodland.

Policies BC3 and BC4 relate to the alteration and demolition of listed buildings. The former states that alterations and additions, or changes of use, to a listed building will not be permitted if they adversely affect important architectural or historic features, either internal or external, which contribute to its character, to the scale and proportions of the building or to the preservation of its setting. The choice of materials for new additions to listed buildings will be expected to complement the original materials of construction. Policy BC4 highlights that consent for the demolition of a listed building will only be granted in wholly exceptional cases, where all of the following criteria are met:

- i. the building is structurally unsound and cannot reasonably be made safe, and / or
- ii. all reasonable efforts have been made:-
  - a) to maintain the existing use of the building;
  - b) to find compatible alternative uses for the building;
  - c) to sell the building on the open market at a realistic price reflecting the building's condition; and,
  - d) to seek preservation of the building through charitable or community ownership, but that all of these efforts have failed; and,

- iii. that demolition and subsequent redevelopment of the site would produce substantial benefits for the community which would decisively outweigh the loss arising from demolition; and,
- iv. in the case of a listed building situated within a Conservation Area, detailed plans for the after-use of the site have been submitted to, and approved by, the Local Planning Authority.

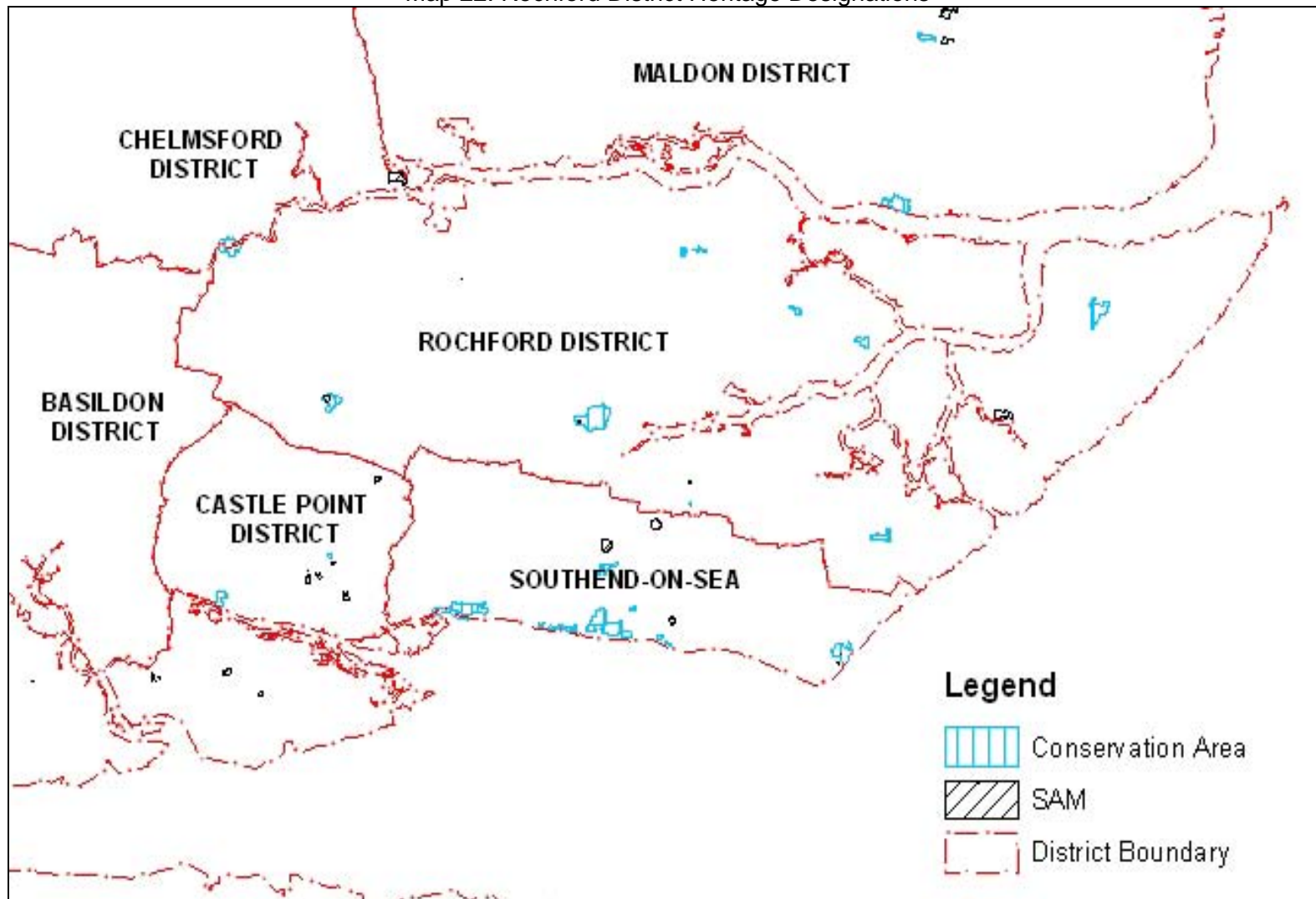
Policy BC5 – Development Affecting Archaeological Sites stipulates that applications for development that would affect sites of known archaeological importance must be accompanied by sufficient information (usually an archaeological field evaluation). Policy BC6 – Development Affecting Regional, County and Local Archaeological Sites states that in cases where archaeological sites and monuments of regional, county or local importance, and / or their settings, will be affected by a proposed development, they should be preserved *in situ* if at all possible, and conditions will be imposed on any permission granted to this end. In cases where preservation is not possible or merited, conditions will be imposed to ensure that a programme of archaeological investigations and recording takes place prior to the commencement of the development.

### **Current Position**

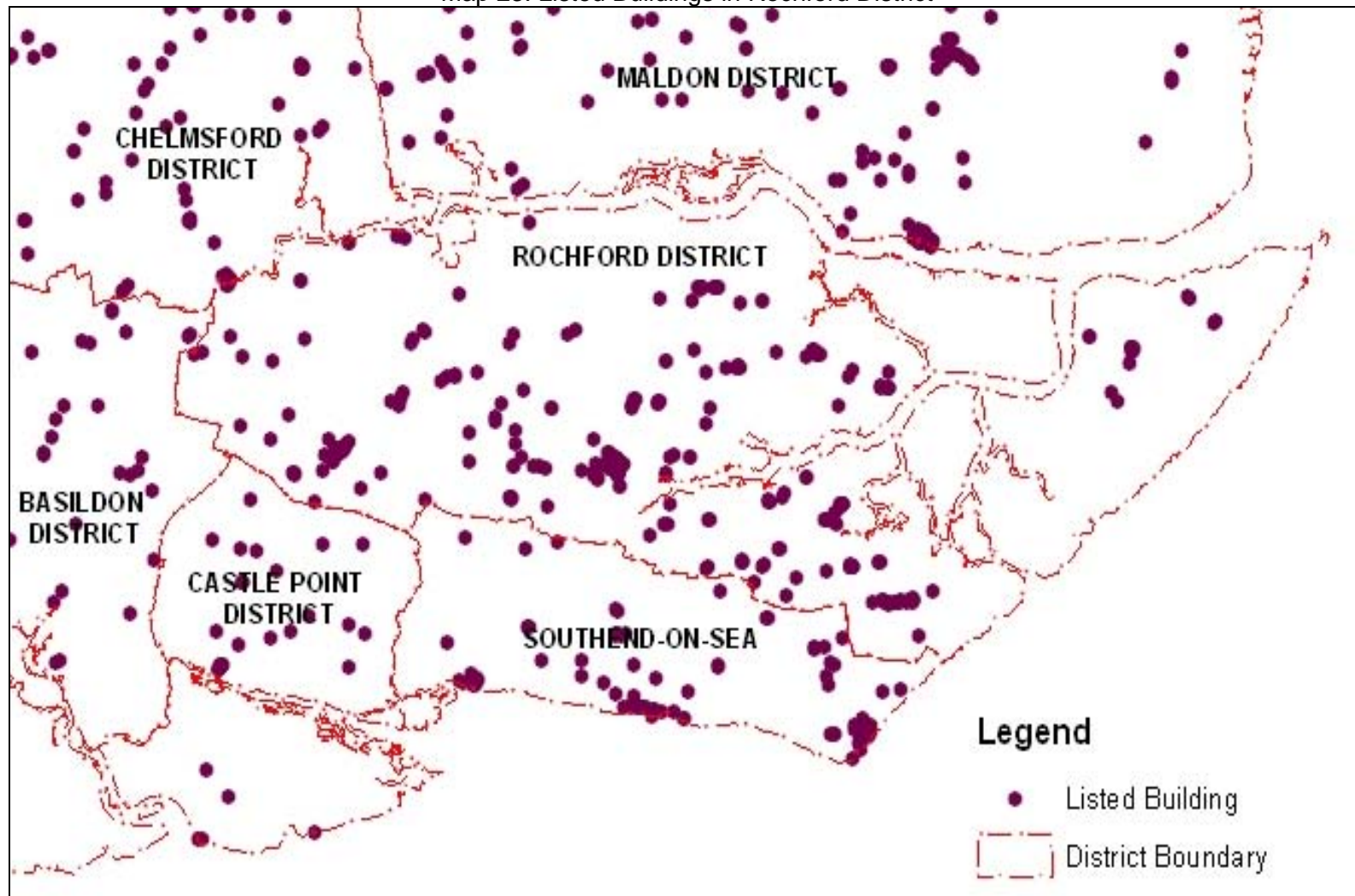
Rochford District has 5 Scheduled Ancient Monuments, 327 listed buildings, 1 of which, Rochford Hall, is Grade I listed. There are 17 Grade II\* listed buildings and the remaining 309 are designated as Grade II. The number of listed buildings at risk in the district has decreased from 8 in 2004 to 7 in 2005. Rochford also has 1126 archaeological records.

The District has 1 registered village green, Norpits Beach at Canewdon, with an area of 2.30ha. There are also 3 commons, with the largest recorded at Great Wakering (5.86ha). In total the measured commons within the District have a hectareage of 6.48ha, which is a small area when compared to the Essex total of 1154.24ha. There are no registered parks/gardens within the District. There are a total of 10 Conservation Areas, with the largest being Rochford at 365,798m<sup>2</sup>. These sites are defined as having 'special architectural or historical interest, the character of which it is desirable to preserve or enhance'. Maps 22 and 23 display heritage designations in Rochford District.

Map 22: Rochford District Heritage Designations



Map 23: Listed Buildings in Rochford District



### ***Data Limitations***

The data utilised concerning commons and village greens are only those that have been registered. Therefore it may not be a very accurate record of the precise number of sites. Moreover, it is not known when this data will be updated, and so an alternative source may have to be found. Unfortunately, there is no data available concerning the condition of the commons and village greens, which would have been useful in ascertaining the quality of this part of our heritage.

The information on the archaeological sites and deposits retained on the Historic Environment Record only shows the known sites and does not take into account the potential for previously unrecorded archaeological deposits, which are continuing to be found on development sites. Both Chelmsford and Rochford have undertaken Historic Environment Characterisation Projects to allow a better understanding of the overall historic landscape rather than relying on known archaeological sites and find spots.

### ***Summary***

- There is evidence of occupation of the District during the Palaeolithic, Mesolithic (especially well represented), the Neolithic and the Bronze and Iron Ages.
- The district has 1126 archaeological records of which 5 are protected as Scheduled Ancient Monuments and 327 listed buildings, 7 of which are on the Buildings at Risk register.
- There are 3 commons, 1 village green, 0 registered parks and gardens and 10 Conservation Areas.

## Significant Issues and Trends

Rochford District has a number of designated natural areas. There are 2 RAMSARs (also designated as SPAs), the Crouch and Roach Estuaries and Foulness. In total there are 3 SSSIs, 175.87ha of ancient woodland, 59 County Wildlife Sites (CWS) within the District. There are also 4 LNRs, with the largest being Hockley Woods at 91.50ha.

At present however, 2 out of the 3 SSSIs within the District are not meeting PSA targets - 90.25% of the SSSI area in the District is in an 'unfavourable declining' state, with the remaining area being classed as 'unfavourable no change.' The poor condition of SSSIs could possibly be attributed to coastal squeeze, low water levels and inappropriate scrub control.

There are three Landscape Character Areas identified within the District: Crouch and Roach Farmland, Dengie and Foulness and South Essex Coastal Towns. The sensitivity of LCAs in the district to different developments and changes is quite variable. The most sensitive areas are the Dengie and Foulness, which are highly sensitive to 8 out of the 10 developments. The development that has the greatest potential impact upon these 3 LCAs is utilities development, such as masts and pylons, with all LCAs being highly sensitive to such development.

With Regards to air pollution, seven significant junctions with traffic flows of more than 10,000 vehicles per day have been identified in the District. At all of these junctions the predicted 2005 annual mean Nitrogen dioxide concentration, 2004 PM<sub>10</sub> concentration and exceedences all meet the NAQS objectives. The High Street/Eastwood Road junction has become a site for Nitrogen dioxide diffusion tube monitoring. The actual 2004 and 2005 Nitrogen dioxide at 3 roadside sites has been found to exceed or almost exceed the annual mean objective value of 40 µg/m<sup>3</sup>. Other Nitrogen dioxide diffusion tube monitoring sites, such as Rochford Market Square and Bedloes Corner, have been found to have concentrations well below the annual mean objective in 2004 and 2005, ranging from 27.4 µg/m<sup>3</sup> to 30.9 µg/m<sup>3</sup>. During the monitoring of Rawreth Industrial Estate for PM<sub>10</sub> in summer 2004, there were 7 days where the 24-hour mean objective of 50 µg/m<sup>3</sup> was exceeded. This site is due to be monitored for PM<sub>10</sub> in the summer of 2006.

Water courses associated with Rochford District are the Roach, Crouch, Eastwood Brook, Hawkwell Brook/Roach, Prittle Brook and Rayleigh Brook. There is also a reservoir present at Rochford. In 1999-2001 only two river stretches investigated were compliant with their targets (Hawkwell Brook/Roach headwaters to Eastwood Brook confluence and Prittle Brook from the headwaters to the tidal limit), with the remaining 6 stretches being classified as 'marginal' or 'significant failure' and none of the river stretches investigated in the District are meeting the target of rivers reaching 'good' status by 2015, associated with the Water Framework Directive.

The Chemical GQA for the majority of the District's rivers is fair or fairly good, however Rochford District rivers are ranked as Grade 5/high or Grade 6/excessively high for phosphates. Most rivers are classified as Grades 5 or 6 (very high/excessively high) for nitrates and all river water bodies within the District have been found through the Water Framework Directive assessments to be 'at risk' or 'probably at risk' and there is a considerable area of land at a high risk of flooding within the District.

As much as 30% of the agricultural land in Rochford District is Grade 1 and 2, with the majority of remaining agricultural land is classed as Grade 3. The present dominant land use within the District is agricultural. Land contamination may also result from Southend airport, and the manufacturing, engineering, printing and plastics industries. 326 sites with potentially contaminative uses have been identified and are being investigated in priority order.

Rochford District has one renewable energy scheme and is therefore making a contribution to the East of England target of 14% electricity generation from renewable sources. Average domestic gas consumption in the District in 2003 was slightly greater than the Essex average, however domestic and industrial/commercial electricity and industrial/commercial gas consumption within the District were below the Essex averages.

The District produces a relatively low amount of household and municipal waste compared to other Districts in the county, however, Rochford District is performing poorly in recycling terms (10.3%), which needs to increase significantly in order to meet the Government PSA target of 25% recycling/composting of waste by 2005/06 (and improvement by 2008).

The total population within Rochford District is expected to increase by 3.2% throughout the period 2001-2021. In terms of recorded crime per 1000 population, Rochford District has significantly lower crime rates than the Essex average. Average house prices in the District are generally slightly higher than the Essex average, however, 37.5% of Local Authority dwellings fall below the 'Decent Homes Standard', one of the highest figures for Essex districts.

The most prominent sectors of employment within the District are wholesale and retail, financial intermediation, manufacturing and real estate, renting and business activities.

Unemployment in the District is considerably lower at 1.8% than the Essex average of 2.3%. Indices of Multiple Deprivation place Rochford District with a rank of average score of 316, a rank of income scale of 299 and rank of employment scale of 302.

With regards to education, the percentage of 15 year olds achieving 5 or more A\*-C grades at GCSE level (and equivalent) in 2004 was 67.3%, which is considerably higher than the Essex average of 55.4% and the national mean of 53.7%. Educational attainment of the working age population, the percentage of those without a Level 2 qualification for 2003/04 was 31.1%, compared with a figure of 34.7% nationally.

Rochford contains a rich and varied heritage and archaeological resource. Evidence of occupation during the Neolithic, Bronze and Iron Ages is present across the District with a significant expansion of settlement in the Bronze and Iron Ages.

The Essex Historic Environment Record (HER) maintained by Essex County Council details 327 listed buildings in the District. One of these is Grade I listed. There are 17 Grade II\* listed buildings and 309 buildings designated as Grade II. The number of listed buildings at risk in the district has decreased from 8 in 2004 to 7 in 2005. There are 1126 archaeological records within the District, including five Scheduled Monuments.

At present there are 10 Conservation Areas with Rochford District. There are three commons, one village green and no registered parks and gardens.

## **Biodiversity, Flora and Fauna**

### **International/ National Position**

European Commission (1979) Conservation of Wild Birds Directive

European Commission (1992) Habitats Directive

The Conservation (Natural Habitats, &c.) Regulations 1994, The Stationery Office Ltd

The Convention on Wetlands of International Importance especially as Waterfowl Habitats (Ramsar Convention or Wetlands Convention) 1971

European Commission (1992) Convention on Biological Diversity

Department for Environment, Food and Rural Affairs (1994) Biodiversity: The UK Action Plan, The Stationery Office Ltd

Department for Environment, Food and Rural Affairs (1995) Biodiversity: The UK Steering Group Report, The Stationery Office Ltd

The Essex Biodiversity Action Plan (EBAP) 1999, Essex County Council and Essex Wildlife Trust

Department for Environment, Food and Rural Affairs (1981) The Wildlife and Countryside Act, The Stationery Office Ltd

Department for Environment, Food and Rural Affairs (2000) The Countryside and Rights of Way Act, The Stationery Office Ltd

Office of the Deputy Prime Minister (2005) Planning Policy Statement 9 Biodiversity and Geological Conservation

### **Regional/ County**

East of England Regional Assembly and East of England Environment Forum (2003) Our Environment, Our Future: The Regional Environment Strategy for the East of England, East of England Regional Assembly

East of England Regional Assembly (2004) Draft RSS14 Regional Spatial Strategy for the East of England, East of England Regional Assembly

### **Standards/ Targets**

Department for Environment, Food and Rural Affairs (2002) PSA Target 3 – Care for Our Natural Heritage

### **Rochford Position**

Rochford District Local Plan First Review, 1995.

Rochford District Second Deposit Replacement Local Plan, 2004



## **Landscape Character**

### **National Position**

Office of the Deputy Prime Minister. (1997) Planning Policy Guidance 1: General Policy and Principles, TSO (The Stationery Office)

Office of the Deputy Prime Minister (1994) Planning Policy Guidance 15: Planning and the Historical Environment, TSO (The Stationery Office)

Department for Food and Rural Affairs (DeFRA.) (2000) The Rural White Paper, 'Our Countryside: The Future – A Fair Deal for Rural England

### **Regional/ County Position**

Essex and Southend-on-Sea Replacement Structure Plan (2001) Policy NR4

Chris Blandford Associates (2002) Landscape Character Areas (LAC's) – Essex Landscape Character Assessment

### **Rochford Position**

Chris Blandford Associates (2002) Landscape Character Areas (LCA's)

Rochford District Local Plan First Review, 1995.

Rochford District Second Deposit Replacement Local Plan, 2004

## **Air Quality**

### **International/ National Position**

European Commission (1996) Air Quality Framework Directive.

HMSO (1995) The Environment Act, The Stationery Office Limited

The Environment Act (1995) National Air Quality Strategy (NAQS), The Stationery Office Limited

HMSO (1995) Part 5 Environment Act, The Stationery Office Limited

### **Regional/ County Position**

The Environment Act (1995) Air Quality Management Areas (AQMA's)  
Department for Environment, Food & Rural Affairs (2000) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland. Department of the Environment, Transport and the Regions, in partnership with the Scottish Executive, The National Assembly for Wales, and the Department of the Environment for Northern Ireland.

Department for Environment, Food & Rural Affairs (2005) Air Quality Archive.

### **Standards/ Targets**

Office of the Deputy Prime Minister (1997) National Air Quality Standards (NAQS).

### **Rochford Position**

The Environment Act 1995 (1997) Air Quality Review and Assessment (AQRA),  
County and District Councils

Environmental Health Service (2003) Local Air Quality Management Updating and Screening Assessment.

Rochford District Local Plan First Review, 1995.

Rochford District Second Deposit Replacement Local Plan, 2004

## **Water**

### **International/ National Position**

European Commission (2000) The Water Framework Directive 2000/60/EC (WFD)

The Water Resources Regulations 2003 SI No 164

HMSO (1989) Water Resources Act 1963, The Stationery Office Limited

HMSO (1989) Water Act 1989, The Stationery Office Limited

HMSO (1991) Water Resources Act 1991, The Stationery Office Limited

Environment Agency (2003) Water Act 2003.

Governments strategic vision 'Directing the Flow – priorities for future water policy'?

HM Treasury, ODPM, DfT and DEFRA (2005) Making Space for Water: Taking forward a new Government strategy for flood and coastal erosion risk management', Defra Publications

Office of the Deputy Prime Minister (2001) Planning Policy Guidance 25: Development and flood risk

Office of the Deputy Prime Minister (1992) Planning Policy Guidance 20: Coastal Planning

### **Regional/ County Position**

The Environment Agency (2001) Regional water resources strategies 'Water resources for the future'

'Managing Water Abstraction' provides framework for the Catchment Abstraction Management Strategies (CAMS)

Draft East of England Plan (EERA,) (2004) Paragraph 4.71

Environment Agency (2003) The North Essex Catchment Flood Management Plan Scoping Report

Essex County Council (1994) The Essex Coastal Strategy

Environment Agency (2003) A Shoreline Management Plan for Essex

### **Standards/ Targets**

Department for Environment, Food & Rural Affairs (DEFRA) (2005-2008) Public Service Agreement

Environment Agency Environmental Quality Standards (EQS)

European Community (EC) Shellfish Waters Directive (79/923/EEC)

Commission of the European Communities (CEC) Directives Freshwater Fish Directive (78/659/EEC)

Commission of the European Communities (CEC) Directives Bathing Water Directive (76/160/EEC)

Commission of the European Communities (CEC) Directives Surface Water Abstraction Directive (74/440/EEC)

Commission of the European Communities (CEC) Directives Urban Waste Water Treatment Directive (91/271/EEC)

### **Rochford Position**

Essex and Suffolk Waters (2005) Our Water Resources Plan,

Rochford District Local Plan First Review, 1995.

Rochford District Second Deposit Replacement Local Plan, 2004

### **Current Position**

Environment Agency (2005)

The River Quality Objective River Ecosystem (RE, RE2, RE3)

Environment Agency (2005) Water Resources Plan

Essex and Suffolk Water (2005) Security of supply, leakage and the efficient use of water 2003-04 report Ofwat (December 2004),

Essex County Council (2005) Personal Consumption in Essex

Environment, Society and Economy: Performance report (2002/ 03)

## **Soil**

### **International/ National Position**

The Council of Europe's (1972) European Soil Charter

European Commission (April 2002) 'Towards a Thematic Strategy for Soil Protection'

Department for Environment, Food & Rural Affairs (1990) Part 2a of the Environmental Protection Act

HMSO (2001) Contaminated Land Regulations, The Stationery Office Limited

Environment Agency (2005)

Department of the Environment, Transport and the Regions (May 1999) In a Better Quality of Life

Department for Environment, Food & Rural Affairs (May 2004) First Soil Action Plan for England 2004-2006

Department for Environment, Food & Rural Affairs (March 2001) Draft Soil Strategy for England

Department for Environment, Food & Rural Affairs (first developed in 1966, by Ministry of Agriculture) Agricultural Land Classification (ALC)

Office of the Deputy Prime Minister (2004) Planning Policy Statement 7: Sustainable Development in Rural Areas

Department for Environment, Food & Rural Affairs (2002) Sustainable Development Strategy

Office of the Deputy Prime Minister (2005) Planning Policy Statement 9: Biological and Geological Conservation

### **Regional/ County**

Essex Record Office (1999) The Essex Landscape,

The Regional Environment Strategy for the East of England Regional Assembly and East of England Environment Forum (July 2003) Our Environment, Our Future

Department for Environment, Food & Rural Affairs (first developed in 1966, by Ministry of Agriculture) Agricultural Land Classification (ALC)

Natural Environment Research Council (2005) British Geological Survey

### **Standards/ Targets**

Office of the Deputy Prime Minister (2005) Best Value Indicators 2005/06

### **Rochford Position**

Rochford District Local Plan First Review, 1995.

Rochford District Second Deposit Replacement Local Plan, 2004

Essex Wildlife Trust (2001) Essex RIGS Group

Essex RIGS Group (2001) Geological Stratigraphy of Essex

Natural Environment Research Council (2005) British Geological Survey

**Current Position**

Department for Environment, Food & Rural Affairs (first developed in 1966, by Ministry of Agriculture) Agricultural Land Classification (ALC) for Maldon

Office of the Deputy Prime Minister (2005) Best Value Performance Indicators for 2005/06

## **Climatic Factors**

### **International/National Position**

European Commission (2001) European Union Sustainable Development Strategy

Department for Environment, Food and Rural Affairs (2005) Securing the Future - UK Government Sustainable Development Strategy, The Stationary Office Ltd

European Commission (2005) 6th European Union Environment Action Programme - Environment 2010: Our Future, Our Choice, Office for Official Publications of the European Communities

### **Regional/ County**

East of England Regional Assembly and the East of England Sustainable Development Round Table (2001) A Sustainable Development Framework for the East of England, The Beacon Press

The Environment Agency (2000) The Strategic Waste Management Assessment

East of England Regional Assembly and East of England Environment Forum (2003) Our Environment, Our Future: The Regional Environment Strategy for the East of England, East of England Regional Assembly

Hulme, M., Jenkins, G.J., Lu, X., Turnpenny, J.R., Mitchell, T.D., Jones, R.G., Lowe, J., Murphy, J.M., Hassell, D., Boorman, P., McDonald, R. and Hill, S. (2002) Climate Change Scenarios for the United Kingdom: The UKCIP02 Scientific Report, Tyndall Centre for Climate Change Research, School of Environmental Sciences, University of East Anglia

East of England Regional Assembly and the East of England Sustainable Development Round Table (2003) Living with Climate Change in the East of England

### **Standards/ Targets**

Department for Environment, Food and Rural Affairs (2004) PSA Target 2 2005-2008, The Stationary Office Ltd

Department for Environment, Food and Rural Affairs (2002) PSA Objective V 2003-2006, The Stationary Office Ltd

Department for Trade and Industry (2003) Our Energy Future - creating a low carbon economy (White Paper), The Stationary Office Ltd

### **Rochford Position**

Rochford District Local Plan First Review, 1995.

Rochford District Second Deposit Replacement Local Plan, 2004

## **Built Environment**

### **International/National Position**

Committee on Spatial Development (1999) European Spatial Development Perspective - Towards Balanced and Sustainable Development of the Territory of the European Union, European Commission

Office of the Deputy Prime Minister (2004) Planning Policy Statement 11: Regional Spatial Strategies, Her Majesty's Stationery Office

Office of the Deputy Prime Minister (2003) Sustainable Communities: Building for the future, Her Majesty's Stationery Office

### **Regional/ County**

Office of the Deputy Prime Minister (2003) Sustainable Communities: Building for the future, Her Majesty's Stationery Office

East of England Regional Assembly (2004) Draft RSS14 Regional Spatial Strategy for the East of England, East of England Regional Assembly

### **Standards/ Targets**

East of England Regional Assembly (2004) Draft RSS14 Regional Spatial Strategy for the East of England

Office of the Deputy Prime Minister (2005) PSA Target 5 – Housing Supply and Demand

East of England Development Agency (2004) Progressing a Shared Vision - the draft regional economic strategy for the East of England, East of England Development Agency

### **Rochford Position**

Essex County Council (1973, updated 1997) Essex Design Guide, Essex County Council

Rochford District Local Plan First Review, 1995.

Rochford District Second Deposit Replacement Local Plan, 2004



## **Population and human health**

### **International/National Position**

National Statistics online 2001 Census

### **Regional/ County**

Office of the Deputy Prime Minister (2004) Indices of Multiple Deprivation, The Stationary Office

### **Standards/ Targets**

Department for Work and Pensions (2002) Delivering for People of Working-age, The Stationary Office Ltd.

Department of Health (2004) Department of Health Autumn Performance Report, The Stationary Office Ltd

Department for Education and Skills (2005) 14-19 Education and Skills, The Stationary Office Ltd

### **Rochford Position**

Rochford District Local Plan First Review, 1995.

Rochford District Second Deposit Replacement Local Plan, 2004

## **Cultural Heritage and material assets**

### **International/National Position**

Council of Europe (2002) Guiding Principles for Sustainable Spatial Development of the European Continent

European Commission (1985) Council Directive on the assessment of the effects of certain public and private projects on the environment 85/337/EEC (EIA Directive)

European Commission (2001) Council Directive on the assessment of the effects of certain plans and programmes on the environment 2001/42/EC (SEA Directive)

Department for Environment, Food and Rural Affairs (1999) A better quality of life - strategy for sustainable development for the United Kingdom, The Stationary Office Ltd

Department for Culture, Media and Sport (2001) The Historic Environment: A force for Our Future, The Stationary Office Ltd

Office of the Deputy Prime Minister (1994) Planning Policy Guidance 15: Planning and the Historic Environment, The Stationary Office Ltd

Office of the Deputy Prime Minister (1990) Planning Policy Guidance 16: Archaeology and Planning, The Stationary Office Ltd

### **Regional/ County**

East of England Regional Assembly (2004) Draft RSS14 Regional Spatial Strategy for the East of England, East of England Regional Assembly

East of England Regional Assembly and East of England Environment Forum (2003) Our Environment, Our Future: The Regional Environment Strategy for the East of England, East of England Regional Assembly

### **Rochford Position**

Rochford District Local Plan First Review, 1995.

Rochford District Second Deposit Replacement Local Plan, 2004