Appropriate Assessment for the King's Lynn & West Norfolk Core Strategy Development Plan Document

Introduction

The Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna – the 'Habitats Directive' provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of interest to the EU, at a favourable condition.

Articles 6(3) and 6(4) of the Habitats Directive require Appropriate Assessment:

Any plan or project not directly connected with or necessary to the management of the site but likely to have significant effect thereon, either individually or in combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the site and subject to the provisions of paragraph 4, of the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned, and, if appropriate, having obtained the opinion of the general public. (Article 6(3))

If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. (Article 6(4))

What is Appropriate Assessment?

AA is an assessment of the potential effects of a proposed plan on one or more European sites. The 'assessment' proper is a ***statement*** – which could be as brief as one sentence – which says whether the plan does, or does not, affect the integrity of a European site. However the ***process*** of determining whether or not the plan will affect the site(s) is also commonly referred to as 'appropriate assessment'. The process will usually be documented in a ***report***, entitled something like 'information in support of an appropriate assessment'. The assessment is termed 'appropriate' because it should be 'appropriate' to its purpose under the Habitats Regulations, namely to assess the implications of the plan in respect of the site's 'conservation objectives'.

Stages in the AA process (based on European Commission, 2001)

Stage 1: Screening

Determining whether the plan is likely to have a significant effect on European sites.

Determines whether or not full Appropriate Assessment is needed. The European Court of Justice Judgement ensures that land use plans may be subject to Appropriate Assessment where they might have a significant effect on a European site. Land use plans include RSSs, LDDs, and alterations or replacements of 'old style' land use plans. Screening focuses on avoidance and mitigation of impacts.

Stage 2: Appropriate Assessment

Determine whether, in view of the sites conservation objectives, the plan would have an adverse effect on the integrity of the site.

Fine-tune the plan as it emerges to ensure that significant effects on European sites are avoided. This will render Stages 3 and 4 unnecessary – important since these are complex, expensive and not in keeping with the spirit of the Habitats Directive.

Stage 3: Assessment of Alternative Solutions

Where the plan is assessed as having an adverse effect on the integrity of a site, there should be an examination of alternatives.

Alternatives that avoid adverse effects on European sites should be considered from the earliest stage.

Stage 4: Assessment where no alternative solutions remain and where adverse impacts remain

Compensation measures are required for any remaining adverse effects, and are permitted only where the plan would be necessary for imperative reasons of overriding public interest (IROPI)

Summary of AA Stages

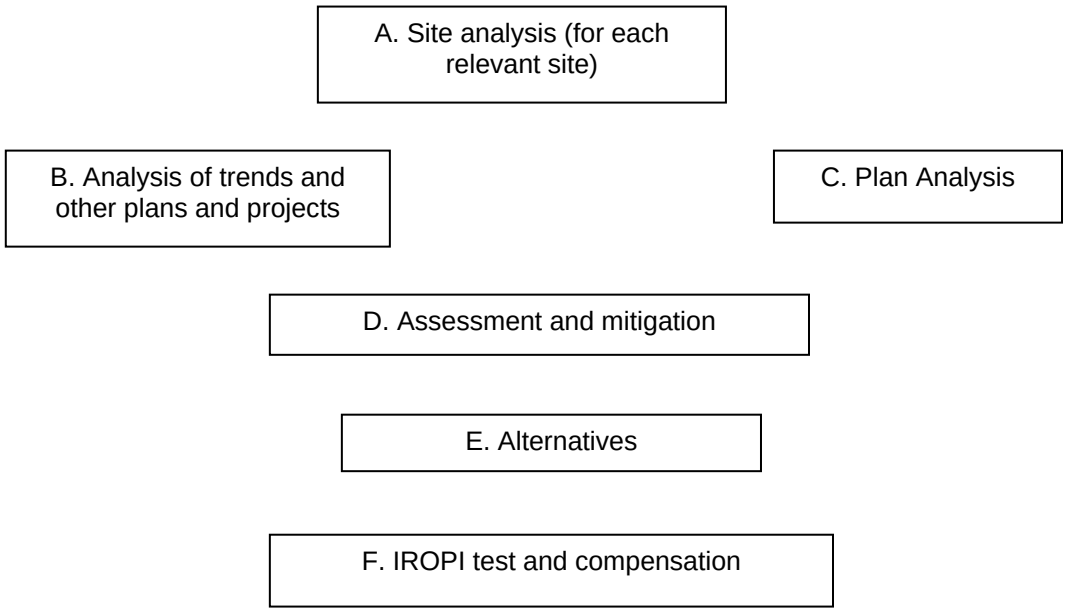


Table 1: Relationship between this approach, European Commission guidance and the relevant articles of the Habitats Directive

AA Approach	EC (2001)	Habitats Directive
Stage A – Site Analysis	**Stages 1-2**	**Article 6(3)**
Stage B – Analysis of trends and other plans and projects		
Stage C – Plan analysis		
Stage D – Assessment and mitigation		
Stage E - Alternatives	**Stage 3**	**Article 6(4)**
Stage F – The IROPI test and compensation	**Stage 4**	

Stage A Site Analysis

Determining the European Site(s) to analyse

The following European Sites are designated within or adjacent to the Borough of King's Lynn and West Norfolk.

The Wash

The Ouse Washes

Norfolk Valley Fens

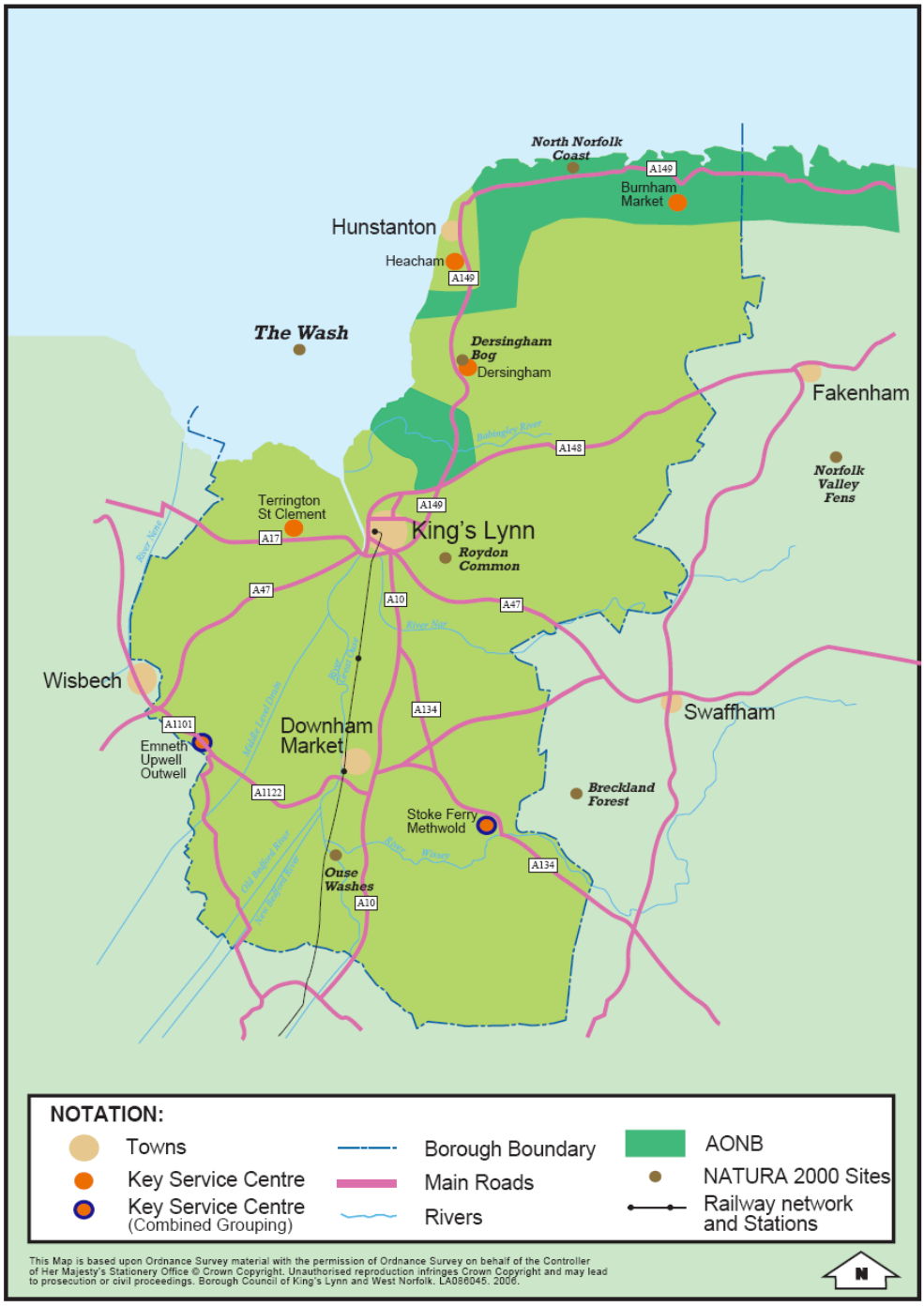
Roydon Common and Dersingham Bog

Breckland

North Norfolk Coast

The locations of these sites are illustrated on the following location plan (Figure 1).

Figure 1: Indicative location of European Sites within King's Lynn & West Norfolk This map will need to be adjusted as Norfolk Valley Fens, Breckland Forest and Ouse Washes are shown in the wrong locations.



Roydon Common and Dersingham Bog SAC

Site Condition

37.74% Area Favourable **62.26%** Area unfavourable recovering

Determining reasons for designation

Dersingham Bog was designated on 12 September 1995 and is located in north west Norfolk, 10km north-east of King's Lynn and 2km east of The Wash. Dersingham Bog covers approximately 158ha and is East Anglia's largest remaining example of a pure acid valley mire, and supports extensive bog, wet heath and transition communities over peat. These are sustained by groundwater, fed via springs and seepage, from the underlying greensand, which in places has caused the development of iron pans. The site supports internationally important plant communities, and has an important assemblage of birds and nine British Red Data Book invertebrates.

Roydon Common was designated on 5 March 1993 and is located in west Norfolk, 4km north-east of King's Lynn and 9km south-east of the eastern shore of the Wash. Roydon Common is an area of lowland mixed valley mire surrounded by heathland. It sits on the Cretaceous greensand of west Norfolk, within a broad south-west facing valley basin.

The site was designated as it is the most extensive example of valley mire-heathland biotope within East Anglia. It is a mixed valley mire holding vegetation communities which reflect the influence of both base-poor and base-rich water. The vegetation communities also have a restricted distribution within Britain. The site supports a number of acidophilic invertebrates outside their normal geographic range with six British Red Data Book invertebrates. In addition numerous nationally rare and scarce flora and fauna are identified on the site.

The entire SAC lies within the Borough.

Site's European Qualifying Features

Roydon Common and Dersingham Bog SAC	**Qualifying Features**	**Key environmental features that support site integrity**
SAC1	4010 Northern Atlantic wet heath with *Erica tetralix*	Groundwater fed via springs and seepage from underlying strata, soil conditions, topography.
SAC2	7150 Depressions on peat substrates of the *Rhynchosporion*	Groundwater fed via springs and seepage from underlying strata, soil conditions, topography.
SAC3	4030 European dry heaths	Soil conditions, low nutrient input

Site Vulnerability

The groundwater is often susceptible to contamination by agricultural fertilisers, or by pollution leaking from landfill sites. Excessive spread of reed, reed canary grass, or reed sweet grass is likely to be an indication of worsening water quality, the cause of which should be investigated and addressed to maintain the characteristic fen communities.
Drainage schemes should not intercept the sources of ground and surface water to the valley mire. It is important for the watercourses of the valley mire not to receive run-off from fertilised land or surface water from farmyards. The bed of the watercourse should not be lowered, nor should its water level be artificially raised, other than as part of a well thought-out conservation scheme.
Heavy grazing should be avoided on wet heath as it can lead to a decline in characteristic dwarf shrub cover in favour of grass and sedge species, as well as excessive poaching and erosion of the underlying peat. Inappropriate burning can be very damaging to both plant and animal communities. Many of the habitats present are vulnerable to neglect.
The habitats within this site are highly sensitive to inorganic fertilisers and pesticides, applications of which should be avoided both within the site itself and in adjacent surrounding areas. Herbicides may be useful in targeting certain invasive species, but should be used with extreme care. Access to this site, and any recreational activities within, may also need to be controlled.

North Norfolk Coast SAC/ SPA

Site Condition

96.62% Area favourable **1.93%** Area unfavourable recovering
1.46% Area unfavourable no change

Determining reasons for designation

The North Norfolk Coast is a low-lying barrier coast which extends for 40km, covering approximately 7862ha and encompasses a variety of habitats including intertidal sands and muds, saltmarshes, shingle and sand dunes, together with area of land-claimed freshwater grazing marsh and reedbed. Both freshwater and marine habitats support internationally important numbers of wildfowl in winter and several nationally rare breeding birds. The sandflats, sand dune, saltmarsh, shingle and saline lagoon habitats are of international importance for their fauna, flora and geomorphology.

The justification for designation is that the site is one of the largest expanses of undeveloped coastal habitat of its type in Europe. It is a particularly good example of a marshland coast with intertidal sand and mud, saltmarshes, shingle banks and sand dunes. There are also a series of brackish-water lagoons and extensive area of freshwater grazing marsh and reed beds.

The site also supports at least three British Red Data Book and nine nationally scarce vascular plants, one British Red Data Book lichen and 38 British Red Data Book invertebrates.

Part of the SAC/ SPA lies within the Borough, the remainder lies within North Norfolk district.

Site's European Qualifying Features

North Norfolk Coast SAC/ SPA	**Qualifying Features**	**Key environmental features that support site integrity**
SAC1	1150 Coastal Lagoons	Topography, salinity, drainage
SAC2	1220 Perennial vegetation of stony banks	Coastal processes, relative tranquillity
SAC3	1420 Mediterranean and thermo-Atlantic halophilous scrubs	Coastal processes
SAC4	2110 Embryonic shifting dunes	Coastal processes
SAC5	2120 Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")	Coastal processes
SAC6	2130 Fixed dunes with herbaceous vegetation ("grey dunes")	Coastal processes, relative tranquillity.
SAC7	2190 Humid dune slacks	Topography, rainfall, drainage
SAC8	1355 Otter	Extent of site, mosaic of habitats, habitat structure, relative tranquillity.
SAC9	1395 Petalwort	Soil conditions, hydrology, habitat structure
SPA1	Breeding populations: avocet, bittern, marsh harrier, little tern, common tern, mediterranean gull, roseate tern, sandwich tern, redshank, ringed plover.	Coastal processes, extent of site, mosaic of habitats, habitat structure, relative tranquillity.
SPA2	Wintering populations: avocet, pink-footed goose, dark-bellied brent goose, wigeon, knot, hen harrier, bar-tailed godwit, bittern, golden plover, ruff, pintail, redshank.	Coastal processes, extent of site, mosaic of habitats, habitat structure, relative tranquillity.
SPA3	Migrant populations; ringed plover	Coastal processes, extent of site, mosaic of habitats, habitat structure, relative tranquillity.

SPA4	Wetland bird assemblage (in addition to the overwintering and migratory species above): Common scoter, Cormorant, shelduck, white-fronted goose, dunlin, gadwall, teal, shoveler, velvet scoter, oystercatcher, grey plover, lapwing, sanderling	Coastal processes, extent of site, mosaic of habitats, habitat structure, relative tranquillity.

Site Vulnerability

Water quality, and any direct and/or diffuse inputs from the surrounding land, can have a profound effect upon the productivity of lagoons and well-being of specialist species. Saline lagoons can show extreme reactions to a build up of some types of nutrients and therefore it may be necessary to actively manage inputs, especially where in close proximity to farmland.

The birds that use mud and sandflats for feeding and roosting are vulnerable to disturbance from human activities, for example, bait digging, dog walking and wildfowling. These activities can lead to reduced time spent feeding, or individuals being restricted to areas with a poor food supply. Disturbance should therefore be minimised, especially at times when bird populations may be stressed, such as during severe winter weather.

The location and extent of mud or sandflats is dependent on the extent to which the estuary or coast where they occur is constrained from responding to sea level rise and changing sediment regimes. Management needs to create space to enable landward roll-back to take place in response to sea-level rise, and should also allow the system to be dynamic and retain the flexibility to respond to associated changes such as the movement of physical features within the system, e.g. migrating subtidal sandbanks.

There are a number of factors that are contributing to saltmarsh change that management may need to take into consideration. These include coastal erosion as a result of coastal flood-defence works, rising sea-levels, variations in sediment deposition, and land claim for development.

A key management requirement is to avoid or minimise surface disturbance, especially in the more open communities. Many of the vegetation types and species associated with shingle are fragile and vulnerable to damage from trampling. This breaks up the fine humus that develops in the upper layers of the shingle that is vital for the plants to survive. Where recreational pressures are significant enough to result in the loss of vegetation cover, or prevent its recovery, it may be necessary to take steps to manage access. Disturbance of areas important for breeding birds should be minimised during the breeding season.

Many of the vegetation types supported by sand dunes are fragile and vulnerable to erosion from heavy trampling. Where recreational pressures are significant enough to result in the loss of vegetation cover and prevent recovery, it may be necessary to take steps to manage access by putting boardwalks in or controlling activities in vulnerable areas such as the foredunes. It may also be necessary to manage access to limit the impacts of disturbance on breeding birds. Where recreation pressure is

not severe, the impact of trampling can help to retain diversity on some sites – sandy tracks break up the vegetation sward and provide areas of bare sand thus increasing the diversity of habitats available.

The habitats within this site are highly sensitive to inorganic fertilisers and pesticides, applications of which should be avoided both within the site itself and in adjacent surrounding areas. Herbicides may be useful in targeting certain invasive species, but should be used with extreme care. Access to this site, and any recreational activities within, may also need to be controlled.

Breckland SPA

Site Condition
100.00% Area Favourable

Determining reasons for designation

The Breckland of Norfolk and Suffolk lies in the heart of East Anglia on largely sandy soils of glacial origin. In the 19th century the area was termed a sandy waste, with small patches of arable cultivation that were soon abandoned. The continental climate, with low rainfall and free-draining soils, has led to the development of dry heath and grassland communities. Much of Breckland was planted with conifers through the 20th century, and elsewhere arable farming is the predominant land use. The remnants of dry heath and grassland that have survived these changes support heathland breeding birds, where grazing by sheep and rabbits is sufficiently intensive to create short turf and open ground. These species have also adapted to live in forestry and arable habitats. Woodlark and nightjar breed in recently felled areas within the conifer plantations, while stone curlew establishes nests on open ground provided by arable cultivation in the spring.

Only a small proportion of the Breckland SPA lies within the Borough. The remainder lies within Breckland district and Forest Heath district.

Site's European Qualifying Features

Breckland SPA	Qualifying Features	Key environmental features that support site integrity
SPA1	Breeding birds; stone curlew, woodlark, nightjar	Stone curlew – soil conditions, agriculture, grass heath. Woodlark and nightjar – clear-felled forestry plantations, grass heath.

Site Vulnerability

Both Breckland Forest and Farmland are heavily managed habitats and the species using them are subject to changes in management.

Stone curlew in particular is vulnerable to human disturbance, including recreation.

The Ouse Washes

Site Condition

100.00% Area Favourable

Determining Reasons for Designation
The Ouse Washes SAC represent spined loach populations within the River Ouse catchment. The Counter Drain, with its clear water and abundant macrophytes, is particularly important, and a healthy population of spined loach is known to occur.

The Ouse Washes are located in Eastern England on one of the major tributary rivers of the Wash. It is an extensive area of seasonally flooding wet grassland ("washland") lying between the Old and New Bedford Rivers, and acts as a floodwater storage system during winter months. The cycle of winter storage of floodwaters from the river and traditional summer grazing by cattle, as well as hay production, have given rise to a mosaic of rough grassland and wet pasture, with a diverse and rich ditch fauna and flora. The washlands support both breeding and wintering waterbirds. In summer, there are important breeding numbers of several wader species, as well as spotted crake. In winter, the site holds very large numbers of swans, ducks and waders. During severe winter weather elsewhere, the Ouse Washes can attract waterbirds from other areas due to its relatively mild climate (compared to continental Europe) and abundant food resources. In winter, some wildfowl, especially swans, feed on agricultural land surrounding the SPA.

The SAC/ SPA only lies partly within the Borough, the remainder lies within Fenland District and East Cambridgeshire District.

Site's European Qualifying Features

Ouse Washes SAC/ SPA	Qualifying Features	Key environmental features that support the site integrity
SAC1	1149 Spined loach *Cobitis taenia*	Fluvial processes; water quality; water levels.
SPA1	Breeding species; spotted crake, ruff, shoveler, gadwall, black-tailed godwit, garganey	Water levels; relative lack of predators
SPA2	Wintering species; bewick's swan, whooper swan, hen harrier, ruff, black-tailed godwit, gadwall, pintail, pochard, shoveler, wigeon.	Water levels
SPA3	Wetland bird assemblage (in addition to the overwintering species above): mallard, teal, pochard, tufted duck, mute	Water levels

	swan, coot, cormorant, snipe, moorhen, oystercatcher, shelduck, redshank, lapwing	

Site's Vulnerability

Adverse change in vegetation community type in relation to changing hydrological regime (increased levels of annual inundation) and decades of high nutrient-status of receiving water.

High nutrient levels caused by sewage treatment works and agricultural runoff.

Recent decades have seen an increase in occurrence of spring flooding and winter flood depths. These two factors have had an adverse impact on vegetation and bird features of the site.

The Wash (incorporating the Wash SPA and the Wash and North Norfolk Coast SAC)

Site Condition

60.24% Area favourable **0.63%** Area unfavourable recovering **39.13%** Area unfavourable declining

Determining Reasons for Designation
The Wash is located on the east coast of England and is the largest estuarine system in the UK. It is fed by the rivers Witham, Welland, Nene and Great Ouse that drain much of the east Midlands of England. The Wash comprises very extensive saltmarshes, major intertidal banks of sand and mud, shallow waters and deep channels. The eastern end of the site includes low chalk cliffs at Hunstanton. In addition, on the eastern side, the gravel pits at Snettisham are an important high-tide roost for waders. The intertidal flats have a rich invertebrate fauna and colonising beds of Glasswort *Salicornia* spp. which are important food sources for the large numbers of waterbirds dependent on the site. The sheltered nature of The Wash creates suitable breeding conditions for shellfish, principally Mussel *Mytilus edulis*, Cockle *Cardium edule* and shrimps. These are important food sources for some waterbirds such as Oystercatchers *Haematopus ostralegus.* The Wash is of outstanding importance for a large number of geese, ducks and waders, both in spring and autumn migration periods, as well as through the winter. The SPA is especially notable for supporting a very large proportion (over half) of the total population of Canada/Greenland breeding Knot *Calidris canutus islandica*. In summer, the Wash is an important breeding area for terns and as a feeding area for Marsh Harrier *Circus aeruginosus* that breed just outside the SPA.

To the north, the coastal habitats of The Wash are continuous with Gibraltar Point SPA, whilst to the east The Wash adjoins the North Norfolk Coast SPA.

Only part of The Wash SPA and the Wash and North Norfolk Coast SAC lie within the Borough. The remainder lies within North Norfolk,

Site's European Qualifying Features

The Wash (incorporating the Wash SPA and the Wash and North Norfolk Coast SAC)	Qualifying Features	Key environmental features that support the site integrity
SAC1	1110 Sandbanks which are slightly covered by sea water all the time	Coastal processes
SAC2	1140 Mudflats and sandflats not covered by seawater at low tide	Coastal processes
SAC3	1160 Large shallow inlets and bays	Coastal processes
SAC4	1170 Reefs	Coastal processes
SAC5	1310 *Salicornia* and other annuals colonising mud and sand	Coastal processes
SAC6	1330 Atlantic salt meadows	Coastal processes
SAC7	1420 Mediterranean and thermo-Atlantic halophilous scrubs	Coastal processes
SAC8	1150 Coastal lagoons	Topography, salinity, drainage
SAC9	1365 Common seal	Coastal processes, relative tranquillity
SAC10	1355 Otter	Extent of site, mosaic of habitats, habitat structure, relative tranquillity.
SPA1	Breeding species: common tern, little tern, marsh harrier	Coastal processes, extent of site, mosaic of habitats, habitat structure, relative tranquillity.
SPA2	Overwintering species: bar-tailed godwit, avocet, whooper swan, golden plover, black-tailed godwit, curlew, dark-bellied brent goose, dunlin, grey plover, knot, oystercatcher, pink-footed goose, pintail, redshank, shelduck, turnstone	Coastal processes, extent of site, mosaic of habitats, habitat structure, relative tranquillity.
SPA3	Migratory species: ringed plover, sanderling	Coastal processes, extent of site, mosaic of habitats,

		habitat structure, relative tranquillity.
SPA4	Wetland bird assemblage (in addition to the overwintering and migratory species above): little grebe, cormorant, white-fronted goose, wigeon, mallard, lapwing, whimbrel, common scoter, goldeneye	Coastal processes, extent of site, mosaic of habitats, habitat structure, relative tranquillity.

Site's Vulnerability

The biological richness of the Wash is largely dependant on the physical processes that dominate the natural systems and consequently the ecological vulnerability is closely linked to the physical environment. The intertidal zone is vulnerable to coastal squeeze as a result of land-claim, coastal defence works, sea-level rise, and storm surges. Intertidal habitats are potentially affected by changes in sediment budget caused by dredging and coastal protection, construction of river training walls and flood defence works. The site is also potentially vulnerable to gas exploration. Activities affecting sediment budget and anthropogenic causes of coastal squeeze will be addressed through the management scheme being developed jointly for the SAC/SPA on this site.
The estuary is fed by four large rivers, which drain a substantial area of Eastern England. The volume and quality of water entering the Wash is dependent on the use made of these rivers for water abstraction and agricultural, and domestic effluents. Discharge consents and abstraction licenses will be reviewed under the provisions of the Habitats Regulations.
There are two Air Weapons Ranges within the site; activities on these ranges are covered by a Memorandum of Understanding between the Ministry of Defence and Department of the Environment, a Declaration of Intent between the Ministry of Defence and English Nature and by Site Management Statements with English Nature. There is a Nature Conservation Management Plan and Management Committee for one of the ranges.
These issues have been addressed in the Wash Estuary Management Plan and by Local Environment Agency Plans and will be extended through the Marine Scheme of Management, which is now in progress.

The Norfolk Valley Fens

Site Condition

20.22% Area Favourable **79.78%** Area unfavourable recovering

Determining Reasons for Designation

Norfolk Valley Fens is one of two sites selected in East Anglia, in eastern England, where the main concentration of lowland alkaline fens occurs. This site comprises a series of valley-head spring-fed fens. Such spring-fed flush fens are very rare in the lowlands. Most of the vegetation at this site is of the small sedge fen type, but there are transitions to reedswamp and other fen and wet grassland types. The individual fens vary in their structure according to intensity of management and provide a wide range of variation. There is a rich flora associated with these fens, including species such as grass-of-Parnassus, common butterwort, marsh helleborine and narrow-leaved marsh-orchid.

In the Borough, there is only one component site of this widely scattered SAC; East Walton and Adcock's Common SSSI. The other sites are within North Norfolk district, Breckland district, Broadland district, and South Norfolk district.

Site's European Qualifying Features

Norfolk Valley Fens	**Qualifying Features**	**Key environmental features that support the site integrity**
SAC1	7230 Alkaline Fens	Hydrology, topography, water quality
SAC2	4010 Northern Atlantic wet heaths with *Erica tetralix*	Not present within SAC component in Borough
SAC3	4030 European dry heaths	Not present within SAC component in Borough
SAC4	6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates	Soil conditions; habitat structure
SAC5	6410 *Molinia* meadows on calcareous, peaty or clayey silt-laden soils	Soil conditions; habitat structure, hydrology
SAC6	7210 Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*	Hydrology, topography, water quality
SAC7	91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*.	Not present within SAC component in Borough
SAC8	1014 Narrow-mouthed whorl snail *Vertigo angustior*	Not present within SAC component in Borough
SAC9	1016 Desmoulin's whorl snail *Vertigo moulinsiana*	Habitat structure; hydrology and water levels.

Site Vulnerability

These alkaline fens are generally small in area and surrounded by intensively-farmed land. They are very vulnerable to reductions on the water table and a decrease in the volume of spring flows arising from groundwater abstraction.

In recent decades scrub and woodland has spread due to the cessation of traditional cutting and grazing management and the drying-out of the fens. These sites are now largely isolated from the rural/agricultural economy of which they were once a part, and in many instances this traditional management has become uneconomic.

Management agreements, Countryside Stewardship and ESA payments help towards the reintroduction or promotion of the continued use of traditional management. Improved understanding of the water needs of these wetlands is required and is the subject of work by the Environment Agency and English Nature

Stage B Analysis of Trends and Other Plans and Projects

The main plans and strategies influencing the Natura 2000 sites and therefore the assessment are as follows:

The King's Lynn & West Norfolk Local Plan was adopted in November 1998 and covers the period to the end of 2006. The impact of the new Planning Act (2004) was to automatically "save" all its policies until September 2007. A number of policies from the Norfolk Structure Plan 1999 are also saved. These are listed in the Local Development Scheme and in the draft Regional Spatial Strategy. Over the coming years, Local Development Plan Documents will be produced to replace the saved Local Plan policies and proposals. As each new Development Plan Document is adopted, the policies, proposals and supporting text in the Local Plan it replaces will be withdrawn.

The Core Strategy is the key document to which other Development Plan Documents will be linked and be in conformity with.

Impact of Other Regional/Local Initiatives and Strategies e.g. regional and local housing strategy, economic strategies, community strategy, local neighbourhood renewal strategy

The Core Strategy has to relate to and deliver other key regional and local strategies.

Regional Strategies

Some of the key regional strategies which will influence the Local Development Framework are summarised below. As there are at least 19 regional strategies this section picks out those thought to have the most significance for the LDF.

Regional Economic Strategy

A shared vision: the regional economic strategy for the East of England represents the latest revision of the regional economic strategy for the region, which was originally produced in 1999 and revised in 2001. This document takes into account,

policy initiatives, data and research that post-date the production of the 2001 strategy.

The regional economic strategy sets the long-term vision for the sustainable economic development of the East of England.

This strategy should be considered alongside the regional spatial strategy for the East of England which covers the period up to 2021. The regional economic strategy is formally reviewed every three years but it is also a live document that is subject to an ongoing and transparent process of monitoring and review.

The regional economic strategy is one of a suite of regional strategies. Production of these strategies is overseen or is the responsibility of a number of different regional organisations. The regional economic strategy informs, emphasises, seeks coherence between and builds upon the economic development aspects of these regional strategies.

The regional spatial strategy sets the spatial development framework for the region. Other strategies, for example the environment strategy and the social strategy, emphasise different aspects of sustainable development. EERA has also led on the production of an integrated regional strategy for the East of England which, building on the sustainable development framework, will provide an overarching context for the other regional strategies.

The vision for the region is…
'…a leading economy, founded on our world-class knowledge base and the creativity and enterprise of our people, in order to improve the quality of life of all who live and work here.'

For the King's Lynn Sub Region the RES shows the following areas for development:

- Improve the provision of locally-based higher education and support training programmes in association with local business
- Support the regeneration and renaissance of King's Lynn and reinforce its role as a key service centre, through the redevelopment of brownfield land, a high quality mixed use urban environment and the provision of employment land and business premises
- Support local communities to develop solutions and address their own needs particularly in relation to improving employment access for disadvantaged communities.
- Promote closer economic links to the Cambridge, Peterborough and Norwich sub-regions to maintain and attract complementary businesses
- Improve transport connections to the rest of the region and the East Midlands by both road and rail.

Regional Housing Strategy 2005 – 2010

The Regional Housing Strategy for the East of England sets out the strategic direction for the delivery of housing in the East of England - helping to meet the challenges of

growth and regeneration in the Region, and more specifically to inform the recommendations for public investment in affordable housing.
The Regional Housing Strategy (RHS) is based on a vision of the Region where everyone can live in a decent home which meets their needs, at a price they can afford and in locations that are sustainable.

Integrated Regional Strategy

The Integrated Regional Strategy (IRS) is an EERA led strategic initiative, the vision for which is: 'to improve the quality of life for everyone who lives or works in the East of England'. The White Paper, "Your Region, Your Choice", May 2002, presented an early opportunity for the development of the IRS, which outlines the Government's commitment to greater regional integration. The White Paper encouraged public bodies, operating in the region, to develop a 'joined up' approach and to identify and drive forward the main priorities for the region. The completed IRS seeks to do just that. It was developed though a two stage process:
a review and analysis of regional strategies, ranging from the east of England Plan to the Regional Cultural Strategy; and the identification and reconciliation of the main priorities incorporated in these regional strategies.
The purposes of the IRS are:

- To provide a joined up statement of regional priorities.
- To flag any areas where the regional strategies may conflict.
- To suggest processes through which tensions between regional strategies might be mitigated and resolved.
- To provide an overarching context for the development of regional strategies in the future, building on the current Regional Sustainable Development Framework.
- To provide a clear statement to central government of the East of England's regional priorities.

The IRS tackles the critical issues facing the region, for example housing, transport, health, skills and economy. It combines a strong strategic vision for the region with the necessary co-ordination framework for all other strategies, regional partnership bodies and delivery mechanisms.

Sustainable Development Framework

The East of England Sustainable Development Framework sets out a vision for sustainable development in the region, and identifies its contribution to sustainable development at the national level.
The Sustainable Development Framework was produced in October 2001 by EERA and the Sustainable Development Round Table. The Framework is a high level document, aiming to influence the development of regional policy, rather than setting out a plan for action. It has played a central part in the development of the Integrated Regional Strategy for the East of England.

Cultural Strategy

A draft Cultural Strategy has been produced by Living East. The Cultural Strategy embraces performing arts, media, museums and archives, libraries and literature, sport, built heritage, archaeology, landscapes and countryside recreation, parks and play activities and tourism. Rather than determining cultural policies or individual

projects, the role of the strategy will be to highlight the value of cultural activity and its importance to the quality of life in the East of England.

Regional Social Strategy

The Regional Social Strategy sets out the vision, objectives and means for achieving a fair and inclusive society in the East of England. It identifies regional priorities, policies and actions to support local activity and provides a framework for tackling social exclusion in the region.

Towns and Cities Strategy (Urban Renaissance)

EEDA's Urban Renaissance Strategy built on the recommendations of the Government's Urban White Paper and the Urban Task Force report. An initial consultation phase led to the creation of the Towns and Cities Strategy and Action Plan and a Good Practice Guide.

Actions from the Action Plan are being developed. These include:

Regional Centre of Excellence for Regeneration and Renaissance (RCE)

Regional Design Action Manager

Local Strategies

Enabling Sustainable Development

Design Quality Criteria

County Strategies

Local Transport Plan for Norfolk 2006 – 2011

This document, Norfolk's second Local Transport Plan, covers the five year period from April 2006 to March 2011 but with a longer term strategy up to 2021. The Vision is that "Norfolk is a well-connected place in which to live and do business and to visit, and is known as a national leader in making the transport system safer and reducing the impact transport has on climate change and the wider environment. The Plan contains a number of thematic strategies together with area strategies for King's Lynn and, in the rural areas, for the Norfolk Market Towns and the North Norfolk Coast Area of Outstanding Natural Beauty.

Norfolk Ambition: The Community Strategy for Norfolk 2003 to 2023

The County's Community Strategy sets out a vision for the next 20 years.

The Vision

To improve the quality of life for all of the people of Norfolk.

This means in 2023 Norfolk will be recognised as a county:

- where all individuals have the opportunity to achieve a good quality of life
- where people enjoy healthy lifestyles and have equitable access to high standards of health and social care
- where people in communities feel safe
- with excellent educational attainment and opportunities for learning at all stages throughout life
- where individuals from all backgrounds can play an active part in community life

- where the high quality environment is respected and enhanced for everyone's enjoyment and is matched by a strong reputation for renewable energies
- which is renowned for its culture, creativity and spirituality
- with a distinctive economy characterised by innovative and dynamic businesses
- where the physical and virtual communications infrastructure meets the needs of a forward-looking county

Local Strategies

Shaping the Future – A Strategy for Economic Regeneration in the Borough of King's Lynn and West Norfolk March 2003

This was prepared by the West Norfolk Economic Forum. It sets out the priorities and indicative actions needed to achieve the goal contained in the Local Strategic Partnership's Community Plan of King's Lynn and West Norfolk being "A prosperous place to live with a diverse and growing economy".

A key element of the Strategy is the focus on King's Lynn as the main economic driver and employment centre of the Borough. The success of King's Lynn, supported by the regeneration of the market towns, will have the greatest impact on securing the future prosperity of the Borough.

Shaping the Future – West Norfolk provides the West Norfolk element of the Norfolk Shaping the Future Economic Development Strategy. Shaping the Future recognizes the need to implement the strategy at the local level. This concentration on activity at the local level will not only strengthen the local economies, but will also lead to an overall improvement to the prosperity of the County. Shaping the Future in turn links with the East of England Development Agency's Regional Development Strategy.

West Norfolk Partnership Strategic Framework 2005

In 2002 the West Norfolk Partnership developed and published the first West Norfolk Community Strategy - 'Working Together. Making a Difference.'
The West Norfolk Strategy provided a long term view of how local quality of life in West Norfolk could be improved. It set out the 'stepping stone' goals to help move us towards this future.
The board has reviewed its strategy by working with key partnerships. The revised West Norfolk Community Strategy was published in April 2005, together with six 'daughter strategies' - one for each of the six Standing Partnerships.
The priorities of this document are expressed in the local area agreement under the headings:

1. Healthier communities and older people
2. Economic development and enterprise
3. Children and young people
4. Safe and stronger communities

Neighbouring Districts

The districts neighbouring The Borough are North Norfolk, Breckland, Forest Heath, Fenland, East Cambridgeshire and South Holland. These districts will also be producing LDFs concurrent with that of the Borough.

Other Environmental Strategies/ Plans which may impact on some or all Natura 2000 sites within the Borough

Brecks Management Plan
Water Resources Strategy for the East of England
English Nature/ Landowner Site Management Plans
Minerals LDF – Norfolk County Council
Norfolk Biodiversity Action Plan
Norfolk Coast AONB Management Plan
Shoreline Management Plans
Wash Estuary Management Plans

Stage C – Plan Analysis

In order to determine whether the King's Lynn and West Norfolk Local Development Framework is likely to have a significant effect on the European Sites within the Borough by a series of matrices have been created which seek to assess the following:

1. The Status and Condition of the Site;
2. Factors affecting the integrity of the sites' qualifying features;
3. Score in view of LDF;
4. Influence of the LDF on these factors;
5. Relationship of other plans/programmes on site integrity;
6. Possible mitigation measures to alleviate impact on Natura 2000 sites.

The LDF has been assessed against each of the qualifying features of the site. The likely impact of the LDF is then scored against each of these features in terms of the following:

Symbol	Meaning
++	Likely significant positive effect
+	Likely positive effect
0	Likely neutral effect
-	Risk of negative effect
--	Risk of significant negative effect
-/+	Dependent on implementation – could be a positive or negative effect

"Significant" in this context can be interpreted as an effect likely to adversely affect a Natura site's integrity in the case of a negative effect, or an effect likely to enhance the site's integrity in the case of a positive effect. Note that the precautionary principle has been applied in all cases, as specified in the draft DCLG Guidance. "Integrity" is described in ODPM Circular 06/2005: Biodiversity and Geological Conservation as "the site's coherence, ecological structure and function across its whole area that enables it to sustain the habitat, complex of habitats and/or the levels of populations of species for which it was classified" (ODPM Circular 06/2005, para. 20).

Key policy options, which are likely to impact on the qualifying features of European sites, are outlined as follows, together with a broad assessment of impacts, specifying which sites where possible. Impacts on each qualifying feature of each site are then assessed in detail.

Every policy option has been assessed against each of the qualifying features in this report. The matrices pick out the key policy options in terms of feature and give an assessment. Many policy options will have a neutral effect on each site feature and are therefore not detailed within this report.

Preferred Policy Option		Impact on Natura 2000 Sites
Achieving Sustainable Development		
1	Tackling Climate Change	Potentially positive
2	Renewable Energy Development	Potential negative impacts on Ouse Washes and North Norfolk Coast
3	Energy and Water Efficiency	Potentially positive
4	Location of Development	Potentially positive
5	Establishing Key Service Centres	Potential negative impacts on Dersingham Bog and Breckland SPA
Housing		
6	Housing Distribution	Potential Impacts on Dersingham Bog and Roydon Common SAC
7	Affordable Housing	None identified
8	Affordable Housing	None identified
9	Rural Exception Sites	If there is a need for an exception site for affordable housing in an area close to a Natura Site this could have negative impacts.
10	New Housing in the AONB	Potential impacts on Roydon and Dersingham SAC, North Norfolk Coast and the Wash.
11	Second Home Ownership	None identified.
12	Dwelling Types	None identified.
13	Residential Mobile Homes	None identified, as mobile homes will be treated as if they were permanent housing so come under similar constraints of protection to these Natura sites.
14	New Dwellings in the Countryside	These could have an impact on various sites dependent upon proximity and location.
15	Removal of Agricultural Occupancy	None identified.
16	Re-use of buildings in the countryside for housing	None identified, as the policy option states that the change of use should not result in excessive traffic generation
17	Alteration or replacement of existing dwellings in the Countryside	None identified.
18	Provision for Gypsies and Travellers	Potential negative impact, dependent upon location and proximity to any Natura sites.
Economic Regeneration		
19	Location of Economic Development, Retail	Increased development near Natura sites could

Preferred Policy Option		Impact on Natura 2000 Sites
	& Tourism	have a negative impact.
20	Growth of Towns & Gaywood District Centre	None identified.
21	Employment Sites and Premises	Increase in employment sites could have negative impact on Natura sites, Roydon in particular, through increased traffic, noise, air pollution, use of water resources.
22	Location of Office Development	Potential impacts, dependent upon proximity to Roydon in particular.
23	Location of Industrial and Warehouse Development	Potential impacts, dependent upon proximity to Roydon in particular.
24	Redevelopment of office, industrial and warehouse sites	Potential impacts, dependent upon proximity to Roydon in particular.
25	Promoting Tourism	Increased informal recreation/tourism could have impacts on all the sites, particularly the Wash and North Norfolk Coast.
26	Caravans, Cabins & Camping Sites	Increased pressures within some areas of the Borough could exacerbate pressures on informal recreation within and near some of the Natura sites, resulting in negative impacts.
27	Safeguarding Rural Services	None identified.
28	Farm Diversification	Should be no negative impacts as specified in the policy options.
29	Re-use and redevelopment of rural buildings for employment	Potential negative impacts, dependent upon the employment use proposed and the location.
Transport and Travel		
30	Reducing the Need to Travel	None identified.
31	Improving Accessibility	None identified.
32	Safeguarding Transport Routes	None identified.
33	Travel Plans and Standards	None identified.
Sports, Recreation & Open Space		
34	General Open Space Standards	No provision has been made for the designation of informal recreation areas for dog walking etc which would alleviate the pressures of such pursuits on the Natura sites.
35	Open Space Standards for New Development	Potential negative impacts as the open space provision within the policy option is probably insufficient to absorb informal recreation activities of the increasing populations.
Environmental Protection		
36	Water, Air and Soil Resources	Potential positive impacts on Natura sites.
37	Flood Risk	None identified.
38	Water Quality & Drainage Systems	Potential positive impacts on Ouse Washes, Wash and North Norfolk Coast.
39	Noise/Dust/Dirt/Odour	Potential positive impacts on Natura sites.
40	Waste/Recycling	Potential positive impacts on Natura sites.
41	Pollution	Potential positive impacts on Natura sites.
42	Geology and Land Stability	None identified.

Preferred Policy Option		Impact on Natura 2000 Sites
Coastal Planning		
43	Coastal Management	Dependent upon approach to coastal management could have both positive and negative impacts on the Wash and the North Norfolk Coast. The presence of offshore wind turbines could also have a negative impact on the Wash. Opening access to open spaces could have a negative impact
Countryside & Landscape Protection		
44	Countryside Protection & Development in the Countryside	Potential negative impacts from rural developments, particularly mineral extraction and waste disposal and those related to tourism.
45	Protected Areas of Landscape Quality	Potentially positive impacts on North Norfolk Coast and Roydon and Dersingham SAC
Biodiversity		
46	Enhancing, Protecting, Creating Areas of Biodiversity and Nature Conservation	Potential positive impact on the Natura sites.
47	Special Sites	Potential positive impact from site protection policy options.
48	Habitats and Species	Positive impacts through enhancing ecological networks and enhancing BAP habitats
49	Development and Biodiversity	Potential positive impacts through creation of new habitats near Natura sites, and site protection policy options.
Conservation of the Built Environment		
50	Conservation of the Built Environment	None identified.
General Considerations		
51	Advertisements and Areas of Special Control	None identified.
52	Public Amenity	None identified.
53	Design	Potential positive impact through creation of green corridors.
54	Securing Planning Obligations	None identified.
55	Telecommunications	Impact dependent upon proximity and location of the telecommunication masts to the Natura sites.

From the above table it can be seen that the preferred policy options fall into three main groupings:

1. Preferred policy options thought to have no identifiable impact on Natura 2000 sites. Many of these policy options explicitly state that impacts on

nature conservation and/ or designated sites will be avoided. These preferred policy options are not considered any further in this report. Policy numbers 7-8,11-13, 15, 17, 19-20, 26, 27, 30-33, 37, 42, 44, 50, 51, 54, and 55.

2. Preferred policy options which may have impacts (positive or negative) on Natura 2000 sites, but where due to the broad-brush nature of the LDF, no specific impacts can be pinpointed. These preferred policy options are considered in the next section. Policy numbers 1, 3,4, 9-10, 14, 16, 18, 28, 34-35, and 39-41.

3. Preferred policy options where a specific impact (positive or negative) on a particular site, or a specific impact on all sites, has been identified. These preferred policy options are also considered in the next section. Policy numbers 2,5,6,10, 21-25, 36, 38, 43, 45-49, and 53.

Impact Matrices

Breckland SPA

Breckland SPA	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SPA1	Breeding birds; stone curlew, woodlark, nightjar	Stone curlew – soil conditions, agriculture, grass heath. Woodlark and nightjar – clear-felled forestry plantations, grass heath. Key factors: disturbance, predators, agricultural operations, forestry operations	Policy 5; Establishing key service centres; increased disturbance via increased informal recreation, particularly dog walking. It is also recognised that this site could be a candidate for National Park status which may bring with it more formal recreational pursuits. The development of Methwold as a key service centre is of particular relevance.	LDF produced by Breckland District Council and Forest Heath District Council. Large part of the site within the two districts. Brecks Management Plan. Dependent upon the location, scale and type of development required in other plans.	Potentially - - in combination with other LDFs	Around particularly sensitive areas, development buffer zones could be established to alleviate the severity of the impact. Co-ordinate with neighbouring districts
SPA1	As above	As above	Policy options of protected areas of landscape quality and biodiversity (45-49) – creating new BAP habitats near site, enhancing ecological networks.	Norfolk Biodiversity Partnership	+	None identified
SPA1	As above	As above	Direct/ indirect effects from policies of rural exception sites (9), new dwellings in the countryside (14), re-use of buildings in the countryside for housing (16), and	LDF produced by Breckland District Council and Forest Heath District Council. Large part	-	Policies could explicitly state that Natura sites will not be impacted on by such development either in isolation or

Breckland SPA	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
			provision for gypsies and travellers (18). Effects could include impacts from infrastructure/ roads as well as housing – increased traffic, noise, human disturbance, habitat fragmentation, increased informal recreation, particularly dog walking.	of the site within the two districts. Brecks Management Plan. Dependent upon the location, scale and type of development required in other plans.		cumulatively.
SPA1	As above	As above	Policy for farm diversification could introduce negative impacts to stone curlew through loss of open fields for nesting habitat	None	-	Policy could specifically state that Natura sites and features will be taken into account.
SPA1	As above	As above	There are no specific policy options within the LDF relating to routine forestry and agricultural operations, which are the most important for the qualifying species	Other LDFs may contain specific policies relating to agriculture and forestry operations	0	None

Summary of Significant Effects and Recommendations – Breckland SPA

Significant positive effects:

Summary of Significant Effects and Recommendations – Breckland SPA

No significant positive effects have been identified as part of this site assessment.

Significant negative effects of the LDF alone:
None

Significant in-combination or external negative effects:
The effects of disturbance as the result of informal recreation could, in combination with neighbouring districts' LDFs, amount to a significant negative effect on the integrity of the SPA. The effect of this LDF on the SPA on its own would probably not be significant.

Recommendations:

- Ensure coherence with neighbouring authorities plans and programmes, particularly regarding informal recreation.
- If necessary establish development buffer zones around particularly sensitive areas

Roydon Common and Dersingham Bog SAC

Roydon Common and Dersingham Bog SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SAC1, SAC2	SAC1 - Northern Atlantic wet heath with *Erica tetralix* SAC2 - Depressions on peat substrates of the *Rhynchosporion*	Groundwater fed via springs and seepage from underlying strata, soil conditions, topography. Key factors: water resources, abstraction, aerial pollutants, nutrient enrichment, management of vegetation.	The LDF policy options (36, 38) seeking to protect ground water resources and promoting sustainable drainage should result in a neutral/ positive impact.	Water Resources Strategy for the East of England, East of England Plan, neighbouring authorities' LDF's.	0/+	
			However the building of 11,000 new homes within the Borough means that lowering of the water table could occur as demand outweighs supply for new development, placing higher demand upon groundwater abstraction.	Water Resources Strategy for the East of England, East of England Plan, neighbouring authorities' LDF's.	- -	Increases in water supply should not come from groundwater sources. The development growth is inevitable; concerns remain about how natural resources such as water will meet this added demand.
SAC1, SAC2, SAC3	SAC1 and 2 as above; SAC3 – Dry Heath	As above	The LDF policy options (41) stating that new development should not exacerbate air pollution should result in a neutral/ positive impact.	Trend is for increasing diffuse airborne nitrate pollution on low nutrient sites such as these.	0/+	

Roydon Common and Dersingham Bog SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
All features	As above	As above	Policy 5: Indirect effects from Increased disturbance, and use of paths via increased informal recreation, particularly dog walking. The development of Dersingham as a key service centre is of particular relevance. Related to this, increased use of the site by predators such as domestic cats and dogs	None identified	- -	Establish development buffer zones. Improved on-site facilities to cope with increasing numbers of users.
All features	As above	As above	Direct/ indirect effects from policies of rural exception sites (9), new housing in the AONB (10), new dwellings in the countryside (14), re-use of buildings in the countryside for housing (16), and provision for gypsies and travellers (18). Effects could include impacts from infrastructure/ roads as well as housing – increased traffic, noise, human disturbance, habitat fragmentation, increased informal recreation, particularly dog walking.	Dependent upon the location, scale and type of development.	- -	Policies could explicitly state that Natura sites will not be impacted on by such development either in isolation or cumulatively.
All features	As above	As above	There are no specific policy options within the LDF that will impact on management on-site.	English Nature/ NWT site management plans	0	None
All features	As above	As above	Roydon is located close to silica	Emerging Minerals	0	None

Roydon Common and Dersingham Bog SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
			sand extractions at Leziate. Future expansions of the workings could have an adverse effect upon the Roydon site. The LDF has no policies relating to mineral extraction, there are therefore no effects anticipated from LDF alone. Mineral expansion is controlled by Norfolk County Council.	Local Development Framework for Norfolk produced by Norfolk County Council.		
All features	As above	As above	The policy options (39, 41) seeking to encourage sustainable use of soil resources, protect international sites from noise, dust, dirt and odour, and protect designated sites from pollution caused by development, increased motor traffic and intensive farming could have significant positive effects	None identified	+ +	None
All features	As above	As above	The policy option (40) seeking to protect designated sites from adverse effects from the handling, processing, disposal and transport of waste could have positive effects	Dependent upon the approach to waste reduction and disposal with respect to designated sites within neighbouring authorities' LDF's.	+	None identified.
All features	As above	As above	Potential positive impacts from biodiversity policy options (46-49) – creating new BAP habitats near	Norfolk Biodiversity Partnership	+	None identified.

Roydon Common and Dersingham Bog SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
			site, enhancing ecological networks.			
All features	As above	As above	Policies 21-24: Indirect negative effects from the development of industry and offices around Roydon Common, Impacts from infrastructure/ roads as well as industry – increased traffic, noise, human disturbance, habitat fragmentation, pollution risk.	Regional Economic Strategy, Strategy for Economic Regeneration.	- -	Around designated sites buffer zones to restrict development could be established to alleviate the potential severity of the impact.
All features	As above	As above	Policy 6: Indirect negative effects potentially from the increased housing growth, which may occur near this site. This could be from urban extensions to King's Lynn which could impact on Roydon Common, and impacts on Dersingham Bog could come from the development of Dersingham as a key service centre. Impacts from infrastructure/ roads as well as housing – increased traffic, noise, human disturbance, habitat fragmentation, pollution risk, lighting.	East of England Plan	- -	Around designated sites buffer zones to restrict development could be established to alleviate the potential severity of the impact.

Summary of Significant Effects and Recommendations – Roydon and Dersingham SAC

Significant positive effects:
The range of environmental protection policy options could have a significant positive impact on this SAC.

Significant negative effects from LDF alone:
From industrial development around Roydon Common, and from housing development at both Dersingham Bog and Roydon Common. Although effects may be indirect, they are likely to be significant.

Significant in-combination or external negative effects:
There would be a risk of significant negative effects from depletion of groundwater resources, however the policies in the LDF do not contribute to this effect.

Recommendations:
- Groundwater supplies will need to be protected and alternative water sources will need to be found to meet increased demand.
- If necessary establish development buffer zones around the SAC, giving careful thought to the form of such zones so they achieve their aim
- If necessary work with site owners to manage site access and use more effectively, particularly in respect of dog owners.

Norfolk Valley Fens SAC (Component SSSI – East Walton and Adcock's Common)

Norfolk Valley Fens SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SAC1 SAC5 SAC6 SAC9	Alkaline Fens *Molinia* meadows on calcareous, peaty or clayey silt-laden soils Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* Desmoulin's whorl snail *Vertigo moulinsiana*	Hydrology, topography, water quality, habitat structure, soil conditions	The LDF policy options (36, 38) seeking to protect ground water resources and promoting sustainable drainage should result in a neutral/ positive impact.	Water Resources Strategy for the East of England, East of England Plan, neighbouring authorities' LDF's.	0/+	
			However the building of 11,000 new homes within the Borough means that lowering of the water table could occur as demand outweighs supply for new development, placing higher demand upon groundwater abstraction.	Water Resources Strategy for the East of England, East of England Plan, neighbouring authorities' LDF's.	- -	The development growth is inevitable; concerns remain about how natural resources such as water will meet this added demand. Increases in water supply should not come from groundwater sources.
As above but also SAC4	SAC4 - Semi-natural dry grasslands and scrubland facies: on calcareous substrates	As above	The policy options (39, 41) seeking to encourage sustainable use of soil resources, protect international sites from noise, dust, dirt and odour, and protect designated sites from pollution caused by development, increased motor traffic and intensive farming could have significant positive effects	None identified	+ +	None identified

Norfolk Valley Fens SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
All features	As above	As above	Indirect negative effects potentially from the increased housing growth, which may occur near this site (rural exception sites, Policy 9). However the site is in a rural location and should not be seriously adversely affected by housing development.	East of England Plan	-	Improve on-site visitor management.
All features	As above	As above	Increased disturbance, and use of paths via increased informal recreation, particularly dog walking. This could come as a result of increased housing within this area of the Borough. Lack of provision for informal open space in LDF (policies 34, 35)	East of England Plan, site management plan	-	Improve on-site visitor management. Provide informal recreation areas away from site.
All features	As above	As above	Direct/ indirect effects from policies of rural exception sites (9), new dwellings in the countryside (14), re-use of buildings in the countryside for housing (16), and provision for gypsies and travellers (18). Effects could include impacts from infrastructure/ roads as well as housing – increased traffic, noise, human disturbance, habitat fragmentation, increased informal recreation, particularly dog walking.	Dependent upon the location, scale and type of development.	-	Policies could explicitly state that Natura sites will not be impacted on by such development either in isolation or cumulatively.

Norfolk Valley Fens SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
All features	As above	As above	There are no specific policy options within the LDF that will impact on management on-site.	English Nature site management plan	0	None
All features	As above	As above	Potential positive impacts from biodiversity policy options (46-49) – creating new BAP habitats near site, enhancing ecological networks.	Norfolk Biodiversity Partnership	+	None identified.

Summary of Significant Effects and Recommendations – Norfolk Valley Fens SAC

Significant positive effects:
The range of environmental protection policy options could have a significant positive impact on this SAC.

Significant negative effects from LDF alone:
None

Significant in-combination or external negative effects:
There would be a risk of significant negative effects from depletion of groundwater resources – however this is an effect from an external plan and is not contributed to by policies in the LDF.

Recommendations:
- Groundwater supplies will need to be protected and alternative water sources will need to be found to meet increased demand.

North Norfolk Coast SPA/ SAC

North Norfolk Coast SPA/ SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SAC1	Coastal Lagoons	Topography, salinity, drainage	Housing distribution and affordable housing in the AONB policy options (6, 10): Impacts from infrastructure/ roads as well as housing – increased traffic, noise, human disturbance, habitat fragmentation, pollution risk, lighting, informal recreation. Impacts may be insignificant compared with those from increased tourism.	North Norfolk District LDF Norfolk Coast AONB Management Plan Shoreline Management Plans	-	None identified within LDF
SAC2	Perennial vegetation of stony banks	Coastal processes, relative tranquillity				
SAC3	Mediterranean and thermo-Atlantic halophilous scrubs	Coastal processes				
SAC4	Embryonic shifting dunes	Coastal processes				
SAC5	Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")	Coastal processes				
SAC6	Fixed dunes with herbaceous vegetation ("grey dunes")	Coastal processes, relative tranquillity.				
SAC7	Humid dune slacks	Topography, rainfall, drainage				

North Norfolk Coast SPA/ SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SAC1-7	As above	As above	Promoting Tourism policy option (25) – Growth of Hunstanton as a centre for tourism may have indirect in-combination negative impacts on SAC habitats through increased informal recreation, disturbance, trampling, erosion, dog walking.	North Norfolk LDF, Norfolk Coast AONB Management Plan, Shoreline Management Plans	- -	Co-ordinate with AONB and Shoreline management plans.
SAC1-7	As above	As above	Water, air and soil - The policy options (36, 38) seeking to encourage sustainable use of soil resources, protect international sites from noise, dust, dirt and odour, and protect designated sites from pollution caused by development, increased motor traffic and intensive farming could have significant positive effects	None identified	+ +	None identified
SAC1-7	As above	As above	Coastal management – potential positive and negative impacts from policy options (43) relating to coastal engineering, development in the coastal zone, and climate change (some qualifying habitats may decrease due to coastal processes). Risk of potential negative impacts from opening up access.	Norfolk Coast AONB Management Plan Shoreline Management Plans	-	None identified

North Norfolk Coast SPA/ SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SAC1-7	As above	As above	Policy options of protected areas of landscape quality and biodiversity (45-49) – creating new BAP habitats near site, enhancing ecological networks.	Norfolk Biodiversity Partnership	+	None identified
SAC1-7	As above	As above	Direct/ indirect effects from policies of rural exception sites (9), new housing in the AONB (10), new dwellings in the countryside (14), re-use of buildings in the countryside for housing (16), and provision for gypsies and travellers (18). Effects could include impacts from infrastructure/ roads as well as housing – increased traffic, noise, human disturbance, habitat fragmentation, increased informal recreation, particularly dog walking.	Dependent upon the location, scale and type of development.	-	Policies could explicitly state that Natura sites will not be impacted on by such development either in isolation or cumulatively.
SAC8	Otter	Extent of site, mosaic of habitats, habitat structure, relative tranquillity.	Policy options of protected areas of landscape quality and biodiversity (45-49) – creating new BAP habitats near site, enhancing ecological networks.	None identified	+	None identified

North Norfolk Coast SPA/ SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SAC8	As above	As above	Promoting Tourism policy option (25) – Growth of Hunstanton as a centre for tourism may have indirect in-combination negative impacts on otters through increased informal recreation, disturbance, dog walking	Norfolk Coast AONB Management Plan Shoreline Management Plans	-	None identified
SAC8	As above	As above	Coastal management – potential positive and negative impacts from policy options (43) relating to coastal engineering, development in the coastal zone, and climate change (some qualifying habitats may decrease due to coastal processes). Risk of potential negative impacts from opening up access.	Norfolk Coast AONB Management Plan Shoreline Management Plans	-	None identified
SAC9	Petalwort	Soil conditions, hydrology, habitat structure	None identified	Biodiversity Action Plan	0	None identified

North Norfolk Coast SPA/ SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SPA1	Breeding populations: avocet, bittern, marsh harrier, little tern, common tern, mediterranean gull, roseate tern, sandwich tern, redshank, ringed plover.	Coastal processes, extent of site, mosaic of habitats, habitat structure, relative tranquillity.	Promoting Tourism policy option (25) – Growth of Hunstanton as a centre for tourism may have negative impacts on SPA populations through increased informal recreation, disturbance, dog walking and visitor pressure.	North Norfolk District LDF Norfolk Coast AONB Management Plan Shoreline Management Plans	- -	None identified within LDF
SPA2	Wintering populations: avocet, pink-footed goose, dark-bellied brent goose, wigeon, knot, hen harrier, bar-tailed godwit, bittern, golden plover, ruff, pintail, redshank.	Coastal processes, extent of site, mosaic of habitats, habitat structure, relative tranquillity.				
SPA3	Migrant populations; ringed plover	Coastal processes, extent of site, mosaic of habitats, habitat structure, relative tranquillity.				

North Norfolk Coast SPA/ SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SPA4	Wetland bird assemblage (in addition to the overwintering and migratory species above): Common scoter, Cormorant, shelduck, white-fronted goose, dunlin, gadwall, teal, shoveler, velvet scoter, oystercatcher, grey plover, lapwing, sanderling	Coastal processes, extent of site, mosaic of habitats, habitat structure, relative tranquillity.				
SPA1-4	As above	As above	Coastal management – potential positive and negative impacts from policy options (43) relating to coastal engineering, development in the coastal zone, and climate change (some qualifying populations may change due to coastal processes). Risk of significant negative impacts from opening up access.	Shoreline Management Plan	- -	
SPA1-4	As above	As above	Direct/ indirect effects from policies of rural exception sites (9), new housing in the AONB (10), new dwellings in the countryside (14), re-use of buildings in the countryside for housing (16), and provision for gypsies and travellers (18). Effects could include impacts	Dependent upon the location, scale and type of development.	-	Policies could explicitly state that Natura sites will not be impacted on by such development either in isolation or cumulatively.

North Norfolk Coast SPA/ SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
			from infrastructure/ roads as well as housing – increased traffic, noise, human disturbance, habitat fragmentation, increased informal recreation, particularly dog walking.			
SPA2	Pink-footed Goose	Habitat structure	Pink footed geese in particular use farmland throughout north-west Norfolk for foraging during the winter. Therefore policy options that affect this area and its agriculture may impact on this species, including farm diversification, rural exception housing, and renewable energy development policy options (2, 9, 28).	None identified	-	None identified

Summary of Significant Effects and Recommendations – North Norfolk Coast SAC/ SPA

Significant positive effects:
The range of environmental protection policy options could have a significant positive impact on this SAC.

Significant negative effects of the LDF alone:
Risk of significant negative effects have been identified from the Promoting Tourism (Hunstanton) policy options on SAC habitats and SPA bird populations. Also risk of significant effects on bird populations from increasing public access.

Significant in-combination or external negative effects:
It is likely that the increase in tourism to the North Norfolk Coast will not come from the above policy alone, but in combination with other policies, plans and trends.

Recommendations:

- Work closely with partner organisations and within AONB and Shoreline Management Plans to reduce impacts.

The Ouse Washes

Ouse Washes SPA/ SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SAC1	1149 Spined loach *Cobitis taenia*	Fluvial processes; water quality; water levels.	Main populations lie outside Borough and upstream – therefore no impacts anticipated.	Fenland LDF, East Cambridgeshire LDF Bedfordshire & Cambridgeshire Plans, East of England Plan (all within site catchment).	0	None identified
SPA1	Breeding species; spotted crake, ruff, shoveler, gadwall, black-tailed godwit, garganey	Water levels; relative lack of predators	Water quality and drainage systems policy option (38) will have negligible impact on site water levels. However unspecified impacts on water levels may come from water quality and drainage (and other) policies of LDFs of upstream districts.	Water quality and drainage systems policy options of neighbouring district's LDFs: Fenland LDF, East Cambridgeshire LDF Bedfordshire & Cambridgeshire Plans, East of England Plan (all within site catchment).	-	None identified
SPA2	Wintering species; bewick's swan, whooper swan, hen harrier, ruff, black-tailed godwit, gadwall, pintail, pochard, shoveler, wigeon.	Water levels				
SPA3	Wetland bird assemblage (in addition to the overwintering species above): mallard, teal, pochard, tufted duck, mute swan, coot, cormorant, snipe, moorhen, oystercatcher, shelduck, redshank, lapwing	Water levels				

Ouse Washes SPA/ SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SPA2	Bewick's and Whooper Swans	As above	Wild Swans in particular use farmland adjacent to the Ouse Washes Norfolk for foraging during the winter. Therefore policy options that affect this area and its agriculture may impact on this species, including farm diversification, rural exception housing, and renewable energy development policy options (2,9,28).	Fenland LDF, East Cambridgeshire LDF Bedfordshire & Cambridgeshire Plans, East of England Plan (all within site catchment).	-	Identify areas within borough used by wild swans – take into account in local plans.
SPA1-3	As above	As above	Renewable Energy Development may result in negative impacts through disturbance/ displacement, barrier effects, collision with wind turbines, and cumulative impacts of all the above (2). The above effects are **in combination** with other plans.	Fenland LDF, East Cambridgeshire LDF Bedfordshire & Cambridgeshire Plans, East of England Plan (all within site catchment).	- - (in combination)	Wind turbine developments should not be permitted in areas found by the RSPB to be used regularly by wild swans.
SPA1-3	As above	As above	Direct/ indirect effects from policies of rural exception sites (9), new dwellings in the countryside (14), re-use of buildings in the countryside for housing (16), and provision for gypsies and travellers (18). Effects could include impacts from infrastructure/ roads as well as housing – increased traffic, noise, human disturbance, habitat fragmentation, increased informal	Dependent upon the location, scale and type of development.	-	Policies could explicitly state that Natura sites will not be impacted on by such development either in isolation or cumulatively.

Ouse Washes SPA/ SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
			recreation, particularly dog walking.			
SPA1-3	As above	As above	Policies increasing disturbance/ recreation pressure on SPA (25). However this is probably currently well managed by landowners.	Fenland LDF, East Cambridgeshire LDF Bedfordshire & Cambridgeshire Plans, East of England Plan (all within site catchment).	-	None identified

Summary of Significant Effects and Recommendations – Ouse Washes SAC/ SPA

Significant positive effects:
The LDF will not have any significant positive effects on this site.

Significant negative effects of the LDF alone:
None

Significant in-combination or external negative effects:
The cumulative effects of renewable energy development could have a significant negative impact on this site.

Recommendations:

Summary of Significant Effects and Recommendations – Ouse Washes SAC/ SPA

- Cumulative effects of renewable energy development across administrative boundaries must be considered.

The Wash (incorporating the Wash SPA and the Wash and North Norfolk Coast SAC)

Wash SPA/ Wash and North Norfolk Coast SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SAC1	Sandbanks which are slightly covered by sea water all the time	Coastal processes	Coastal Management (43) – potential negative impacts from offshore wind turbines, and infrastructure coming onshore. The development of offshore turbines is outside the control of the planning system. Risk of potential negative impacts from opening up access.	Neighbouring authorities' LDF's and The Wash SAC Management Plan and Wash Estuary Management Plan. UK Renewable energy targets	- - (In combination)	None identified
SAC3	Large shallow inlets and bays	Coastal processes				
SAC4	Reefs	Coastal processes				
SAC2	Mudflats and sandflats not covered by seawater at low tide	Coastal processes	Housing distribution policy option (6): Impacts from infrastructure/ roads as well as housing – increased traffic, noise, human disturbance, habitat fragmentation, pollution risk, lighting, informal recreation. Impacts may be insignificant compared with those from tourism.	Neighbouring authorities' LDF's and The Wash SAC Management Plan and Wash Estuary Management Plan. Norfolk Coast AONB Management Plan Shoreline Management Plan	-	None identified within LDF
SAC5	*Salicornia* and other annuals colonising mud and sand	Coastal processes				
SAC6	Atlantic salt meadows	Coastal processes				
SAC7	Mediterranean and thermo-Atlantic halophilous scrubs	Coastal processes				
SAC8	Coastal lagoons	Topography, salinity, drainage				

Wash SPA/ Wash and North Norfolk Coast SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SAC1-8	As above	As above	Water, air and soil - The policy options (36, 38) seeking to encourage sustainable use of soil resources, protect international sites from noise, dust, dirt and odour, and protect designated sites from pollution caused by development, increased motor traffic and intensive farming could have significant positive effects	Neighbouring authorities' LDF's and The Wash SAC Management Plan and Wash Estuary Management Plan.	+ +	None identified
SPA1-4	As above	As above	Direct/ indirect effects from policies of rural exception sites (9), new housing in the AONB (10), new dwellings in the countryside (14), re-use of buildings in the countryside for housing (16), and provision for gypsies and travellers (18). Effects could include impacts from infrastructure/ roads as well as housing – increased traffic, noise, human disturbance, habitat fragmentation, increased informal recreation, particularly dog walking.	Dependent upon the location, scale and type of development.	-	Policies could explicitly state that Natura sites will not be impacted on by such development either in isolation or cumulatively.

Wash SPA/ Wash and North Norfolk Coast SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SAC2, 5-8	As above	As above	Promoting Tourism policy option (25) – Growth of Hunstanton as a centre for tourism may have negative impacts on SAC habitats through increased informal recreation, disturbance, trampling, erosion, and dog walking.	Neighbouring authorities' LDF's and The Wash SAC Management Plan and Wash Estuary Management Plan. Norfolk Coast AONB Management Plan Shoreline Management Plans	- - (In combination)	Co-ordinate with AONB and Shoreline management plans.
SAC2, 5-8	As above	As above	Coastal management – potential positive and negative impacts from policy options (43) relating to coastal engineering, development in the coastal zone, and climate change (some qualifying habitats may decrease due to coastal processes). Risk of potential negative impacts from opening up access.	Neighbouring authorities' LDF's and The Wash SAC Management Plan and Wash Estuary Management Plan. Norfolk Coast AONB Management Plan Shoreline Management Plans	-	None identified

Wash SPA/ Wash and North Norfolk Coast SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SAC9	Common seal	Coastal processes, relative tranquillity	Coastal management – potential positive and negative impacts from policy options (43) relating to coastal engineering, development in the coastal zone, and climate change (some qualifying features may decrease due to coastal processes). Risk of potential negative impacts from opening up access.	Neighbouring authorities' LDF's and The Wash SAC Management Plan and Wash Estuary Management Plan. Norfolk Coast AONB Management Plan Shoreline Management Plans	-	Safeguard important sites for common seal
SAC9	As above	As above	Promoting Tourism policy option (25) – Growth of Hunstanton as a centre for tourism may have indirect in-combination negative impacts on common seals through increased informal recreation, disturbance, dog walking	Norfolk Coast AONB Management Plan Shoreline Management Plans	-	None identified
SAC10	Otter	Extent of site, mosaic of habitats, habitat structure, relative tranquillity.	Policy options of protected areas of landscape quality and biodiversity (45-49)– creating new BAP habitats near site, enhancing ecological networks.	None identified	+	None identified

Wash SPA/ Wash and North Norfolk Coast SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SAC10	As above	As above	Promoting Tourism policy option (25) – Growth of Hunstanton as a centre for tourism may have indirect in-combination negative impacts on otters through increased informal recreation, disturbance, dog walking	Norfolk Coast AONB Management Plan Shoreline Management Plans	-	None identified
SAC10	As above	As above	Coastal management – potential positive and negative impacts from policy options (43) relating to coastal engineering, development in the coastal zone, and climate change (some qualifying habitats may decrease due to coastal processes). Risk of potential negative impacts from opening up access.	Norfolk Coast AONB Management Plan Shoreline Management Plans	-	None identified
SPA1	Breeding species: common tern, little tern, marsh harrier	Coastal processes, extent of site, mosaic of habitats, habitat structure, relative tranquillity.	Affordable housing in the AONB policy option (10): Indirect impacts from infrastructure/ roads as well as housing – increased traffic, noise, human disturbance, habitat	Neighbouring authorities' LDF's and The Wash SAC Management Plan and Wash Estuary	-	None identified

Wash SPA/ Wash and North Norfolk Coast SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SPA2	Overwintering species: bar-tailed godwit, avocet, whooper swan, golden plover, black-tailed godwit, curlew, dark-bellied brent goose, dunlin, grey plover, knot, oystercatcher, pink-footed goose, pintail, redshank, shelduck, turnstone	Coastal processes, extent of site, mosaic of habitats, habitat structure, relative tranquillity.	fragmentation, pollution risk, lighting, informal recreation, increase in predators such as cats. Populations of qualifying species using land outside the SPA could be impacted on.	Management Plan. North Norfolk District LDF Norfolk Coast AONB Management Plan Shoreline Management Plans		
SPA3	Migratory species: ringed plover, sanderling	Coastal processes, extent of site, mosaic of habitats, habitat structure, relative tranquillity.				
SPA4	Wetland bird assemblage (in addition to the overwintering and migratory species above): little grebe, cormorant, white-fronted goose, wigeon, mallard, lapwing, whimbrel, common scoter, goldeneye	Coastal processes, extent of site, mosaic of habitats, habitat structure, relative tranquillity.				

Wash SPA/ Wash and North Norfolk Coast SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
SPA1-4	As above	As above	Promoting Tourism policy option (25) – Growth of Hunstanton as a centre for tourism may have indirect negative impacts on SPA populations through increased informal recreation, disturbance, dog walking	Neighbouring authorities' LDF's and The Wash SAC Management Plan and Wash Estuary Management Plan. Norfolk Coast AONB Management Plan Shoreline Management Plan	- -	Co-ordinate with AONB and Shoreline management plans, and landowners
SPA1-4	As above	As above	Coastal management – potential positive and negative impacts from policy options (43) relating to coastal engineering, development in the coastal zone, and climate change (some qualifying populations may change due to coastal processes). Risk of potential negative impacts from opening up access.	Neighbouring authorities' LDF's and The Wash SAC Management Plan and Wash Estuary Management Plan. Shoreline Management Plan	-	None identified
SPA1-4	As above	As above	Direct/ indirect effects from policies of rural exception sites (9), new housing in the AONB (10), new dwellings in the countryside (14), re-use of buildings in the countryside for housing (16), and provision for	Dependent upon the location, scale and type of development.	-	Policies could explicitly state that Natura sites will not be impacted on by such development either in isolation or cumulatively.

Wash SPA/ Wash and North Norfolk Coast SAC	Qualifying Features	Key environmental features and factors that support site integrity	Possible impacts from the LDF	Possible impacts from trends, other plans and projects	Likely effect on site integrity	Possible measures to alleviate impact on Natura 2000 Site
			gypsies and travellers (18). Effects could include impacts from infrastructure/ roads as well as housing – increased traffic, noise, human disturbance, habitat fragmentation, increased informal recreation, particularly dog walking.			
SPA2	Pink-footed Goose	Habitat structure	Pink footed geese in particular use farmland throughout north-west Norfolk for foraging during the winter. Therefore policy options that affect this area and its agriculture may impact on this species, including farm diversification, rural exception housing, and renewable energy development policy options (2, 9, 28).	None identified	-	None identified

Summary of Significant Effects and Recommendations

Significant positive effects:
The range of environmental protection policy options could have a significant positive impact on this SAC.

Significant negative effects of the LDF alone:
Risk of significant negative effects have been identified from the policy options of Promoting Tourism policy options on SAC habitats and SPA bird populations.

Significant in-combination or external negative effects:
It is more likely that the increase in tourism to the Wash SPA and Wash and North Norfolk Coast SAC will not come from the above policy alone, but in combination with other policies, plans and trends. Additionally, the combination of development of a number of offshore wind turbines and infrastructure coming ashore may have significant negative effects on SPA bird populations.

Recommendations:

- Careful monitoring of the impacts of offshore developments on the condition of The Wash, particularly offshore wind turbine development.
- Monitoring of visitor pressures on The Wash.

Stage D; Assessment and Mitigation

The table below considers the significant effects identified above. Only those significant effects of the LDF policies alone, or where the LDF policy contributes to in-combination effects, are considered. These policies are the ones that are considered to adversely affect the integrity of the sites.

Site	Likely significant effect leading to adverse effect on site integrity	From LDF alone or in combination with other plans	Measure taken to alleviate impact	Residual impact once measure taken
Breckland SPA	Policy 5; Establishing key service centres; indirect effects from increased disturbance through increased informal recreation, particularly dog walking. The development of Methwold as a key service centre is of particular relevance.	In-combination effect with other plans: LDF produced by Breckland District Council and Forest Heath District Council.	Avoidance: [SUBJECT TO CONSULTATION AND AGREEMENT WITH ENGLISH NATURE]	No impact from LDF, therefore not contributing to potential in-combination impact from other plans.
Roydon and Dersingham SAC	Policies 21-24: From indirect effects of industrial development around Roydon Common, and from indirect effects of housing development at both Dersingham Bog and Roydon Common. Although effects may be indirect, they are likely to be significant. Also combined effects from housing policies 9,10, 14, 16 and 18 could add to this impact	From LDF alone, though industrial development may also be driven by other plans/ strategies	Avoidance: [SUBJECT TO CONSULTATION AND AGREEMENT WITH ENGLISH NATURE]	No impact from LDF, therefore not contributing to potential in-combination impact from other plans.
Norfolk Valley Fens SAC	Significant effect from depleting of groundwater resources	Not from LDF	No measures taken	
North Norfolk Coast SAC/ SPA	Policy 25: Risk of significant negative effects have been identified from the Promoting	Probably in-combination with other plans and trends	Mitigation: [SUBJECT TO CONSULTATION AND AGREEMENT WITH ENGLISH	Mitigation measure should result in maintenance of site integrity

Site	Likely significant effect leading to adverse effect on site integrity	From LDF alone or in combination with other plans	Measure taken to alleviate impact	Residual impact once measure taken
	Tourism (Hunstanton) policy options on SAC habitats and SPA bird populations.		NATURE]	
Ouse Washes SPA	Policy 2: The cumulative effects of renewable energy development could have a significant negative impact on this site.	In combination with other LDFs, UK renewable energy targets	Avoidance: Avoid constructing wind turbines in areas used by wild swans for feeding or migrating.	No impact from LDF, therefore not contributing to potential in-combination impact from other plans.
The Wash SPA and North Norfolk Coast and Wash SAC	Policy 25: Risk of significant negative effects have been identified from the policy options of Promoting Tourism policy options on SAC habitats and SPA bird populations.	Probably in-combination with other plans and trends	Mitigation: [SUBJECT TO CONSULTATION AND AGREEMENT WITH ENGLISH NATURE]	Mitigation measure should result in maintenance of site integrity
The Wash SPA and North Norfolk Coast and Wash SAC	Policy 43: The combination of development of offshore wind turbines and infrastructure coming ashore may have significant negative effects on SPA bird populations.	In combination with other LDFs, UK renewable energy targets	Avoidance: Avoid important areas for SPA birds both for wind turbines, and for the infrastructure coming ashore.	No impact from LDF, therefore not contributing to potential in-combination impact from other plans.

Conclusions & Recommendations

Main Conclusion

It is thought that it should be possible to **avoid** or **mitigate for** all impacts identified in Stage D, provided such mitigation can be agreed with the statutory consultee, English Nature (soon to become Natural England), avoiding the need for stages E and F. Discussions and consultation with English Nature is ongoing. The result of avoidance or mitigation should be **no impact on the site integrity** of the Natura sites from the LDF, although there may still be significant effects on these sites within the Borough from other plans, strategies, projects or trends.

Other Conclusions

The tables above identify potential risks of significant impacts on each of the Natura 2000 sites within the Borough. Risks have been identified using a precautionary approach, where if information or evidence is lacking, adverse effects have been assumed.

A theme that emerges through the potential significant negative impacts is that with an increase in housing and tourism in the Borough, there will be increased pressure on Natura sites from informal recreation, dog walking, and human disturbance. This is likely to be particularly acute on SPA where bird populations are among the qualifying features of the site – Breckland, North Norfolk Coast, Ouse Washes and The Wash.

In order to mitigate the potentially significant negative effects, provision and/ or promotion of informal recreation locations away from the Natura sites should be considered. The challenge should be to maintain human disturbance of the Natura sites at an acceptable level, which will demonstrably not adversely affect the integrity of the sites. There may be potential for achieving this through such policy options as farm diversification, and through such initiatives as Environmental Stewardship.

The establishment of development buffer zones around Breckland SPA and Roydon Common and Dersingham Bog SAC is suggested, but careful thought would need to ensure such zones achieved their aims i.e. to ensure the integrity of the SAC/ SPA is maintained. For example buffer zones may not alone succeed in reducing the negative impacts of informal recreation, or in reducing the impacts on groundwater supplies.

Many policy options within the LDF specify that development will only be permitted provided nature conservation interests are not adversely affected. Such policy options must take into account **indirect** and **cumulative** impacts of development.

Identification of risk of a significant negative effect should remind planners that, should the option be chosen as policy, further appropriate assessment work will be required (including possibly eliminating the option later in the plan-making process). Avoidance of impacts is the best solution in all circumstances. Mitigation measures should only be considered where avoidance is not possible, and should be agreed in discussion with English Nature (shortly to become Natural England).