Landscape Character Assessment of the Essex Coast
PREFACE

This document was commissioned by SAIL (Schéma d'Aménagement Intègre du Littoral) and Essex County Council. It aims to collate current information about the landscape character of the Essex coast in a structure designed to help inform future planning decisions. The study involved consultation and gathering of existing data and information and we appreciate the time and advice given by many individuals within Essex County Council.

Whilst every effort has been made to ensure that the report is factually accurate, its contents, opinions, conclusions and recommendations are entirely those of the consultant who carried out the study. It is for information purposes only and to be used as a background technical document.

Catherine Bailey wrote the draft of the Mid-Essex Landscape Character Assessment in 2002.

We are grateful for the guidance and advice provided by the steering group:

Beverley McClean - Essex Estuaries Partnership
Alex Midlen - Essex Estuaries Partnership
Crispin Downs - Essex County Council
Sarah Green - Essex County Council
Martin Wakelin - Essex County Council

With additional advice particularly from:
Ray Brewer - Essex County Council
Nigel Brown - Essex County Council
Terry Coelho - Essex County Council
Lynn Dyson-Bruce - Essex County Council
Debbie Knopp - Essex County Council
Peter Spurrier - Essex County Council
and Oliver Ishmael and Dennis Bauszus in GIS

Photographs by Catherine Bailey, Mary McHugh and Almudena Quiralte.

The project team who produced this document was:
Mary McHugh
Almudena Quiralte

USERS GUIDE

This document attempts to be partly interactive. On the same CD-Rom you will find other Landscape Character Assessments, which are accessed in certain sections of the text.

This will allow the reader to receive relevant paragraphs as if forming part of this present document, and then also to browse further background information.

IMPORTANT INFORMATION

All the links to websites, further information and maps in this document are marked in blue. To navigate through this document we advise you to use the CONTENTS column on the left hand side of the page. You can also navigate through the 'Bookmarks' window.
Contents

PREFACE
EXECUTIVE SUMMARY
LANDSCAPE FRAMEWORK
  GENERAL BACKGROUND
  PURPOSE AND SCOPE OF MID ESSEX LCA
  METHODOLOGY
  GEOLOGY AND LANDFORM
  SOILS
  HISTORY AND ARCHAEOLOGY
  SETTLEMENT AND LAND-USE
  CULTURAL PERCEPTIONS
  ECOLOGY
  STUDY AREA
PART ONE. LANDSCAPE CHARACTER TYPES
  UNVEGETATED FORESHORE
  INTER-TIDAL SALT MARSH
  DIVERSE COASTAL MARSHLAND
  UNIFORM COASTAL MARSHLAND
  URBAN FRINGE MARSHLAND
  RIVER TERRACE FARMLANDS
  MIXED MARSHLAND EDGE
  ROLLING CLAY FARMLANDS
  VALE TOP FARMLANDS
  ENCLOSED VALLEY-SIDES
PART TWO. LANDSCAPE CHARACTER AREAS
  INTRODUCTION TO THE HISTORIC LANDSCAPE CHARACTERISATION
  LANDSCAPE CHARACTER AREAS
    SOUTH ESSEX COAST
      AVELEY, WENNINGTON & RAINHAM MARSHES
      TILBURY, MUCKING & BOBBING MARSHES
      CHADWELL AND WEST TILBURY
      WEST CANVEY / SHELLHAVEN
      CANVEY BENFLEET
    MID ESSEX COAST
      CROUCH ESTUARY AND FOULNESS ARCHIPELAGO
      ROCHEFORD MIXED FARMLANDS
      RIVER ROACH
      CANEWDON SLOPING CLAYLANDS
      RIVER CROUCH
      BURNHAM SLOPING CLAYLANDS
      DENGIE COASTLANDS
      TILLINGHAM ANCIENT FARMLANDS
      DENGIE ANCIENT CLAYLANDS
      UPPER BLACKWATER ESTUARY
      LOWER BLACKWATER ESTUARY
      MALDON MIXED FARMLANDS
      TOLLESBURY ROLLING FARMLANDS
      TOLLESBURY COASTLANDS
    NORTH ESSEX COAST
      MERSEA ISLAND
      COLCHESTER CLAYLANDS AND MARSHLANDS
      LOWER ROMAN RIVER
      LOWER COLNE ESTUARY
      UPPER COLNE ESTUARY
      BRIGHTLINGSEA ENCLOSED VALELANDS
      BRIGHTLINGSEA FLAG CREEK
      ST OSYTH COASTLANDS
      HOLLAND COASTLANDS
      HAMFORD WATER
      STOUR ESTUARY
BIBLIOGRAPHY
CONSULTEES
APPENDICES
  FIELD SURVEY SHEET USED FOR MID-ESSEX LCA
Because of its proximity to London there has been longstanding use of the coastal area of Essex not only for holidays and recreation, but also for industry and military purposes. This seeming contradiction is explained by the remoteness of some of its creeks and headlands.

This document aims to collate current information about the landscape character of the Essex coast, to help inform future planning decisions.

Several Landscape Character Assessment (LCA) studies have been undertaken of the county of Essex. This document, The Landscape Character Assessment of the Essex Coast, co-ordinates access to those character assessments which have been published to date, whether at a regional or local scale.

However the sections referring to South East Essex and North Essex have been included via links to other assessments because this document also includes the publication of the Mid Essex Coast Local Landscape Character Assessment for the first time and that section is here presented in greater detail.

The aim is to provide an extended overview from Thurrock, part of the Thames Gateway, in the south to Harwich and the Stour Estuary bordering the county of Suffolk. It concentrates on those sections which analyse the Essex coast and provides visual data and links to further information available through Geographical Information Systems (GIS).

The structure of this document aims to allow further LCAs to be incorporated in the future, so that a 'one-stop' access to information remains current. Thus a bench-mark from which to base a description of the unique character of the Essex coast has been created and can be revised or amended to remain up to date.
Countryside Character Initiative and Landscape Character Assessment

The landscape is what determines the character of the British countryside: it belongs to each and every one of us. Policy makers, practitioners and special interest groups need techniques to identify what gives a locality its own sense of place, what makes it different from its neighbouring area, and what conditions should be set for any new development and change.

"Most of us welcome progressive change, but don’t want to see development running amok. We applaud new woodland to enhance the landscape, but know that planting and management must be sensitive to the locality.

We can be excited by bold regeneration for places in need of a lift, but recognise that the new development must work around the best of the old, and not sweep it away."

Richard Wakeford Chief Executive, Countryside Agency

The Countryside Character Initiative came about because it was recognised that there was a need for a new approach to landscape assessment which would look at the whole of England’s countryside - rather than just specific designated areas - and provide a consistent national framework within which more detailed local landscape assessments would sit.

This new approach led to the task of mapping the country into 159 separate, distinctive character areas. The features that define the landscape of each area are recorded in individual descriptions which explain what makes one area different from another and show how that character has arisen and how it is changing.

http://www.countryside.gov.uk/LivingLandscapes
The Mid Essex Landscape Character Assessment (LCA) was produced in draft form in 2001-2, (hereafter referred to as Mid Essex LCA) and, edited and published here, forms the core part of this document The Landscape Character Assessment of the Essex Coast.

The area covered by the Mid Essex LCA was broadly equivalent to the existing Essex Coastal Protection Belt from Jaywick (near Clacton-on-Sea) to Shoeburyness (near Southend-on-Sea). There is some overlap with the 1RUWK(VVH\[/&$LVRQHRIWKHVSHFL¿FDFWLRQVWKDWKDV originated from SAIL (Schéma d'Aménagement Intègre du Littoral), the acronym for a project funded under the European Union Interreg 11c programme that consists of strategic work on integrated coastal zone management and local pilot projects. Building on existing initiatives, including the Blackwater Project, the SAIL Project involves working with a range of organisations to develop a regeneration strategy for the rural coast.

List of links to estuarine/coastal projects

* www.sailcoast.org/index.shtml

The key aims of the Mid Essex LCA were to:

- identify and describe the local landscape character types and areas of Mid Essex
- establish the condition of these character types and areas and the issues that affect them
- use this assessment as a basis for possible future Heritage Coast status

(The main objectives of the Heritage Coast policy of the old Countryside Commission [now Countryside Agency] was to include the conservation, protection and enhancement of the natural beauty of the coasts, and their heritage features of architectural, historical and archaeological interest)

A proposal to grant Heritage Coast status to the Essex Coast would be based on the information collated in this document, The Landscape Character Assessment of the Essex Coast.
The Mid Essex LCA followed the methodology promoted through the Countryside Commission’s Countryside Character Programme and Landscape Assessment Guidelines, CCP423, and supported and updated by the Countryside Agency’s Interim Landscape Assessment Guidance 1999. It includes historic and cultural factors, but the emphasis on involvement of stakeholders was not addressed.

The factors used to assess landscape character include:

- Physiography: geography, soils, topography, vegetation
- Human activity: land use, settlement, field enclosure, landscape history
- Aesthetics: form, scale, enclosure, unity, colour, views, cultural perceptions
Essex has one of the longest coastlines of any county in England comprising complex estuary systems, extensive salt marsh and intertidal areas of international conservation importance. It still has a small but active fishing fleet and, largely due to its proximity to London, has been a traditional holiday area for over a century.

The geology of coastal Essex is a complex array of varying marine, alluvial and glacial drift sediments that overly or border the thick deposits of the London Clay and terrace gravels. The clay is part of the older strata of rocks that form the eastern sector of the London Basin, a bowl created from the Cretaceous chalk. This stiff, dark or bluish-grey clay, that shrinks and cracks during dry weather, is widespread adjoining the coastal strip and forms, together with the terrace gravels, a gently rolling backdrop to the distinctive level coastal marshlands at its margins.

Sands and gravels are exposed as a cliff at Cudmore Grove, Mersea whilst the London Clay forms the spine of the Island and abuts the marshlands from Langenhoe to Great Wigborough, forming rolling farmlands that extend around the north east of Tollesbury to be exposed at the surface again in a narrow belt south of the town and then around Goldhanger.

West of Tollesbury the clay is overlain by a belt of freer-draining terrace deposits.

The bulk of the Dengie Peninsula is shaped from the London Clay, but with a central tract lying inland forming a gently rolling or distinctly undulating plain above 20m AOD. A gravel ridge runs roughly south-west north-east across the Dengie and this important feature was a major influence on the original settlement pattern. On the north coast of Dengie, however, the clay is exposed in a low-lying belt over a wide area between Mundon and Maylandsea, narrowing to a thin but more undulating wedge south of St Lawrence that ends at Bradwell on Sea.

Head deposits, caused by down-slope movement of material in peri-glacial conditions, are found on the clay in scattered drifts along the north bank of the Blackwater and on Dengie.
Along the banks of the River Crouch the London Clay creates a more steeply sloping hummocky landscape extending west of Creeksea to South Woodham Ferrers, and from Hullbridge to Canewdon.

This is topped by a limited band of Claygate Beds around Althorne, which forms a sandy transition at the top of the clay that is exposed along the narrow crest of the valley’s side.

The characteristic fringing marshlands protected by sea walls were traditionally grazing marsh but most of the land is now ploughed. They are composed of varied marine sediments lying at the seaward foot of the low clay hills or terrace gravels. These level, and for the most part ancient, marshlands with their relic dykes and ditches often still visible, generally extend no further than 5m AOD above sea level.

In places the junction between these coastal marshlands and the low hills is perceived as a gradual transition, as on the marshland at St Osyth, Langenhoe and again southeast of Maldon. Elsewhere, as at Fingringhoe, above the Mersea Flats at Cudmore Grove and above St Lawrence Bay, the land rises more steeply to around 20m AOD, to give a distinct backdrop to the horizontal planes of the coastal marsh.

This topographical difference is most striking at Creeksea, where the higher land comes to the river’s edge as low cliffs, and behind Bridgemarsh Island where the land rises steeply to 50m. Canewdon, which perches on an outcrop of London Clay topped with river terrace gravels, is one of a distinct series of low, but visually dramatic, coastal hills running west, which rises from this matrix of clayey alluviums.

Perhaps the most characteristic feature of this coast, however, is the way the alluviums extend to form most of the eastern Dengie peninsula, Wallasea, Foulness and the Roach archipelago, stretching in unremitting horizontals from the defensive sea walls up to 10km inland before the land rises. This trait is most marked on Wallasea Island where the level landscape is unmarked by tree, counter-wall, creek or building over most of its 5km length. This open character turns almost any elevated position into a ready vantage point from which distant views are only limited by the often misty atmosphere found here at the coast.

East of Rochford the Wakering and Paglesham farmlands are formed on a distinct patchwork of terrace, sands and gravels, overlain by brickearth, all deposits of economic value giving rise to a landscape of worked-out and restored land. The Quaternary sands and gravels, that cover parts of coastal Essex are primarily the result of the Thames and Medway rivers’ migration during the last Ice Age. In the final cold period, the Devensian, the brickearths of southeast Essex were formed by the deposition of loess, or windblown silts.
The soils along the coast associate closely with the geology, reflecting the recent drift deposits, the underlying Tertiary London Clay and the small outcrops of Tertiary sands.

At the coast itself the most common soils are those associated with the marine alluviums. These are deep, generally clayey soils on flat land, with fluctuating groundwater levels giving rise to the risk of flooding in places. Water is controlled by a complex system of criss-crossing drains and ditches, some retaining the curves and bends of natural watercourses whereas others form the straight lines and right angles of the drawing-board.

These soils are found on the marshland of the Colne and Blackwater estuaries, the Rivers Crouch and Roach, the length of Dengie and Foulness and much of the Roach archipelago. On the seaward side of Dengie and Foulness a more silty and calcareous soil exists. This underlies the more recently settled marshlands and has given rise to good quality soils traditionally used for arable crops. The salt marshes themselves are formed on weakly developed soils of varying texture in the intertidal zone. The higher salt marsh was traditionally used for grazing, with wildfowling and recreation among the creeks.

The hinterlands of the marshes are formed on the clayey soils and loams that have developed on the London Clay and terrace gravels. The sands and gravels found in broad swathes behind the marshlands at Brightlingsea, St Osyth and Fingringhoe have given rise to loams that are variously affected by groundwater but produce soils traditionally used for arable crops.

On Mersea, in the backlands of Dengie and around Paglesham, the finer loamy soils have traditionally given rise to short-term grassland and some field vegetables as well as arable crops.

The brown soils found around Tollesbury and Tolleshunt D’Arcy are good quality well-drained loams derived from the underlying gravels. These soils are used for both arable and horticultural crops and also support some woodland.

The higher ground formed on the London Clays gives rise to clayey soils and where topped by river terrace gravels to loamy soils. The clayey soils, forming the higher ground behind the marshes on the Crouch and Blackwater estuaries are often mottled due to water-logging, but are less wet on the slopes leading down to the river valleys. Traditionally used for dairying, most of this land has now been given over to cereals. Scattered woodlands are locally common, especially on the steeper valley slopes.

Where the London clays and drift deposits are topped by river terrace gravels, in the Dengie hinterlands, around Heybridge and between the Roach and the Crouch, the good quality soils can support horticultural crops and cereals. However, much of the area east of Heybridge has been exploited for its gravels.
Archaeological survey work of the coastal zone of Essex has revealed some of the best and most extensive evidence for prehistoric settlements in the county.

At the beginning of the current interglacial, people were already living in most parts of Essex. Inland, the rolling hills and coastal slopes were covered with mixed woodland, possibly dominated by oak and lime. The lower reaches of the rivers were wide and shallow with swampy areas.

From the end of the last glaciation, a combination of rising sea level and subsidence of the North Sea basin led to submergence of former coastal lowlands. A sequence of rises and falls between 4,000–10,000 years ago resulted in the effective covering of previously occupied sites by estuarine sediments, thus protecting the sites from further weathering.

Evidence from what were dry-land sites at Hullbridge and Maylandsea suggest that communities at this time were mobile, undoubtedly exploiting resources from the sea as well as the land. Seasonal coastal settlements may have been abandoned each year, and with sea-level rise, their insubstantial remains have been lost. The inland sites, however, were reoccupied over many centuries and have therefore retained archaeological evidence showing a hunter-gatherer subsistence.

By the Neolithic, there is evidence at many sites in the intertidal zone. The most extensive and completely investigated site is at The Stumble, now in the intertidal zone of the Blackwater Estuary. These sites provide evidence of an economy based on localised agriculture and woodland foraging. Although it is thought the estuarine fringes were still well wooded, there is also evidence of forest clearance. In the Bradwell, Burnham, Wallasea and Foulness area, the coastline was substantially different from that of the present day, being much further inland. What is now land was then FRPSOHJRIWLGDOVDQGDQGVLOWÀDWV and occasional beach ridges of sand, gravels and shells.

The Later Neolithic and Early Bronze Age are marked by increased woodland activity, evidenced by extensive charcoal remains, possibly a late stage of clearance, with decreased settlement in the present intertidal zone. Settlement appears to have moved inland away from the damp estuary edge. At Jaywick an extensive settlement seems to have evolved behind a protective coastal sand or gravel bar. Following a further sea transgression, the coast took on a form much like the present.

In the later Bronze Age there is evidence of wooden structures such as platforms of brushwood, possible landing stages, hurdle bridges and small lengths of trackway, the latter perhaps allowing sheep access to wetland or marsh, in the sheltered estuaries. The finding of the ‘Canewdon Paddle’ from this time is evidence that the estuaries and creeks were being used for transport and undoubtedly small boats were used to link the small coastal communities not only within Essex but also across the southern North Sea. Salt production began around the Essex coast in the Middle Bronze Age.

The late Bronze Age was a time of great expansion of settlement and agriculture. Settlement systems in the estuaries would have used the resources available there; the marshes for grazing, the estuaries for hunting, fishing and shellfish gathering. Although shellfish were undoubtedly exploited in previous eras, it is only from the Bronze Age that evidence of cockle and mussel shells become available and numerous settlements
are known along the Blackwater, Thames and other Essex estuaries from this time. Evidence also suggests an essentially pastoral agriculture but with relatively high woodland cover, still mainly oak.

The Iron Age and Roman periods, about 2000 years ago, were times of gradual increased population and settlement, with resulting pressure on land. Agriculture intensified and deforestation continued with metal ploughs used for the first time, as these were effective on heavier soils.

The coastal plains and river valleys were characterised by unenclosed farmsteads, villages and hamlets. Evidence for trackways and drove roads linking animal enclosures to settlements has been found. The particular feature, however, of this period are the red hills found widely around the Essex coast resulting from the manufacture of salt.

Salt was important for preserving food, and was made by evaporating sea water in ceramic vessels, the remains of which have given rise to the distinctive red earths of the hills. Remains of the charcoal used for burning can also be found. These red hills appear to be concentrated in the estuaries in the north-east of the county, just behind the sea wall, maybe relating not only to demand for salt from thriving towns such as Colchester and London but also supply of resources such as fuel and clay to make the ceramic vessels. At Canvey Island there is evidence of what might have been a trans-shipment point for traded goods.

There is evidence from the shellfish and fish bones found on the coast elsewhere in Essex of on-going economies based on marine life; at The Stumble the remains of what may be an Iron Age fish trap have been found. Sheep and goat bones indicate the importance of the marshes for grazing at this time.

Essex’s coast, so close to that of Europe, made it vulnerable to invasion from across the channel from Roman times. From then into the twentieth century there is evidence of military defence of the coast, an early example is at the Roman fort of Bradwell on Sea. The Roman site at Bradwell was subsequently chosen as the spectacular site for the Saxon St Peter’s on the Wall, one of a group of churches in pivotal positions in relation to Europe that helped re-establish Christianity in England. Also mid-Saxon in origin is the Strood, the causeway from the mainland to Mersea Island. The most dramatic remains of this period are huge timber fishtraps, many examples of which have been recorded in the Blackwater Estuary.

At this time, pollen samples indicate intensification or better management of pasture and increased crop production around the Blackwater. Bradwell was part of a thriving and productive economy with trade by boat likely with East Anglia, Kent and Europe.

The distinctive coastal sea walls that protect large parts of the old grazing marshes of Essex are medieval or post-medieval in origin. At Canvey, Foulness and adjacent islands each marsh was separately protected and only at a later date was the whole island enclosed with walls and the old ones left as counter-walls. In places the timber structure of these ancient sea walls has been exposed where the walls have been undercut, as at Tollesbury Creek.
Waterborne transport was the prime method of movement of both people and goods throughout the greater Thames. From at least the Saxon period every farm would have had a simple quay alongside which boats could tie up. In effect this system survived into the 20th century when barges took straw etc. from the fields of Essex to the horse-powered streets of London, bringing back refuse to manure the fields. The Bronze Age paddle recovered from the Crouch at Canewdon and more recent shipwrecks and reused fragments of vessels are known from several sites, and present potentially important archaeological evidence associated with Britain’s development as a maritime nation and a world power. This tradition of maritime movement did not cease completely until after the Second World War with sailing barges in particular still to be found at the wharves of Colchester, Brightlingsea and Maldon.

The importance of shellfish, and specifically oysters around the Blackwater and Colne, continued through to the 19th century. This was the great era of the Essex fishing fleets, of specialized coasters and smacks which dredged under sail from the many small ports around the river estuaries; from Colchester, Rowhedge, Brightlingsea, West Mersea and Maldon. These fleets fished not only inshore but also for months at a time went to Falmouth or Holland looking for deep-sea oysters and also off the French coast for scallops. It is from this time that the numerous oyster pits that still mark the salt marshes all around the Mid Essex coast can start to be dated.

Oyster storage pits, mostly of post-mediaeval date, occur extensively around the coast. The remains of these can still be clearly seen today. They represent the holding-grounds from which the oysters could be packed before being sent to London and onwards by train on the aptly-named ‘Crab and Winkle’ lines. These branch lines once linked each small port back to the main line, but some, such as the Tollesbury branch did not even survive the First World War.

In contrast to the many oyster pits, there are few remains of the long history of wildfowling in the marshes. An exception is the once common decoy ponds, often starfish-shaped; many of these were lost in the 1950s and 1960s when the grazing marshes were ploughed. These features were most plentiful on the Blackwater and Dengie marshes in the 18th and 19th centuries. Some remained in use into the middle of 20th century, those that remain being most easily identified by the scrub that gradually chokes them from the banks.

The defensive role of this part of the Essex coast in post-medieval times continued with construction of earthwork forts at the mouth of the Colne estuary in the 1540s. Remarkably one of these earth forts survives at Cudmore Grove. The 19th century martello towers that form such imposing structures in the low-lying marshlands at Seawick and Point Clear were built as part of a string of
History and Archaeology

Fortifications against Napoleon that stretch up the coast to Harwich. In the Thames estuary the importance of defending the approaches to London led to the construction of major defences like Coalhouse and Tilbury forts.

Military activity around Foulness, specifically at Shoebury, dates from 1855 when the experimental range for artillery was transferred from Woolwich, because that location was already too close to neighbouring settlement. Firing ranges were established on the marshes at Aveley, near Purfleet later in the 19th century. The long history of military occupation of Foulness and Purfleet has tended to preserve many of the historic features and wildlife interest of these marshlands.

All around the Essex coast there are extensive remains of Second World War defences and some First World War installations also survive. Cold War weapons’ research at Foulness ended recently and the training base and experimental range at Shoeburyness are likely to be partly redeveloped in the near future.
The marshland areas of the Mid Essex coast have been important for agriculture since at least the later Bronze Age. They produced, in particular, wool and dairy produce for both local use and export to London. Although grazing was the dominant farming pattern for centuries, some marshland areas, such as part of Foulness, were intensively farmed as early as the 16th century with a high percentage of the land growing cereals for the London market.

The grazing marshes, which were created during mediaeval and early post-mediaeval times, were extensive all around the coast. On the higher ground, a mixed agriculture of grassland and arable developed, producing hay or corn for London. Orchards, copses and hedgerows gave a more enclosed and textured landscape than the poorly-drained land below.

This pattern of farming continued almost unchanged until the mid-20th century when developments in drainage technology, improvements to sea wall defences following the 1953 floods and the provision of subsidies and incentives led to substantial loss of grazing marsh and its associated features in conversion to arable. Habitat value, historic field boundary ditches and archaeological features were all lost to modern farming methods. Around 80% of the grazing marsh appears to have been lost since the Second World War, although this is being slowly rectified through agri-environmental schemes such as the creation in the past ten years of an Environmentally Sensitive Area along this coast.

In much of the farmed hinterland above the marsh, a distinct rectilinear pattern of small to medium-scale fields of ancient origin can be discerned, although agricultural intensification has resulted in high loss of hedgerows locally and so left a fragmented and discordant pattern that is hard to read in places.

Historically, most settlements were located beyond the edge of the marsh, with farms often sitting just above the 5m AOD mark in a line above the marsh.

The only settlements of any size that developed within the marshland itself were the fishing villages and small ports: Brightlingsea, Wivenhoe and West Mersea towards the northern part of the study area; Maldon, Burnham, Rochford, Leigh, and Fobbing further south.

Paved roads and lanes lie close to the 15-20m AOD contour with unpaved trackways, usually to farms or old wharves, forming right-angled routes down to the marsh edge and beyond to the creeks or sea, testament yet again to the importance of water in commercial and agricultural life until the middle of the 19th century and beyond. The amphibious dual existence of many of the inhabitants of the coast until the early years of the 20th century lives on in the old pub names of what are now land-based communities; The Plough and Sail at Paglesham, the Ferryman at North Fambridge.

The traditional building materials used for cottages found around the marsh are timber clapboard, usually white-painted or with black gable ends, or red brick with red tiled roofs. Thatch may have been more extensive in the past, as references in 19th century and early 20th century texts testify. Many of these traditional buildings may only date from the early 19th century, with the timber trade through Maldon and the Crouch contributing to the use of clapboard nearby. The marshes were traditionally economically important but peripheral to the main areas of settlement so the older buildings were often modest in size and origin, and due to their poor construction, many
did not survive into the 20th century. There are some notable exceptions, such as St Osyth’s Priory and Hadleigh Castle.

Farmers in the 1930s agricultural depression divided fields into plots to sell to Londoners. Tents and sheds became more permanent homes during and after the war and plotlands developed often without services or other amenities. The conversion of grazing marsh and pasture, mainly since the Second World War, has affected the colour and texture of the marshland character, yet it is perhaps the gradual encroachment of settlement into this low-lying land that has altered its open character more significantly at a local level. This is apparent in the settlements at Jaywick and Point Clear and the rambling caravan sites of Mersea; the spreading seaside villages of Maylandsea and St Lawrence on the Dengie Peninsula that have grown around plotland villages; Bradwell power station and the scattered military installations of Foulness, as well as the extensive urban and industrial developments in south Essex.

There has been longstanding use of the coastal area of Essex not only for holidays and leisure use, because of its proximity to London, but for industry and military purposes, both ironically because of the remoteness of some of its creeks and headlands.
Although much of the current perception of Essex can be summed-up by the image presented in the recent film Essex Boys, this is a distorted view that treats all of Essex as an extension of the East End of London. Most early observations of the people and their landscape were matter of fact. Commenting on the Essex estuaries in the 18th century, Daniel Defoe focuses on the abundant natural produce available for London tables:

In this inlet of the sea is Osey or Osyth Island, commonly called Oosy Island, so well known by our London men of wild-fowl, that is to say duck, mallard, teal and widgeon, of which there are the island, namely the creek, seems covered with them, at certain times of the year…………..

Defoe, 1724

John Constable, although associated most with the landscapes of the Dedham Vale, executed at least one oil painting of the country house of the Hawkins family at Alresford Hall. It sits on the wooded slopes that form the backdrop to the Colne estuary and, most famously, he painted the ruins of Hadleigh Castle in its striking bluff overlooking the Thames estuary at South Benfleet. The bright light that has attracted painters down the years to Dedham Vale is present at the coast itself, with a combination of what Ronald Blyth describes as ‘high skies and low landscape’.

Displays in the Beecroft Art Gallery, Southend-on-Sea, include W Bates’ A View of Leigh, 1861; A view near Southend by A Vickers; and Benfleet Creek and Southchurch Beach

By the 19th century, Sabine Baring-Gould, in his novel Mehala, looks lyrically at the Essex wetlands, describing their intrinsic character admiringly and for its own sake. He describes The Ray, the marshy land that at high water appears to float between Mersea Island and the mainland:

Between the mouths of the Blackwater and the Colne, on the east coast of Essex, lies an extensive marshy tract veined and freckled in every part with water. At high tides the appearance is that of a vast surface of Sargasso weed floating on the sea, with rents and patches of shining water traversing and dappling it in all directions. The creeks, some of considerable length and breadth, extend many miles inland, and are arteries whence branches out a fibrous tissue of smaller channels, flushed with water twice in twenty-four hours. At noontides, and especially at the equinoxes, the sea asserts its royalty over this vast region.

Sabine Baring-Gould, 1880

As the vicar at East Mersea church for several years, Baring-Gould obviously spent many hours observing and recording the landscape around him:

A more desolate region can scarcely be conceived, and yet it is not without beauty. In summer, the thrift mantles the marshes with shot satin, passing through all gradations of tint from maiden’s blush to lily white. Thereafter a purple glow steals over the waste, as the sea lavender bursts into flowers, and simultaneously every creek and pool is royally fringed with sea aster.

Sabine Baring-Gould, 1880

It is not from the land, however, but from the sea that so much of this long, sinuous coast reveals itself. Several authors have discovered that the best way to explore the Essex coastline, although not necessarily the safest, is in a small sailing boat. The most obvious of these is Maurice Griffiths, yacht designer and journalist, who, in 1932, wrote ‘The Magic of the Swatchways’, ‘swatch’ being an East Anglian word for the narrow navigable
channels that wind between the land and the numerous changing mud and sandbanks that define its seaward edge. The book describes almost every creek and channel between Brightlingsea and Paglesham, every bar and sandbank between Colne Point and Maplin, and every mood of the sea. Many of the features of that time, the fishing boats and barges, a thatched roof, the calling cattle on Foulness are now just ghosts, and yet the character of the places has not fundamentally changed.

The ebb had been silently receding for nearly three hours, and on each side of the river the mudflats were uncovering rapidly. A small white-sailed barge-yacht was trying to beat up against a dying westerly wind, and on the horizon, it seemed, Osea lay like a mirage with its purple undulating masses of trees.

The shore where we landed was hard, and we scrunched away along towards the point - and the sea. It was a deserted bit of coast, this strip of sedge-bordered shingle, although two miles to the north lay Brightlingsea, with its creek crowded with oyster smacks and fishing boats...

From out there towards the invisible bar buoy came a continuous noise, not deep enough for the roar of surf nor shrill enough for the shriek of the sea's onslaught on shingle, but a steady incessant commotion, like the sound of an angry crowd heard through closed doors.

Maurice Griffiths, 1932

In the 1950s John Betjeman, in his collected poems, reflected on the Essex he knew at the beginning of the 20th century.

Far Essex, - fifty miles away
Where distant barges high with hay
Come sailing in upon the flood.

Like many observers before and after him, the dramatic quality of the traditional working boats, the barges, smacks and ‘bawleys’ (a corruption of boiler from the tradition of boiling the shellfish on board), as well as the empty mudflats, captures his imagination.

Fifty years after Maurice Griffiths
Jonathan Raban, author and journalist, coasting around Britain in a small yacht, chose to explore and also to overwinter on the wild marshlands of Dengie.

On my first circuit of the islands, three years before, I'd steered clear of this meagre and featureless coast as being too untrustworthy to do business with. The sea lathered over its maze of offshore sandbars; church towers marked on the chart were lost among trees that looked like lines of crouching mangroves in a swamp; I'd investigated the narrow swatchways leading inshore through the sands, and headed north for the broad, safe channel into Harwich.

Having mastered his sailing-boat and gained the courage to enter the Blackwater, however, he becomes beguiled.

Essex had hardly any vertical dimension at all; its character lay in voluptuous horizontals - the looping sea walls, the crescent sandbars, the curving throats of the river mouths.'

Jonathan Raban, 1987

Raban's description of the landscape of Dengie could in fact be a picture of any number of locations on the Essex coast and estuaries:

Land and sea were constantly changing places. As the tide shrank away through the culverts between banks of cord-grass, it left large islands of shining mud, looking more liquid than the ruffled water round their shores.

When the sea came back, flooding in
over the salt marshes, drowning the islands and opening sandy footpaths to navigation, it was arrested only by the ancient earthwork of the sea wall...

Jonathan Raban, 1987

Even under cultivation, the marshes have retained many of their seascape qualities:

...the face of the England that I could see from the window was fat - a landscape of amazing plenty. The billowing sea waves of growing corn went on for miles. When the combine harvesters moved in, they worked all night, stealing across the marshes in isolated pools of brightness like illuminated trawlers.

The cornstalk rustle of the sea makes itself heard a mile away.

Jonathan Raban, 1987

Today, the wildness and history of this coast still exerts an influence on local artists, whose growing numbers, provide material for the thriving art galleries. Martin Newell, poet and musician, the self-styled Wild Man of Wivenhoe, has brought to a contemporary audience some of the legends and tales that haunt the East Anglian coast. He recounts the tale of the mythical ghost dog of eastern England, in Black Shuck, evocatively illustrated by local artist James Dodds.

He rises from the blackness
And races through the lanes
To reach the lonely estuary track
And sneaks along the sea walls
The saltings and the flats
With no one but the wind to call him back

Martin Newell & James Dodds, 1997

The ancient folktale from which this poem originates can grip the imagination if you walk alone along the remote tracks and footpaths that are even now the only routes to the sea in this remote and tranquil landscape. These pictures of lost marshlands were popular through the late 20th century.
The undeveloped coast of Essex exhibits a strong relationship between its ecology and landscape, perhaps more than anywhere else in the county. Much of the Mid Essex Coast has been designated in some way for its nature conservation value, often at an international level. More than any other attribute apart from landform, the ecology of the coastland gives it a unique and distinctive quality.

**Grazing marsh:** These habitats, once characteristic but now exceptional, are found traditionally behind the sea wall formed on the poorly-drained silty and clay soils of the marine alluviums. From Roman times, the inhabitants of the open wetlands of these coasts tried to control the extent of the tides with dykes and walls in order to create non-tidal grazing marsh from the natural salt marshes. Traditionally such marshes have been grazed by sheep all year round and by cattle in the summer, but much of this land is now arable. In the less disturbed grazing marshes, the former salt marsh structure is still apparent in the sinuous system of ditches, dykes and fleets that drained the marshes. The water ranges from fresh to almost as salty as sea water, and the wildlife reflects this. In contrast, Wallasea Island has lost not only its marshland character and features, its habitat value and diversity but a remarkably rich and diverse historic environment has also been lost.

One of the best remaining examples of grazing marsh along the Mid Essex Coast is at Old Hall Marshes, north of Tollesbury, which has been under the management of the RSPB for fifteen years. In winter there can be up to five thousand Brent Geese, 4-5% of the world population, inhabiting these marshes. The water levels and salinity in the fleets and dikes are controlled by a complex system of pumps and sluices that gives varied micro-habitats. These drainage systems are of great entomological interest with many special insects relying upon the continuation of grazing to provide lightly trampled margins in which to breed.

The marsh grassland can be equally distinctive, often dominated by meadow barley, strawberry clover, spiny rest-harrow and hairy buttercup. Those marshes which have escaped the plough during their history often feature large numbers of ant hills; the hills provide a unique, well-drained micro-habitat, as well as shelter for breeding redshank, lapwing, shelduck and yellow wagtail, and ants as food for green woodpeckers. The Essex grazing marshes are also being colonised by small numbers of breeding avocets.

The success of all breeding waders is enhanced by the restriction of grazing during spring to avoid trampling, and the maintenance of open water margins into June to provide feeding areas for chicks. A marsh grazed at the optimum density will usually develop a tussocky sward, which harbours high densities of small mammals and birds. These in turn support birds of prey, often widely dispersed over huge areas; short-eared owl, hen harrier, peregrine and merlin in winter, marsh harrier on migration, and barn owl and kestrel all year round.

Grazing marshes have had a varied history. Many have undergone drainage, levelling and ploughing, some from early in their history as on Foulness. Whilst small areas have subsequently reverted back to marshland, most have remained in arable cultivation. The most dramatic phase of arable conversion was around the Second World War and following the Great Flood of January 1953. Last century 80% of grazing marsh was lost, mostly dating from this period, although there was another rapid period of conversion following Britain’s entry into the European Economic Community.
Damaging though these losses have been, the vast areas of winter cereal crops have proved highly attractive to Brent geese, and form colourful and striking landscapes in their own right in high summer.

Losses have also occurred through urbanisation, but to a far lesser degree than arable conversion. A steady increase in urban land use took place between 1947 and 1960, mainly in land adjacent to existing centres of population such as Maldon, Burnham and West Mersea. Urbanisation results not only in the loss of habitat but of the open and linear character of the marshlands, with buildings and ornamental tree planting causing fragmentation of once uninterrupted landscapes and seemingly limitless views.

Sea walls: These unique coastal and estuarine features, designed to protect the salt marshes from tidal influence, may have their origins in Roman times. Most date back at least to the Middle Ages, although considerably changed by raising and repair. Only a small percentage of the undeveloped coast is not protected in this way. From time to time the remains of counter-walls can be found somewhat inland in the marshland marking an old line of defence. The land to the seaward side can be higher than that to landward because the latter has fallen due to isostatic settlement. The areas outside the wall have grown higher in response as silt deposition continues.

The sea walls of Essex now represent one of the last expanses of grassland in the county, and support a range of uncommon plants and insects. In early summer, grass vetchling, sea clover and narrow-leaved bird’s-foot trefoil create a carpet of colour.

On a warm summer’s day, the air can be filled with the whirring songs of Roesel’s bush-crickets, like the sound of bicycles freewheeling. This insect can be extremely abundant along the Essex coast, despite being scarce nationally. Even more noticeable feeders: Meadow brown, and Large, Small and Essex skippers are widespread; and Ringlet, Brown argus and Marbled white can be locally abundant.

The counterpart habitat to the sea wall is the borrowdyke or delph ditch, from which clay was excavated to make the wall. These ancient linear water-features run parallel to the sea-walls over hundreds of miles around the Essex coast with few breaks, forming an unusual habitat of varied salinity depending on local conditions and management.

The water in the borrowdyke is usually brackish, a mixture of salt water seeping through the wall or leaking through sluices and fresh water drainage off the land. The typical dominance of sea club-rush, glaucous bulrush and lesser reed mace is a reflection of this water chemistry. Where stands of reeds and other emergent plants have developed, a limited range of reedbed birds is present, along with rare insect and animal life.

Salt marsh: Beyond the sea wall, where the surface of the mud flats is exposed for long enough in the tidal cycle, a range of plants can colonise and form a salt marsh. The surface of the marsh is dissected by a system of creeks and often pitted with isolated pools. Deceptively green when the tide is out, at high water they can...
be remote and dangerous places, but accessible from the comparative dryness of an Essex punt!

Essex is especially important for this habitat, having a larger area of salt marsh than any other British county, amounting to 10% of the total national resource. It is under enormous pressure from coastal squeeze, however - a combination of a relative rise in sea level meeting the resistant force formed by the sea wall. Staggering losses have been recorded in the 25 years from 1973 to 1988. The extent of Essex salt marsh fell from c4,000 hectares to c3,000 hectares – that means about 40 hectares a year or 1% a year. Although there is variability between different parts of the coast, it is the big picture which is most worrying. Extensive marshes still remain at Colne Point, Abbot’s Hall and Northey Island and fringing the east coast of Dengie but some show signs of erosion.

Salt marshes have a much specialised flora composed of species that can tolerate or thrive in high salt concentrations. At the lower levels, covered by every tide, most of the plants are annuals, notably the glassworts (a very palatable plant known also as samphire). These develop distinctive tints in the autumn, ranging from yellow to deep purple. The middle marshes are more diverse, with sea aster, salt marsh grasses, and sea purslane with its highly palatable leaves, and its abundant seeds much eaten by wintering birds. In summer, salt marshes can be a blaze of colour, first pink with thrift, and then purple under swaths of sea lavender. One unwelcome invader of both salt marshes and upper mud flats is common cord-grass, which can adversely affect the habitat for birds and other plants.

In their natural state, salt marshes also have an upper zone, washed only by the highest tides. Higher marshes in Essex have now largely been lost as a result of sea-wall construction, but where fragments remain, they can support a distinctive flora. Shrubby seablite and golden samphire, both nationally scarce species, are often abundant with sea wormwood locally common. Above the threat of high tides during the summer, the upper marshes may support high densities of breeding redshank and, more locally, large colonies of black-headed gulls.

These upper zones were traditionally used for summer sheep grazing at low water.

Intertidal mudflats: Where sheltered conditions allow small particles of sediment carried by the sea and river currents to settle, mud and sandy flats can form. These form an extraordinary landscape at low tide, especially when viewed from the water itself.

It was not so much an estuary as a broad sea gulf, thirty miles from jaw to jaw, with the ebb tide turning it to an expanding archipelago as whaleback islands of mud and sand began to ease themselves out into the hazy sunshine.

Jonathan Raban, 1987

Perhaps one of the most dramatic and best known of the sand flats are the Maplin Sands off Foulness where literally miles of sands are exposed, forming one of the biggest intertidal zones in Britain.

Glistening in the sun at low tide, the estuarine and coastal muds and sands are places of great beauty that reveal their ecological richness on close examination. Countless millions of worms, snails, shellfish and other invertebrates, and often a surface layer of green algae contribute to a biological productivity, which surpasses that of even the most intensive agricultural system. Life
on and in the mud is supported by nutrients brought in by the twice-daily tides. In turn this becomes food for fish and birds, in particular to more than a quarter of a million wading birds, ducks and geese every winter.

The sheltered estuaries of Essex are not generally under threat from land reclamation or barrage construction and are a major recreational resource supporting all manner of water-based activities. Where such activities are subject to control, they can be integrated with wildlife interest, but excessive or inappropriate use of the estuaries, especially during the winter months, can lead to disturbance of feeding or roosting birds. Developments associated with water recreation, such as marinas, are also a cause of habitat loss, and, pollution.

Shell and shingle habitats may be found in the outer reaches of the estuaries especially in north Essex. Colne Point, a 4km-long shingle spit, is the best Essex example, supporting an area of vegetated shingle, an internationally scarce habitat.

Shells and shingle may be very different, but the wildlife they support shows great similarities. The unstable substrate and susceptibility to both salt spray and drought make them unsuitable for all but a few well-adapted plants. Typically, the sparse vegetation is dominated by sea beet, sea kale, yellow horned-poppy and sea campion, all plants that can withstand the conditions.

Shell and shingle banks are also of importance for ground-nesting birds, including ringed plover, oystercatcher and also common, Sandwich and little terns. The eggs are simply deposited in a shallow depression, relying on camouflage for defence against predators. Such a defence is, of course, counter-effective against human trampling, and on the more heavily used beaches these birds have been completely excluded.

**Sand dunes:** Deposits of sand forming into dunes are also associated with outer estuarine areas. These small fringing dunes, limited to a few places such as Jaywick, are of value for their special plants, and as natural defences against the sea. Sand is both unstable and drought-prone, and most plants growing on dunes show adaptations such as deep tap roots, succulent tissues, waxy coatings and silvery foliage.

The roots of all plants help to stabilise the sand, but the most effective is marram grass, which can grow through mobile sand, forming an effective frame to the dune. Once stabilised, other plants can colonise, including sea holly, sea bindweed and sea spurge.
Bird life on the dunes is restricted to a few pairs of ground-nesters in the summer, and roving flocks of larks and other small birds in winter. Down on the sandy foreshores, the sanderling is a characteristic wader, brilliant white in winter, following each wave in and out on clockwork legs in its search for food.

Human pressures, especially trampling, horse riding and off-road vehicles, damage the fragile vegetation cover, but natural dynamism, from wind and waves, also helps mould and move the sand. Dunes may, when not impeded, roll over on to salt marshes to provide a unique interface habitat, which supports a number of scarce plants.

Hedgerows: Hedgerows are not at all typical of the coastal marshlands. Yet they form an important linear habitat on the higher ground of the hinterland landscapes on the London Clay with associated drifts, and on the better-drained farmlands of the brick earths, river sands and gravels.

Elm is the dominant hedgerow plant in all these landscape types, but it is often associated with blackthorn and bramble, and can even be enriched with hawthorn, field maple, hazel, oak, and ash. The hedgerows are generally tall and unkempt-looking, the result in part of the natural habit of the elm compared to the more bushy form of hawthorn or hazel. This form can perhaps also be linked in part to management regimes or reflect the local climate at the coast, since more compact, clipped hedges can be found inland on the Dengie peninsula. There appears to be no local tradition of laying these elm hedgerows.

Sadly many of the hedgerows on the coastal hinterland are littered with the skeletons of dead elm trees, ghosts of the 20th century when much of the landscape, notably of the Dengie plain, was graced by their distinctive outline, and the lanes turned into tunnels by their over-arching branches. The culprit in their demise, Dutch elm disease, was first found in Britain in the 1920s but the virulent strain that caused so much damage in the latter half of the century didn’t take hold until the late 1960s. There is currently both a local programme, run jointly by the Campaign to Protect Rural England (CPRE) and Braintree District Council, and a national one run by the Conservation Foundation, of taking cuttings from large elms that, by their size, can be assumed to have resistance to the disease. These can then be grown on, hopefully as healthy adults. These programmes are extremely important for the future both of the landscape and the tree, whose status is recognized in its designation as a Biodiversity Action Plan (BAP) species by Essex County Council.
Several local Landscape Character Area studies, which include the coastal area, have been undertaken in Essex.

Regional and County Scale

The Essex and Southend-on-Sea Landscape Character Assessment is one of a series commissioned by Essex County Council and Southend-on-Sea Borough Council, the Joint Structure Plan Authorities (JSPAs). This regional scale report, prepared at the same time as the Mid Essex LCA [2002] by landscape consultants Chris Blandford Associates (CBA) was published in 2003.

For further information you can link here to the CBA LCA Introduction

District Scale

Tendring landscape character assessment was produced in November 2001 by Land Use Consultants (LUC).

Thurrock LCA (draft) was produced in September 2001: this is being updated but until it is made available reference is made where appropriate to the existing assessment.

The Thames Gateway South Essex Greengrid Strategy has been produced for the Greengrid Partnership by Landscape Design Associates (LDA Design). It incorporates a summarised landscape Character Assessment of the study area.

For further information you can link here to the Greengrid Strategy

Colchester Borough Council LCA is currently being prepared.

The differences in definition of areas and types that evolved between different practitioners are outlined in Definition of Terms (page 27)

SCOPE

The Essex Coastal Protection Belt is a county planning designation that covers undeveloped coastal areas, together with the estuaries and rivers subject to tidal influence, and was set up to protect them from all but essential development. The boundaries of the belt omit urban coast, larger towns, and land committed for development within existing plans. Land affected by forms of development such as caravan sites is also excluded. Small villages and developed land that remains predominantly open such as mineral extraction or landfill sites are included, however.

For the purposes of this study, a similar belt has been extended into the Thames Gateway area to the south (excluding urban centres) and along the Stour valley to the north to define the ‘study area’. The scope of this document covers the coast from the Thames Gateway to Harwich and along the southern bank of the Stour, roughly following the 10m AOD contour as its inland limit.

In Part Two there are therefore three broad sections, loosely defined. The South Essex, Mid Essex and North Essex groupings take account of geographical rather than district boundaries:

South Essex – (Thames Gateway)
Aveloe Marshes to Mucking Flats
Mucking Flats to Canvey Island & Southend

Mid Essex – (Foulness and Dengie)
Foulness Archipelago
River Crouch
Denge Peninsula
River Blackwater

North Essex – (Tendring)
St Osyth (River Colne to St Osyth)
The Naze (St Osyth to River Stour)
Landscape Character Types

This section describes the general character of each of the different landscape character types. The information base for their identification has been described broadly in the section METHODOLOGY OF MID ESSEX LCA [2002]

The following landscape types identified for the Mid Essex LCA have been ‘translated’ to the equivalent landscape types for the other areas:

<table>
<thead>
<tr>
<th>South Essex (Thurrock LCA)</th>
<th>Mid Essex LCA (+ overlap areas of North Essex)</th>
<th>North Essex (Tendring LCA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESTUARY SALT MARSH / MUDFLATS</td>
<td>UNVEGETATED FORESHORE</td>
<td>OPEN COASTAL MARSH</td>
</tr>
<tr>
<td>INTER-TIDAL SALT MARSH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALLUVIAL DRAINED MARSHLAND</td>
<td>DIVERSE COASTAL MARSHLAND</td>
<td>DRAINED COASTAL MARSH</td>
</tr>
<tr>
<td></td>
<td>UNIFORM COASTAL MARSHLAND</td>
<td></td>
</tr>
<tr>
<td>URBAN FRINGE ESTUARY MARSHLAND</td>
<td>URBAN FRINGE COASTAL MARSHLAND</td>
<td></td>
</tr>
<tr>
<td>SAND/GRAVEL TERRACES</td>
<td>RIVER TERRACE FARMLANDS</td>
<td>RIVER FLOODPLAINS</td>
</tr>
<tr>
<td></td>
<td>MIXED MARSHLAND EDGE</td>
<td></td>
</tr>
<tr>
<td>CLAY VALLEYS</td>
<td>ROLLING CLAY FARMLANDS</td>
<td>CLAY VALLEYS</td>
</tr>
<tr>
<td>VALE-TOP FARMLANDS</td>
<td></td>
<td>HEATHLAND PLATEAUX</td>
</tr>
<tr>
<td>ENCLOSED VALLEY SIDES</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Characteristic features and key issues have been stated. Unless otherwise stated, the landscape types have been mapped at 1: 100,000; 1:50,000 or 1:10,000 scale.

Definition Of Terms

The complex nature of the assessment process necessitates a degree of qualitative judgement, as the factors that govern character definition – geology; soils; topography; ecology; archaeology and history; land use and settlement; and cultural perception – can be variable within a specific type.

Boundaries between types can be distinct as between the Diverse Coastal Marshland and the Unvegetated Foreshore or salt marsh where the sea wall marks a clear division; whereas some boundaries are broad and merging as between the Rolling Clay Farmlands and the Mixed Terrace Farmlands.
Landscape Character Types

Some of the broader landscape character types are capable of variety at a local level; for instance the Unvegetated Foreshore can subdivide into muds, sands, shingle, and shells: some types can be defined more narrowly such as the Intertidal salt marsh.

So, for example the landscape type Estuary salt marsh/mudflats in south Essex is a similar type to Open Coastal Marsh in North Essex, whereas in Mid Essex this category has been subdivided into two separate landscape types - Unvegetated Foreshore and Intertidal salt marsh.

In Part Two character areas, often composed of various character types, are described in more detail.
<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Essex</td>
<td>Estuary salt marsh/mudflats</td>
<td>Aveley, Wennington Rainham Marshes, (Inner Thames to St Clement’s Reach)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mucking and Fobbing Marshes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Benfleet Creek at Canvey Island / Benfleet</td>
</tr>
<tr>
<td>Mid Essex</td>
<td>Unvegetated Foreshore</td>
<td>Foulness Point in Crouch Estuary and Foulness Archipelago</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dengie Coastlands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upper Blackwater Estuary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower Blackwater Estuary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tollesbury Fleet in Tollesbury Coastlands</td>
</tr>
<tr>
<td>North Essex</td>
<td>Open Coastal Marsh</td>
<td>Strood Channel at Mersea Island</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Salcott Channel in Colchester Claylands and Marshlands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upper Colne Estuary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower Colne Estuary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brightlingsea Flag Creek</td>
</tr>
<tr>
<td></td>
<td></td>
<td>St Osyth Coastlands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stour Estuary</td>
</tr>
</tbody>
</table>
Unvegetated Foreshore

CHARACTERISTIC FEATURES

* Dynamic system of muds, sands, shingle and shells between the tides
* Rich habitat for invertebrates and molluscs
* Extensive feeding grounds for wildfowl and waders; basking areas for seals
* Archaeological and historic remains
* A large-scale open landscape with extensive views of estuary and coast
* Big skies giving keen sense of the weather
* Sense of remoteness
For South Essex (Estuary salt marsh/mudflats) and North Essex (Open Coastal Marsh) the landscape types include all coastal or estuarine areas down to the low water mark and where sheltered conditions have led to the build-up of sediment.

The further subdivision of the landscape type Unvegetated Foreshore, which excludes salt marsh, is mostly found in Mid Essex and refers to the entire intertidal zone between the high and low marks where this has not yet been colonized by vegetation, a dynamic environment that evolves in shape and form season to season with changes in the wind and tide.

Most characteristic of this varied landscape are the extensive mudflats of the estuaries and creeks, often deeply incised by the moving tide. At low tide these muds, glistening with retreating sea water, form shimmering landscapes of eerie beauty, occasionally revealing the long-hidden remains of ancient human activity or the more recent wreck of a working barge or smack. The remains of Saxon fish traps have been discovered, but are vulnerable to damage by modern-day boating; the wrecks of 19th-century sailing barges, are gradually being lost with each winter storm.

On the coastal shores themselves it is possible to find smooth, hard or pebbly sands, which can be extensive and flat, or narrower and more steeply-shelving. These coastal flats form some of the most remote, wilderness areas not only of Essex but Britain. Wild, potentially hazardous places, inaccessible to all but experienced sailors, basking seals and feeding waders, these are places of extraordinary natural quality.

Perhaps most dramatic, are the shingly and shelly spits. Shell banks are also found along the seaward edge of some of the salt marshes up the estuaries themselves, where the vast numbers of cockles and other shellfish provide the material for these spits. Where the currents are strong enough, great banks of shingle interspersed with small creeks, and in places vegetated, form ridged hummocks from which dramatic views can be had.

Most unifying of all the characteristics of these shorelines is their sense of openness, of horizontality, with limitless views and, in certain lights, shore, sea and sky merging into one. In fresh clear conditions the views are usually enhanced by the sails of small pleasure boats or the glimpse of distinctive rigs of old fishing smacks, winkles brigs and the occasional Thames barge. At night, these landscapes are generally unlit and free from man-made intrusion. However the caravans, holiday homes, and small...
settlements that cluster locally behind
the sea wall in some places, decrease
the night-time sense of remoteness
with inappropriate lighting, and can
clutter views from the shoreline.

Some of the foreshores, especially in
Mid Essex have restricted public access
due either to military ownership or to
conservation management. Most are
inaccessible without private access
from the public highway to the sea
wall or to a boat. Even though there
are few pleasure craft for hire or
charter around the Essex shores,
inappropriate usage of the creeks and
shorelines can still be a problem.

Jet skis have the potential to disturb
wildlife and damage fragile ecosystems
and are still used to explore isolated
channels though they are supposed to
be restricted, especially within SSSI
limits.
KEY ISSUES
* Danger of pollution of intertidal habitat
* Disturbance of habitat by inappropriate recreation
* Loss of traditional commercial maritime trade and distinctive sailing craft
* Erosion of diversity and distinctiveness of seaside beach huts
* Need for recording or conservation of archaeological and historic features
* Restricted access
* Views inland cluttered by scattered development
* Night-time remoteness damaged by lighting at urban fringes
<table>
<thead>
<tr>
<th>SECTION</th>
<th>CHARACTER AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOUTH ESSEX</td>
<td></td>
</tr>
<tr>
<td>AVELEY MARSHES SECTION</td>
<td>Aveley, Wennington, Rainham marshes</td>
</tr>
<tr>
<td></td>
<td>Tilbury, Mucking and Fobbing marshes</td>
</tr>
<tr>
<td>MUCKING / CANVEY SECTION</td>
<td>Chadwell and West Tilbury</td>
</tr>
<tr>
<td></td>
<td>W. Canvey / Shellhaven</td>
</tr>
<tr>
<td></td>
<td>Canvey Benfleet</td>
</tr>
<tr>
<td>FOULNESS ARCHIPELAGO SECTION</td>
<td>Crouch Estuary and Foulness Archipelago</td>
</tr>
<tr>
<td></td>
<td>Rochford Mixed Farmlands</td>
</tr>
<tr>
<td></td>
<td>River Roach</td>
</tr>
<tr>
<td>RIVER CROUCH SECTION</td>
<td>Canewdon Sloping Claylands</td>
</tr>
<tr>
<td></td>
<td>River Crouch</td>
</tr>
<tr>
<td></td>
<td>Burham Sloping Claylands</td>
</tr>
<tr>
<td>DENGIE PENINSULA SECTION</td>
<td>Dengie Coastlands</td>
</tr>
<tr>
<td></td>
<td>Tillingham Ancient Farmlands</td>
</tr>
<tr>
<td>RIVER BLACKWATER SECTION</td>
<td>Dengie Ancient Claylands</td>
</tr>
<tr>
<td></td>
<td>Upper Blackwater Estuary</td>
</tr>
<tr>
<td></td>
<td>Lower Blackwater Estuary</td>
</tr>
<tr>
<td></td>
<td>Maldon Mixed Farmlands</td>
</tr>
<tr>
<td></td>
<td>Tollesbury Rolling Farmlands</td>
</tr>
<tr>
<td></td>
<td>Tollesbury Coastalnds</td>
</tr>
<tr>
<td>NORTH ESSEX</td>
<td></td>
</tr>
<tr>
<td>ST OSYTH SECTION</td>
<td>Mersea Island</td>
</tr>
<tr>
<td></td>
<td>Colchester Claylands and Marshlands</td>
</tr>
<tr>
<td></td>
<td>Lower Roman River</td>
</tr>
<tr>
<td></td>
<td>Lower Colne Estuary</td>
</tr>
<tr>
<td></td>
<td>Upper Colne Estuary</td>
</tr>
<tr>
<td></td>
<td>Brightlingsea Enclosed Valelands</td>
</tr>
<tr>
<td></td>
<td>Brightlingsea Flag Creek</td>
</tr>
<tr>
<td>THE NAZE SECTION</td>
<td>St Osyth Coastlands</td>
</tr>
<tr>
<td></td>
<td>Holland Coastlands</td>
</tr>
<tr>
<td></td>
<td>Hamford Water</td>
</tr>
<tr>
<td></td>
<td>Stour Estuary</td>
</tr>
</tbody>
</table>
South Essex – (Thames Gateway)
Aveley Marshes to Mucking Flats
Mucking Flats to Canvey Island & Southend

Mid Essex – (Foulness and Dengie)
Foulness Archipelago
River Crouch
Dengie Peninsula
River Blackwater

North Essex – (Tendring)
River Colne to St Osyth
St Osyth to The Naze & River Stour
The Essex coast falls principally in the Greater Thames Estuary character area identified by the Countryside Agency. The area described here extends landwards only where there are significant visual, topographical or cultural relationships with the coast. The broad South Essex, Mid Essex and North Essex groupings are loosely defined – and take account of geographical rather than district boundaries.

**Landscape Character Areas**

Thirty distinct character areas have been highlighted along the Essex Coast.

Each local Landscape Character area is defined as a geographical entity, based on cultural and historical associations rather than the physical associations, which link the landscape types. Each local character area listed below is mapped and described. Reference is made to:

- specific issues which relate to the conservation, protection and enhancement of the natural beauty of the coast
- the landscape type or types they contain
- the ecological value of each area, in terms of the designated areas and habitat types
- public accessibility in the form of country parks, long distance walks and nature reserves. As public accessibility is a key objective, where access to country parks, long distance walks and nature reserves exist they are noted. Many of these sites are owned or managed by Essex County Council, Essex Wildlife Trust, the RSPB or the National Trust

- heritage features of architectural, historical and archaeological interest– including an introduction to the process of Historic Landscape Characterisation (outlined briefly in a synthesis of what can now be shown using these methods)

Consideration of these features would provide the basis for possible future Heritage Coast status.

But first, a brief introduction to the process of Historic Landscape Characterisation by Lynn Dyson-Bruce. An HLC has not been carried out on every character area.
A synthesis of what is known about the landscape can now be shown through a process called Historic Landscape Characterisation (HLC). HLC is a relatively new approach to a study of the landscape within Archaeology. The methodology has been developed from that used in the Landscape Character Assessment (LCA) process.

Part of the reason for the development of HLC was due to a perceived imbalance between the information that heritage records indicate and the reality on the ground, reflecting a change of focus from ‘sites’ to ‘landscapes’. Until recently heritage records – the Sites and Monuments Record (SMR) now Heritage Environment Records (HER) - formed the primary resource for heritage management. Yet, no matter how excellent this resource, it is biased and limited, reflecting current and past areas of interest. Where development control has taken place along a bypass, for example, a concentration of SMR/HER records leads to a linear reflection of work, but not of the true potential of the archaeological or historical content within the surrounding landscape. Current trends tend to look at heritage and culture at a total landscape level.

HLC attempts to redress this imbalance by assessing the rural landscape from the point of view of its historic origins. It is meant to be a ‘broad-brush’ approach and represents the first attempt by archaeologists to understand and record the landscape in such a manner. The HLC assesses the entire landscape and does not concentrate on ‘important’ areas nor attach degrees of value to specific areas: it is universal in approach.

In England, English Heritage (EH) spearheaded this approach in 1995 in Cornwall (Herring 1996). The methodology has developed over the years, and application in England is approaching 50%. The coverage is by county; the HLC being applied in partnership between EH and the county involved. (See English Heritage website – characterisation, for further information)

**HC - East of England**

As part of this national initiative EH, in conjunction with the relevant local authorities, initiated an East of England regional project. Started in 1998 in Suffolk, it is now nearing completion, finishing with Norfolk where work began in 2004. The six counties involved in this project are Bedfordshire, Cambridgeshire, Essex, Hertfordshire, Norfolk and Suffolk.

The unitary authorities of Thurrock, Southend-on-Sea and Peterborough have also been included.

**Methodology**

The HLC uses readily available sources (mainly maps), which must be universally available across the region. These comprise current OS maps; the 1950 OS series and the 1st edition OS (mid-19th century). These sources reflect prime changes within the landscape and are available across the region – either as paper or in digital form. The HLC records not only the forms of field systems and their historic origin but change within the landscape. Seminal landscape changes since 1950 in the post-Second World War years appear due to mechanisation, changes in farming practice and socio-economic/political reforms (e.g. CAP). The 1st edition records the effects of the Parliamentary Acts and other 19th century agricultural reforms – unfortunately earlier maps and sources are parish based and thus there is no consistent coverage across the counties. However further research could fill in this information on a parish rather than county base, creating a more detailed, if patchy resource.
CONTENTS
Preface
Executive Summary
Landscape Framework
Part One. Landscape Character Types
Part Two. Landscape Character Areas
Introduction to the Historic Landscape Characterisation
Landscape Character Areas
Bibliography
Consultees
Appendices

Introduction to the process of Historic Landscape Characterisation

The HLC is now a digital record within a Geographic Information System (GIS) i.e. intelligent digital mapping. This enables much complex information to be attached to the map and has been fundamental in the development and success of HLC.

Past landscapes and forms of management may help inform future management strategies, providing guidance in conservation, preservation, restoration or in ways to develop new 21st century landscapes.

HC IEA
The origins of HLC lie in LCA, in both approach and methodology. LCAs assess landscapes with regard to topography, aspect, visual criteria, building types/forms etc. whereas HLCs assess landscape as to its historic origins. Although the original methodology is derived from LCA, HLC is now developing its own approach and methodology.

For further information you can link here to the English Heritage website www.english-heritage.org.uk

Both approaches are complementary: the HLC attempts to inform LCA about historic development in parallel with the natural environment. The scale may differ – LCA is often studied at a smaller scale than HLC.

The HLC process has informed various national LCA's as well as those within the East of England.

HC SAIL
For the purposes of this SAIL project a few ideas have been illustrated here to show how HLC information may be used and applied.

The SAIL project fits within the broader remit of LCA and the HLC can inform the SAIL project as to the historic origins of the wider landscape. The HLC enables smaller units of focus such as Special Sites of Scientific Interest (SSSIs), Scheduled Monuments (SM), Conservation Areas, Special Areas of Conservation (SACs), Special Protection Area (SPAs) etc. to be placed within their wider historic context. This may help inform how they have come about or how they may best be managed to ensure their future survival. One can assess past management strategies and/or impacts upon these smaller landscape components, which may have significance either in ecological or historic terms. Their historic development may have contributed to their current status, form and designation.

HC and Essex
The HLC in Essex is still under review, currently being audited and edited, with reports coming out in late 2005. However initial analysis has indicated several major trends within the landscape.

In general the Essex landscape has early origins. The majority of Essex is ‘anciently’ enclosed as described by Rackham.

But there are traces of Parliamentary style enclosure in the north, as seen on the Chilterns, which rationalised the large common arable fields under strip cultivation, and there are other small pockets of enclosed grazing commons across the county.

The balance of the county can be divided into a broad north-east to south-west division roughly along the A12. North of this, various forms of pre-18th century irregular field systems predominate, thought to be mainly arable. To the south a range of various co-axial field systems, also pre-18th century, are paramount and these are thought to be predominantly grazing. The origins of both are
thought to be early, some mediaeval or earlier.

It is important to remember that East Anglia has been the grain bowl for the UK for centuries and was in the past one of the most densely populated and intensively farmed areas in the UK, although current and recent rural depopulation would attest otherwise.

Since the Second World War there have been radical changes across the county: agrarian changes have meant many alterations within the landscape in the form of field boundary loss or gain. But the over-riding factor is that the inherent historic character and form of enclosure still holds true and dominates more recent change.

There has also been much urban and industrial development within the county. This includes urban expansion of current settlements such as Southend-on-Sea, or new towns such as Harlow. Industrial and commercial development for example in Thurrock made use of former gravel extraction areas with development taking place on reclaimed lands.

Case Studies
Case studies will attempt to place the dynamics of change within the landscape into some form of context.

As an initial indicative study various ‘key-holes’ or scenarios have been selected to illustrate key landscape forms in terms of historic development and significance - rather akin to ‘keyhole’ surgery - to afford small windows looking into or out of the landscape to inform wider initiatives. It is hoped that in the future these ‘key-holes’ or scenarios will be expanded in number, nature and form to provide more diverse applications and interpretations of the landscape in historic terms.

In the selection of HLC examples here, a few ideas will be highlighted showing how the historic background of the coastal regions in Essex can be demonstrated in HLC terms. The history is complex: much has changed socially, economically and topographically, by erosion.

The common themes within the HLC are those of:
• Urban expansion since 1st edition maps – primarily since the Second World War
• Industrial expansion and development – primarily since the Second World War
• Increased mineral exploitation in recent years
• Coastal change – erosion, changes in drainage - pre-18th century curvilinear and 19th century rectilinear
• Coastal exploitation – saltings, oyster beds, ports
• Agricultural change and diversity
• Diverse field systems and distinctive patterns of enclosure
• Most enclosure is very early – pre-18th century in origin
• Recent changes in field boundaries – losses and gains since the 1950s
• Woodlands - a mix of ancient woodlands with limited small more recent plantations
Dengie - Historic landscape Characterisation

The Dengie is a very significant area in historic terms which, in conjunction with the neighbouring area of the River Crouch, represents the core area of a highly distinctive form of enclosure – a co-axial pattern that not only runs EW but NS as well – forming a block-type pattern of enclosure. This pattern has an early date some think possibly dating to the Roman period – representing Roman Centuriation.

Its true origins are disputed – but it is accepted that these represent an early form of enclosure pattern and may even date from prehistory. What is significant in this area is that this form of enclosure is limited to the higher, drier land, with early and later forms of drainage and reclamation in the low lying areas. The area by Bradwell-on-Sea illustrates clearly the change in enclosure pattern – the coaxial fields on the ‘highland’ and sinuous and later drainage patterns on the lowlands.

When one illustrates the contours with the pre-18th century HLC types, the relevance of how enclosure patterns are related with topography is apparent, similarly when one adds the 19th century changes. The pale greens, representing these early periods of coastal drainage are limited to these low lying areas. These areas largely conform to the SLA (turquoise outline). The Ramsar and SSSI sites are on the littoral coast – and impinge on the unimproved strip of land running along the coast – the slightly darker olive.

On the current HLC map – the large pale pink area in the north represents one of the Second World War airfields, which are scattered across the Essex countryside in various forms of preservation.
Generally: This large distinctive character area extends from the small remnant of marshland east of Bradwell to the broad tracts of polder several miles in extent between Burnham and the sea. It includes the fringing salt marshes and the broad sweeps of the Dengie Flats and Ray Sand, which at low tide forces all but boats of the shallowest draft well offshore.

The figures for salt marsh loss in the recent past are significant – a 10% loss was measured between 1973 and 1988 on the Dengie peninsula, where the average rate of retreat during this period was an alarming 2.6m per year. New methods to prevent further loss include use of wave-breaks such as the Thames Lighters at Sales Point and near Marsh House, Tillingham.

It was wide-open country. The silence of the place was thick and palpable; the level sweep of fields under a giant sky made it feel oddly suspended and provisional, a shimmering trick of the light.

This thin, pale water didn’t look like sea, and nor did the land around it look like land. It was wide-open, flat and boggy, only by a few degrees less liquid in its constituency than the stuff which was officially designated as water on the chart.

Jonathan Raban, 1987

Generally settlement is not characteristic of the diverse coastal marshland, but scattered established farmsteads such as Middlewick and Turncole farms, are found within the older marshlands on Dengie, well below the 5m AOD level, with private lanes and tracks linking one to another.

The boundary between the uniform marshland and the more diverse coastal marshland is generally aligned along the change in soil type from the good quality silts of the uniform marshland, to the harder-to-work clays of the older diverse marshland, much of which remained as grassland until the Second World War. A notable traditional settlement is the chain of farms visible along this boundary.
Mid Essex Coast

**Dengie Coastlands**

The uniform coastal marshland was intensively farmed and mainly converted to arable before the Second World War, reflecting the quality of the soils. There is little of ecological value now except in the remaining ditches and dykes, isolated patches of scrub or hedgerow and occasional tree, but the farmland within 1.5km of the sea wall forms part of the extensive feeding grounds for the important numbers of Brent Geese that frequent the Essex coast.

The Dengie Marshlands are marked at the northern end by the pylons that march across the peninsula from Bradwell power station, but otherwise the only striking structures are modest telegraph poles, or occasional telecom masts that have an impact close to.

Access for vehicles is limited: on Dengie it may be necessary to walk up to 10km to reach the nearest public highway from the sea wall, even though this is little more than 1.5km away as the crow flies.

The marshland furthest inland is the oldest, enclosed along the lines of natural drainage channels and fleets that were still substantially intact until the second half of the 20th century. Small pockets of this ancient drainage pattern can still be seen in Bradwell Marsh, around Marsh House in Tillingham parish. Massive ditch removal and straightening has occurred in Southminster and Burnham parishes, and other features such as decoy ponds and counter-walls have disappeared. These more ancient marshlands, enclosed before the 17th century, have a higher percentage of woody vegetation such as scrub, isolated trees and short lengths of hedgerow. Most were still grazed until well into the 20th century because of their heavier clay soils, but are now mostly arable.

Uniform marshland describes the large areas of marsh which were inned and drained generally to a regular pattern. They are found on the seaward side of the older coastal marshlands on Dengie, each inning still separated by counter-walls in places and visibly higher than the older land.

The more recent innings immediately behind the sea wall are on lighter soils and have consequently been cultivated for a longer time. They were enclosed after the 17th century with the help of Dutch engineers. The boundary ditches were always straight and the field size larger. They are devoid of woody vegetation except in association with old decoy ponds and along some counter-walls through lack of maintenance. Farm tracks occasionally run along these old sea defences.

While the older marshlands are scattered with occasional farmsteads and public highways, there is no settlement on the more recent innings, just farm tracks and barns. Public access of any kind, by foot or vehicle, is severely restricted except along the sea wall itself. Just four public rights of way give access to the sea wall from a public highway over the 15km length of the Dengie coast, one of them St Peter’s Way. The landscape has an extraordinarily remote and unsettled quality, particularly in its southern half – buildings, people or animals are rarely visible in the landscape, especially in an east coast mizzle.

Exceptionally, the massive presence of Bradwell power station and its pylons dominate its rural setting locally. The station strangely dominates the landscape, more from a distance than close to, and it is a landmark far out to sea where it is a welcome marker for maritime traffic on an otherwise one-dimensional coastline. Set in a remote and unspoiled landscape, Bradwell power station forms an imposing and
**Dengie Coastlands**

Brooding structure that decreases the sense of remoteness over a wide area, lighting up the night sky in stark contrast to its surroundings. The landscape character around the station had been substantially altered by the creation of a military airfield there during the Second World War. Telegraph poles are widespread but do not intrude.

On a clear day there are long views from the sea wall over the marshes and Dengie Flats to Foulness, the North Kent coast and north to the Tendring coastline.

Looking inland, the Tillingham Terrace Farmlands provide a low tree-lined backdrop, with Bradwell power station a landmark to the north, and the crop processing works at Asheldham dominating the southern marshlands.
Baring-Gould, Sabine, 1880
‘Melahah: A Story of the Salt Marshes’

Benham, Hervey, 1948
‘The Last Stronghold of Sail’

Defoe, D., 1724-6
‘A tour through the whole island of Great Britain’ (reprinted in 1971, Harmondsworth: Penguin)

English Heritage, 1996
‘England’s Coastal Heritage’

English Nature, 1999
‘The Essex coast; beyond 2000’

Essex County Council and Essex Coastal Districts, 1994
‘Essex Coastal Strategy’

Essex County Council, 1999
‘The Essex Landscape: in search of history’

Essex County Council, 1998
‘Draft Deposit Plan’

Firstsite Gallery, Colchester (quote by Ronald Blythe), 2000
‘This flat earth – Art of the East Anglian Landscape’

Griffiths, Maurice, 1932
‘Magic of the Swatchways’

Hunter, John, 1997
‘The Essex Landscape’

John Betjeman, 1954
‘Essex’

Maldon District Council and Colchester Borough Council, 1996
‘Blackwater Estuary Management Plan’

Nature Conservancy Council, 1992
‘Research and Survey in Nature Conservation No. 42; Erosion and vegetation change on the salt marshes of Essex and North Kent between 1973 and 1988’

Newell, Martin and Dodds, James, 1997
‘The Wild Man of Wivenhoe’

Raban, Jonathan, 1987
‘Coasting’

Sagar, Peter, 1994
‘East Anglia’

Smith, J.R., 1970
‘Foulness, A History of an Essex Island’

Soil Survey of England and Wales
‘Soil map of England and Wales; South East England 1:250,000’

Strachan, David, 1998
‘Essex from the air: archaeology & history from aerial photographs’

Winsor, Terry, 2000
‘Essex Boys’ (the movie)
Blackwater Project
BNFL at Bradwell power station
Colchester Borough Council
Countryside Agency
DERA (Ministry of Defence) at Shoeburyness
English Nature
Environment Agency
Essex Estuaries Project
Essex Wildlife Trust
Farming and Wildlife Advisory Group
Castlepoint District Council
Maldon District Council
Rochford District Council
Southend-on-Sea District Council
Tendring District Council
Thurrock District Council
SAIL