A585 Windy Harbour to Skippool Improvement Scheme

TR010035

6.9.1 ES Appendix 9.1: National Character Area 32

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Volume 6

October 2018

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Infrastructure Planning

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(Applications: Prescribed Forms and
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A585 Windy Harbour to Skippool Improvement Scheme

Development Consent Order
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ES APPENDIX 9.1: NATIONAL CHARACTER AREA 32

Regulation Number:	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	TR010035
Application Document Reference	TR010035/APP/6.9.1
Author:	A585 Windy Harbour to Skippool Improvement Scheme Project Team, Highways England

Version	Date	Status of Version
Rev 0	October 2018	DCO submission

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National Character Area profile:

32. Lancashire and Amounderness Plain

Supporting documents

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Introduction

As part of Natural England's responsibilities as set out in the Natural Environment White Paper[1], Biodiversity 2020[2] and the European Landscape Convention[3], we are revising profiles for England's 159 National Character Areas (NCAs). These are areas that share similar landscape characteristics, and which follow natural lines in the landscape rather than administrative boundaries, making them a good decision-making framework for the natural environment.

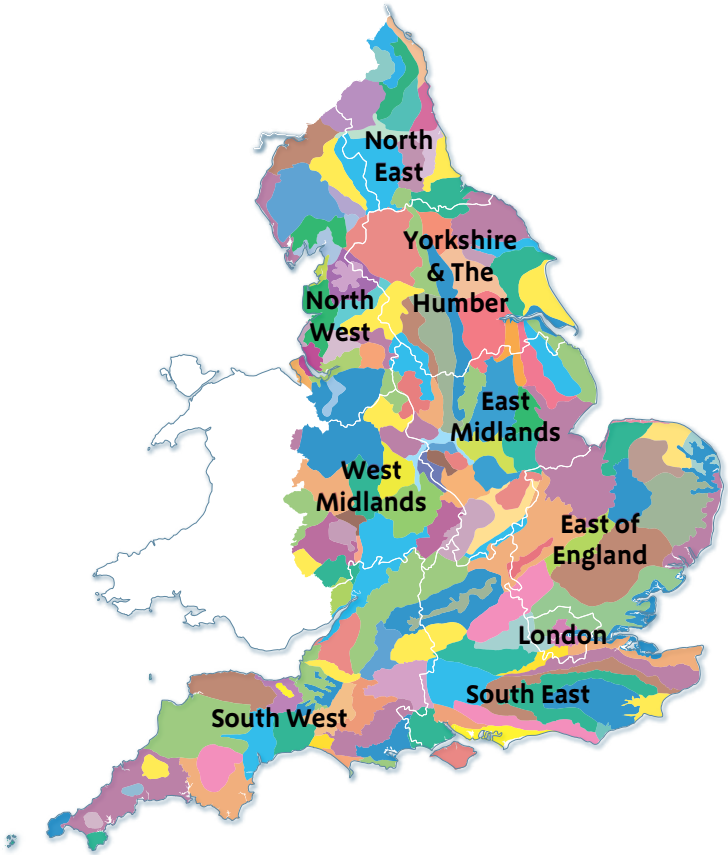
NCA profiles are guidance documents which can help communities to inform their decision-making about the places that they live in and care for. The information they contain will support the planning of conservation initiatives at a landscape scale, inform the delivery of Nature Improvement Areas and encourage broader partnership working through Local Nature Partnerships. The profiles will also help to inform choices about how land is managed and can change.

Each profile includes a description of the natural and cultural features that shape our landscapes, how the landscape has changed over time, the current key drivers for ongoing change, and a broad analysis of each area's characteristics and ecosystem services. Statements of Environmental Opportunity (SEOs) are suggested, which draw on this integrated information. The SEOs offer guidance on the critical issues, which could help to achieve sustainable growth and a more secure environmental future.

NCA profiles are working documents which draw on current evidence and knowledge. We will aim to refresh and update them periodically as new information becomes available to us.

We would like to hear how useful the NCA profiles are to you. You can contact the NCA team by emailing ncaprofiles@naturalengland.org.uk

National Character Areas map



[1] The Natural Choice: Securing the Value of Nature, Defra (2011; URL: www.official-documents.gov.uk/document/cm80/8082/8082.pdf)

[2] Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services, Defra (2011; URL: www.defra.gov.uk/publications/files/pb13583-biodiversity-strategy-2020-111111.pdf)

[3] European Landscape Convention, Council of Europe (2000; URL: http://conventions.coe.int/Treaty/en/Treaties/Html/176.htm)

Summary

The Lancashire and Amounderness Plain is an area of high-grade agricultural land, bounded by Morecambe Bay in the north and Liverpool in the south. The eastern boundary is contained by the Bowland Fringe. The plain is made up of a series of low-lying landscape types: in the east, undulating lowland farmland on the highly productive coastal plain, and in the west, the former mosslands and their remnant sites, and the coastal marshes and dunes.

The northern Fylde (or Amounderness) coastal plain contains the estuary and lower reaches of the River Wyre, as well as its tributaries, the rivers Calder and Brock. It is predominantly improved pasture, with isolated arable fields. It is an ordered landscape of medium-sized fields with field ponds, clipped hedgerows and drainage ditches. This is a medium- to large-scale landscape, where blocks of wind-sculpted mixed woodland punctuate the relatively flat to gently rolling plain.

South of the Ribble Estuary the plain has a different physiographical history to that to the north, and this is reflected in the land use of the area. It is predominantly highly productive arable land with large fields. Agricultural drainage systems, including steep-sided ditches with localised reedbeds and steep embankments, are a dominant feature, and are responsible for the area's dramatic transformation from marshland to a rich and ordered landscape of rectilinear fields. This is mainly an area of open, high-quality farmland.

Large flocks of migratory wildfowl and wading birds take up residence on the coast during the winter months. These birds feed and roost not only on the mudflats and salt marshes of the estuaries, but also on the farmland along the coastal plain, using wet pastures, areas of open water, improved pasture and arable fields. These wintering flocks include internationally important numbers of Bewick's swan, whooper swan, lapwing, wigeon and pink-footed goose, as well as nationally significant numbers of golden plover. The presence of these birds has led to large areas of the National Character Area (NCA) being designated as Ramsar sites and Special Protection Areas.

There is a concentration of urban areas along the Fylde coast, characterised by large Victorian and Edwardian residences and landmark features including the nationally famous pleasure beach and tower at Blackpool. Other notable large population centres within the NCA include Preston in the centre, and Ormskirk and Skelmersdale in the south. However, the plain remains largely rural in character, with isolated brick farmsteads, small villages and numerous large detached houses located along the network of country lanes. Views to the coast from the southern plain are highly influenced by urban fringe development in the Sefton Coast NCA at Formby, Ainsdale, Southport and other settlements, and by offshore hydrocarbon and wind energy installations.

The area offers many opportunities for informal recreation – particularly along the Fylde coast – and contains a number of country parks. The Ribble Link, Lancaster Canal, and Leeds and Liverpool Canal all cross the NCA and offer extensive recreational opportunities. There are several long-distance paths, the Lancashire Cycleway crosses the NCA both above and below the Ribble Estuary, and there are also long stretches of cycle paths around the coast. Other activities include birdwatching at the many marsh sites.

Click map to enlarge; click again to reduce.

Statements of Environmental Opportunity

- **SEO 1**: Conserve, manage and enhance the river systems and wetlands – including the Ribble Estuary and the rivers Wyre and Douglas – with their many associated drains, dykes and streams. This will improve water quality and supply, sustainably address flood risk management, and enhance biodiversity and the historic environment through a strategic, landscape-scale approach.

- **SEO 2**: Work with landowners and land managers to protect, enhance and strengthen the network of farmland features in this agricultural plain landscape. Create and expand farmland habitats to enhance biodiversity, improve soil and water quality, strengthen the resilience of habitats to climate change and enhance landscape character.

- **SEO 3**: Promote the sense of place of the coastal and inland settlements, and protect the remaining rural character of the wider landscape from further loss and change from development pressures. Manage urban fringe development to ensure that it does not negatively impact the rural character of the area, and ensure that all development is of an appropriate type and scale. Provide good green infrastructure links to enhance people's enjoyment of and access to the varied landscapes and valuable recreational assets that the area provides.

- **SEO 4**: Promote and manage recreational and access opportunities, at the same time as conserving the natural and cultural heritage. Conserve and enhance the historic environment, geodiversity, areas of tranquillity, nature conservation sites, long, open views and landscape character. In recognition of the importance of tourism to the local economy, provide interpretation and educational facilities, which will bring health and wellbeing benefits for both residents and visitors.

Ribble Estuary, Lytham can be seen in the background.

Description

Physical and functional links to other National Character Areas

This is an area of high-grade agricultural land extending southwards from Morecambe Bay in the north to the outskirts of Liverpool in the south. The eastern boundary of the plain is contained by the Bowland Fringe. It is divided from the industrial landscape of the Lancashire Coal Measures in the south-east by the Upholland Ridge, a Millstone Grit outcrop that punctuates the plain. The southern boundary is formed partly by the city of Liverpool, which extends from the Mersey Estuary beyond the hills of Anfield and Walton.

The area is relatively well populated, and an extensive network of road and rail routes links the area with the surrounding National Character Areas (NCAs). The area also contains the Ribble Link, the Lancaster Canal, the Leeds and Liverpool Canal, and several long-distance footpaths. The NCA is bounded on its eastern and western edges by the M6 and Irish Sea respectively, although in the south the NCA is separated from the coast by the Sefton Coast NCA.

The northern half of the NCA contains the estuary and lower reaches of the River Wyre and its tributaries, the rivers Calder and Brock. The headwaters of these rivers drain the western and south-western slopes of the Bowland Fells NCA. At the centre of the Lancashire and Amounderness Plain NCA lie the estuary and lower reaches of the River Ribble (which has its source in the Yorkshire Dales NCA), and its tributary, the River Darwen (which drains the Southern Pennines NCA). The River Douglas and its tributaries, the rivers Yarrow and Lostock, drain much of the southern half of the NCA, with the River Douglas flowing into the southern side of the Ribble Estuary. These rivers' headwaters rise on Rivington Moor, in the Southern Pennines NCA.

Views into the plain can be seen from adjacent raised ground, including the Bowland Fells and Southern Pennines. Conversely, views from within the NCA are set against the dramatic backdrop of the Southern Pennines to the south-east, the Bowland Fells to the north-east and the Cumbrian Fells to the north. Blackpool Tower is visible from many parts of the area and from further afield. There are extensive views across the Irish Sea and along the coastline, including distant views of mountain ranges in North Wales and Cumbria.

Distinct areas

- The Fylde coast, including significant urban areas such as Blackpool and Fleetwood.

Key characteristics

Agriculture near Rufford.

- A rich patchwork of pasture, arable fields and drainage ditches, on a relatively flat to gently undulating coastal landscape.
- Extensive views across the plain, within which small to medium-sized blocks of mixed woodland (wind-sculpted near the coast) provide punctuation and vertical accents.
- Thickly blanketed by glacial till, with poorly-drained peat-filled hollows that give rise to mosses and meres (now mainly remnants).
- Medium-sized to large fields form an open, large-scale agricultural landscape. Pasture is more dominant north of the Ribble Estuary, with arable to the south. There is a high density of relict pastoral field ponds on the eastern side of the NCA.
- Localised areas of intensive market gardening provide seasonally varied colours and textures.
- A complex network of wide meandering rivers, raised drainage ditches and dykes divide and drain the landscape. Along with fragmented relicts of reedbeds and mosses, and historic place names, these provide a reminder of the area's heritage of wetland reclamation.

Continued on next page...

Key characteristics continued...

- Coastal habitats and large areas of open water are of international importance for their migratory and wintering wildfowl and wading bird populations.
- Mixed arable and pastoral farmland habitats support a nationally important assemblage of breeding farmland bird species.
- A complex network of channelised rivers, canals, drainage ditches and dykes supports a nationally important population of water vole.
- The Fylde coast, which extends from Fleetwood in the north to the mouth of the Ribble Estuary, includes significant urban areas along the coastal strip (such as Blackpool and Fleetwood).
- Urban settlement is concentrated in the planned Victorian coastal resorts (including Blackpool) and inland towns (the largest of which is Preston).
- The Ribble Link, Lancaster Canal, and Leeds and Liverpool Canal all cross the NCA.
- Designed landscapes associated with large houses are locally common in the south, where they provide enclosure in an otherwise open landscape.
- A rectilinear network of lanes and tracks – usually without fences or hedges – subdivides the landscape, and isolated brick farmsteads occur in rural areas.
- Tourism is an important contributor to the local economy, with many opportunities for informal recreation – particularly along the Fylde coast.
- Several long-distance paths cross the NCA, including the Lancashire Coastal Way, the Ribble Way and the Wyre Way, as well as canal towpaths.

Lancashire and Amounderness Plain today

The Lancashire and Amounderness Plain supports an open, large-scale landscape of farmland on a relatively flat to gently undulating coastal landscape. Pasture is more dominant north of the Ribble Estuary, with arable to the south. This rural landscape is dissected by wide rivers and a complex network of drainage channels, which together reinforce the angular form of the field pattern and are a reminder of the area's heritage of mosses and meres.

Large flocks of migratory wildfowl and wading birds take up residence on the coast during the winter months. These birds feed and roost not only on the mudflats and salt marshes of the estuaries, but also on the farmland along the coastal plain, using wet pastures, areas of open water, improved pasture and arable fields. The presence of these birds has led to large areas of the NCA being designated as Ramsar sites and Special Protection Areas (SPA).

The northern plain is predominantly improved pasture, supporting a high density of livestock, with isolated arable fields. It is a medium- to large-scale landscape, with medium-sized fields, field ponds, clipped hedgerows and drainage ditches. Blocks of wind-sculpted, mixed woodland punctuate the relatively flat to gently rolling plain. Views to the east are seen against the dramatic backdrop of the Bowland Fells and Southern Pennines. To the north, bordering Morecambe Bay, areas of stubble and grass leys contribute to significant feeding grounds for internationally important flocks of pink-footed goose and whooper swan.

To the south of the Ribble Estuary, the plain has a different physiographical history. This is reflected in the land use of the area: it is predominantly highly productive arable land much of it Grade 1, with some Grade 2 – with large, rectilinear fields bounded by ditches. Arable fields provide a habitat for farmland

View from Parbold Hill across the Lancashire Plain.

birds such as the lapwing, grey partridge, corn bunting and skylark; during the winter months, large areas of stubble provide important feeding grounds for internationally important flocks of pink-footed goose and whooper swan. Many field boundaries are simply ditches in areas where there is no need for stock proofing. The lack of hedgerows and hedgerow trees, combined with the essentially flat topography and large arable fields, creates a large-scale and sweeping landscape. Woodland is sparse outside historic estates such as Knowsley Park. The woodland that does exist tends to be made up of large, angular blocks of mixed species, which accentuate the regular field pattern. The plain to the east is predominantly formed by clay soils, and contains some ancient wood pasture, with a high density of field ponds formed by the extraction of lime and marl for agricultural use.

Oystercatchers.

An area of low-lying, open, intertidal land and coastal grazing marsh extends along the Ribble Estuary from Fulwood to the coast, separating the two areas of agricultural plain to the north and south. The intertidal landscape of the estuary varies in character, with narrow, bounded riverine channels inland, and wider, open and flat channels at the river mouth. The low-lying marine levels are an open and pastoral landscape of fields enclosed by ditches and hedgerows, with minimal woodland cover or settlement. Dynamic salt marsh intersected by dendritic creeks running out to sea creates a remote-feeling landscape. The intertidal flats of the Ribble Estuary support thousands of birds including the knot, oystercatcher, redshank, dunlin, curlew and godwit, while the extensive areas of grazed salt marsh are of considerable importance for feeding flocks of wigeon, pink-footed goose, whooper swan and Bewick's swan. The River Douglas flows into the southern side of the Ribble Estuary: along with its tributaries, the rivers Yarrow and Lostock, it drains much of the southern half of the NCA.

The northern half of the NCA contains the estuary and lower reaches of the River Wyre and its tributaries, the rivers Calder and Brock. The ungrazed salt marshes on the Wyre Estuary are of importance for their plant communities, including large areas of sea lavender, sea purslane, thrift and sea aster.

The NCA supports a range of important habitats and species, including two plant species endemic to the British Isles: purple ramping-fumitory and Isle of Man cabbage. The coastal habitats, – along with the large areas of open water and linear canals such as at Martin Mere, Mere Sands Wood and Marton Mere – are of international importance for their populations of migratory and wintering wildfowl and wading birds.

There is a concentration of urban areas along the Fylde coast, characterised by large Victorian and Edwardian residences, as well as landmark features such as Lytham Windmill, Royal Lytham and St Anne's Golf Club, St Anne's Pier, and the many notable features of Blackpool such as the tram-lined promenade, the tower, the pier and the nationally famous pleasure beach, which all contribute to the overall sense of place. Other notable large population centres within the NCA include Preston in the centre, and Ormskirk and Skelmersdale in the south. However the plain remains rural in character, with isolated brick farmsteads, small villages and numerous manor houses located along the network of country lanes.

The area offers many opportunities for informal recreation, particularly along the Fylde coast. A number of country parks lie either wholly or partly within the NCA (including Beacon Park, Cuerden Valley and Wyre Estuary). Further recreational opportunities are provided by the urban parks of towns such as Blackpool, Lytham St Anne's and Preston. In the south, part of the NCA falls within the Mersey Forest. The Ribble Link, Lancaster Canal, and Leeds and Liverpool Canal all cross the NCA, and offer extensive recreational opportunities including walking, fishing and boating. Several long-distance paths cross the NCA, including the Lancashire Coastal Way, the Ribble Way and the Wyre Way, as well as canal towpaths. The Trans Pennine Trail National Cycle Route crosses the lower part of the NCA, linking the area as far away as Hornsea on the east coast, while the Preston Guild Wheel National Cycle Route loops around the city.

The Lancashire Cycleway crosses the NCA both above and below the Ribble Estuary, and there are long stretches of cycle paths around the coast. Other activities include birdwatching at the many marsh sites (including the Ribble Estuary National Nature Reserve, Hesketh Out Marsh, Fairhaven Lake and Granny's Bay, Pilling Marsh, Marton Mere, Rossall Point and Fleetwood Marsh), while the series of Local Nature Reserves (LNR) provide further opportunities for observing wildlife and enjoying contact with the natural environment.

View across Harrock Hill towards Preston.

The landscape through time

Although Permo-Triassic red mudstones, siltstones and sandstones constitute much of the floor of the Lancashire lowlands, the solid geology rarely emerges from beneath its thick covering of glacial and post-glacial deposits. The plain's lush green pasture and rich arable land are a creation of the last two centuries. Prior to this, the area was predominantly marshland formed by rising sea levels after the last glaciations. As the ice sheet retreated, it left behind a blanket of glacial till that now forms the coastal cliffs north of Blackpool. It also created many poorly-drained hollows, which soon became filled with post-glacial peat, giving rise to the mosses and meres that dominated the area until very recently. Place names incorporating 'moss' and 'mere' are numerous today, and are associated with an abundance of well-maintained ditches and drains.

The plain to the south of the Ribble Estuary has a similar post-glacial history to that of the northern plain. Again, glacial deposits, soils and contours combine to produce the gently sloping plain that flattens out to fenland at the coast. A low cliff-line in the till plain a few miles inland marks the old shoreline of the former lake of Martin Mere, and is still intermittently traceable from the River Ribble to the River Dee. It is best seen at Hesketh Bank, near Preston, and at Hill House, east of Formby. The superficial geology in this area is mainly wind-blown Shirdley Hill Sand, with small patches of underlying till and marine clay. In addition, there are major areas of basin peat in the east (around Simonswood Moss), and of coastal peats south-east of Hightown. Together with podsolic soils overlying the Shirdley Hill Sands, the basin and coastal peats produce high-quality Grade 1 and 2 soils over much of the area.

There is some limited evidence of the area first being settled in the Mesolithic period, and later by the Vikings and Angles, and there is also evidence of a Roman fort at Kirkham. However, the barren sand dunes of the present coast, the mosslands studded with meres, and the heavy, clay soils of the densely forested glacial drift plain combined to make this an inhospitable landscape not conducive to early settlement. Areas of ancient enclosure between the rivers Wyre and Ribble, and in the angle of the rivers Ribble and Douglas, retain indications of strip cultivation (fossil strips). These are rare in Lancashire.

The Lancashire Plain included vast areas of mossland, supplying important resources such as peat and rough grazing for small local communities. Between the 12th and 14th centuries, population pressures drove small-scale drainage works, which brought the drier edges of the mosslands into cultivation.

The western coastlands of the area remained sparsely populated until the end of the 18th century. From the late 17th century onwards, the area began to change. This started with the wind-powered drainage of mosslands and fenlands, which was greatly accelerated by new technology such as steam pumps and increased demand for arable and horticultural produce in the 19th century. This transformed the marshes into high-grade pasture and arable land and, as a consequence, the Fylde emerged as an important area for both grain production and small-scale dairying. By the late 19th century and early 20th century, the arable farms of this area were also providing market produce, chickens and eggs for the region's towns. A few isolated windmills, built to drain the water and grind the first crops of corn, have also survived on the plain.

Large numbers of ponds and small marl pits were excavated on the coastal plain in the 19th century. In some areas, there are more than 35 ponds per square kilometre. The marl pits are associated with a particular soil type, the Salop and Salwick Flint Associations, which contain deposits of lime. Prior to industrialisation and the development of the fertiliser industry, small pits were dug to extract lime for spreading on surrounding fields; these pits have since filled with water to form ponds.

The conurbation of Blackpool grew in the late 18th century from a collection of farmsteads, following the growth of the ports at Skippool and Hambleton. The practice of closing the Lancashire mills annually for repairs ensured a steady stream of tourists and visitors. The arrival of the railway joining Blackpool to the main Preston and Wyre Joint Railway line in 1846, and the later development of the motorways, opened up communication routes between Blackpool and the agricultural and industrial landscapes further east. This cemented the town's recreational role and its development into the premier UK seaside resort that it is today.

More recent developments include the expansion of towns, residential areas, light industry, and the road and motorway network. In some areas, the conversion of historic brick-built barns for use as residential dwellings or for intensive agricultural practices, with harshly-coloured imported bricks and other inappropriate materials has resulted in poorly integrated developments that compromise the historic buildings and the wider landscape setting of groups of farm buildings. In some areas, farming is now giving way to livery and keeping horses particularly around the fringes of towns and villages.

Croston.

Ecosystem services

The Lancashire and Amounderness Plain NCA provides a wide range of benefits to society. Each is derived from the attributes and processes (both natural and cultural features) within the area. These benefits are known collectively as 'ecosystem services'. The predominant services are summarised below.

Further information on ecosystem services provided in the Lancashire and Amounderness Plain NCA is contained in the 'Analysis' section of this document.

Provisioning services (food, fibre and water supply)

- **Food provision**: The northern plain of the Fylde is used predominantly for dairy farming, with isolated arable fields. The southern plain, to the south of the River Ribble, is dominated by arable and horticulture, mainly on agricultural land of the highest quality. The basin and coastal peats, together with podsolic soils overlying the Shirdley Hill Sands, produce high-quality Grade 1 and 2 soils over much of the area. The coastal peat soils are intensively farmed for horticulture, vegetables, potatoes and cereals. Further inland, the slightly higher ground is also farmed for cereals and vegetables.

- **Biomas**: The existing woodland cover offers small-scale opportunities for the provision of biomass, either through bringing unmanaged woodland under management or as a by-product of commercial timber production. There are also opportunities for new planting, particularly in the south, under the Mersey Forest. There are also opportunities for energy crop production.

- **Water availability**: The water used across the plain is sourced in the neighbouring uplands of the Bowland Fells. The wide, meandering rivers Lune, Ribble and Wyre cross the plain. In rivers such as the Wyre, historic water abstraction rights may cause artificially low flows, leading to detrimental effects on fauna and flora, and to the loss or deterioration of wetland assets. Water abstraction within the area is dominated by public water supply, but is also used for industry, agriculture, fish farming and topping up the Lancaster Canal.

Regulating services (water purification, air quality maintenance and climate regulation)

- **Climate regulation**: Peat soils have a particularly important role in storing carbon. The area was once extensive lowland raised bog, interspersed with various fen and wet woodland habitats (collectively known as mosslands in Lancashire). The area is now predominantly drained and used for arable agriculture. This linked network of pumped drainage assets requires considerable resources to support it, which releases a large amount of carbon dioxide into the atmosphere, exacerbating climate change. Underlying the peat are glacial clays; if the peat were to be lost, there could be a deterioration of the quality of agricultural land. There are major areas of basin peat in the east of the NCA, around Simonswood Moss, and coastal peats south-east of Hightown. Limited carbon storage will be offered by the NCA's woodland cover (making up 4 per cent of the area), especially where this woodland is brought under management. In areas of mineral soils, carbon sequestration and storage can be enhanced by the addition of organic matter and through a reduction in the frequency and extent of cultivation.

- **Regulating soil erosion**: Just under half (43 per cent) of the soils covering this NCA are susceptible to erosion. The freely draining, slightly acid, loamy soils (1 per cent) have an enhanced risk of soil erosion on moderately or steeply sloping land where cultivated or bare soil is exposed. This is exacerbated where organic matter levels are low after continuous arable cultivation, or where soils are compacted. Heavy traffic also increases erosion risk on the naturally wet, very acid, sandy and loamy soils (16 per cent). Both of these soil types are at risk of wind erosion – especially where freely draining, slightly acid, loamy soils are coarse-textured. The slightly acid, loamy and clayey

soils with impeded drainage (7 per cent) are easily compacted by machinery or livestock if accessed when wet, and are prone to capping or slaking, increasing the risks of soil erosion by surface water run-off (especially on steeper slopes). Salt marsh soils (3 per cent) may be lost to coastal erosion, including from sea level rises but this process will help to prevent the loss of inland soils. The raised bog peat soils (7 per cent) and fen peat soils (7 per cent) are permeable, and therefore have a generally low risk of water erosion – except where cultivated land is susceptible to flooding. There is a risk of wind erosion in these soils and also in the loamy and sandy soils with naturally high groundwater and a peaty surface (2 per cent), especially where surfaces are bare or spring crops are grown.

- **Regulating soil quality**: The slowly permeable, seasonally wet, slightly acid but base-rich loamy and clayey soils (39 per cent) may suffer compaction and/or capping, as they are easily damaged when wet. In turn, this may lead to increasingly poor water infiltration and diffuse pollution as a result of surface water run-off. Management measures that increase organic matter levels can help to reduce these problems. The naturally wet, very acid, sandy and loamy soils (16 per cent) can have a weak structure, but are easily worked. Topsoil compaction can occur, as well as cultivation pans.

- **Regulating water quality**: There are a number of pressures on water quality in the NCA. Slurry and silage liquor discharges from farms with inadequate containment facilities, spreading of slurry to land, and discharges from small private sewage treatment works and septic tanks all contribute to rising ammonia levels in rivers. There is a risk of leachate being discharged into watercourses from large chemical, industrial and landfill sites, particularly along the open coastal marsh near Fleetwood. The ecological quality of surface waters is moderate across much of the NCA, including its coastal waters. It is, however, good in the River Brock (a tributary of the Wyre), the Lancaster Canal, and the Leeds and Liverpool Canal, but poor in the River Darwen (a tributary of the Ribble) and the River Lostock (a tributary of the Douglas). Other than the Ribble Estuary, the NCA's coastal waters fail to achieve good chemical status. The chemical status of groundwater, meanwhile, is generally good – but poor along the southern edge of the NCA.

- **Regulating water flow**: Areas within the flood plains of the main rivers and their tributaries informally provide flood storage, and therefore are already acting to protect nearby properties and businesses. The many ponds and areas of wetland perform a similar service. Flooding from the River Wyre has historically been an issue of concern, especially within the areas of Garstang, St Michael's on Wyre and Great Eccleston (within this NCA). Following severe flooding in 1980, flood basins were constructed at Garstang and Catterall; these have prevented major flooding to property, although flooding to a number of rural properties, roads and agricultural land has still occurred. The Environment Agency's preferred approach to managing this flood risk includes the restoration of moorland habitat by grip blocking in the Bowland Fells, as well as changes in land and soil management practices to reduce erosion rates and increase local water retention. The Ribble catchment has a history of flooding, with the flood risk concentrated in Preston (within this NCA) and upstream in Ribchester (in the Lancashire Valleys NCA). Opportunities exist within the Upper Ribble and Hodder sub-catchments to provide flood storage and to create habitats that could reduce the downstream flood risk. Reservoirs at Rivington Moor (in the Southern Pennines NCA) play an important role in regulating flow from the upper catchment, and in reducing flood peaks on the Yarrow and Douglas. The flood plain of the lower Douglas and Yarrow consists of high-grade agricultural land where drainage is modified by pumping within a complex network of artificial channels. The main locations of fluvial flood risk to people and property within the NCA are Croston and Eccleston (on the River Yarrow), Leyland and the Lostock area (on the River Lostock), and Longton and Hutton (to the south-west of Preston, on streams draining to the River Douglas).

- **Regulating coastal flooding and erosion**: Tidal flooding typically occurs along the coastline, where high tides combine with a storm surge, wind and wave action to raise the sea level over the top of coastal defences. The main urban areas influenced by direct tidal flooding are Lytham St Anne's, Penwortham near Preston, Hesketh Bank and Walton-le-Dale. Many rivers are tidally influenced, with the potential to increase flooding upstream by preventing inland fluvial rivers from draining freely. Liggard Brook, Dow Brook and Savick Brook in the Ribble catchment are affected in this way. High water levels within the Douglas Estuary may prevent pumped or flapped outfalls from drainage channels from working correctly, leading to flooding behind the tidal defences, mainly affecting agricultural land.

Cultural services (inspiration, education and wellbeing)

- **Sense of place/inspiration**: A sense of place is provided by the generally flat, fertile and gently rolling coastal plain, interrupted by isolated hills. The plain is dissected by wide, meandering rivers and an extensive network of rectilinear raised drainage ditches and dykes, with wind pumps that form distinctive features in the landscape – a reminder of the area's heritage of wetland reclamation from mosses and meres. The Ribble Estuary and coastline provide a strong sense of place in the west, with the Victorian coastal resorts of Blackpool and Lytham St Anne's forming the focal points for settlement. Extensive intertidal sand and mudflats are backed by remnant dunes and some of the largest salt marshes in the country. Views are set against the dramatic backdrop of the Forest of Bowland in the north-east and the Lake District to the north. Blackpool Tower is visible from many parts of the area. There are extensive views across the Irish Sea and along the coastline, including distant views of mountain ranges in North Wales and the Lake District.

- **Sense of history**: The history of the landscape is evident in its transformation from an area of extensive lowland raised mires to productive reclaimed farmland, beginning in the 18th and 19th centuries and reflected in the regular drainage ditches and dykes, canals, windmills and isolated red-brick farm buildings. Little evidence remains of the area's former landscape, aside from small areas of remnant mosses or fen carr that provide indications of strip cultivation on boundaries of ancient enclosure between the rivers Wyre and Ribble, and place names that refer to 'moss' or 'mere'. Aspects of history likely to be most evident to the general public are to be found in the Victorian seaside towns of Blackpool and Lytham St Anne's, as well as in the area's parklands; these are most notable to the south, and include Knowsley Park, Rufford Abbey, Lytham Hall and Stanley Park.

- **Recreation**: There are many opportunities for informal recreation, particularly along the Fylde coast. The area is surrounded by large population centres, including Liverpool to the south and Preston in the centre; urban areas are also concentrated along the Fylde and Sefton coasts. Wyre Estuary Country Park and Lostock Valley Country Park are the only statutory country parks within the NCA, although Cuerden Valley Park fulfils a similar function. All the major conurbations have municipal parks. A number of the nature reserves within the area are free and open to the public, and offer opportunities for quiet recreation and enjoyment of the natural world. These include Mere Sands Wood, Marshside, Hesketh Bank, Fleetwood Marsh, Marton Mere and Longton Brickcroft. Brockholes and Martin Mere require payment for access, and there is restricted public access to the Ribble Estuary National Nature Reserve.

  Public footpaths also offer significant opportunities for birdwatching on private farmland and on the coast. The Ribble Link, Lancaster Canal, and Leeds and Liverpool Canal all cross the NCA, and offer extensive recreational opportunities, including walking, fishing and boating. Several long-distance paths cross the NCA, including the Lancashire Coastal Way, the Ribble Way and the Wyre Way, as well as canal towpaths. The Trans Pennine Trail National Cycle Route crosses the lower part of the NCA, linking the area as far away as Hornsea on the east coast, while the Preston Guild Wheel National Cycle Route loops around the city. The Lancashire Cycleway path crosses the NCA both above and below the Ribble Estuary, and there are long stretches of cycle paths around the coast. Horse riding on the beaches is characteristic

in some areas, for example at St Anne's. Tourism is an important contributor to the local economy; however, visitor numbers are much lower than they were in the heyday of these Victorian and Edwardian seaside resorts.

- **Biodiversity**: The NCA is an intensively farmed landscape, and agricultural changes over the past 200 years have seen the majority of habitats considerably reduced in size and quality. Despite this, the NCA supports a range of important habitats and species, and contains one Special Area of Conservation, three Special Protection Areas and three Ramsar sites, with over 2,700 ha nationally designated as Sites of Special Scientific Interest (SSSI). In addition, the area has seven Local Nature Reserves and 219 Local Wildlife Sites, which provide further habitats for wildlife and also opportunities for communities to engage with and enjoy nature close to where they live.

  The principal priority habitats within the NCA are coastal and flood plain grazing marsh and salt marsh, with some arable margins, lowland raised bog, lowland meadows, fens and lowland heathland also represented. The large number of ponds and marl pits are a particularly important but vulnerable resource.

  Most of the prime agricultural land within the NCA is former mossland – under 400 ha of lowland moss habitat remains. What is left exists as small, isolated, hydrologically damaged remnants of a once-extensive moss resource. Only one of these remnants, Winmarleigh Moss SSSI, now retains anything like the original raised mire conditions supporting *Sphagnum* mosses.

  The NCA is home to two plant species endemic to the British Isles: purple ramping fumitory and Isle of Man cabbage. The coastal habitats, along with the large areas of open water and linear canals (such as at Martin Mere, Mere Sands Wood and Marton Mere), are of international importance for their populations of migratory and wintering wildfowl and wading birds. The intertidal flats of the Ribble Estuary support thousands of birds including the knot, oystercatcher, redshank, dunlin, curlew and godwit, while the extensive areas of grazed salt marsh are of considerable importance for feeding flocks of wigeon, pink-footed goose, whooper swan and Bewick's swan. The ungrazed salt marshes on the Wyre Estuary are of importance for their plant communities, including large areas of sea lavender, sea purslane, thrift and sea aster.

Redshank.

Statements of Environmental Opportunity

SEO 1: Conserve, manage and enhance the river systems and wetlands – including the Ribble Estuary and the rivers Wyre and Douglas – with their many associated drains, dykes and streams. This will improve water quality and supply, sustainably address flood risk management, and enhance biodiversity and the historic environment through a strategic, landscape-scale approach.

For example, by:

- Maintaining and improving water quality and provision by working with landowners, farmers and riparian owners to encourage sustainable farming practices. These will improve filtration into the ground and reduce nutrient run-off by creating a network of meadow grasslands, including grass field margins and grass buffers to both watercourses and areas of open water.
- Encouraging the growth of crops that require less irrigation, thus increasing on-farm water storage.
- Managing the network of drains, ditches and dykes on rotation so that they continue to function, while retaining vegetation to form effective habitats for species such as water voles. This will build links between wetland and other semi-natural habitats, improving water quality and preserving key landscape features.
- Managing and restoring any remnant landscape and habitat mosaics that are important to landscape structure and diversity, focusing on river, watercourse and wetland landscape features.
- Seeking opportunities to increase and link wetland habitats, including open water, reedbed, fen, wet woodland and wet grassland.
- Seeking opportunities to maintain and increase flood plain grazing marsh, based on its role in storing carbon, ensuring that sites are managed to enhance their biodiversity value.
- Encouraging agricultural practices such as planting winter cover crops, and creating in-field grass areas to prevent run-off, permanent grassland with low inputs, and buffer strips on cultivated land adjacent to watercourses, thus improving the infiltration of rainwater.
- Where feasible, through partnership, seeking opportunities to support habitat enhancement and wildlife opportunities, managing flood risk in relevant areas by creating permanent grassland, wet grassland and wet woodlands, and expanding or creating flood storage areas.
- Seeking opportunities to create woodland to reduce flood flows.
- Seeking opportunities to develop joint strategies in relation to the delivery of the Shoreline Management Plan and Catchment Flood Management Plan, ensuring that flood risk from both the coast and inland waterways is managed effectively, and protecting settlements.
- Responding to rising sea levels, storm events and flooding by promoting coastal adaptation measures and supporting planning policies that avoid development in flood-prone areas.
- On undefended coastlines, allowing natural processes to occur so that sediment can provide natural sea defences. This also creates important habitats such as salt marsh, mud and sand flats.
- Protecting and restoring features of historic interest associated with drainage history, and providing access and interpretation where possible.
- Where new development will generate surface water run-off, ensuring that it incorporates sustainable urban drainage systems. The amount of surface water that enters the combined sewer network should be minimised. Also, seeking opportunities for the retrofitting of sustainable urban drainage systems in locations that generate surface water run-off.

SEO 2: Work with landowners and land managers to protect, enhance and strengthen the network of farmland features in this agricultural plain landscape. Create and expand farmland habitats to enhance biodiversity, improve soil and water quality, strengthen the resilience of habitats to climate change and enhance landscape character.

For example, by:

- Encouraging sustainable food production to contribute to the economy, while protecting and managing high-quality soils.
- Conserving and managing field ponds, and lowland mosses and meres, which are of great landscape, historical and wildlife interest.
- Maintaining distinctive (often historic) brick-built barns, which are a prominent landscape feature.
- Conserving and restoring hedgerows and hedgerow trees – especially in the mosslands – in order to preserve the dominant ancient and post-medieval enclosed landscape.
- Encouraging cultivation practices that will benefit wildlife (such as farmland bird species and pollinating insects) by adopting land management interventions including the incorporation of fallow periods within rotations, overwintering stubbles, uncropped field margins, pollen and nectar strips, and the planting of birdseed mixtures.
- Taking opportunities to reduce habitat fragmentation by creating networks, corridors and stepping stones of semi-natural habitats. This can increase the resilience of species and habitats to climate change, notably by creating more hedgerows on higher ground and pasture land, managing flood plain grazing marsh, and creating buffer strips of permanent grassland alongside watercourses – as well as pollen and nectar strips.
- Working with landowners and farmers to create marginal habitats around designated sites such as reedbed, fen and carr woodland.
- Working with landowners and farmers to solve the problem of surface water flooding and poor drainage of agricultural land.
- Ensuring that all existing woodlands are brought under sound management, and that those with links to ancient woodlands are managed to improve their biodiversity and heritage interest.
- Improving soil and crop management by encouraging the practice of increasing green cover crops (such as grasslands) on cultivated or bare soil and field margins, and adopting appropriate grazing regimes on soils that are vulnerable to compaction.
- Seeking opportunities to extend unimproved species-rich grassland and other riparian habitats around key waterways and designated sites, thereby improving water quality and providing wildlife corridors for water voles and bird species (including wading birds).

SEO 3: Promote the sense of place of the coastal and inland settlements, and protect the remaining rural character of the wider landscape from further loss and change from development pressures. Manage urban fringe development to ensure that it does not negatively impact the rural character of the area, and ensure that all development is of an appropriate type and scale. Provide good green infrastructure links to enhance people's enjoyment of and access to the varied landscapes and valuable recreational assets that the area provides.

For example, by:

- Protecting important views to the coast and along the urban coastline frontage of the Fylde.
- Ensuring that development respects local settlement patterns and uses traditional building materials where possible.
- Incorporating green spaces into new developments, in particular around the urban fringe. Connecting green spaces with semi-natural habitats where possible, providing communities with recreational green space and wildlife corridors.
- Managing development around the urban fringe and within rural settlements to enhance the distinctive character and countryside setting of the rural landscape.
- Encouraging landscaped buffers for any development that impacts on land outside settlement boundaries, in order to limit the effect on the landscape.
- Seeking opportunities to enable both locals and visitors to enjoy access to the coast and its associated recreation opportunities, providing good facilities at coastal resorts and opening up access to the area's geological heritage, eroding coastline and wildlife. The England Coast Path, a brand new National Trail, will – for the first time – allow people the right of access around England's entire open coast. Where appropriate, this will include 'spreading room' along the way, where visitors can rest, relax or admire the view.
- Managing the key approach routes to the main urban centres as gateways, so as not to detract from the resort experience with generic urban expansion.
- Enhancing landscapes associated with major infrastructure developments such as the M6 and M55 corridors.
- Improving drainage arrangements to limit pollution and floodwater retention through tree planting in areas where this can integrate new development or infrastructure.
- Protecting the landscape character of rural areas through the management of developments and activities such as golf courses, motorbike scrambling, caravan parks and equestrian centres.
- Developing initiatives to encourage local communities, particularly in deprived areas, to enjoy their local greenspace, to take action to improve it, and to benefit from the recreation and health benefits that it offers. This might include action to develop wildlife corridors to improve the resilience of species to climate change.
- Incorporating greenspaces into new developments, ensuring a connection between these and semi-natural habitats. This will benefit wildlife while providing communities with recreational outdoor space.

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- Seeking opportunities to engage communities in the expansion of woodland cover in appropriate areas, and increasing public access to existing woodlands.
- Ensuring that significant built developments do not adversely impact the open character of the area. Through grant schemes, seeking opportunities to enhance and conserve traditional farm buildings, and encouraging the use of traditional building materials where appropriate.
- Ensuring that woodland planting schemes and biomass crops are carefully located, with consideration for archaeological potential, the impact on long, open views, and the effect on the functionality of grassland, wetland, woodland, coastal and other ecological networks. Also, ensuring consistency with the Lancashire Woodland Vision strategy.
- Seeking opportunities to work with the farming community by encouraging the creation and maintenance of semi-natural habitats that contribute natural features to the rural landscape. This will help to maintain the high levels of tranquillity found in rural areas associated with farmed landscapes, away from larger settlements.
- Using an understanding of the area's traditional and historic architecture, and its distinct patterns of settlement, to inform the appropriate conservation and use of historic buildings, and to plan for and inspire any environmentally beneficial new development that makes a positive contribution to local character and retains key views.
- Carefully ensuring that light spill is minimised through lighting design in new developments, to minimise the impact on dark skies and on wildlife, particularly bats and birds.

SEO 4: Promote and manage recreational and access opportunities, at the same time as conserving the natural and cultural heritage. Conserve and enhance the historic environment, geodiversity, areas of tranquillity, nature conservation sites, long, open views and landscape character. In recognition of the importance of tourism to the local economy, provide interpretation and educational facilities, which will bring health and wellbeing benefits for both residents and visitors.

For example, by:

- Identifying opportunities to create new permissive routes, especially around larger settlements, linking with existing rights of way within settlements and into the surrounding countryside. Extending coastal access with roll-back provision and by working in partnership with others.
- Seeking opportunities to increase public access to existing woodlands, and identifying new community woodland creation schemes.
- Where appropriate, seeking opportunities to provide surfaced paths for use by all levels of ability, opening up access to the area's many historic, natural and cultural assets.
- Increasing awareness of geodiversity, and of its role in developing the character of the NCA – including both dynamic and static geology.
- Seeking opportunities to restore peatlands, to re-establish their geomorphological function and as a record of palaeo-environmental evidence.
- Restoring the structure and character of designed landscapes, ensuring in particular that landmark woodlands are retained.
- Working with local communities and schools to interpret the area's historic landscape.
- Appropriately managing the historic environment for its contribution to local character and sense of identity, and as a framework for habitat restoration and sustainable development.
- Seeking opportunities to enable both locals and visitors to enjoy access to the coast and its associated recreation opportunities: providing good facilities at coastal resorts and opening up access to the area's geological heritage, eroding coastline and wildlife.
- Managing the demand for recreational facilities, particularly in the coastal resorts on the fringes of Blackpool, including the development of golf courses, static caravan sites and marinas, and the leisure complexes close to the M6 corridor.
- Ensuring that sensitive ecosystems such as sand dunes and salt marshes are not negatively impacted by increased recreation and access. Employing careful design and management of new and existing access routes, and using education boards to publicise the threat to these habitats. This is especially relevant in the confined area of dunes, where trampling is causing erosion that may lead to the degradation of natural grass swards and the destabilisation of the dunes. Natural England's Coastal Access Scheme sets out the methodology for the implementation of the England Coast Path and associated coastal margin – and includes details of how it will ensure that there will be no impact on sensitive features found on and along the coast.

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- Protecting the long, expansive, open views along the coastline (valued for their sense of inspiration and place) from intrusive developments such as car parks and leisure facilities, which can be visually invasive in distinctive landscapes.
- Protecting and managing the area's long, characteristic views – including those over the plain and coastline, and towards the dramatic backdrop of the Forest of Bowland and Lake District – by ensuring that any new development is well designed to be integrated into the landscape.
- Promoting opportunities for access and enjoyment, while managing visitor pressure, in the NCA's country parks such as Beacon Park, Cuerden Valley and Wyre Estuary, and in the urban parks of towns such as Blackpool, Lytham St Anne's and Preston.
- Promoting the valuable recreational opportunities offered by the National Trails and National Cycle Routes (including the Trans Pennine Trail, Preston Guild Wheel, Lancashire Coastal Way, Ribble Way and Wyre Way), together with the Ribble Link, Lancaster Canal, and Leeds and Liverpool Canal. These provide a chance to explore the countryside, coastal and estuary landscapes, and to engage in a range of activities including walking, fishing and boating.
- Developing opportunities for visitors to enjoy the NCA's many historic locations, including Blackpool – the tower, the promenade and the pleasure beach – with its legacy of fine Victorian buildings from its heyday as one of the most prominent coastal resorts in England.
- Developing good-quality interpretation and education about habitats, wildlife, geology and history at key sites, including working with schools and other educational institutions.
- Improving access to the coast for walking and cycling, and also for disabled people, through the sustainable use of old railway lines, tracks and paths, and through encouraging reduced car use. Securing opportunities for the public to enjoy the natural environment through the implementation of the England Coast Path, while ensuring its appropriate protection.
- Ensuring that the promotion of access opportunities educates people about the vulnerability of the NCA's coastal habitats, and encourages low-impact visits. These will avoid any adverse impacts on agricultural management, landscape, habitats and wildlife.