

Sefton Coast Partnership Nature Conservation Strategy and Biodiversity Delivery Plan

October 2007 - 2015



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Section 1: Introduction

The nature conservation strategy (the strategy) for the Sefton Coast is part of the Sefton Coast Management Plan.¹ It addresses aspects of the conservation of landscape and nature within the coastal area of Sefton. Through this strategy the members of the Sefton Coast Partnership will;

- support land managers in the conservation and management of the international, national and local sites which have been identified for their biological and geological interest,
- with the support of Natural England, help meet statutory obligations for nature conservation arising from the designation of these sites,
- help to review and coordinate the delivery of the targets and actions contained in the North Merseyside Biodiversity Action Plan relevant to the Sefton Coast,
- deliver Government nature conservation targets for 2010 also included in the Local Area Agreement for Sefton,
- support the implementation of the Sefton Coast Woodlands Forest Plan and Red Squirrel Refuge and Buffer Zone Strategy
- support the development and operation of BioBank (the Merseyside biological records centre)
- maintain good lines of communication between partners, stakeholders and the local community on issues relating to nature conservation and landscape
- support the development of sustainable tourism activity which promotes the natural values of the coast and;
- maintain links with the Natura 2000 network of protected sites through continuing membership of Eurosite.

The strategy supports the overall vision of the Sefton Coast Partnership *‘to manage and promote access to the coast in a way which ensures the conservation of one of the most important coastal areas in Europe for nature whilst providing sustainable benefits for the economy and for people’* and *‘to accept the joint responsibility to ensure that the integrity and natural value of the dune system and estuaries is protected in perpetuity as one of the series of European nature sites’*.²

The strategy fulfils in part the specific goal in the Coast Management Plan to *‘conserve, protect and enhance the landscape character, natural beauty and biodiversity of the coast’*. To this goal is now added the term ‘geodiversity’.

Geodiversity is the natural range (diversity) of geological, geomorphological and soil features. It includes their assemblages, relationships, properties, interpretations and systems.³

Biodiversity is the whole variety of living nature. It includes all species of plants and animals, but also their genetic variation, and the complex ecosystems of which they are part. It is not

¹ It has been prepared by the Sefton Coast Partnership (SCP) through its Nature Conservation Task Group.

² Sefton Coast Partnership (ICZM) Business Plan 2006-2011

³ Gray (2004) in Natural Foundations: geodiversity for people, places and nature. Natural England 2006

restricted to rare or threatened species but includes the whole of the natural world from the commonplace to the critically endangered.⁴

The wider definition of ‘conservation’ in this strategy is that adopted by the National Trust;

“Conservation is the careful management of change. It is about revealing and sharing the significance of places and ensuring that their special qualities are protected, enhanced, understood and enjoyed by present and future generations.”⁵

The strategy is based on an evaluation of the status of the features characteristic of the coast, conservation objectives are developed and short and medium term targets are set out in an action programme. Marine features will be covered in regional Species Action Plans and work on Marine Natural Areas⁶; they are not included in this strategy.

The strategy addresses future challenges. It takes as its starting point the desire to conserve the present range of habitats and species. However, there will inevitably be decisions to be made about one habitat type or another at the same place. It is an often overlooked principle of nature conservation that whatever we might do to assist one habitat or species there will be negative consequences for others.

With this strategy, the Sefton Coast Partnership invites its partners to take a long term and coastwide view, working together to develop sustainable approaches to coastal management, whilst accepting the need for flexibility in the face of uncertainty.

Preparation work identified the key issues which will have to be addressed and opportunities which could be developed. The most challenging issues, requiring a coordinated response are;

- The need to reduce the fragmentation of habitats, and the impact of fragmentation, to provide stepping stones for the movement of species
- The need to counter negative changes to low-nutrient habitats resulting from atmospheric nutrient deposition
- The continuing coastal erosion at Formby Point which leads to a squeeze on habitats
- The need to consider the potential impact of climate change on shorelines, wetlands and dunes
- The need to develop and maintain management practices which sustain the conservation value of the area.

Implementation

The responsibility for delivering positive outputs for nature conservation will be shared by the wide range of land managers, statutory agencies, non-governmental organisations and community interests represented through the Sefton Coast Partnership.

⁴ From the UK Biodiversity Action Plan

⁵ National Trust Conservation Strategy Group 2003

⁶ See The Irish Sea Marine Natural Area. English Nature 2004.

The strategy coordinates action in several ways;

- By developing and promoting coastwide good practice in the management of habitats and species
- By identifying coastwide initiatives to coordinate survey and management effort
- By establishing new conservation initiatives through collaboration and joint funding
- By addressing the capacity of land managers to deliver the conservation programmes
- By involving a wide range of interests in developing conservation programmes and projects

The strategy will support applications for funding by site managers, groups of managers and the Sefton Coast Partnership. The strategy would support the development of a Heritage Lottery Fund Landscape Partnership Scheme for the Sefton Coast.

Key projects

Key projects for the period 2007-2012 include;

- A restoration project at Formby Point to be carried out by the National Trust to retreat the main car park and to maintain a belt of mobile dune habitat. The project is a necessary response to coastal erosion.
- A project by Sefton Council to tackle the remaining problems of grass and scrub encroachment on fixed dune and slack habitat at Ainsdale and Birkdale, with a project on the Birkdale Sandhills to introduce mowing and grazing management linked to improved access.
- The need to find an acceptable solution to the challenges for nature, landscape and amenity resulting from ongoing and predicted coast erosion at Formby Point
- The continuation of the work programme of the Sefton Coast Woodlands Forest Plan and its review by 2012
- A project, led by RSPB, for the creation of new habitat at Marshside from the former sand extraction works, linked to access and interpretation.
- A coordinated effort to establish a Local Nature Reserve at Hightown and to reintroduce the management of the Hightown Meadows.
- Coastwide projects for the conservation of dune heath and acid grasslands involving several golf courses, private landowners and RAF Woodvale.
- A coastwide project for the management of scrub on fixed dunes, heaths and slacks involving a coordinated approach to grazing and the use of scrub as biomass-fuel.

- The establishment of good communication and networking between the Sefton Coast Partnership, Merseyside Biodiversity Partnership, Merseyside BioBank and individuals to improve the recording and reporting of biodiversity interest.
- For all land managers to include nature conservation outputs within their management plans and to coordinate the reporting of conservation action across the coast.

Summary of main inputs and outputs to the strategy

Inputs

- Up-to-date information on the distribution of the habitats on the Sefton Coast based on vegetation surveys of the Ribble and Alt Estuaries (2002) and the sand dunes of the Sefton Coast (2003/4)
- Up-to-date information on the ornithological importance of the Ribble and Alt estuaries Special Protection Area
- The management policies, plans and experience of the land managers of the Sefton Coast
- Up-to-date advice from specialists and scientists on trends and projections for coastal change
- Consideration of stakeholders interests through a consensus building process

Outputs

- Establishment of a set of management principles
- Development of medium and short-term objectives with reference to the management principles
- Commitment to the implementation of conservation actions
- A mechanism to address statutory conservation objectives within an overall approach to Integrated Coastal Zone Management
- Information to advise the development of second generation Shoreline Management Plans
- Records of how stakeholders have been involved throughout the development of the strategy.

Section 2: The Sefton Coast

The special qualities of the Sefton Coast

The Sefton Coast is one of the most important natural sites in Great Britain. Its geographical position at a point of overlap of ‘northern’ and ‘southern’ species makes it particularly rich in biodiversity. It is also one of the main stop-off points for birds travelling the East Atlantic Flyway: many thousands over-winter along the shore or build up energy reserves for their journeys. Its richness also owes much to human activity over the centuries, the recent past and today’s management practices.

Sefton Coast facts and figures

- The Sefton Coast covers 20% of the total dune area in England
- This includes two fifths of the total area of slacks in England (damp valleys in the dune system)
- A total of 3333 species of invertebrates has been listed by the World Museum Liverpool (of which 264 are nationally notable and 33 are listed in Red Data Books) making the Sefton Coast the most important site in northwest England
- A total of 1075 vascular plants (flowering plants, conifers and ferns) has been catalogued by Dr Philip H Smith within the dune area. This includes 37% of all the rare plants found in northwest England
- The Ribble and Alt estuaries support up to 350,000 over-wintering and passage waterbirds, making it one of the most important sites in Great Britain
- There are significant national populations of many species, including Natterjack Toad, Sand Lizard and Dune Helleborine
- There is also a significant local population of Red Squirrel

Further background information on the conservation value of the Sefton Coast can be found on www.seftoncoast.org.uk, in the book 'The Sands of Time' by P.H. Smith (1999) and the booklet 'The Ribble –portrait of an estuary' by the Ribble Estuary Partnership.⁷

Most of the area is protected through legal instruments and local planning policies which support a series of international, national and local designations. The aim of the national and international designations is to protect in perpetuity a selection of the best sites for wildlife. Local designations (Sites of Local Biological Importance and Regionally Important Geodiversity Sites) are operated through the planning system and seek to protect all the important wildlife and geological sites in the Borough. The North Merseyside Biodiversity Action Plan (NMBAP) is also concerned with the maintenance, restoration and creation of all wildlife habitats, and associated species, throughout the Sefton area. Specific action plans have been written for some habitats and species. Targets in these local plans are to be reviewed by March 2008.

Statutory designations

From the mid-1950s, a series of statutory sites has been designated along the Sefton Coast for their habitats, species and geological interest. New designations or extensions are proposed on scientific evidence according to national (UK) guidelines⁸. In 2000 a number of sites were amalgamated and added to the Sefton Coast Site of Special Scientific Interest (SSSI) which now covers 4600 hectares.

The Sefton Coast Special Area of Conservation (SAC) notified under the EU Habitats Directive covers much the same area. The Ribble and Alt Estuaries Special Protection Area

⁷ A more detailed listing of the species of the sand dunes of the Sefton Coast can be found in the book 'The Sand Dunes of The Sefton Coast' (1993) edited by D Atkinson and J Houston and published by the National Museums and Galleries on Merseyside.

⁸ In selecting SPAs, for example, the UK has designed its own guidelines based on those of the Ramsar Convention (e.g. if a site is used by 1% of the Great Britain population of a species listed in the Birds Directive etc.)

(SPA) under the EU Birds Directive covers the much larger 12,400 ha of intertidal foreshores from Crosby to Lytham St Annes.

These protected sites include golf courses, land used for military training, amenity areas and coastal plantation woodlands. Land owners of protected sites are required to give notice to Natural England for consent if they wish to carry out certain works which could be potentially damaging to the notified features of the SSSI (as identified on the 'Operations Likely to Damage' list (the OLD list)). Although designations may be challenging, they ensure that wildlife interest is respected and, in practice in discussion with Natural England, seldom prevent landowners from carrying out activities necessary to their business.

Summary of statutory designations

International

Ribble and Alt Estuaries Ramsar site (2002)
Sefton Coast Special Area of Conservation (2005)
Ribble and Alt Estuaries Special Protection Area (2002)

Mersey Narrows and North Wirral Shore potential SPA (and Ramsar site)
Liverpool Bay potential Marine SPA

National

Sefton Coast SSSI (2000) –includes geological conservation review (GCR) site at Ainsdale
Hesketh Golf Links SSSI (1989)
Mersey Narrows SSSI (2000) (part in Sefton)
Ribble Estuary SSSI (1984)(part in Sefton)

Formby Point potential GCR site and Hightown potential GCR site for historic landforms



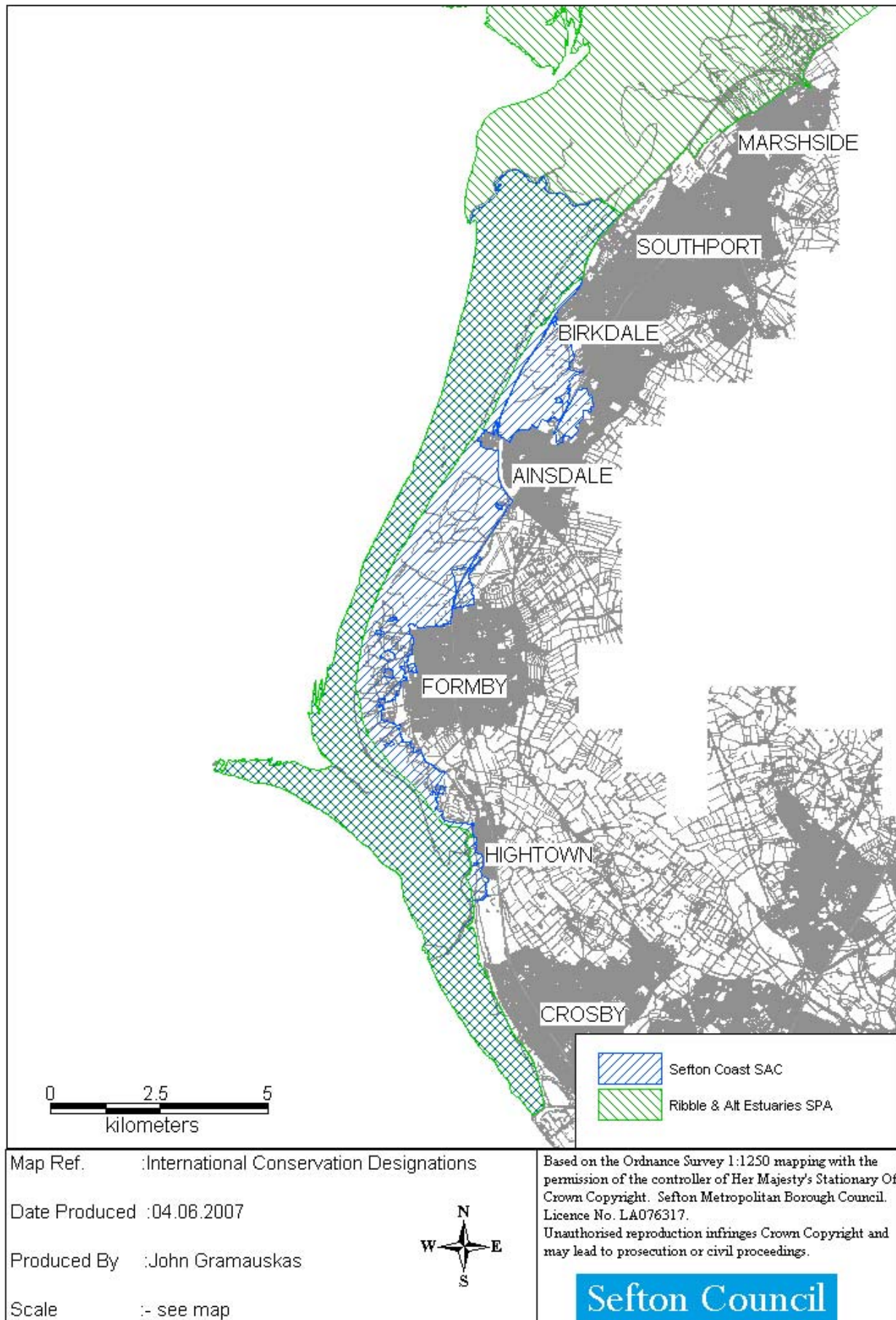
Natura 2000 is a European ecological network established under the EU Habitats Directive (1992) on the conservation of natural habitats and of wild fauna and flora. The network includes Special Areas of Conservation designated by Member States in accordance with the provisions of the Habitats Directive and Special Protection Areas designated by Member

States under the Conservation of Wild Birds Directive (1979). Annexes to the Directives list the habitats and species whose conservation requires the designation of sites. Some are listed as 'priority'. The Habitats Directive also lists species which are in need of strict protection across their 'natural range'.

Natura 2000 gives the highest level of protection to nature under UK law. Natura 2000 promotes the sustainable use of sites for people and nature, in partnership. It is not a network of strict nature reserves. Natura 2000 now encompasses over 25,000 sites in 25 Member States covering almost one fifth of the EU territory.

Most of the Natura 2000 network is farmland and forest in private ownership. Natura 2000 fully recognises that people are an integral part of nature and the two work best in partnership with one another.⁹

⁹ Further information on Natura 2000, including a number of publications, can be found on the European commission's website on <http://ec.europa.eu/environment/nature/home.htm>





Sefton Coast Partnership

The Sefton Coast Partnership is an informal voluntary association which follows the principles of Integrated Coastal Zone Management in developing strategies for the management of the Sefton Coast¹⁰. Its vision and goals are set out in the Sefton Coast Partnership (ICZM) Plan 2006-2011 (see www.seftoncoast.org.uk/partnership.html)

The strategic approach helps to look at the coast as a landscape and ecological unit, rather than a series of discrete ownerships. The nature conservation strategy addresses the landscape and nature conservation issues which lie at the heart of 'the coast' and which directly affect how people use, enjoy and learn about this special site.

Policies and strategies

The management of the Sefton Coast lies within a framework of other plans and strategies, Government guidance and national and international legislation. These include;

- The obligations falling on Sefton Council and other statutory bodies to adhere to national legislation¹¹ and guidance for nature conservation (this includes any obligations arising from international law as translated into domestic legislation). Day-to-day guidance on these matters is provided through Natural England.
- The regional and local planning system which establishes the framework for land use planning. The current Unitary Development Plan (2006) will be replaced in 2009 by a Local Development Framework. This will take into account the Government policy relating to biodiversity and geodiversity given in Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS9).
- The Government's approach to shoreline management (coastal defence) through the preparation and review of Shoreline Management Plans (SMPs). National guidance on the preparation of second-generation SMPs advises on biodiversity issues.
- The work of the Local Borough Partnership in Sefton which incorporates the delivery of the North Merseyside Local Biodiversity Action Plan into the Community Strategy.
- The strategic planning work of the Mersey Forest Plan, Mersey Waterfront Regional Park and Ribble Estuary Regional Park. In 2007 the MWRP published its strategic framework and vision to 2020.
- The role of the Sefton Coast Partnership in promoting Integrated Coastal Zone Management through its various strategies and links to regional and national bodies.

¹⁰ An integrated approach to the management of coast defence, natural resources, access and interpretation was established in 1978 with the Sefton Coast Management Scheme, its scope being widened in 2001 to form the current partnership.

¹¹ Section 40 of the Natural Environment and Rural Communities Act places a new biodiversity duty on all public sector bodies. Guidance will be published for local authorities in 2007.

- The specific policies of organisations within the Sefton Coast Partnership which may determine their response to certain issues.

The coordinated approach to management is guided by the non-statutory, voluntary, ICZM plan. There are complementary links between strategies for coast defence, access, interpretation, woodland management, tourism and nature conservation. These links are often strengthened in the development of programmes and projects for external funding bids.

Section 3: Management Principles

Management principles

A strategic approach needs to be forward-looking. The strategy is set out in a series of steps taking us from what we have to where we want to be in 5, 10 or 50 years time. The longer timescale is more visionary but important –nature conservation is not only about us today but is for the benefit of present and future generations.

In looking ahead we will attempt to predict how the coastline may change, how soils will change, how habitats will respond, how the woodlands will develop and so on. Our medium-term objectives will be more firmly based in current policy and guidance. The Forest Plan for the coast has a 20 year work plan and most ‘agri-environment’ agreements last for 10 years. So, the medium term objectives will look forward 10 years while short term objectives will address some of the targets already set for 2010.

The nature conservation strategy combines statutory conservation objectives with those of the local Biodiversity Action Plan and other local priorities arising from stakeholder consultation. This helps to broaden our thinking to consider the wider natural environment.

A set of robust principles provide the basic ‘ground-rules’ for a coastwide approach to nature conservation. The principles identify themes which will underpin our work. The direction in which we develop our objectives should be guided by the principles –or else we need to be sure of the need to change the principles.

Principles are different from objectives. Objectives (see later) are a statement of where we want to be by a certain time. Principles are themes that remain open for discussion and need to take account of changing policy and opinion.

In the initial consultation period (February –September 2006) discussion focused on the principles and found general support for what are essentially common-sense and pragmatic positions. The background documentation, including an Issues Report and workshop notes, is kept as part of the record of the process of strategy development (see www.seftoncoast.org.uk/index_consultnature.html).

The principles¹² are;

To adopt a coastwide approach

We have to think of the Sefton Coast and the Mersey and Ribble estuaries as ‘systems’ rather than a series of sites. We have to understand the issues and threats by looking at these systems in their wider regional, national and international context.

To allow nature to adapt to change

We should allow nature to take its course wherever possible. We need to be planning for the long term in the context of predicted climate change. We may have to accept, in some cases, that habitats and species will be lost, changed or replaced over time.

To work with coastal processes

We should accept erosion and accretion as part of the dynamic character of the coast. We recognise that some constraints to this approach may be set by conservation objectives or by over-riding socio-economic needs, such as the need to maintain sea defences where these are sustainable.

To ensure continuity of management

We need to conserve important semi-natural habitats, such as fixed dunes, heaths and grazing marshes, through active and sustainable management. In many areas this is achieved through grazing. We also need to understand the history and cultural value of these habitats to help us understand why we are managing this land.

To restore priority habitats and species

We need to identify coastwide (following our first principle) the priorities and opportunities for the restoration of processes, hydrology, habitats and species. We may need to take collective action to reduce the impacts of fragmentation to provide corridors or stepping stones for the movement of habitats and species.

To involve people in nature conservation

We want to involve local communities in helping develop solutions to conservation challenges. We want to celebrate nature as a source of inspiration, enjoyment and learning for local people, visitors and wildlife specialists.

¹² As endorsed by the Sefton Coast Partnership

Section 4: The Strategy Process

The Strategy process

The logical framework uses an approach to the evaluation of protected sites developed by UK conservation bodies.

1. We identify, through involving stakeholders, the physical, biological and cultural features and sub-features that make up the coast. Some of the (sub) features (e.g. different types of dune) may be grouped to simplify the plan.
2. We develop our objectives for each feature. This is a long-term view setting out what we want to see for each feature to ensure that it has 'favourable conservation status'.
3. We identify the factors which might affect each feature (both positive and negative, natural and from human activity) and for some of these we set 'operational limits' to control them if required.
4. To allow us to monitor the features we set 'attributes' for each feature (e.g. size, extent etc). Upper or lower limits may be identified beyond which the feature might become 'unfavourable'.

This approach is also used in the North Merseyside Biodiversity Action Plan (NMBAP) to prepare Habitat Action Plans and Species Action Plans. The habitats and species of the NMBAP relevant to the Sefton Coast have been incorporated in this strategy and the Sefton Coast Partnership will help to develop and deliver a range of actions. Reporting mechanisms will be established to fit those of both the Mersey Forest and the NMBAP.

Selection of features

'Features' are the elements (physical, biological and cultural) which make up the Sefton Coast. Some are listed in the citations for statutory Sites of Special Scientific Interest and Natura 2000 sites (SACs and SPAs). Others reflect local interests.

For the statutory sites Natural England prepares Conservation Objectives.. They are measurable objectives that outline the optimum condition for the habitats and species for which the protected sites have been designated and which management will strive to achieve. They are not usually time limited. Separate sets of Conservation Objectives are prepared for each SSSI. The Conservation Objectives for the Sefton Coast SSSI will be revised by Natural England alongside the development of the strategy. Not all the features within this strategy are notified features of the statutorily protected sites.

Drawing from the full list of features identified (Table 1) the Sefton Coast can be described in terms of its;

- Physical landform –a product of geology, geomorphological processes, vegetation, soil development and hydrology.

- Intertidal habitats –sandflats, mudflats, saltmarshes.
- Dune habitats from strandline through to dune heath including the slacks, natural woodland and scrub.
- Modified features –the plantations, ponds, asparagus fields, ditches and grazing marshes which form an integral part of the landscape mosaic we wish to retain
- Value for passage, over-wintering and breeding birds
- Characteristic, rare and protected animal and plant species of the coastal habitats
- Overall high biodiversity value
- Cultural landscape and archaeology
- Value to society for access, recreation, education, tourism and economic use

Looking to the future our success will be measured if each and every feature is maintained in a healthy state. The term ‘favourable conservation status’ describes this state. Although Favourable Conservation Status (FCS) has a legal meaning with reference to the EU Habitats Directive 1992 and the UK Habitats Regulations 1994 it can be used less formally to present a vision for sustainability. At its simplest it is an optimism for the future –we want all the features of the Sefton Coast to be there for future generations.

A definition of Favourable Conservation Status is;

Habitats

The habitat must be stable or increasing in area: it must be sustainable, the typical species are also at favourable conservation status and the factors that affect the habitat or its typical species must be managed.

Species

The population must be viable in the long term, the range must not be contracting, sufficient habitat must exist to support the population in the long term and the factors which affect the species, or its habitat, must be managed.

To these ‘nature’ definitions we have added a definition for the landscape

Landscape

The landscape should contain all the natural and cultural elements which, taken together, reflect the sense of place that is the Sefton Coast. The character of the landscape should be consistent with the vision of the Sefton Coast Joint Character Area¹³

For each feature we need to know something of its size (extent of habitat, size of population etc) and also its distribution (widespread, localised etc). Conflict would be inevitable if we try to maximise the potential for every habitat and species. The art of management is to set limits of acceptable change and, advised by monitoring, to take action when upper or lower limits are exceeded.

¹³ The Sefton Coast is a unique Joint Character Area described in terms of the condition of agriculture, boundaries, trees and woodland, semi-natural habitats, historic features and river & coastal features. See www.cqc.org.uk for more information.

We have to think outside of the lines on maps. With the changing nature of the coast habitats and species will move. So, as the dune front retreats at Formby Point (as it has done for the last century) the woodland edge should also retreat. It may not be possible to conserve all the features within the current protected areas and new opportunities for habitat creation should be sought outside the main sites. In a climate of changing farming practices there may be increasing opportunities for farmers to convert part of their holding into nature areas.

Table 1: list of features and sub-features

Feature
1. Physical features
Geomorphology-active (beach ridges, mobile dunes, parabolic dunes, saltmarsh etc) –and succession
Dune aquifer –dune hydrology
Soils
Physical landform (features include intertidal foreshores, coastal dunes and dune backlands)
Geological conservation
2. Biological features -habitats
Intertidal foreshores –sand and mud
Coastal saltmarsh
Shingle
Sand Dunes – Strandline – Embryo Dunes – Mobile dunes – Semi-fixed dunes – Fixed dunes – Dunes and dune slacks with Creeping Willow – Dune slacks – Other dune grasslands –dunes and dune backlands
Dune heath
Acid dry dune grasslands
Woodlands – Wet woodland – Planted coniferous woodland – Deciduous woodland – Scrub
Saline lagoons
Coastal and floodplain grazing marsh
Reedbeds
Drainage ditches
Ponds
3. Biological features -species
Bats
Red Squirrel
Migratory waterbirds
Breeding birds of salmarsh, coastal grassland and dunes
Sand lizard and common lizard
Natterjack Toad
Other amphibians
Assemblages of invertebrates
Assemblages of vascular plants

Feature
Bryophytes
Lichens
Stoneworts
Fungi
4. Cultural features
Cultural landscape
Archaeology

The above features are all affected by factors. This is further developed in Part 2 of the strategy. The Part 2 document develops the rationale for the management of features based on available information, knowledge about trends and acceptable limits of change.

The features below are more related to the values of society. A slightly different approach is taken to their evaluation where we can assess their importance –locally, regionally and nationally.

5. Socio-economic features
Access
Demonstration, education, interpretation and research
Community involvement
Economic value and tourism

Rationale for management –an analysis of the issues

The Sefton Coast Partnership advocates a flexible, adaptable and open approach to management. Each year new information will come to light about climate change, management practice or species conservation and we need to be able to consider the implications of this knowledge.

The input to the strategy, at an early stage, from a wide range of stakeholders has helped to identify some of the issues. On some of these more discussion may be necessary. The balance of access and conservation would be one such example.

Why manage at all? Without management it is certain that many of the habitats and species on the Sefton Coast would become restricted and perhaps become locally extinct. The high wildlife value of the Sefton Coast is partly a product of centuries of management by local communities which has created a mosaic of dunes, woods, fields, heaths and marshes. Nature conservation, at the landscape scale, needs to be part of this continuity of management.

Section 5: Challenges to be addressed

The overall ‘health check’

Most of the area covered by this strategy lies within the Sefton Coast SSSI and part of the Ribble Estuary SSSI. The condition of special interest features of SSSIs is monitored in a rolling programme by Natural England using what is termed the UK Common Standards

Monitoring approach (see www.jncc.gov.uk/page-2217). This gives a health check of the condition of sites against scientific criteria and provides information for the Government's PSA (Public Service Agreement) target that 95% of all SSSIs should be in 'favourable' or 'recovering' condition by 2010.

To understand this approach one has to accept that the UK has a national system, scientifically based, for the selection of Sites of Special Scientific Interest¹⁴ and for monitoring their condition. The selection of sites and their 'condition' is a reflection of current national scientific opinion and the methodologies used. Practical local experience can have an influence in providing data and rationale for the selection of new sites as well as affecting their condition. For example, the Sefton Coast SSSI and SAC were reviewed and extended largely as a result of work led by Sefton Council in the 1990s.

In preparing the strategy the Sefton Coast Partnership has worked closely with Natural England to help land managers understand the process, to ensure that monitoring takes local interests into consideration and to suggest a habitat-based approach to monitoring (in addition to a landownership-based approach). The discussions are ongoing.

By 2006 condition assessments (which started in 2000 prior to the establishment of Common Standards Monitoring) showed that the foreshore habitats along the Sefton Coast, the Ribble Estuary and the RSPB Marshside Nature Reserve were in favourable condition with no evidence of deterioration of the habitat or its value for birds.

The situation is more complicated on the dune system with some 'units' in favourable condition but a significant number in unfavourable condition (see Table 2 below). In parts of the dune system there are concerns about a decline in habitat diversity and quality. Conservation practice, where applied, is considered by Natural England to have been successful. The view is that, given sufficient resources and support, the dune system can be brought into favourable condition and maintained in that state.

Management practice such as the control of scrub, mowing of meadows and slacks and grazing of dunes and heaths appear to be able to slow or stop some of the detrimental trends. The re-introduction of livestock grazing has improved the habitat quality on fixed dunes and heaths as measured by surveys of vegetation structure and plant diversity.

The most up to date assessment by Natural England shows the following problems in relation to the Sefton Coast SSSI¹⁵

Table 2 Condition of Sefton Coast units not meeting management objectives (2006)

SSSI Unit	Date /Assessment	Management prognosis	Problem	Area
Queens Jubilee	2002	Not meeting	Needs scrub	9.8 ha

¹⁴ And that it is a UK system which is used for the selection of international sites –following the principle of subsidiarity in the EU.

¹⁵ As it is a rolling programme not all the information may reflect the current situation. If management action has been implemented since the last assessment the improvement will not be noted until the next assessment.

SSSI Unit	Date /Assessment	Management prognosis	Problem	Area
Nature Trail	Unfavourable –no change	objectives	control	
Southport and Ainsdale Golf Course	2002 Unfavourable – recovering	Not meeting objectives	Needs positive management of heath	51.2 ha
Birkdale Sandhills (LNR)	2000 Unfavourable – declining	Not meeting objectives	Lack of grazing Needs scrub control	117.6 ha
Big Balls Hill	2002 Unfavourable – declining	Not meeting objectives	Needs scrub control	24.7 ha
Ainsdale Sand Dunes NNR –open dunes	2001 Unfavourable- recovering	Not meeting objectives	Over-stable	92.3 ha
Ainsdale Sand Dunes NNR –dune restoration	2001 Unfavourable recovering	Not meeting objectives	Grazing needs to be adjusted	45.2 ha
Ainsdale Sand Dunes NNR – frontal woodlands	2001 Unfavourable –no change	Not meeting objectives	Needs scrub control	31 ha
Ainsdale Sand Dunes NNR –rear woodland	2001 Unfavourable –no change	Not meeting objectives	Needs scrub control	141.4
Formby Golf Course	2002 Unfavourable –no change	Not meeting objectives	Needs scrub control Needs heath structure	129.4 ha
Formby Ladies Golf Course	2002 Unfavourable –no change	Not meeting objectives	Needs scrub control Needs heath structure	27.5 ha
Lifeboat Road dunes	2002 Unfavourable –no change	Not meeting objectives	Needs scrub control	48.3 ha
Altcar Dunes	2003 Unfavourable – declining	Not meeting objectives	Need to adjust mowing regime	49.3 ha
Hightown Dunes	2002 Unfavourable –no change	Not meeting objectives	Needs scrub control	40.9
Freshfield Dune Heath	Unfavourable declining	Not meeting objectives	Needs scrub control	23.7 ha
Birkdale –Ainsdale railway line	2002 Unfavourable- no change	Not meeting objectives	Needs scrub control	7.7 ha

The national target is to have 95% of the SSSI in ‘favourable’ or ‘unfavourable-recovering’ condition by 2010. The responsibility applies to all owners of SSSI land, with help and

advice from Natural England. This target has been further emphasized through the 'Countdown 2010' initiative and publications on progress¹⁶.

The Sefton Coast Partnership has taken the responsibility to meet this target for the coast through the Local Area Agreement. Given the timescale this work is pressing and land managers will work with Natural England to discuss and agree the 'remedies' which should be applied to bring the sites into better condition.

Meeting the 2010 target is the main short term objective of the nature conservation strategy.

Key conservation Issues

Key conservation issues have been identified. The Sefton Coast Partnership will ensure that effort is focused on the issues which are most pressing or where conservation action can have most impact.

Climate change currently lies at the top of the global environmental agenda. In response, predictions of climate change implications need to be considered in current day planning and policy and in medium to long-term thinking about coastal management in several sectors, including coast defence, nature conservation, and tourism.

Studies of the potential impact of climate change

Although climate change is an external factor outside the control of managers, and predictions are subject to change themselves, the concept of 'adaptable management' is adopted as one of the principles underpinning the strategy: working with the underlying processes (geomorphology and hydrology), maintaining habitat diversity, protecting soils, creating buffer zones and developing strategies for invasive species.

The Sefton Coast can make an important contribution to studies on climate change on several levels through information on water levels, coastal change and the responses of animals and plants to increasing temperature.

Integrated studies into the impacts of climate change on the coastal zone will be supported by the Sefton Coast partnership through its research network.

The following issues are addressed directly through the nature conservation strategy:

The impact of fragmentation

The extent and connectivity of habitats on the Sefton Coast has been significantly altered by the consequences of fragmentation. Some natural features, such as the River Alt, act as barriers for some species but it is mainly the presence of transport infrastructure,

¹⁶ Target 2010: the condition of England's Sites of Special Scientific Interest in 2005. English Nature 2006 & Target 2010 –North West: the condition of the region's Sites of Special Scientific Interest in 2005. English Nature 2006.

residential development, plantation woodlands and sea defence structures which break up the coast into smaller units. Some sites, such as small outlying fragments of the dune system are particularly vulnerable to damage.

The issue of fragmentation has to be addressed at the landscape level. The value of maintaining a linear woodland habitat running along the spine of the coast is supported by the Sefton Coast Woodlands Forest Plan. A similar approach to the connectivity of dune habitats is required to link sites along the coast. Other habitats and species also require corridors or stepping stones so we may need to look differently at the patterns in the landscape, to ensure, for example more open links from the beach to the dune backlands. In some cases the removal of planted woodlands will re-open habitat corridors.

Climate change concerns are forcing conservation thinking to go beyond the nature reserve concept to whole landscape approaches based on corridors and links.

The consequences of nutrient deposition (pollution)

Of significant concern is the issue of the cumulative effect of decades of atmospheric pollution, an external factor, which has added much nitrogen (a main plant fertilizer) to the system. Dune grassland is adapted to less nitrogen in its soil and vegetation biomass than coarse grassland. So, as the amount of nitrogen begins to increase a change is triggered in the type of grassland. Studies of changes to vegetation communities would suggest that this process is now affecting the Sefton Coast.

However, with improved pollution controls, the amount of nitrogen deposition is slowing so it would be achievable to improve the condition of the dune sites by removing much of this build up through grazing, turf-stripping and mowing. The problem of nutrient deposition is widespread and affects golf courses as much as nature reserves. Coast-wide solutions need to be considered, through local grazing schemes and making use of local composting facilities to recycle material arising from mowing.

Working with coastal change

Ongoing coastal change is leading to both losses and gains of habitats. New habitat is forming at Southport (saltmarsh), Birkdale (dunes and marshes) and Crosby (dunes and dune grasslands). At Formby the mobile dunes are migrating landwards in response to coast erosion. Whilst generally perceived to be a positive and natural aspect of the coast, erosion will inevitably lead to some habitats being 'squeezed' by advancing mobile dunes from the west and scrub and woodland from the east. The landward movement of habitats in response to coastal change, which would be natural and desirable, is constrained by the pinewoods, inland residential areas and infrastructure.

The situation is acute at Formby Point where a number of landowners will have to consider their response to ongoing coast erosion. Even taking the lowest climate change predictions into account there could be a further 200m of erosion at Formby Point by 2050¹⁷. The

¹⁷ Coastal change is monitored by the Director of Technical Services and predictive models have been developed based on sea-level rise and national climate change scenarios.

National Trust is already making plans to relocate its main car-park, a new route has been found for the Sefton Coastal Path and woodlands at the National Trust property, Formby Golf Course and Ainsdale Sand Dunes NNR are suffering from salt-laden winds and sand-blow. It will be important to manage change.

Maintaining natural geomorphological processes

The dynamic nature of beaches, saltmarshes and dunes depends on the continuity of natural geomorphological processes. Tidal and storm-dominated processes ensure that along much of the Sefton Coast the beach structure, marsh and dune growth and erosion are natural phenomena. Wind-dominated processes are important for the formation of dunes, blowouts and slacks. Without these the dunes become 'fossilised'. The changes observed to the distribution of plant communities on the coast suggest that the dunes are becoming increasingly stable. Reasons may be part of a natural cycle but also partly a result of shelter effects, active stabilisation and nutrient deposition.

Whilst it is necessary to retain the skills of dune management (sand trapping, sand stabilisation and marram planting) it is important to allow natural dune mobility where there is no threat to infrastructure or property from sand-drift or flooding. In the nature reserves recreation pressure serves a useful function in keeping sandy paths open and in triggering the development of blow-outs. Bare sand should feature in large and small amounts throughout the dune system, in woodland clearings and on the heaths.

Where time and space permit consideration should also be given to stimulating natural processes by removing vegetation from windward slopes to allow blow-out features to develop.

Monitoring trends in plant communities

From repeat surveys there appears to be increased vegetation growth leading to the loss of younger more open habitats and the replacement of species-rich dune grassland by coarse grassland. Ecological succession from open habitats to more closed habitats is a natural and cyclical process but the ability of the dune system to provide the younger habitats in this succession may be affected by factors such as nutrient deposition and falling water tables.

This issue links back to the need to welcome active geomorphological processes in the dune system and not to be over-concerned by recreation pressure and what might be considered as over-grazing. Agricultural advisors recognise that conservation management often benefits from higher levels of stock grazing than is normally allowed for just this reason.

It will be important to continue to monitor the trends in plant communities, as a means of identifying problems and to develop a range of practical measures which can be employed to maintain the mosaic of habitats (of saltmarsh, dunes, heaths and woods) which make the area special. There would be a concern if, over time, the range of habitats were lost leaving us with the same area of habitats but with less biodiversity value.

Conservation of water resources

Several habitats and species on the Sefton Coast are dependant on natural fluctuations in water levels and water quality. The natural groundwater reservoir is an essential element of the dune ecosystem. There are concerns about the water budget of the dunes and the impact of drainage, golf course abstraction and draw-down from plantations. Some slack habitats are also becoming more over-grown with scrub and grasses.

In the long-term climate change may result in a lowering of the water table (predicted to be by as much as 1 metre by the 2080s) and this would have serious implications for the current slack system, which developed in the late 19th and early 20th centuries. But, on the other hand, sea level rise might theoretically lead to higher water levels in the hinterland necessitating more drainage. However, such a response is not expected on the Sefton Coast within the period of this strategy.

Although there are uncertainties in such computer modelling it will be worth considering the range of conservation actions which could be applied. Large scale re-shaping of parts of the dune system is one option. If it is not possible to rely on natural processes in the future it should still be possible to retain the full range of slack habitat types by artificial means.

The cumulative impact of human use

The use of the coast for settlement, industry, recreation and transport puts considerable pressure on the remaining areas of open land. Specific issues which affect the nature and landscape of the coast include coastal defence works, water abstraction, drainage, trampling, pollution, introduction of problem species and disturbance. Access is an important feature of the coast and the need to find the right balance between this and wildlife is recognised by the Sefton Coast Partnership. In some places traffic is a danger to wildlife and visitors and traffic calming schemes should be considered.

The value of the coast for amenity is an asset for the future. In terms of overall land-use, the Sefton Coast is primarily managed as a recreational resource. The natural environment is greatly appreciated by society for its intrinsic beauty, wildlife, opportunities for recreation, health benefits and local space.

Improving communication

Land managers have to meet nature conservation obligations whilst also trying to meet the expectations of local communities and visitors. This can prove to be a difficult balancing act. The Sefton Coast Partnership wishes to raise the level of understanding about nature conservation, to show that the reasons for changes need to be better understood, and management needs to be under-pinned by evidence so that the right decisions can be made. The Sefton Coast Partnership will be involving local communities in discussions about how the landscape should be managed now and into the future.

A number of ideas for improving communication may arise from discussions on the draft strategy.

Table 3: An evaluation of the issues affecting the Sefton Coast -its strengths, weaknesses, external opportunities and external challenges.

Strengths	Weaknesses	Opportunities	Challenges
Size-the largest dune system in England c.2000ha.	Sub-division into many landholdings makes it difficult to plan at landscape scale	Opportunity to expand dune habitats	Impact of nutrient accumulation in dune soils may be difficult to reverse
Size allows several different management approaches –adds to diversity	Range of land uses reduces full potential to manage at ecosystem scale	Increasing opportunities to make nature more accessible through Natural England policies and local cooperation on tourism and access	Climate change may bring problems – falling water tables are predicted
Most of area protected by conservation designations	Fragmentation of site by roads, railway, plantations etc	Partnership approach may open additional funding opportunities	Coastal changes may will lead to losses and gains of habitats.
Naturalness –coastal processes remain strong	Direct and indirect impacts of large local population and high visitor numbers	There is scope for further development of education and life long learning	Visitor usage may increase to levels which become detrimental to conservation interests.
Range of habitats and species –high biodiversity value	No consensus in local views on management –range of values.	There is scope for developing a green tourism offer for Sefton’s Natural Coast	‘Urbanisation’ of coastal facilities could reduce wild character of coast (car parks, paths, signs etc)
Wildness-large parts of the site are free from infrastructure.	Lack of adequate amenities for visitors	Changes in land use or ownership may present opportunities for habitat creation	
Well resourced land managers –few areas of neglected land			
Good access and opportunities to view wildlife			
Strong links with local communities and support from volunteers			

Section 6: Long term outlook

The Sefton Coast Partnership can present its 'vision' for the landscape and nature of the Sefton Coast in 2050, drawing on current issues, a number of predictions of change and expert opinion and considering some opportunities.

We include certain assumptions. We will assume that the main infrastructure remains as it is today. We will assume that land currently in conservation management will remain so and may be extended, that the golf courses and the Altcar Rifle Range estate will remain and that there will be no substantial incursion into the Green Belt. We assume that the intrinsic nature of the coast remains valuable to society and that it will continue to attract visitors.

The uncertainties are in land use associated with trends in tourism (perhaps also linked to climate change), RAF Woodvale, some private areas of land of high biodiversity value (e.g. at Hightown), in areas of private farmland or grazing paddocks and in the overall character of the agricultural landscape, especially the conservation of boundaries and historic features. There are trends in the countryside, often linked to financial support for farming, forestry and access which will impact on the landscape. Initiatives such as the 30 year Mersey Forest Plan have landscape-wide impact.

This is our outlook for 2050 –it sums up what we hope to achieve by pursuing the objectives of this strategy as part of the Sefton Coast Management Plan.

A visitor standing on the high dunes would see the open landscape of the Sefton Coast much as it is today and would see beaches, dunes, pinewoods and a mosaic of land uses. But the position of the coastline would have changed. A belt of about 200m of dune would have been lost to erosion around Formby Point. At Southport the growth of the green beach and salt marsh would have extended although, with ongoing sea level rise, future losses are now predicted.

The intertidal zone remains wide, a mixture of sand flats, mud flats and marsh, providing a rich source of food for waterbirds. Ornithologists continue to monitor the populations and movements of migratory birds across the UK as they respond to weather and climate change.

Dune growth continues along parts of the Ainsdale shore and at Ravenmeols. All the habitats from strandline to semi-fixed dune are present along with their characteristic species. The dune belt is intact along its length and deep corridors running from the beach to the dune hinterland are maintained. Recreation pressures are managed in a way which encourages some areas of bare sand without resulting in large scale blow-outs. There is a good balance between access and conservation offering a range of recreational experiences with well-managed 'gateway sites' taking most of the visitor pressure leaving large tracts of the coast for quiet enjoyment.

Large areas of the fixed dune habitat are maintained by grazing with livestock and native scrub would be retained as a feature in the landscape. Characteristic species include willows, hawthorn and sea buckthorn, the mosaic of habitats maintained by a programme of scrub cutting. The growth of rank grassland, which was a

concern in the early-2000s, has been effectively controlled by grazing and by removal of cut material. Golf course roughs ensure the conservation of open acid grassland habitat. Levels of nitrate pollution have now fallen to safe levels and in the restored areas there is a return of more characteristic dune grassland. Rabbits can be seen throughout the dune area, this being a traditional and effective grazing animal.

The wet slack system is still a strong feature of the landscape of Ainsdale and Birkdale and is flooded to a great depth in some years. A programme is in operation to maintain the full range of slack types by removing turf and deepening slacks, a necessary action due to a widespread lowering of the water table.

In some of the older slacks the development of native wet woodland has been encouraged and one can study the stages of succession from the strandline through the dunes to scrub and woodland.

Despite the pressure the falling water table has put on the Natterjack Toad although populations are associated with the young dunes at Birkdale. Excavations in former sand-winning areas at Formby have provided new habitats and in parts of the Ainsdale Hills blow-outs have been encouraged to 'find the water table' by natural processes.

The Sand Lizard is found in creasing numbers. Conservation work has reduced the problems of fragmentation and established a number of new colonies. The species may be benefiting from warmer summers especially where the habitat conditions are right.

The coastal woodlands are still predominantly of pine species following the implementation of the first Forest Plan between 2005 and 2025. By the effective control of Grey Squirrel the woodlands continue to support a healthy population of Red Squirrel. More is now known about the wildlife value of the range of woodland habitats and areas of native deciduous woodland and wet woodland have been conserved. The coastal woodlands form a near-continuous belt from Ravenmeols to Birkdale although coast erosion has forced back the most seaward woods. Some of the frontal woodlands have been removed to restore dune habitats and others remain as landscape features.

The landscape of open fields, plantations, dunes and heaths has been retained and its character has been strengthened. The most historic landscapes have been given greater protection and works have been carried out to conserve field features, boundaries and sites of habitation.

The dune heath remains centred around Freshfield with the habitat expanding in response to management and also due to the slow leaching of calcium from the dune soils favouring the spread of acid grassland and heath. Dune heath habitat forms a continuous belt between Freshfield and Ainsdale.

Golf course management maintains a traditional links character with more use of drought resistant grasses and less use of water and fertilizer. Water abstraction is at a level which does not impact on dune slacks. The golf courses play a major role in the conservation of the dune heath and acid grassland habitats.

Opportunities have been taken to restore or create habitats whilst also improving overall access to the area. Some farmers have taken up incentives under the Higher Level Stewardship scheme to convert land to dune and heath. There is now a better link between the dunes and dune backlands through the implementation of a successful local grazing scheme. It is now quite normal to see livestock throughout the coastal area.

The biodiversity of the coast remains high. Some of the more 'northern' species may be facing local extinction but change is accepted. Regular surveys continue to record new arrivals. The Sefton Coast retains its position as one of the most important sites in the UK for coastal processes and wildlife.

We can meet this vision by getting the day-to-day management right (the continuity of management) but also by being flexible and by taking opportunities as they arise. When we look at the issues affecting the coast we can begin by looking at the constraints and opportunities now and in the future.

The accompanying maps shows some of the 'forcing factors' such as predicted erosion and expected changes in soils and vegetation and also flag up potential areas for maintenance, restoration or creation of habitats. It is also important to think outside of the immediate coastal area –to see what opportunities may arise through the Mersey Forest, Mersey Waterfront and Ribble Estuary initiatives.

What we have presented is a confident vision for the future. In part this is based on the level of protection now offered to the coast, the security of land management and the partnership approach which has worked well for 30 years.

In contrast if we look back 50 years to the early 1960s the situation along the Sefton Coast was one of rapidly degrading natural values, the break up of long-established estates, divided local authority management and the exploitation of the coast for sand extraction, waste tipping, housing development and residential tourist facilities. In the 1960s, when Lancashire County Council tried to focus on just Formby Point the reality for the future looked bleak – so much so that their ideas never got off the ground. Today we are in a much better position. With the land use and management issues largely resolved we can concentrate our efforts on common problems and take a sensible approach to the challenges ahead.

Notes on the maps

The maps are **indicative only** and are not based on exact boundaries or project proposals. What they show are some of the coastwide issues which the strategy will address. These include;

Coastal change: erosion and accretion trends which will have a direct impact on the distribution of habitats and species

Retreat of the woodland edge: Wind and sand blow affects the woodland edge along much of the coast. The maps shows some of the sites where tree damage is visible, in some cases quite far inland.

Woodland with no agreed management: The Forest Plan includes woodlands which, due to their proximity to the eroding coast, have no actions proposed. Investment in woodland management in these areas would probably give a poor return.

Land registered as 'agricultural': Much of the open coast, in several ownerships, is registered with the Rural Payments Agency. As such it must be kept in good agricultural condition. Registration allows applications for agri-environment schemes.

Potential for agri-environment schemes: Farmers and other landowners in the coastal hinterland have opportunities to apply for Higher Level Stewardship schemes to maintain and restore dune, heath and wet grassland habitats.

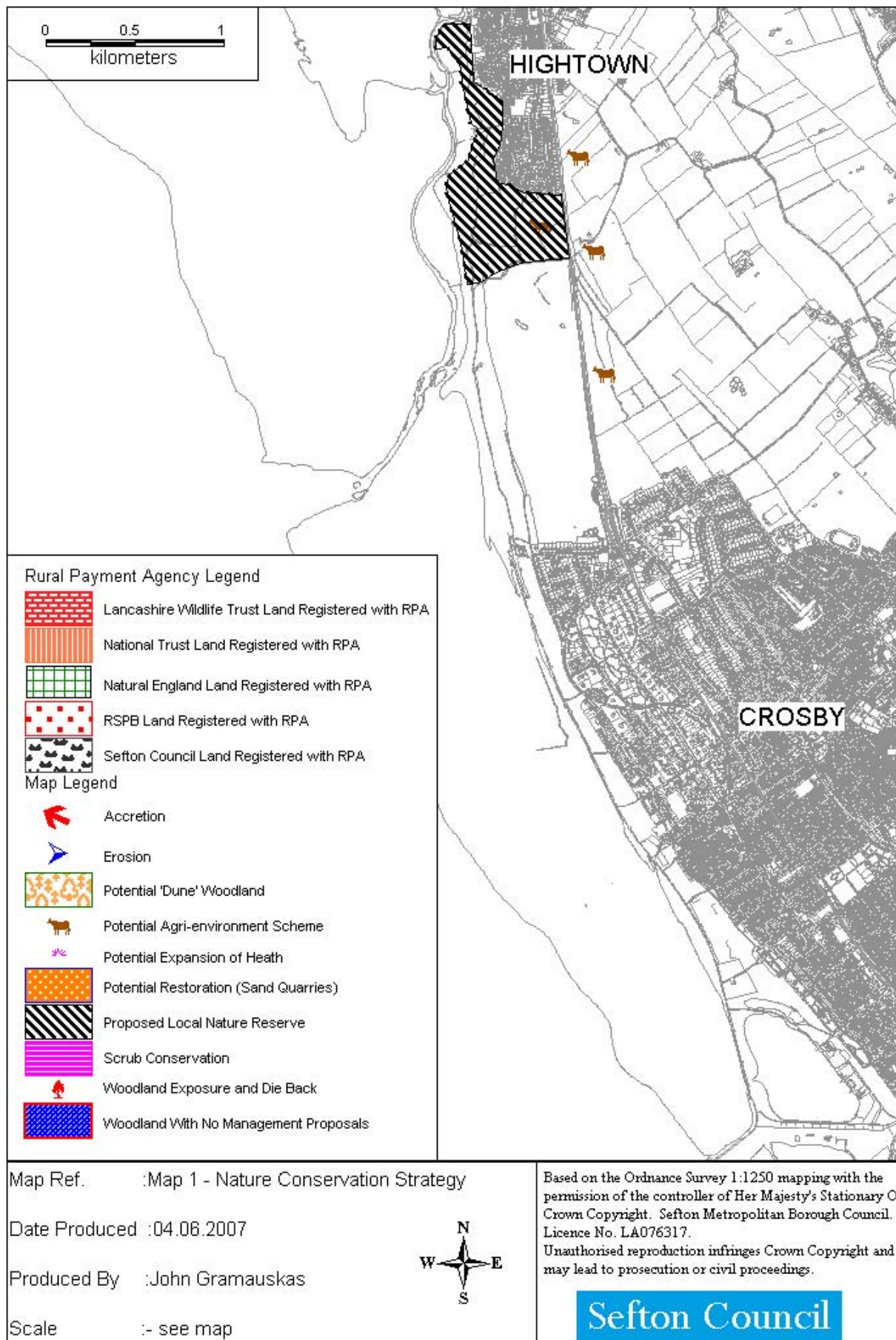
Scrub conservation: Although scrub is a recurring management activity most land managers can identify areas for scrub conservation where scrub will be managed as a landscape feature and habitat.

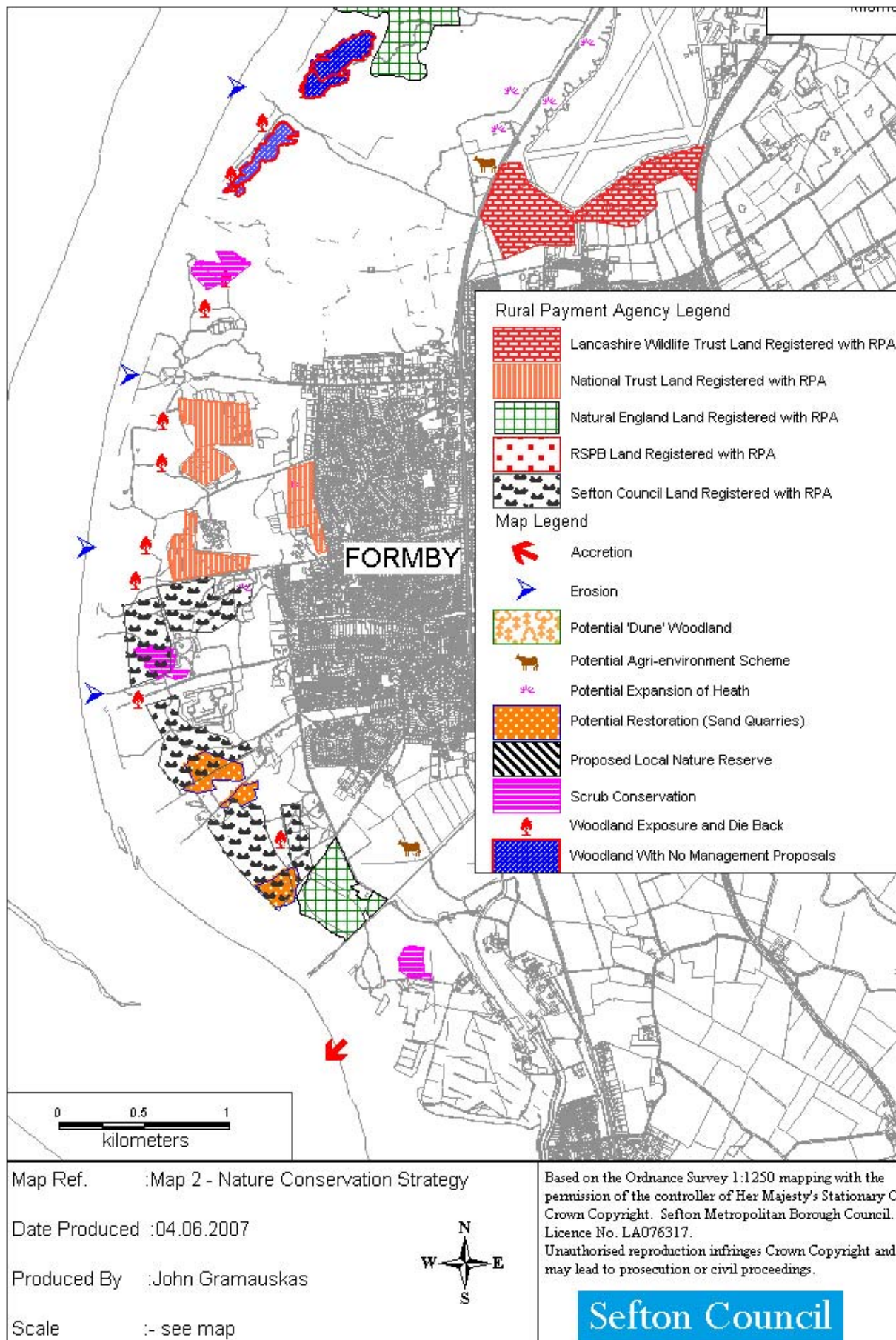
Expansion of dune heath: Dune heath habitat can be expanded in the Freshfield to Ainsdale zone and, as soils become more acidic, may mix with the woodland habitat, e.g. along firebreaks.

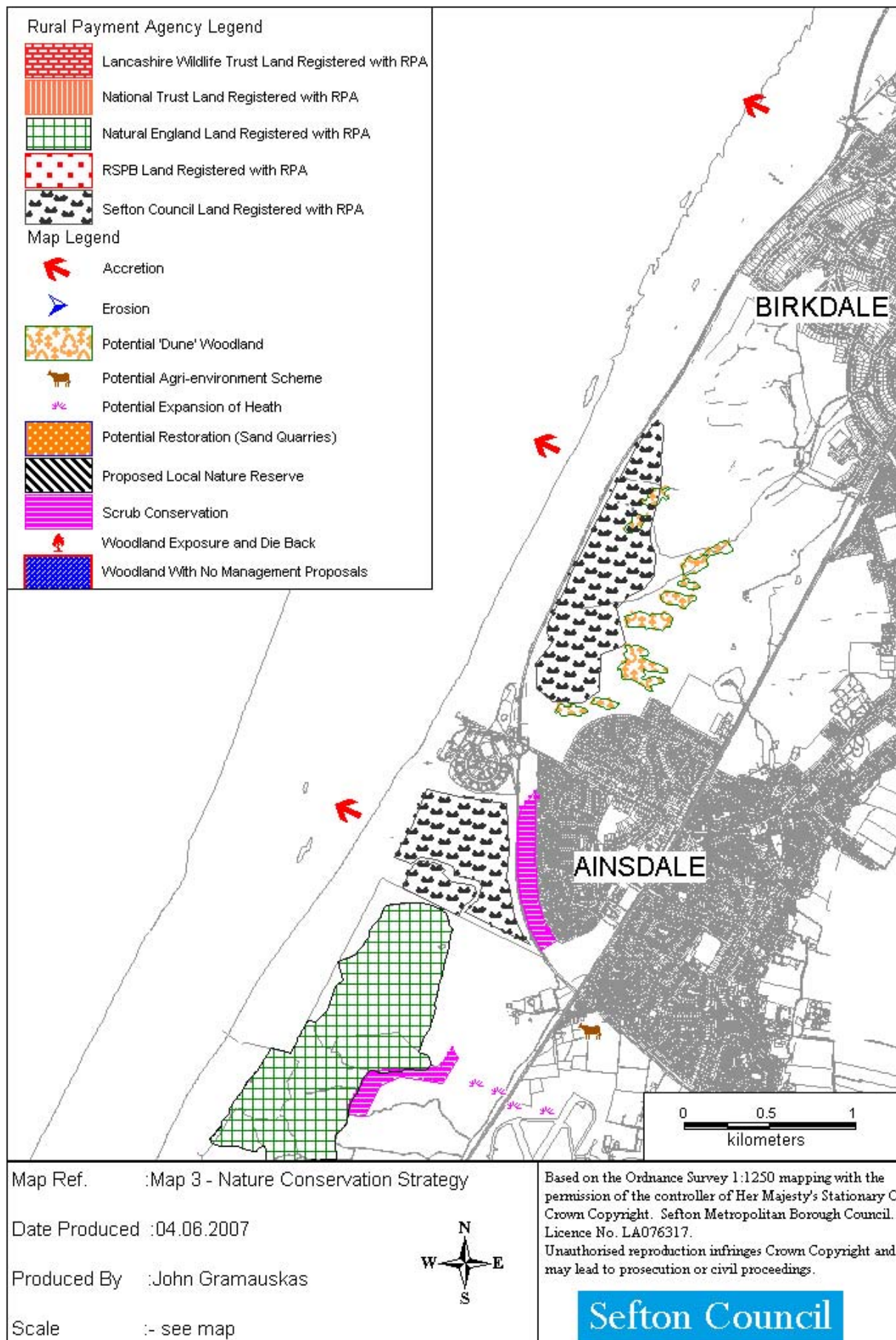
Opportunities for habitat restoration: Some areas, such as former sand quarries at Formby could provide new wetland habitat or fixed dunes.

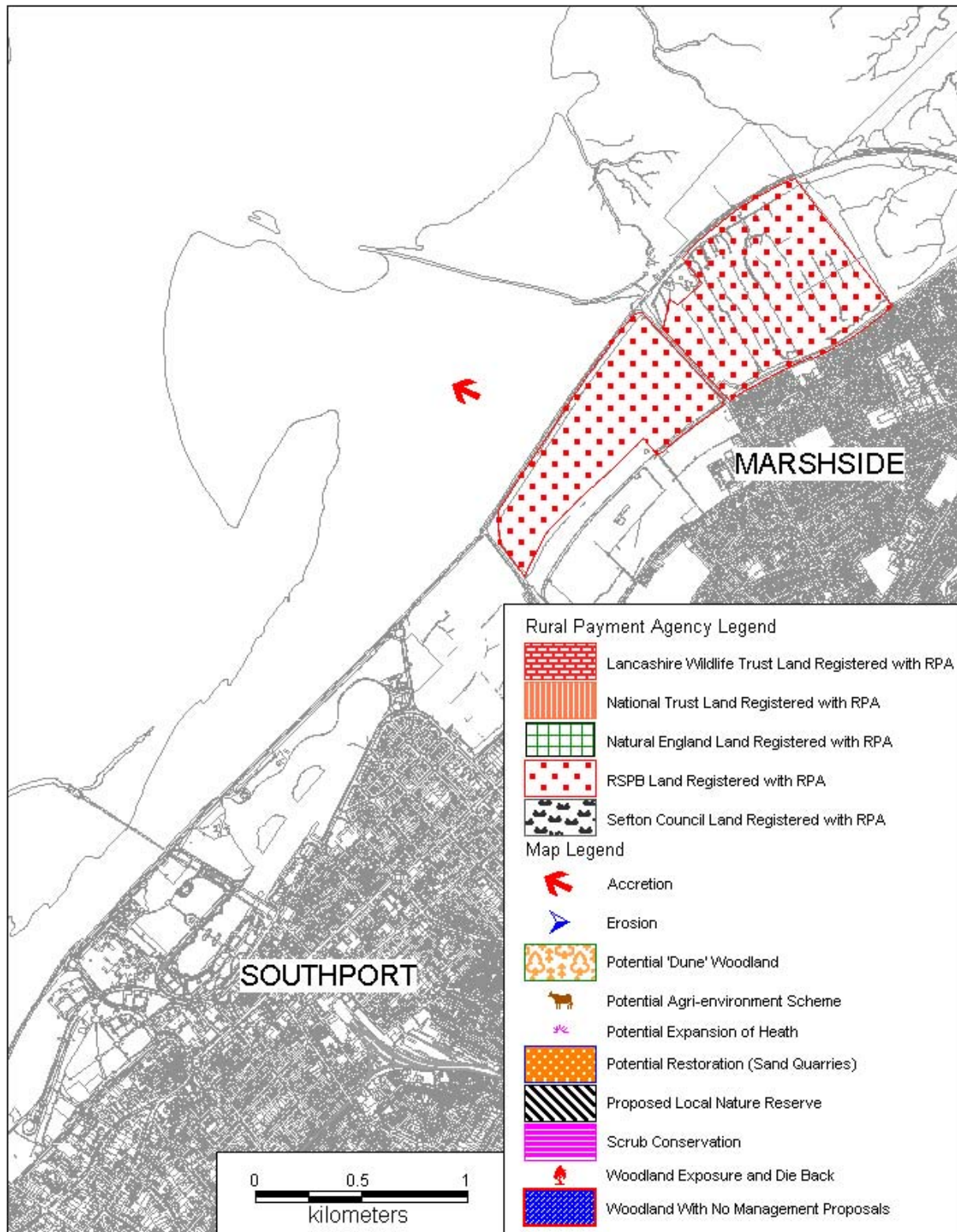
Conservation of 'dune' woodland: Some examples of the natural succession from dune and slack to woodland should be retained within the Forest Plan.

Establishment of new nature reserves: solutions will be sought for unmanaged sites, such as at Hightown, and Local Nature Reserves will be expanded.







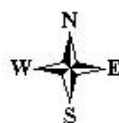


Map Ref. : Map 4 - Nature Conservation Strategy

Date Produced : 04.06.2007

Produced By : John Gramauskas

Scale :- see map



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Sefton Council

Conservation Objectives and targets

Conservation objectives lie at the heart of the strategy. They provide descriptions, feature by feature, of where we want to be. These are supported by general objectives for nature conservation;

- To maintain the function of geomorphological processes
- To maintain the extent, diversity and quality of coastal habitats
- To maintain the populations and distribution of key species
- To reduce fragmentation and increase the connectivity of habitats
- To maintain the exceptional biodiversity of the Sefton Coast

Using the definition of favourable conservation status draft conservation objectives have been prepared for features and groups of features. These are expanded in Part 2 of the strategy which will be developed as a web-based document including distribution maps and photographs of many of the habitats and species and links to further sources of information. Where there is an objective for ‘assemblages’ of species it is expanded in Part 2 of the strategy to include reference to the individual species of the North Merseyside Biodiversity Action Plan.

Natural England has a statutory duty to prepare Conservation Objectives for all features of interest listed in the citations for each SSSI (including, where appropriate SPA, SAC and Ramsar features) using national guidance.

As an example, Natural England’s draft Conservation Objectives for the Sefton Coast SSSI are shown below. This is the broad Conservation Objectives which is expanded into more detailed objectives for habitats and species. Similar Conservation Objectives apply to other sites listed in Box 2.

Box 3: Conservation Objectives for the Sefton Coast SSSI

The Conservation Objectives for the Sefton Coast are, subject to natural change, to maintain the following habitats and features in favourable condition (or restored to favourable condition if features are judged to be unfavourable), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, SAC, SPA, Ramsar) as individually listed in a table of individual designated Special Interest Features (the habitats and features are listed in an annex))

Habitat Types represented (Biodiversity Action Plan categories)

Supralittoral sediment
Littoral sediment

Geological features (Geological Site Types)

Coastal geomorphology

Land managers and key stakeholders have to understand the legislative and scientific background to this approach. Through the development of the nature conservation strategy for the Sefton Coast there has been dialogue with Natural England to help develop the most appropriate Conservation Objectives for the Sefton Coast. Although based on a UK system there is an opportunity to include 'indicators of local distinctiveness' in the monitoring of the statutory features.

Section 7: Conservation objectives

N.B. More detail is given in the supporting information (Part 2) for the strategy. The following section is subdivided into;

- **Physical features**
- **Biological features-habitats**
- **Biological features-species**
- **Cultural features**
- **Socio-economic features**

The actions are mainly generic and coastwide. The tables on implementation identify the key partners and an indicative timetable. Annual reporting to the Sefton Coast partnership will be based on the actions in the tables (Tables 4-8). Individual site actions will be developed by land managers through their site management plans and management agreements (e.g. Countryside Stewardship). The development of the detailed action plan will allow individual site actions to be recorded.

Physical features

Active geomorphology

Active geomorphological processes will function at the macro-scale in the sub-littoral zone (the supply of sediment), the beaches, saltmarshes and shingle (the movement of sediment), dune system (blowouts) and at the micro-scale (weathering). This will lead to a dynamic shifting mosaic of sand dune vegetation communities. The percentage of bare sand in the dune system will not be less than 5%. Geomorphological sub-features will include all stages of dune development and active sub-features including a range of blowouts, some of which will be large (> 0.25 ha) and will reach the water-table. The active geomorphological processes will support the favourable conservation status of key species including the Northern Dune Tiger Beetle, Natterjack Toad and Petalwort.

Targets

To maintain the percentage bare sand in the dune system at not less than 5%. No upper limit is set although for most habitat this should not exceed 25%.	Measured by aerial photography in the main habitats mobile dunes and fixed dunes
To maintain the geomorphological processes associated with the conservation of the	Measured by assessment of condition of RIGS identified for their dynamic

Regionally Important Geodiversity Sites (RIGS) series.	geomorphological processes.
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Actions

- To review the range of techniques to maintain bare sand and sand mobility in the dune system.
- To plan and implement controlled destabilisation projects to counter problems of over-stability.

Dune hydrology

The extent and function of the dune aquifer (as identified by hydrological studies) will be maintained. The natural annual fluctuation of the groundwater table (in response to rainfall) will support characteristic slack vegetation communities. Water quality will be oligotrophic (low in nutrients) and will maintain the habitat for stonewort species (algae), dragonflies and amphibians. In every winter standing water will be present in semi-aquatic and wet slacks and in wet winters more extensive flooding of the slack series will occur. The factors affecting dune hydrology (abstraction and drainage) will be under control over much of the dune system. The uncertainties of modelling water table behaviour are also accepted. Near wet slacks, the impact of draw-down, interception and evapotranspiration from scrub and woodland will be reduced.

Targets

To maintain the quantity and quality of water in the dune aquifer and dune pools	By monitoring –baseline to be established.
To maintain the natural functioning of the dune aquifer	From information and studies led by the Environment Agency

Actions

Most of this is outside of our immediate control. The emphasis is on understanding, monitoring and lobbying as appropriate.

- To ensure an adequate coverage of the dip-well network
- To continue to monitor the dip-well network across the dune system which will assist in understanding the regional behaviour of the water table in the whole system
- To ask the Environment Agency to update their report on the characteristics of the dune aquifer

Soils

The range of dune soils from raw sand (on mobile dunes) to gleys (in waterlogged areas), pararendzinas (under fixed dunes) and micro-podsols (under pine woodlands) will be

maintained. Soil mapping, linked to vegetation mapping, will be used to identify important sites for the study of soils and soil processes. At these sites the factors which could damage the soil interest (ploughing, cultivation, trampling) will be controlled to allow scientific studies.

Targets

To improve understanding of soils and their future evolution and the link between soils and vegetation.	Supporting research projects and mapping studies and to incorporate findings in site management plans
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Actions

- To support studies by higher education institutes into the soils of the Sefton Coast
- To prepare a soil map for the Sefton Coast

Physical landform

The physical landform (that created by natural processes alone), where it still exists, will be protected through planning policies for landscape conservation. Some of these physical landforms are also mobile. At the local scale specific examples of types are added to the RIGS series. Factors which could threaten this interest are controlled through planning policies and e.g. policies in the Mersey Forest Plan and Mersey Waterfront Spatial Plan.

Target

To maintain examples of landforms as part of the RIGS series to give sites a similar level of protection to Sites of Local Biological Interest.	Measured by assessment of condition of RIGS
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Action

- To review the RIGS series in relation to the Sefton Coast

Geological conservation

The most valuable buried geological layers (layers of sand, silt and peat) will remain as part of the archaeological record of the Holocene evolution of the Sefton Coast. No attempt will be made to stop natural processes acting on the erosion of exposed features and scientific study will be encouraged. Factors which could damage the interest, especially in the inter-tidal zone, would be under control.

Target

To protect known sites of geological interest from damage through planning policies,	Monitoring of CGR sites (national) and RIGS (regional)
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RIGS and national law (GCR sites).	
To increase access to the outputs from scientific study of the geological (and palaeo-archaeological) interest of the Sefton Coast	Dissemination through e.g. Archaeology and History Task Group, occasional publications etc.

Actions

- Support designation of proposed geological conservation review sites at Formby Point and Hightown and their interpretation.

Table 4: Physical features –summary of actions

Action	Proposed responsibility	Timescale etc
To review the range of techniques to maintain bare sand and sand mobility in the dune system.	Sefton Council (Technical Services) with Natural England and others	Outline project work 2007. Link to development of remote sensing techniques to monitor bare sand.
To plan and implement controlled destabilisation projects to counter problems of over-stability.	Sefton Council (Technical Services) with Natural England and land managers (e.g. RFCA, Natural England)	Projects proposed at Ainsdale NNR and Altcar to be assessed 2007.
To ensure an adequate coverage of the dip-well network	Environment Agency and Natural England	Extend network to Birkdale Hills (2007)
To continue to monitor the dip-well network across the dune system which will assist in understanding the regional behaviour of the water table in the whole system	Environment Agency and Natural England.	Maintain annual monitoring at Ainsdale NNR, Ainsdale and Birkdale Hills LNR, RBGC and FGC. EA to maintain grid of water table monitoring points.
To update the Environment Agency's report on the characteristics of the dune aquifer	Environment Agency	To update the work on models with data from 2001-2006.
To support studies by higher education institutes into the soils of the Sefton Coast	Current work by University of Wolverhampton and Edge Hill University	PhD due for completion 2008-2009.
To prepare a soil map for the Sefton Coast	Sefton Council (Technical Services) in association with Universities and Natural England.	Assess additional work and funding required 2007-2008
To review the RIGS series in relation to the Sefton Coast	Sefton Council (Planning & Technical Services) in liaison with Lancashire RIGS group	Assess status of current information 2007.
Support designation of proposed geological conservation review sites at Formby Point and Hightown	Natural England. Two new possible statutory sites included in Geological Conservation Review.	Confirm status of sites 2008.

Action	Proposed responsibility	Timescale etc
and their interpretation.		

Biological features –habitats

Sand flats and mud-flats

The area of sand and mud flat will not be reduced in extent and will support the current range of faunal communities in different sediment types. Natural changes in the relative heights of the intertidal shore and in the distribution of sediment will continue to provide a mosaic of habitats providing food for passage, over-wintering and breeding waterbirds. The impact of natural and anthropogenic changes will not have a negative effect on the extent or quality of the habitat or the waterbirds it supports.

Targets

To maintain the quality and range of intertidal fauna as a food source for internationally important numbers of waterbirds	Measured by faunal samples and habitat mapping across intertidal SSSI and European Marine Site
To maintain the value of the intertidal habitats for waterbirds	Measured and evaluated through WeBS (Wetland Bird Survey) counts with overall assessment provided at scale of SPA and estuary.

Action

- Establish regular monitoring of the inter-tidal fauna of the Ribble and Alt Estuary SPA
- Publish the data from WeBS counts through the Beach Management Plan consultative forum.
- Prepare annual ‘condition’ reports based on WeBS and other information.

Saltmarsh

Un-grazed saltmarsh habitat will be present at the mouth of the River Alt and from Southport northwards into the Ribble Estuary. This will contrast with the long-established grazed saltmarsh of the Ribble Estuary NNR. The extent of saltmarsh may fluctuate in response to changing sea levels and sediment supply. The full range of plant communities from pioneer marsh (*Salicornia*) to upper saltmarsh will be present. Cord grass (*Spartina*), will be present but will not form dominant swards.

Targets

To maintain the current extent of saltmarsh in Sefton. (NMBAP target)	Measured from aerial survey and beach surveys
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To maintain the quality of the existing resource in terms of community and species diversity (NMBAP target)	Measured by repeat vegetation community monitoring
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Action

- To continue to monitor beach profiles and saltmarsh extent, especially north of Southport
- To repeat vegetation community monitoring by 2012

Shingle

To retain an example of shingle habitat between Hall Road and Hightown which supports characteristic vegetation and which is maintained by coastal processes.

Targets

To retain the habitat within the design and operation of planned coast protection works	The retention of shingle habitat to be considered within coast protection designs between Hall Road –Hightown
To maintain the characteristic plant species associated with the habitat	Annual survey

Action

- Desirability of retention of shingle habitat to be considered in the development of designs for the Hall Road –Hightown sea defences
- Annual survey of condition of habitat

Sand dunes

To retain the extent, continuity and mosaic of habitat types found within the dune system. The quality of the dune system will be supported by natural geomorphological and hydrological processes which allow the formation of ‘embryo’ habitats –dunes and slacks. Bare sand will be present throughout the dune system from active sand sheets and blowouts to small areas (5% bare sand is minimum). The range of characteristic plants and animals will be present in favourable conservation status. A number of sites will allow development through to dune scrub and dune woodland but across most of the dune system natural succession will be held back by management intervention to maintain the diversity of habitats and species in a semi-natural ecosystem. Grazing, especially by rabbits, will be encouraged. Within the dune system microhabitats (based on aspect, slope, vegetation cover) will provide conditions suitable for priority species including Natterjack Toad, Sand Lizard, Dune Helleborine, Northern Dune Tiger Beetle and others.

Targets

No net loss of dune habitat, taking account	Measured from aerial photography and
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of the dynamic nature of the habitat (UKBAP target/ NMBAP target)	measures of losses /gains of habitats (from natural and anthropogenic factors)
Increase the total dune area (by at least 10 ha by 2015- NMBAP target 2001) and promote mobile dune systems as far as natural processes and legitimate interests allow. <i>Target to be revised by March 2008.</i>	Measured from methodology above and monitoring of specific projects.
Achieve favourable or recovering condition by appropriate management of c. 600ha of the dune system currently in unfavourable condition by 2010 (UKBAP target/ NMBAP target)	Measured through regular use of Common Standards Monitoring methodology to assess habitat condition
Control natural succession to scrub and woodland (UKBAP target). Reduce scrub by at least 50% overall to restore open sand dune by 2015 (NMBAP target 2001). <i>Local target to be revised by March 2008.</i>	Measured through repeat vegetation community mapping and project recording. Scrub control actions to be recorded.
Restore sand dune habitat lost or severely degraded as a result of afforestation, agriculture and infrastructure (UKBAP target). <i>NMBAP targets to be revised by March 2008.</i>	Measured by aerial photography. Individual actions to be documented and subject to assessment.

Actions

- Establish methodology for ready assessment of extent of dune system, linked to regional and national data sets
- Identify and implement ‘remedies’ for sites not meeting management objectives, in agreement with Natural England
- Undertake a range of management actions across the coast to control scrub, introduce grazing and manage mobile dune, fixed dune and dune slack habitats.
- Develop management objectives for the conservation of dune scrub and deciduous ‘dune’ woodland

Summary of actions for sand dune habitats

Objective	Measure	Monitoring	Notes
Maintenance, restoration and creation of foredunes and mobile dunes	Scrub management	Scrub 1% cover across habitat	Retention of native species and control of invasive introduced species.
	Re-mobilisation	Bare sand 5% -25% across habitat –with some examples of mobile dune and bare sand throughout the dune system	Recreation pressure maintains open habitats –in some areas new mobile conditions can be encouraged by de-stabilisation
Maintenance,	Scrub management	Scrub 5% across dune	Retention of native

Objective	Measure	Monitoring	Notes
restoration and creation of fixed dune habitat		habitat –to include scattered scrub and scrub patches turning to dune woodland	scrub species as part of dune mosaic
	Grazing	Grazing to be extended to fixed dune and dune grassland habitats	Grazing by rabbits and livestock maintains open conditions
	Mowing	Some fixed dune sites may benefit from mowing	Dune grasslands can be mown infrequently –every 5-10 years
	Turf stripping	Removal of turf reduces impacts of Nitrogen deposition	Potential of shallow (5 cm) turf stripping to be investigated
	Removal of woodlands	In some areas plantation and self-sown woodland has increased fragmentation of dune habitats	Ecological objectives need to be clear –what habitat type is targeted. This determines methodology.
Maintenance, restoration and creation of slack habitat	Scrub management	Scrub 5% across slack resource –from 0% to 75%+ to allow development of wet woodland.	Creeping willow is associated with slack habitats and is conserved as a special feature
	Grazing	Part of the slack series will be grazed as part of the dune habitat mosaic	Grazing is considered to be the best management technique to maintain slacks and dune pools
	Turf-stripping	Removal of the top layer of turf can help to remove nutrients, create new bare sand for plant colonisation and be part of management for Natterjack Toad	Turf stripping allows rejuvenation of habitats –important if new habitat is not created through natural processes
	Mowing	Part of the slack series will be mown to maintain habitats condition	Where slacks can not be grazed mowing is a good alternative, especially in flower-rich slacks
	Re-mobilisation	Some localised re-mobilisation projects to be considered on nature reserves	A full range of slack types from bare wet sand to wet woodland should be present.
	Woodland removal	Slacks prone to invasion by self sown pine and by birch.	Woodland removal may be an element of rejuvenation of slack

Objective	Measure	Monitoring	Notes
		Some also deliberately planted.	habitat. In some situations non-native woodland species could be replaced by native (alder and willow).
Maintenance of dune scrub habitat	Cutting and Coppicing	Natural dune scrub can be maintained through a regular management cycle. Mainly a range of densities from 5% - 30% scrub. Even in areas identified for large patches of scrub the cover should not exceed 70%.	Dune scrub and dune woodland is part of natural succession – examples of both habitat types will be conserved

Dune heath and acid dune grassland

To increase the area covered by dune heath and acid dune grassland and to connect fragmented sites, especially between Freshfield and Ainsdale. Some scrub and woodland will be associated with the heathland but the predominant plant will be Heather. All stages in the cycle of heather regeneration will be present from pioneer to degenerate stands.

Targets

No net loss of habitat -maintain the current extent of dune heath (UKBAP lowland heath target)	Monitor heath / acid grassland mosaic from aerial photography and surveys
Maintain the area of dune heath currently in favourable condition (UKBAP lowland heath target)	Manage dune heath by mowing, cutting and grazing to maintain habitat quality. Monitor by site condition monitoring.
Improve the condition of dune heath on sites currently in unfavourable condition (UKBAP lowland heath target)	From project recording and monitoring methods above.
Expand the extent of dune heath where opportunities exist (NMBAP lowland heath target)	Identify opportunities on maps and monitor uptake of management agreements and incentive schemes.

Actions

- Establish a dune heath initiative to coordinate monitoring and action
- Seek support of private landowners, golf courses and RAF Woodvale for the maintenance, restoration and creation of dune heath and acid grassland habitat

Woodlands¹⁸

The present woodland habitat is being restructured and diversified through silvicultural management aimed at creating a 'healthy' or normal woodland age profile. Woodland management will maintain the focus on pine species as a food source for the Red Squirrel and to retain the existing woodland character. Areas of indigenous small-seeded broadleaf species will occupy up to 10% of the total area. Suitable habitats will be provided within the woodland structure for woodland species.

The total woodland mosaic will include identified examples of wet woodland and dune woodland and will include dune and heath habitats. Introduced and non-native deciduous woodland species will be rare. Native scrub woodland will cover up to 5% of the open dune system and scrub communities will be found within woodland, between woodland and as discrete units in open areas.

Targets

Maintain and enhance the wildlife and timber potential of the existing conifer resource through restructuring and diversification where appropriate (NMBAP and Forest Plan)	Through assessment of progress with the medium-term objectives of the Sefton Coast Woodlands Forest Plan
Continue to direct the limited planting of conifers onto land of low conservation value. Conifers may be appropriate as an element of mixed amenity woodland or as a nurse species for broadleaf woodland (NMBAP)	Potential sites outside the SSSI / SAC to be identified through the Mersey Forest spatial planning process.
Annual targets to be set through the Sefton Coast Woodlands Forest Plan	Monitoring of the outputs of the Forest Plan (areas planted, thinned, cleaned etc)
To identify areas for the conservation of wet woodland (a priority habitat), 'dune' woodland and scrub.	Sites to be mapped in relation to Sefton Coast SSSI and Sefton Coast Woodlands Forest Plan (some of these sites may lie outside the Forest Plan 'footprint').

Actions

- Conduct survey of wet woods (in Merseyside context) and potential 'dune' woodland (along with Natural England)
- Develop management prescriptions for dune scrub and to identify sites where scrub will be actively managed for conservation
- Continue all actions as specified in the work programme for the Sefton Coast Woodlands Forest Plan

Saline lagoons

¹⁸ The management objectives are based on those of the Sefton Coast Woodlands Forest Plan but extended to include specific BAP features

Saline lagoon habitat is found in the brackish water pools and lakes at Seaforth, Crosby, Southport and RSPB Marshside. The status of the water bodies and their value for wildlife will be retained and enhanced through site management plans. The lagoon habitat will support a range of waterbirds with more specific conservation objectives developed for the saline and brackish lagoons at Seaforth (forming part of the Mersey Narrows and North Wirral Foreshore SPA).

Targets

To maintain the lagoon features, especially for their value as part of wider SPA interests –to maintain the extent, function, salinity regime and biotopes of the lagoons.	Assessment to be carried through Common Standards Monitoring (SSSI / SPA)
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Action

- Carry out further investigations to the range and distribution of biotopes in lagoons.
- Enhance lagoon features where potential exists

Coastal and floodplain grazing marsh

To maintain the extent of coastal floodplain grazing marsh as part of a mosaic of habitat types in the Ribble Estuary supporting breeding and over-wintering bird populations. The management of the grazing marshes will maintain the conservation status of a range of bird species.

Targets

To maintain the extent and quality of grazing marsh as a habitat	From repeat surveys of vegetation communities in the Ribble Estuary
To maintain the value of the habitat in supporting the ornithological importance of the Ribble and Alt Estuary SPA	Information from bird data assembled by RSPB

Actions

- Maintain site management and grazing regimes for favourable conservation status

Wetlands: Reedbeds, drainage ditches and ponds

Wetland habitats will remain within the overall landscape mosaic of the Sefton Coast marshes, dunes and heaths. These will include reedbeds, ditches and ponds. There should be no net loss of wetland habitats. The habitats will support a range of aquatic plants, amphibians, dragonflies and Water Vole. Regular cycles of management will ensure that sites do not become over-grown and that a range of successional stages are present. Factors which affect the habitats, especially water-borne pollution, will be under control.

Targets

Maintain a range of pond habitats and successional stages within the coastal zone and hinterland.	Recorded as part of NMBAP pond survey
Maintain the function of the drainage network where it has no adverse impact on dune habitats.	Baseline to established
Maintain a range of wetland habitats, including reedbeds, swamp communities etc	Measured through vegetation surveys and project reports.

Action

- Include Sefton Coast ponds in North Merseyside pond surveys
- Survey drainage network and develop biodiversity improvement projects

Table 5: Biological features -habitats –summary of actions

Action	Proposed responsibility	Timescale etc
Establish regular monitoring of the inter-tidal fauna of the Ribble and Alt Estuary SPA	Natural England	Discussions in 2007 –resources to be identified
Publish the data from WeBS counts through the Beach Management Plan consultative forum.	British Trust for Ornithology, assisted by WeBS counters, Sefton Council (Leisure Services), RSPB and LWT	Publish first report through Beach Consultative Forum in 2007
Prepare annual ‘condition’ reports based on WeBS and other information.	Natural England, with Sefton Council (Leisure Services) and LWT.	Methodology to be agreed and linked to CSM assessments.
To continue to monitor beach profiles and saltmarsh extent, especially north of Southport	Sefton Council (Technical Services), Natural England and RSPB.	Ongoing monitoring of beach profile changes coordinated by Sefton Council.
To repeat saltmarsh vegetation community monitoring by 2012	Natural England assisted by SCP and others.	To repeat survey by 2012
Desirability of retention of shingle habitat to be considered in the development of designs for the Hall Road –Hightown sea defences	Sefton Council (Technical Services)	Hall Road –Hightown coastal defence scheme to be developed 2008+
Annual survey of condition of shingle habitat	Currently volunteer input by P H Smith and others	Monitoring data may advise the development of coast defence works
Establish methodology for ready assessment of extent of dune system, linked to regional and national data sets	Natural England, Sefton Council (Technical Services) and others	Linked to Conservation Objectives and CSM.

Action	Proposed responsibility	Timescale etc
Identify and implement 'remedies' for sites not meeting management objectives, in agreement with Natural England	Natural England and land owners / managers within SSSIs. Sefton Council, RFCA, FGC, FLGC, S&AGC, Railway Corridor, LWT.	By 2010 –all remedies should be agreed and sites should be moving towards recovery.
Undertake a range of management actions across the coast to control scrub, introduce grazing and manage mobile dune, fixed dune and dune slack habitats.	Coordinated through Nature Conservation Task Group – involving several landowners. Led by conservation bodies – Sefton Council, Natural England, National Trust, LWT and RSPB.	Establish coordinating and recording mechanisms 2007-2008.
Develop management objectives for the conservation of dune scrub and deciduous 'dune' woodland	Coordinated through NCTG in liaison with Mersey Forest and Forestry Commission / Natural England.	Identify sites for scrub conservation 2007-2008. Assess potential sites for 'dune' woodland
Establish a dune heath initiative to coordinate monitoring and action	LWT with support from Natural England and others.	Would depend on additional funding for 'project officer' and conservation projects.
Seek support of private landowners, golf courses and RAF Woodvale for the maintenance, restoration and creation of dune heath and acid grassland habitat	Dune heath initiative to involve National Trust, LWT, FGC, FLGC, S&AGC, RAF Woodvale and private landowners.	Would depend on additional funding for 'project officer' and conservation projects.
Conduct survey of wet woods (in Merseyside context) and potential 'dune' woodland	Merseyside Biodiversity Group with Mersey Forest and others	Workshop planned September 2007
Develop management prescriptions for dune scrub and to identify sites where scrub will be actively managed.	Nature Conservation Task Group –to develop good practice advice for scrub conservation.	Target areas to be identified 2007. Workshop for exchange of experience and to develop conservation objectives.
Continue all actions as specified in the work programme for the Sefton Coast Woodlands Forest Plan	Mersey Forest to coordinate the ongoing work programme of the Sefton Coast Woodlands Forest Plan.	Review of progress to be undertaken 2007-2008.
Carry out further investigations to the range and distribution of biotopes in lagoons.	Natural England, LWT and others	Priority is to survey lagoons within SSSIs
Enhance lagoon features where potential exists	LWT, RSPB and others	Lagoon features can be created or enhanced. A strategic approach (sharing information along the coast) is encouraged.
On grazing marshes maintain site management and grazing regimes for favourable conservation status	RSPB, Natural England and others	Continuity of management practices
Include Sefton Coast ponds in North Merseyside pond surveys	Merseyside Biodiversity Group	Aim to link up-to-date information on ponds to e.g. dragonfly survey 2007-2008.

Action	Proposed responsibility	Timescale etc
Survey drainage network and develop biodiversity improvement projects	Environment Agency /Natural England	Logistics and funding issues to be discussed 2007-2008

Biological features –species

General comment

The conservation of habitats and species are inter-dependent. Each of the species listed in the national and local Biodiversity Action Plans will have its 'champion'. At the national level bodies such as the Herpetological Conservation Trust, Plantlife and Environment Agency may be responsible for Species Action Plans. At the local level groups such as the Merseyside Amphibian and Reptile Group will be a focus for recording work and advice on management.

Several species are protected by international, European and national law and priority has to be given to their conservation.

It is important to monitor species to get a feel for the overall health of the habitats of the coast. Rare and common species can be equally good indicators and we should focus recording effort on those species which can tell us something about habitat management. Management actions for species tend to be more successful if they work with processes and at the habitat level. A feedback loop is valuable so the monitoring of species can influence the management of habitats. Sometimes the management for one species may have a negative consequence for another –hence the importance of assessing the impact of management on a range of animal and plant species.

In recent conservation practice there has been more of a focus on habitats, habitat networks and ecosystem level management than on the needs of individual species. In terms of the species of European interest the European Commission has produced guidance on the protection of species across their natural range (i.e. not only within protected sites).¹⁹

Most of the actions for species below relate to survey and monitoring. But in almost all cases a link will be made between the knowledge about species and that habitat management required to maintain their favourable conservation status.

Bats

To provide the range of roosting and feeding habitats in the coastal zone, as part of a wider landscape mosaic in North Merseyside to maintain and support breeding populations of bats in Sefton.

Targets

¹⁹ Guidance document on the strict protection of animal species of Community interest under the habitats Directive 92/43/EEC. European Commission 2007

To maintain the current local distribution of all bat species and to expand the local distribution of, at least, the commoner species by 2015 (NMBAP target)	Survey from baseline to be established in 2007
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Action

- Undertake survey of the bats of the Sefton Coast through NMBAP and prepare management guidelines

Red Squirrel

The population within the Sefton Coast refuge should remain stable and connected to the wider population within Sefton and West Lancashire, including the urban areas. The health of the population is protected through the control of Grey Squirrels in the buffer zone and the removal from the population of animals found with parapox virus. Woodland management policies provide the necessary habitat, corridors for movement and food supply to maintain a natural population.

Target

To maintain the population of the Red Squirrel across current range in UK (UKBAP target) and on Sefton Coast and adjacent urban areas (NMBAP target) by management in line with the Red Squirrel Refuge and Buffer Zone document.	From survey information (extent and population), data on Grey Squirrel control and records of outbreaks of parapox virus.
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Actions

- To control Grey Squirrel within the core and buffer zone of the Red Squirrel Refuge
- To continue to monitor the status of the population
- To continue with the operational plan of the Sefton Coast Woodlands Forest Plan

Migratory waterbirds

To ensure that the habitats used by waterbirds on the Sefton Coast (intertidal foreshores, lagoons, saltmarsh and freshwater marshes) remain in favourable condition to support internationally important populations of threatened bird species²⁰, internationally important populations of migratory bird species and internationally important assemblages of waterfowl. All factors which could affect the interest, especially recreational disturbance, are under control. To provide overall coordination within Sefton through the mechanism of the Beach Management Plan.

²⁰ Those listed in Annex I of the EU Birds Directive. For the Ribble and Alt Estuaries SPA these include Golden Plover, Bewick's swan, Whooper swan and Bar-tailed godwit

Target

To maintain in favourable condition the intertidal sand and mudflats and saltmarsh as a habitat supporting internationally important populations and assemblages of waterbirds	From WeBS (Wetland Bird Survey) information and condition survey of habitat
To provide disturbance free beach zones for breeding birds, including Ringed Plover and to provide disturbance free roost sites.	From monitoring of the Beach Management Plan
To improve coordination along the Sefton Coast	Through the Beach Management Plan

Actions

- Increase monitoring of waterbirds, especially low water counts, linking these to habitat quality
- To prepare codes of conduct for beach users to reduce disturbance to birds along the whole Sefton Coast
- To prepare an annual report on bird counts, movements and trends for dissemination through the Beach Management Plan
- To review the draft Beach Management Plan in line with this strategy and broaden it to include all relevant land-owners

Breeding birds of saltmarsh, coastal grassland and dunes

To ensure that representative species are present in habitats including saltmarsh, coastal grassland, semi-fixed dunes, dune grassland, scattered scrub and blocks of scrub.

Targets

Maintain breeding population and distribution of key species, including Skylark, Stonechat, Reed Bunting and Linnet	Monitoring from 1997-2000 baseline surveys
Maintain breeding populations of Lapwing, Redshank and Snipe	

Actions

- Assess status of breeding birds of the coast following surveys of 2007-11.
- Target maintenance, restoration and creation of dune grassland through Higher Level Stewardship for benefit of skylark population

Sand Lizard and Common Lizard

To maintain existing populations of Sand Lizard and increase the overall population across its recent historical range. To better evaluate the status of Common Lizard along the Sefton Coast as part of wider studies.

Targets

To determine the current distribution of Common Lizard, to maintain all existing populations at current levels and to increase the distribution by improving habitat management and reducing fragmentation (NMBAP targets)	From baseline study –to be completed
Maintain all existing populations of Sand Lizard at current levels and increase where possible (NMBAP target).	From information collated by the Herpetological Conservation Trust (UK lead partner) assisted by Merseyside ARG in consultation with land managers.
Restore Sand Lizards to their recent historical range –re-establish 2-3 new populations by release of captive-bred stock by 2015 (NMBAP target)	From monitoring of release of captive-bred stock at sites to be determined in discussion with land managers
Reduce fragmentation of sites to create linkages between populations. Four linkages to be created by 2010 (NMBAP target)	From monitoring success of the programme

Actions

- Continue local surveys with assistance of North Merseyside Amphibian and Reptile Group and standardise monitoring techniques
- Identify, by 2007, sites for the re-establishment of Sand Lizard colonies and for actions to reduce fragmentation
- Incorporate strategic approach to conservation of Sand Lizard within Nature Conservation Strategy

Natterjack Toad

To maintain the existing population of Natterjack Toad and increase the extent of the population across its recent historical range and to new sites.

Targets

Maintain current population and distribution (NMBAP target)	From annual coast-wide surveys coordinated by SCP.
Restore Natterjack Toad to recent historical range by 2010 (NMBAP target)	Monitoring of sites identified through strategic approach coordinated by Herpetological Conservation Trust (UK lead partner)
Create linkages between population	From monitoring success of programme

Actions

- Continue local monitoring scheme and preparation of annual report
- Coordinate and implement range of actions across coastal sites
- Incorporate strategic approach to species management and habitat links within nature conservation strategy

Other amphibians

To provide the range of wetland and terrestrial habitat that support all species of amphibian currently present within the coastal zone.

Maintain the range, distribution and viability of Great Crested Newt populations (NMBAP target)	Monitoring from 2004/5 baseline established by North Merseyside Amphibian and Reptile Group
Maintain habitat for Great Crested Newt, Common Toad, Common Frog and Common Newt outside the core areas for Natterjack Toad to reduce competition	Distribution of all species to be recorded by North Merseyside Amphibian and Reptile Group

Action

- Establish survey methodology for Great Crested Newt and other amphibians

Assemblages of invertebrates

To maintain the high biodiversity value of the Sefton Coast for its assemblages of invertebrates by maintaining the current mosaic of habitat types. To give particular focus to those groups and species for which the Sefton Coast is of regional and national significance. To develop more detailed objectives and targets for the groups and species within the NMBAP including dragonflies, aculeate hymenoptera (including the Vernal Colletes Mining Bee), the Northern Dune Tiger Beetle, Grayling butterfly, Dark Green Fritillary butterfly and Sandhill Rustic moth. To increase the overall level of recording along the coast and the identification of a suite of 'indicator species' to be monitored as part of the assessment of the favourable condition of features.

Targets

Maintain and increase the population of Sandhill Rustic moth and enable habitat to be created at other sites	Population to be monitored at Altcar and (potential) at Green Beach, Birkdale
Maintain current colonies of Vernal Colletes Mining Bee and create additional habitat for nest sites	Population to be monitored
Maintain all existing populations of Grayling butterfly, increase their range and reduce fragmentation of sites and create habitat	Population to be monitored –baseline to be established

links in fixed dune grassland.	
Maintain all existing populations of Dark Green Fritillary butterfly, increase range along coast and reduce fragmentation of sites and create linkages of suitable habitat	Population to be monitored –baseline to be established
Maintain populations of Northern Dune Tiger Beetle across current distribution	Monitoring from 2003 baseline
Protect and suitably manage key breeding sites for dragonflies on the Sefton Coast	Baseline to be established in ‘atlas’ project

Actions

- To produce a leaflet on the sand dune invertebrates of the NMBAP (NMBAP action)
- Extend survey work for Sandhill Rustic moth to green beach area at Birkdale and continue annual survey at Altcar. Future conservation action to be advised by survey and opportunities for habitat creation. (NMBAP target)
- Carry out a coastwide survey of the Vernal Colletes Mining Bee linked to advice for management, especially on recreation management.
- Develop a monitoring scheme for the Grayling butterfly to study the importance of habitat condition and habitat corridors for movement. (NMBAP action)
- Develop a monitoring scheme for the Dark Green fritillary to study the impact of grazing and other management (NMBAP action)
- To continue to record information on the range of the Northern Dune Tiger Beetle, especially through land managers / volunteers.
- To propose that the Northern Dune Tiger Beetle be added to the Sefton Coast SSSI citation at its next review.
- Support the development of a dragonfly atlas project in 2007, linked to a survey of ponds, and use this study to advise on the management of emergent vegetation at key sites.

Assemblages of vascular plants

To maintain the high biodiversity value of the Sefton Coast for vascular plants by maintaining the current range of habitat types. To give particular focus to those plants for which the Sefton Coast is of regional and national importance. To update the objectives and targets for those species listed within the NMBAP including Dune Helleborine, Isle-of-Man Cabbage, Early Sand Grass and those listed as Sefton Coast rare plants. To increase the overall level of recording along the coast and the identification of a suite of ‘indicator species’ to be monitored as part of the assessment of the favourable condition of features.

Targets

Protect sites and maintain local populations of Early Sand-grass and Isle of Man Cabbage (NMBAP targets)	Re-survey sites by 2010
Maintain local range and status of the Dune Helleborine (UK & NMBAP target)	Resurvey in 2007/08 to update 1992 survey

To maintain the current diversity of vascular plants on the Sefton Coast –and to keep under review the list of rare plants to be monitored through the NMBAP	Through a rolling programme of surveys to record distribution and trends of populations.
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Actions

- To keep the list of rare plants of the Sefton Coast under review (NMBAP)
- To maintain an up-to-date record of the status and management of the rare plants of the Sefton Coast using GIS
- Survey the populations of rare plants in a rolling programme. The re-survey of Dune Helleborine to be given priority.

Bryophytes, lichens and stoneworts

To maintain and extent the populations of rare bryophytes associated with early stages of dune slack succession, including the Habitat Directive Annex II species Petalwort. To undertake more systematic surveys for lower plants and lichens.

Maintain, and extend, the range and distribution of Petalwort and undertake further ecological research on its requirements	Monitoring from established baselines with support of Plantlife (UK lead partner)
Establish distribution and status of stoneworts, maintain and extend populations and expand number of suitable water bodies	Through pond survey and baseline survey of stoneworts

Actions

- Undertake specific management actions in slacks to maintain suitable habitat for rare bryophytes.
- Update the action plan (2002) for the management of Petalwort on land owned by Sefton Council.
- Develop management prescriptions for the conservation of rare bryophytes on the green beach habitat at Birkdale
- Extend surveys of rare bryophytes to other suitable parts of the Sefton Coast
- Undertake survey of stoneworts on Sefton Coast

Fungi

To record the distribution of fungi in a range of habitats as a component of the overall assessment of habitat quality.

Target

To increase knowledge about the importance of fungi on the Sefton Coast	From baseline data held for Ainsdale Sand Dunes NNR
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Action

- Develop methodology for a more systematic survey of the fungi of the Sefton Coast

Table 6: Biological features-species –summary of actions

Action	Proposed responsibility	Timescale etc
Bats: Undertake survey of the bats of the Sefton Coast and prepare management guidelines	Merseyside Biodiversity Group with assistance from land managers and local experts	Aim to complete survey 2007 / 2008
Red Squirrel: Control Grey Squirrel within the Red Squirrel Refuge	Red Alert North West in association with local land owners and managers	Ongoing and urgent project. Additional funding sought.
Red Squirrel: Continue to monitor the status of the population	Red Alert North West and volunteers	Ongoing.
Red Squirrel: Continue Sefton Coast Woodlands Forest Plan	Forestry Commission /Mersey Forest. Current prescriptions disfavour Grey Squirrel	Ongoing, and subject to regular review.
Waterbirds: Increase monitoring and link to habitat quality	Natural England with support from WeBS counters and land managers	Linked to habitats (above)
Waterbirds: Prepare an annual report on bird counts, movements and trends	Natural England assisted by LWT, RSPB and Sefton Council (Leisure Services)	Linked to habitats (above)
To review the draft Beach Management Plan in line with this strategy	Sefton Council (Leisure Services)	Also to prepare codes of conduct for beach users to reduce disturbance to birds
Assess status of breeding birds of the coast following surveys of 2007-11.	LWT and others.	Surveys planned 2007-2011
Target maintenance, restoration and creation of dune grassland for benefit of skylark population	LWT, RSPB and others	Assess opportunities for Higher Level Stewardship and other incentives -2008
Sand Lizard: Continue local surveys	Nature Conservation Task Group, North Merseyside Amphibian and Reptile Group and others	Add annual survey information to coastal GIS
Identify sites for the re-establishment of Sand Lizard colonies and for actions to reduce fragmentation	Natural England, Herpetological Conservation Trust and land managers	Prepare strategic overview 2007 in liaison with HCT and incorporate into Nature Conservation Strategy
Natterjack Toad: Continue local monitoring scheme and preparation of annual report	Nature Conservation Task Group, land managers, Merseyside ARG	Prepare annual report
Natterjack Toad: Coordinate and implement range of actions across coastal sites	Natural England, Herpetological Conservation Trust	Prepare strategic overview 2007 in liaison with HCT and incorporate into Nature Conservation Strategy
Great Crested Newt and other	Nature Conservation Task	Methodology to be confirmed

Action	Proposed responsibility	Timescale etc
amphibians. Establish survey methodology.	Group, Merseyside ARG and others	2007-2008
Produce a leaflet on the sand dune invertebrates of the NMBAP	Merseyside Biodiversity Group and land managers	Seek funding for leaflet 2008-2009
Extend survey work for Sandhill Rustic moth	Merseyside Biodiversity Group with support of World Museum Liverpool, RFCA and Sefton Council (Leisure Services)	Survey work to be extended in 2007 and 2008
Carry out a coastwide survey of the Vernal Colletes Mining Bee	Merseyside Biodiversity Group with assistance of Natural England	Study already completed for Ainsdale Sand Dunes NNR. To extend to whole coast. Target 2008-2009
Develop monitoring schemes for Grayling and Dark Green fritillary butterflies	Merseyside Biodiversity Group and Nature Conservation Task Group	Establish monitoring methodology 2007-2008
To record information on the range of the Northern Dune Tiger Beetle	Merseyside Biodiversity Group, World Museum Liverpool and Nature Conservation Task Group	Study completed for whole coast. To develop a monitoring programme from this baseline 2008-2009
Support the development of a dragonfly atlas project in 2007.	Nature Conservation Task Group	Assist with training and recording in 2007 and 2008
To keep the list of rare plants of the Sefton Coast under review	Merseyside Biodiversity Group and volunteer surveyors	Review list by 2008
To maintain an up-to-date record of the status and management of the rare plants of the Sefton Coast	Nature Conservation Task Group to coordinate development of GIS records	Maintain information on rare plants of coastal GIS and post updates on website.
Survey the populations of rare plants in a rolling programme. The re-survey of Dune Helleborine to be given priority.	Merseyside Biodiversity Group	Funding sought for survey of Dune Helleborine 2007/ 2008.
Rare bryophytes: Specific management actions, update action plan (2002) for the management of Petalwort on Sefton Council land, extend surveys.	Nature Conservation Task Group, Sefton Council (Leisure Services), Plantlife and others.	Update action plan 2007-2008
Stoneworts: Complete survey of stoneworts on Sefton Coast	Merseyside Biodiversity Group with Natural England, Environment Agency and land owners.	Coordinate survey by 2008-2009
Fungi: Develop methodology for survey of fungi	Natural England with local experts.	Develop methodology 2007-2008

Cultural features

Cultural landscape

To maintain and enhance the elements which make up the cultural landscape of the Sefton Coast; the semi-natural habitats, historic elements and boundary features. To conserve the landscape character of the foreshore, dunes, dune backlands and coastal marshlands. To conserve the visual unity of the dunes with its contrasting and intimate views from within the dunes to the wide open and distant views afforded by dune summits.

Target

To support the conservation of the coastal landscape through the implementation of landscape 'policy guidelines' for the Sefton Coast in Sefton's Unitary Development Plan	Through evaluation of UDP policy impact
To reach and maintain landscape character consistent with the vision for the Sefton Coast Joint Character Area	Through national review of Joint Character Area 57 –the Sefton Coast.

Actions

- To develop a landscape strategy for the Sefton Coast which builds on the national Countryside Quality Counts survey.
- Undertake a review of the history of dune management over the centuries to help understanding of the human impact on the coastal landscape and to advise current policies.

Archaeology

To protect the known and potential archaeological value of the Sefton Coast, to record ephemeral features and to add to our knowledge.

Target

To increase the level of archaeological research on the Sefton Coast –supported by landscape policy guidelines contained within Sefton's UDP	Number of archaeological studies
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Action

- To encourage further archaeological studies to strengthen interpretation and understanding of the landscape.

Table 7: Cultural features –summary of actions

Action	Proposed responsibility	Timescale etc
To develop a landscape strategy for the Sefton Coast	Sefton Coast Partnership	By March 2008
Undertake a review of the	Sefton Council (Technical	Linked to development of

Action	Proposed responsibility	Timescale etc
history of dune management	Services) and land managers	Landscape Partnership project 2008-2009
To encourage further archaeological studies to strengthen interpretation and understanding of the landscape.	Sefton Coast Partnership (History and Archaeology Task Group)	Assessment of landscape and ecological impact of sand extraction at Formby 2007-2008. Other projects to be developed.

Socio-economic features

Access

Sefton Coast Partnership Access Strategy Merseyside Local Transport Plan Mersey Waterfront Strategic footpaths and cycle-routes
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Importance

National	Regional	Local
National cycle-routes Trans-Pennine Trail	North West Coastal Footpath Sefton Coastal Footpath Gateway sites	Local communities are main users

The Sefton Coast is of both local and regional importance for the open access to the coast. The series of coastal sites serves local communities and, at the gateway sites, a broader audience. Maintaining this balance is an important element in setting out a zoning plan for the coast.

An Access Strategy has been developed for the Sefton Coast and this proposes a zoning framework. The strategy will be finalised in 2007 and the Sefton Coast Partnership will be able to confirm a zoning framework which takes into consideration nature conservation interests and the current zoning arrangements of the Beach Management Plan.

The access strategy aims to enhance opportunities for access through the provision and management of paths, cycle-routes and riding routes, for local communities and visitors, and to manage access in ways which contribute to the sustainable management of landscapes, wildlife, coastal defences and land uses.

There is no conflict between the broad aims of the nature conservation and access strategies within the ICZM principles adopted by the Sefton Coast Partnership.

Issues to be addressed include;

- Developing the zoning framework for the benefit of both users and wildlife
- Identifying opportunities for encouraging access to the nature reserves

- Understanding where habitats and species are sensitive to recreational disturbance
- Monitoring of the impact of recreational use on wildlife

The access strategy is designed to provide a positive contribution to the sustainable development and conservation management of the coast.

Actions

- To further develop the zoning framework to support both the access and nature conservation strategy.
- To identify, promote and interpret a series of walks based on the wildlife value of the coast.
- To increase the value of National²¹ and Local Nature Reserves for access and interpretation

Safeguarding natural beauty and wildness

The Sefton Coast is a place of rare beauty and wildness in an increasingly busy world. This is a quality which should be protected from intrusive development and 'urban' recreation infrastructure through careful management and planning policies. There is increasing evidence that open spaces and nature can make a positive contribution to health and well-being. Not all areas can or should be made easily accessible. For those who do visit the more remote parts of the coast this may be the main attraction.

At present the more natural values of the Sefton Coast outweigh the urban infrastructure and formal parks. It is important to retain this character and even, where possible, to remove infrastructure and the impact of traffic and noise. The Sefton Coast Partnership needs to open the discussion on safeguarding natural beauty and wildness to ensure that traffic, car parks, paths and signs do not become the dominant features in the landscape.

Demonstration, education, interpretation and research

Communication, Interpretation and Product Development strategy
Tourism and Communication Task Group
Life Long Learning Task Group
Research Task Group

Importance

National	Regional	Local
Contribution to science Key site for climate change studies Key site for studies into the Holocene period	Regional climate change studies Supports work by Higher Education Institutes	Life long learning value Supports local history / heritage studies

²¹ The NERC Act 2006 gives National Nature Reserves a purpose for access and interpretation.

National demonstration /good practice site		
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– *Demonstration*

The Sefton Coast is of national and international importance for its contribution to scientific understanding of estuaries and dune systems. Reliable information on the coastal area (for example, maps) can be traced back to the 18th Century and studies on the coast remain at the forefront of scientific work. Its geographical position allows it to make an important contribution to the effects of climate change.

The Sefton Coast can be considered a demonstration site for;

- The coastal changes of the Holocene period (the period since the last glaciation) based on research on buried geological features and the archaeological finds on the shore.
- The history and techniques of coastal dune management from the 1960s to the present.
- The partnership approach which operates in Sefton
- The management of recreational beaches within Natura 2000 sites

Actions

- To review conservation management practice on the coast for the 2008 Sefton Coast Partnership conference
- To prepare background materials and a study tour for the international dune conference (Liverpool Hope University) 2008

– *Education and Interpretation*

The coast has huge potential for the development of education and life-long learning programmes, much of which is based on the natural values of the area and the development of the cultural landscape. Formal education programmes began in the 1960s at Ainsdale Sand Dunes NNR with the support of Liverpool Museum and Edge Hill College. Education programmes are now run by all conservation bodies on the coast, with coordination through a Life Long Learning Task Group.

Issues related to interpretation were addressed through a Communications, Interpretation and Product Development (CIPD) study. The study helps to support the development of visitor centres and interpretation by identifying key themes.

Key themes to be supported through the Nature Conservation Strategy are;

- Coastal habitats
- Rare and threatened wildlife
- Coastal processes
- Birdlife

There are also good opportunities for the Sefton Coast Partnership to raise awareness of marine conservation issues and marine life through centres such as the Ainsdale Discovery Centre, events and education programmes.

Projects will be developed which link access, interpretation and nature conservation.

Actions

- To support the development of an interpretive plan for the Sefton Coast through the Tourism and Communications Task Group
- To take the lead on the development of nature conservation themes in the Communication, Interpretation and Product Development strategy by coordinating partners' work and bids for funding.
- To develop projects with the Life Long Learning Task Group focusing, in particular, on public understanding of coastal change.

– *Research*

The Sefton Coast Partnership maintains a Research Task Group to help prioritise and support research activities which assist in coastal management. The research community has had a direct input to the development of the strategy through a research seminar held in July 2006²². Research priorities to be supported through the Nature Conservation strategy include;

- Investigations into the eco-hydrology of the dune slack series
- The development of soil studies
- Further investigations into the impact of nutrient deposition on coastal habitats

Many of the long term challenges for the coast will need to be guided by the results of scientific research. Comparisons between similar issues and habitats in the UK and north west Europe will help to broaden understanding and test management options. Problems such as the impact of atmospheric pollutants or the responses of habitats and species to climate change are being addressed in a range of relevant studies outside the immediate area.

There needs to be a good partnership between land managers and researchers to help find solutions to some of our problems. This may involve collecting data, setting up experimental plots, financial support for studentships and maintaining a list of research projects.

Action

- Develop research links between the Sefton Coast Partnership, Higher Education Institutes and networks.

²² Proceedings of the research seminar 2006 can be found on www.seftoncoast.org.uk

Community involvement and volunteering

Sefton Cultural Strategy
BioBank
Landscape Partnership Scheme

The Sefton Coast is rich in nature, landscape and culture. Community interest and involvement is important to support conservation and to identify the sense of place. Community covers a wide range of interests from local government, civic societies, sectors (such as farming), groups and associations, local residents and visitors.

Volunteers play a vital role in supporting land managers and in conserving the natural and built heritage. The promotion of active involvement through a wide range of volunteering opportunities and other activities will not only benefit coastal management but can also have many added benefits such as improving health and well-being, social inclusion, learning and personal development.

The Sefton Coast Partnership wishes to support local cultural associations by celebrating the links between nature, landscape and communities through, for examples, applications to the Heritage Lottery Fund for projects that involve local people in learning about landscape and biodiversity and support the work of volunteers.

Sefton Council manages much of its land holding as Local Nature Reserve. There are proposals to extend the coverage of the Ainsdale and Birkdale Sandhills LNR to include parts of the foreshore and outlying dune sites. The management of LNRs will be strengthened through the establishment of 'Friends' groups, encouragement of volunteers and events and activities.

Other sites within the coastal zone could be considered for LNR designation. There is a particular need to resolve land management issues at Hightown to promote the management of dune and meadow habitats. The land could be identified as a LNR.

Actions

- The establishment of a forum for the discussion of nature conservation issues
- Support for the development of a 'recorders group' linked to the BioBank initiative.
- Extension of Local Nature Reserves in Sefton.

Public support for nature conservation

People are concerned about the loss of nature and the threats to our natural environment. Membership of bodies such as the National Trust, RSPB and the county Wildlife Trusts is growing year on year. It is this grass roots support for nature which drives the conservation agenda. Organisations such as RSPB lead national and international campaigns for the protection of wildlife and wild places. Working together conservation bodies and their

members are a powerful voice for nature. Major pieces of legislation such as the Birds and Habitats Directives have come from this lobby and it is usually the non-governmental organisations (NGOs) which push for new sites to be added to lists. The establishment of two major European sites on the Sefton Coast is something which comes from people and is something to celebrate.

Economic use

Shoreline Management Plans Sefton Coast Tourism Development Plan

– *Coastal defence*

The beaches, marshes and dunes provide the main coast defence along much of the Sefton Coast. The main sea walls and embankments are between Seaforth and Hall Road and from Birkdale to Crossens although in the northern part of the coast most of the wave energy is absorbed by wide beaches and salt marshes. Shoreline Management Plans are prepared to guide the development of coast defence proposals along the coastline of England and Wales and include a 100-year appraisal period.

Advice on the development of second generation Shoreline Management Plans was issued by Defra in 2006. Shoreline management policies should take account of the need to maintain, restore or, where possible, improve natural and historic assets. When carrying out flood and coastal defence functions, operating authorities have a duty to contribute to and further nature conservation. These duties need to be considered in the development of the SMPs.

The whole length of the Sefton Coast falls under one or more conservation designations so any SMP policies must take full account of the need to meet legal requirements under the EU Birds and Habitats Directives.

Action

- To advise the development of second-generation Shoreline Management Plans affecting the Sefton Coast

– *Tourism*

The Sefton Coast Tourism Development Plan (2005) includes a research programme to establish current visitor use and attitudes towards the marketing of Sefton's Natural Coast. Sefton Council, with the support of the Sefton Coast Partnership, has developed a marketing plan to encourage tourism (and visitor expenditure) within Sefton's Natural Coast.

Although the marketing plan is using 'nature' as its main draw it also specifically targets audiences such as walkers and bird watchers. The natural values of the Sefton Coast are undoubtedly an asset to tourism in Sefton and Merseyside but care must be taken in

developments to ensure that its essential character is not compromised. The monitoring of recreational and tourism use of the coast should include information on total numbers, levels of erosion and damage, and conflict (especially when over-crowding spoils the enjoyment of the area for those seeking its qualities of peace and relaxation).

However, there are good opportunities for the development of the 'green-tourism' product, especially linked to access, education and interpretation and focusing on specialist markets. The Sefton Coast could be attractive to groups wishing to combine nature watching with walking or golf and staying overnight in Southport.

More could be done to improve the nature trails along the coast (priorities and costs are given in the Access Strategy), to open up new areas and to produce and disseminate interpretive material. The current level of 'marketing' to potential interest groups such as members of County Wildlife Trusts and Ramblers is low. A number of opportunities could be explored.

Specific actions include;

- To keep under review the use of the area and its impact on the natural values of the coast (through monitoring and reports from managers)
- Development of access and interpretive projects which help to support green-tourism initiatives.

Table 8: Socio-economic features –summary of actions

Action	Proposed responsibility	Timescale etc
Confirm the zoning framework to support the access and nature conservation strategies.	Sefton Council (Planning Department) with Sefton Coast Partnership	Develop zonation map by 2008
Identify, promote and interpret walks based on the wildlife value of the coast.	Sefton Coast Partnership through Landscape Partnership scheme	Key projects to be confirmed 2007-2008.
Increase value of National and Local nature reserves for access and interpretation.	Natural England and Sefton Council (Leisure Services)	Development of projects by 2008-2009
Review conservation management practice for the 2008 Sefton Coast Partnership conference	Nature Conservation Task Group (NE, RSPB, NT, LWT and Sefton Council)	Conduct review 2007-2008. For publication 2008.
Prepare background materials/ study tour international dune conference (Liverpool Hope University) 2008	Sefton Coast Partnership (nature conservation, research, shoreline management etc)	Prepare tour guide by March 2008.
Take the lead on specific themes in the Communication, Interpretation and Product Development strategy	Nature Conservation Task Group / Life Long Learning Task Group / Sefton Council (Tourism Department)	Linked to Landscape Partnership project 2008-2012
Develop projects with the Life Long Learning Task Group	Nature Conservation Task Group. Focus on public	Develop projects 2007-2008. Potential funding through

Action	Proposed responsibility	Timescale etc
	understanding of coastal change.	Landscape Partnership project.
Develop research links between the Sefton Coast Partnership, Higher Education Institutes and networks.	Sefton Coast Partnership, Nature Conservation Task Group, Research Task Group, UK sand dune and shingle network etc	Contribute nature conservation issues to Research Forum and research newsletter.
Establish a forum for the discussion of nature conservation issues	Sefton Coast Partnership	Format to be discussed at Sefton Coast Forum
Support the development of a 'recorders group' linked to the BioBank initiative.	Nature Conservation Task Group and BioBank	Plans for Merseyside Recorders Group 2007-2008
Extension of Local Nature Reserves in Sefton.	Sefton Council (Leisure Services)	Progress extensions 2007-2008
Advise the development of second-generation Shoreline Management Plans for the Sefton Coast	Sefton Council (Technical Services) , Natural England and Environment Agency	Nature Conservation Strategy provides guidance.
To keep under review the use of the area and its impact on the natural values of the coast	Sefton Coast Partnership	Establish monitoring methodology to assess potential negative impacts of access and recreation.
Development of access and interpretive projects which support green-tourism initiatives.	Sefton Coast Partnership	Development of projects 2007-2012. Links to tourism, access and landscape strategies.

Section 8: Conservation challenges and debates

The 'strategy' looks forward at least over the next 10 years or so. Attitudes to conservation and land management do change and our approach should be flexible without losing sight of the general objectives. There are a number of ongoing challenges and debates;

The first of these relate to concepts;

No net loss

No net loss is a principle in both the UKBAP targets for coastal habitat and the Sefton Coast Woodlands Forest Plan. In both cases the bottom-line is to maintain the 'footprint' of the habitat whilst accepting changes due to coastal changes and the actions of landowners. The nature conservation strategy can accept this approach but also notes that no net loss is not enough in itself. There also has to be a goal to maintain the diversity of current habitats

which lies behind the high biodiversity value of the coastal area. There is also a challenge to strive to increase or enhance the area of identified priority habitat in line with UKBAP targets.

Management of open dune habitat would not be considered a success in the long term if it resulted in a large area of one habitat type with poorly represented processes and habitat mosaics. Current concerns about dune management need to look to the ageing of the natural slack system (how to generate new slacks), to the need to maintain dune annual communities (open, south facing areas) and the need to maintain mobile dunes. We perhaps need to be bolder in our thinking about remobilisation of fixed dune habitats. In the long term this may be the best way to 'chase' a falling water table. The idea of 'no net loss' needs to be treated with some caution.

Similarly 'no net loss' of woodland habitat should not allow all the woodland to become conifer plantation. The biodiversity interest of the coastal woodlands goes beyond the single species interest of Red Squirrel and we need to ensure that we retain broadleaved woodland (some as an example of 'dune' woodland), wet woodland and scrub. If we can maintain a range of woodland types it is likely that the biodiversity value of the woodlands (their value for a wide range of species) will increase with time.

Landscape-scale planning (the ecosystems approach)

There is a view that conservation management is best considered at the landscape scale. Across Europe and the UK there is discussion about ecological corridors to allow species and habitat migration in response to climate change. The natural response of habitats and species to changing climate (as has happened over the most recent glaciations) may be severely constrained for the first time by anthropogenic factors which have imposed barriers to natural movement. The role of protected areas thus becomes one of links in a chain connected by habitat corridors.

Some species, for example the colonists of the green beach at Birkdale, have come from sea-borne seeds, plant fragments and 'rafts' carrying animal as eggs, larva or adults. The development of features such as the green beach or embryo dunes gives some optimism for natural habitat development and adaptation to sea-level rise. Dune systems in the UK, however, tend to be isolated from one another with no opportunity for natural movement of species such as Sand Lizard. Conservation action may also have to consider increasing intervention to protect species and habitats through translocation and habitat creation.

Locally we need to think outside the 'box' of designations and current habitat to seek out opportunities for habitat restoration and creation, especially on the dune backlands and reclaimed saltmarshes. Habitat corridors could be designed to support the conservation of a number of species or to provide additional habitat for the more mobile species including breeding birds, dragonflies, butterflies and Red Squirrel.

Fact: there are more species in southern latitudes than northern latitudes. Climate change should theoretically bring more new species to the Sefton Coast than those we may lose. But maximising biodiversity may not be the best objective if our primary aim is to conserve

the special coastal ecosystems. The Sefton Coast does not have to provide an ark for every species in Merseyside and for some habitats and species, ponds and dragonflies for example, we should encourage the development of new habitat within the coastal vicinity but not necessarily within the coastal SSSI. The recent development of ponds at Formby Hall Golf Club has provided a range of new wetland habitats for dragonflies and the common amphibians.

Specific concerns on the Sefton Coast relate to;

Scrub management

In the management of semi-natural habitats such as dunes and heaths it has, for a long time, been common and cultural practice to control the development of scrub. Scrub is an intermediate habitat, between open conditions and woodland and, if left, would spread across most of the dune area. Farmers, also, keep their land reasonably free of scrub as a condition of agricultural payments. Scrub removal is often criticised as destructive and unnecessary but there will always be a need to set some limit to the extent and distribution of scrub to maintain the balance of habitats on the coast.

Part of the problem is that dune scrub has not been properly recognised as a natural part of dune succession which should be retained for its intrinsic value. This strategy proposes to identify zones of dune scrub and to develop good practice in scrub management. The total area of scrub across the coast should however be limited to about 5% of the dune area, there should be scattered scrub in the semi-fixed dune area and a more continuous strip of native dune scrub to the rear of the dune system and against the main woodland belt. Problem non-native species, such as Balsam and White Poplar must be controlled to allow native species such as Hawthorn, Elder and Rose to develop an open, mixed, scrub. Regular cutting cycles will still be required to keep much of the scrub as an open habitat, richer for birds, butterflies and fungi than more closed canopies. More productive uses for scrub should be found, for example as biomass fuel in heating systems. This could be targeted at birch scrub which poses a threat especially to wet slack habitats.

Sea Buckthorn is considered to be native to the east coast of England but was probably introduced to the west coast in the 19th Century. It is a problem species, but also an attractive species with value for wildlife. It is particularly invasive in young wet slacks and without control forms dense thickets under which only a few plant species can survive. It needs to be controlled but not eradicated.

Habitat restoration and creation

The 'ideal' management for any habitat is to maintain its value through natural processes or through fairly low intensity management (grazing, mowing, small-scale scrub cutting etc) and this is the target state for most habitats in the Biodiversity Action Plans.

However, when the conservation status of a habitat or a species has been affected by another action there can be good grounds for restoration. Restoration implies that one can still 'see' the original state and that the objective of restoration would be to move back to

that state. Restoration may be proposed to correct 'damage' from human activity or to reverse successional processes to rejuvenate habitats.

Examples of restoration projects on the Sefton Coast would include;

- The restoration of more open dune habitat (especially for Natterjack Toad populations) by scrub control followed by grazing (as on Ainsdale Sand Dunes NNR and the Ainsdale Sandhills LNR)
- The restoration of a balanced age structure of heather on Freshfield Dune Heath by a combination of mowing, grazing and scrub removal
- The restoration of mobile and foredune habitats at Formby Point severely damaged by recreation pressure.
- The restoration of dune and dune slack habitats by the removal of conifer plantations (as on Ainsdale Sand Dunes NNR).

Habitat creation projects may arise out of opportunities or may be a requirement as compensation for development. There are a number of potential ideas for habitat creation (some shown on the opportunities map), including;

- The creation of new areas of coastal and dune grassland, dune heath and woodland on parts of the dune backlands. There are a number of opportunities for farmers under the Higher Level Stewardship scheme for such work.
- The creation of new wetland features (ditches, ponds and reedbeds) adjacent to the main coastal sites, on farmland and on golf courses.
- Habitat improvement / creation on parts of the former sand-winning areas at Formby Point, particularly for species such as Natterjack Toad and Sand Lizard.
- Creation of new habitats through the removal of infrastructure such as buildings, car parks and the sand-winning works at Marshside.

Restoration and creation projects have to be carefully planned and clear objectives set. Restoration projects generally require discussion and permissions and so should follow a logical approach which addresses the problems and looks at the possible reasons before setting an objective. There may be several ways to achieve the objective but, whatever measure is selected monitoring must be built in so that success or failure can be reported.

Government targets for SSSI condition

Significant areas of the Sefton Coast SSSI are in unfavourable condition based on the assessments carried out by Natural England prior to the development of the Common Standards Monitoring approach. Site condition is assessed against the statutory Conservation Objectives developed by Natural England for this SSSI.

Revised Conservation Objectives are being prepared by Natural England. These will be used, in draft form, in 2007 to undertake site condition monitoring using Common Standards Monitoring on parts of the Sefton Coast.

The size and complexity of the Sefton Coast makes it difficult to get a 'snap-shot' of its overall condition. The Sefton Coast Partnership considers that it is important to match the condition monitoring work of Natural England's conservation officers with more complete surveys of the main habitat types. This approach is already in place for the Forest Plan and could be extended to the main habitat 'groups' –the mobile dunes, fixed dunes, heaths and acid grasslands and slacks.

Meeting the long term challenges

As things get tougher for nature there is a danger that large-scale conservation projects conflict with other land uses. Across the UK there are examples of managed realignment projects (for intertidal habitat creation), strategic wetland projects (for reedbeds and Bittern), floodplain management (as proposed for the Alt) and woodland creation. The biggest challenge to be faced on the Sefton Coast may be the impact of climate change on the dune aquifer. The naturally formed dune slacks of the coast determine the overall character of the dune system. The Sefton Coast has 40% of this special habitat type in England and it is endangered by long term predictions of falling water levels. Predictive modelling based on UK Climate Impact Programme data suggest a fall by over 1 metre by 2080. If we are to preserve these special habitats under this scenario we would have to consider natural or artificial means to excavate the slacks to a new level. Where blowouts can be allowed to develop this could provide a small amount of new habitat. The excavation of new slacks may be way for the future.

On the nature reserves this approach is possible but it would be difficult on areas of golf course where construction has 'frozen' the landscape at a point in time. How would golf courses cope with a water table 1m below the current level? As these are long-term predictions it is important to maintain a coastwide partnership approach to finding solutions.

Section 9: Monitoring and reporting on the plan

The actions outlined above will be monitored and progress reported in an annual review of nature conservation activity. The reporting and monitoring systems will be developed by March 2008 and a first report of activity prepared to support the Annual Report for 2007.

There are several levels of monitoring required to guide and support the implementation of the strategy.

- The monitoring of the effects of actions (or no action) on the objective for each feature based on the targets listed in the strategy.

- The monitoring of the condition of protected sites through the Common Standards Monitoring system (for SSSI, SPA and SAC habitats)
- The monitoring of overall progress with the strategy and a record of discussions through the Sefton Coast Partnership annual reporting mechanism.

All conservation actions should have an element of monitoring built into their design. For restoration actions the reasons for monitoring are to see whether measures work out as expected, to be able to adjust the process and to collect knowledge that can be applied in similar situations.

More detailed information on the selected features is given in the supporting document (Part 2) to the strategy. This will be developed by March 2008 as a web-based document where the available information on habitats and species will be used to set the conservation objective.

The information in the supporting document will identify the factors which act on any features, will identify what should be monitored and will set limits to the impact of these factors. The supporting information will be in a format which can be updated and which can respond to experience.

A work programme (in spreadsheet format) has been prepared from the actions in the strategy. Where a type of conservation activity involves several land managers the aim will be to prepare summary reports based on the recording of activity.

Actions to develop the monitoring and recording programme include;

- Development of the supporting information as a web-based document by March 2008
- Confirmation of conservation objectives for features (including statutory Conservation Objectives) by March 2008
- Assembly of baseline information where knowledge is limited (prior to developing conservation objectives)
- Testing the value of software packages such as the Countryside Management System (CMS) for site managers and the Sefton Coast Partnership
- Selecting ‘indicator species’ for monitoring (i.e. those which can help to measure the impact of management decisions)
- Securing commitment and funding for long-term monitoring programmes, including those which may measure the impacts of climate change.

The strategy for the Sefton Coast (1999) addressed the implications of the designation of the Sefton Coast SAC. It contained a set of 17 ‘priority actions’. This strategy updates and replaces these ‘priority actions’. Annex I reviews progress with actions listed in the 1999 strategy to provide some continuity between the documents.

References and notes

A selection of reference material used in the preparation of the strategy

Legislation and Planning Policy Guidance

Wildlife and Countryside Act 1981, as amended
The Habitat Regulations 1994

Strategies and guidance

Government Circular: Biodiversity and Geological Conservation –Statutory Obligations and their Impact within the Planning System (ODPM 06/2005, Defra 01/2005).
NNR Management Plans: a guide (2005) English Nature
Management Planning for Protected Areas: a guide for practitioners and their bosses

Climate and coastal change

The UK Climate Impacts Programme. Includes information on current climate, future predictions, along with climate change impacts and adaptation. www.ukcip.org.uk . Relevant projects include RegIS and MONARCH.

Climate change and the visitor economy in England's northwest. Information on www.snw.org.uk/tourism

General introduction to issues: see www.climatechallenge.gov.uk

Report on coastal erosion predictions for Formby Point, Formby, Merseyside (2007). Sefton Council Technical Services (published on www.sefton.gov.uk).

Geodiversity

Natural foundations: geodiversity for people, places and nature. Natural England. 2006

Biodiversity

Biodiversity at EU level. See information on <http://europa.eu.int/comm/environment>

UK Biodiversity Action Plan and UK Biodiversity Partnership www.ukbap.org.uk

England Biodiversity Strategy 'Working with the grain of Nature' For a summary see www.english-nature.org.uk/about/pdf/EBSObjectives.pdf For full document see www.defra.gov.uk/wildlife-countryside/biodiversity/biostrat/index.htm

North West Region biodiversity targets: see www.biodiversitynw.org.uk/

North Merseyside Biodiversity Action Plan www.merseysidebiodiversity.org.uk

International campaign Countdown 2010 www.countdown2010.net

Working with the grain of nature –taking it forward: Volume II. Measuring progress on the England Biodiversity Strategy: 2006 assessment. Defra 2006

Sefton Coast

Smith, P.H. (1999). The Sands of Time: An introduction to the Sand Dunes of the Sefton Coast, National Museums and Galleries on Merseyside

Atkinson, D. and Houston, J. (eds). (1993). The Sand Dunes of the Sefton Coast, National Museums and Galleries on Merseyside

Sefton Coast candidate Special Area of Conservation: Conservation Strategy 1999

Sefton Coast Woodlands Forest Plan 2003

National Vegetation Classification surveys of saltmarsh (2003) and sand dune (2004-2005) by P. Gateley and P. Michel

Management plans of Natural England, National Trust, Sefton Council, RSPB and Lancashire Wildlife Trust

Annex I: Review of priority actions listed in Sefton Coast cSAC Conservation Strategy 1999.

Action	Progress
1. Endorse Strategy and Review Procedures	No systematic reporting maintained –to be included in revised strategy
2. Agree Priority Habitat Indicators where they remain to be defined	Natural England to confirm revised Conservation Objectives for Sefton Coast SSSI in 2007.
3. Integrate Strategy with Local Biodiversity Action Plans	Revised strategy to be integrated with revised UKBAP and NMBAP targets by March 2008.
4. Agree Actions to Ameliorate / Correct Habitat Loss and Fragmentation	Achieved in part but not in context of SAC/ SSSI.
5. Agree Actions to Limit Introduced Plant Species	Actions have been taken on a number of sites to control invasive species –but there can be a subjective view on what is a problem and what is not rather than coordinated action.
6. Agree Climatic Change Indicators and Monitoring System	The potential implications of climate change on species and habitats are considered in the revised strategy.
7. Agree / Establish Dune Monitoring System	Work is ongoing on the development of a second-generation SMP for the Liverpool Bay area.
8. Prepare / Implement Water Conservation Plan	EA has established monitoring network. The formal process of review of abstraction licences under the Habitats Regulations completed in 2005.
9. Develop / Establish Grazing Projects	Grazing now well established at Ainsdale NNR, Cabin Hill NNR, National Trust, LWT Freshfield and Ainsdale LNR (part). Also well-established grazing at Marshside and Ribble NNR.
10. Implement Strategy for Scrub Control	Sefton Coast Forest Plan now operational –identifies some scrub issues but not others. Overall picture and agreement on scrub management still lacking. Condition monitoring seeks to have less than 5% scrub on open areas.
11. Develop Golf Partnerships	No dedicated funding secured for conservation work on golf courses. A need to review approach and encourage partnership working. Golf Clubs now represented on SCP.
12. Develop incentive schemes	Land managers have accessed financial support. Now looking at higher level Environmental Stewardship payments.
13. Integrate the Nature Conservation Strategy for Sand Dunes of the Sefton Coast into Site Management Plans	Updated plans do include links but some plans are now out of date. Plans updated for Ainsdale NNR and Cabin Hill NNR.
14. Complete / Review Species Strategies	Most strategies now need review. Reporting and monitoring maintained for key species.
15. Review Nature Conservation Designations	Sefton Coast SSSI established. Revised boundary and features for Sefton Coast cSAC –now SAC. Action completed. Mersey Narrows SSSI notified in 2000.
16. Retain / Develop Information Base and GIS and develop monitoring arrangements	Post made permanent –but now based in coastal defence team –no longer a dedicated post linked to nature conservation.
17. Promote Exchange of Experience	Networks maintained and enhanced through Eurosite and Coastal Practitioners Network.