

4. Protecting the Wolds - Theme 1

4.1 Landscape Conservation and Enhancement

As detailed previously, the Wolds Landscape Character Assessment identified four landscape character areas within the AONB and highlighted the important landscape qualities of the Lincolnshire Wolds. Table 1 and Appendix 3 have been collated for this Plan, and together outline the special qualities of the AONB, where possible listing their current extent and condition. These are the principal elements of the natural beauty and landscape character of the Wolds.

The Wolds scenery is subtle and complex, but has a clear identity resulting from physical and human influences over many generations. It has a very open character with extensive outward views both eastwards to the coast and westwards across the Central Lincolnshire Vale. The views within the AONB are equally dramatic and are shaped by the open rolling hills, hidden valleys and continually changing patterns of farming. The ridge-top locations provided by the Bluestone Heath Road, the Caistor High Street and the west-east drovers roads provide some of the area's best known and most frequented viewing points.

Threats/Pressures

There are many threats and pressures that have affected, and are likely to continue to impact upon the fine landscape character of the AONB. These are detailed in Tables 1 and 2, within the State of the AONB Report (Appendix 4) and are also summarised within the corresponding topic sections. The key landscape/character issues include:

- Impact of changing farming practices through any decline or switch in future agri-environment subsidies, especially as a result of Brexit and the current uncertainties in the future markets for UK agricultural and horticultural goods.
- Inappropriate or insensitive development both within and adjacent to the AONB including potential pressures from quarrying activity, wind farms, telecommunication infrastructure and new overhead electrical wires.
- Safeguarding the dramatic escarpment and ridge-top views.
- Meeting the needs of the local community for new economic development and service provision whilst protecting the natural beauty and landscape character.
- Strongly linked to above, the need to maintain the area's special qualities and unique tranquillity whilst supporting/promoting development of appropriate type and scale to help secure access, recreation and tourism benefits.
- Impact upon views within, from and to the AONB, including cumulative impacts from neighbouring developments.
- Assessing future impacts from climate change including effects upon the area's ecosystem goods and services – for example future agriculture, biodiversity, heritage and water assets.

The expansive views make the area particularly sensitive to landscape changes. Escarpment, ridge and plateau-top locations are especially vulnerable to inappropriate land-use or development. Similarly, the peaceful and highly attractive valleys that can be found throughout the Wolds are a key component of landscape character and are sensitive to change.

Sir John Lawton's report 'Making Space for Nature' (2010) remains relevant, and makes the case for 'more, bigger, better and joined' habitats to help ensure ecological recovery for our terrestrial wildlife sites, arguing that we must:

- improve the quality of current wildlife sites by better habitat management;
- increase the size of existing wildlife sites;
- enhance connections between sites, either through physical corridors or through 'stepping stones';
- create new sites;
- reduce the pressure on wildlife by improving the wider environment.

The report highlights that National Parks and AONBs should be exemplars of coherent and resilient ecological networks. The adoption of a landscape-scale approach to land management provides an important mechanism for achieving such delivery, recognising the links between economic, social and natural forces.

The Lawton report recommendations, together with the UK National Ecosystem Assessment (UK NEA, 2011) have helped to inform the Government's Natural Environment White Paper – 'The Natural Choice: securing the value of nature' launched in June 2011. The White Paper recognised the importance of landscapes and local nature partnerships for protecting and improving our natural environment and highlighted the value of working together at a strategic level. The AONB Partnership is well placed to lead on such initiatives in the future to help deliver the multiple benefits (goods and services) received from exemplary land management. In taking forward such a collaborative approach there is clearly a need to understand landowners' interests and requirements and to work closely with the Greater Lincolnshire Nature Partnership (GLNP) and other key partners.

Landscape Management Statement:

The many partners supporting the Lincolnshire Wolds AONB will, through aiding and delivering the objectives, policies and resulting actions in this Management Plan, ensure that the natural beauty and special landscape character of the Wolds are protected and enhanced for the benefit of future generations.

As expressed within the vision; in addition, the Partnership will seek to explore innovative approaches to land management that can help to demonstrate the area's contributions to wider goods and services, including opportunities to explore and further links with natural capital (ecosystem services), health and well-being.

This landscape management statement is an overall statement of intent for all partners and is delivered by the objectives, policies and resulting actions across this Plan.



The Wolds is a vibrant, working landscape

4.2 Natural Heritage – Biodiversity

4.2.1 Introduction – context setting for nature conservation

The value and importance of biodiversity has been recognised nationally through the Biodiversity 2020 Strategy (2011) which sets out ambitious targets for halting the overall loss of England's biodiversity by 2020. The most recent State of Nature Report 2016 highlighted that although there have been some success stories, the general trend in loss of nature continues largely unabated. Defra's 25 Year Plan for the Environment (A Green Future) was launched in January 2018 and reaffirms the importance of embracing landscape scale protection and enhancement to support adaptation to climate change and the delivery of wider ecosystem benefits through the embodiment of a "natural capital" approach.

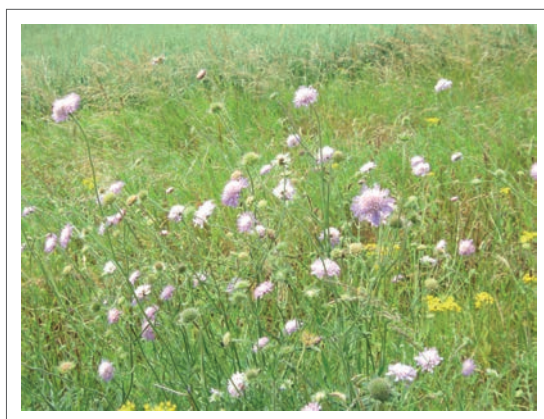
As documented in previous Management Plans, wildlife is a key component of the natural beauty of the Lincolnshire Wolds AONB. The Nature Strategy for Greater Lincolnshire (2015) and the Lincolnshire Wolds National Character Area profile recognise farmland, grassland, roadside verges, woodland, beech clumps, rivers and streams, and hedgerows as important habitat types within the AONB.

The Lincolnshire Wolds State of the AONB report (Appendix 4) provides a number of indicators that will help to monitor the nature conservation and biodiversity interests across the Wolds protected landscape – this includes GLNP collated data for a number of nationally and locally important species (UK BAP, Red List and Lincolnshire BAP Species) and a range of national datasets including those available from the PLMF programme (Section 2.4).

As evidenced, there are a limited number of nationally protected sites in the AONB, with 13 Sites of Special Scientific Interest (SSSIs) designated on account of their wildlife interest. Invariably these sites are located on the steeper valley sides or wetter valley bottoms and typically include important semi-natural grassland or marshland habitat and ancient woodland.

Historically there have been over 300 non-statutory wildlife sites recorded across the AONB. Many were originally listed as Sites of Nature Conservation Importance (SNCIs), but following more recent surveys some 208 of these sites have now been reclassified as Lincolnshire Wildlife Sites (LWSs). Of the remaining 95 original SNCIs, some still require resurveying, whilst some have failed to reach the more robust criteria for successful LWS listing. Additional to the above sites; the AONB has a further nine Lincolnshire Wildlife Trust Reserves and 17 Roadside Nature Reserves.

Clearly looking ahead, the pressures on the wildlife of the Wolds look set to continue, however there has been considerable work in recent years to help increase our knowledge and understanding of the flora and fauna resource. Additional to important agri-environment, forestry and riparian enhancement schemes, a wide range of collaborative projects have been undertaken with local landowners. The Partnership continues to seek to strive towards securing a diverse, abundant and accessible biodiversity resource - not just focusing on the rare and special - but also the wider network of habitats found across a heavily farmed, but nationally protected landscape.



Typical flora of the Wolds SSSI chalk grasslands site

Key issues for the future wildlife management of the Lincolnshire Wolds AONB include:

- Continuing loss of biodiversity exacerbated by small size and isolation of priority wildlife habitats.
- Wide neglect and absence of traditional management especially of woodland, hedgerow, grassland and grass verge habitats.
- Lack of comprehensive up-to-date information, especially for remaining SNCIs that were not surveyed in 2005.
- Future trends in farming, including continued threat to livestock husbandry and subsequent loss in pasture, increasing pressure for intensification and new crops, and the ongoing uncertainties to future markets and subsidies through the Brexit negotiations.
- Need to develop 'good practice' land management in the wider countryside, including development of local case studies to assist landowners in protecting and enhancing wildlife.
- Conflicts between sites for new woodland planting and increasingly energy crops versus the retention of grassland/wetland habitats.
- Inappropriate or insensitive developments especially farmstead and barn conversions which may impact upon protected species such as bats, barn owls, swifts, swallows and house martins.
- Water resource issues including threat of diffuse pollution, sedimentation and low flow rates.
- Wider issues including global warming and the ongoing and future threats to biosecurity from invasive species. Common concerns include the spread of Himalayan balsam, signal crayfish, mink, ragwort and other exotics. Increasing pressures from badger and deer populations is an issue for some landowners.
- Pressing need for a new land management system post-Brexit that can support an ecosystems services approach and encourage and support innovation through local ownership and governance.

Objective:

BO To protect, enhance and where appropriate, restore the biodiversity of the Lincolnshire Wolds AONB, aiding the development and relevant delivery of the Lincolnshire Nature Strategy, Biodiversity 2020, Natural England's Conservation 21 Strategy and emerging UK environmental plans (post-Brexit) including A Green Future.

Policies:

- BP1** To survey and monitor key habitats and species within the AONB in-line with Lincolnshire, national and international aspirations for biodiversity.
- BP2** To develop and promote a landscape-scale approach to habitat conservation, restoration and creation, helping habitats and species to develop resilience to future climate change through increasing habitat linkages and providing for enhanced ecosystem service networks.
- BP3** To support and encourage agricultural guidance and good practices that protect, enhance and restore wildlife habitats across the AONB, helping to minimise the need for regulatory enforcement.
- BP4** Utilising the concept of natural capital to develop and promote general awareness and appreciation of the wildlife of the AONB and maximise the benefits of wider socio-economic gains including utilising wider links to the local nature tourism offer.

Actions: See BA1-6 in Table 3

Key Related Plans and Strategies (Landscape and Biodiversity)

Agriculture Bill (2018)
Anglian River Basin District Flood Risk Management Plan (2015)
Anglian Water Resources Management Plan (2015)
Anglian Water Asset Management Plan (2015-20)
Biodiversity Strategy (2011)
Biodiversity 2020: A Strategy for England's wildlife and ecosystem services
Conservation 21 – Natural England's Conservation Strategy for the 21st Century (2017)
Countryside Stewardship Statement of Priorities – Lincolnshire Wolds (NCA043)
Creating a Great Place for Living; Defra's Strategy to 2020 (2016)
Defra 25 Year Plan – A Green Future: Our 25 Year Plan to improve the Environment (2018)
Forestry and Woodland Policy Statement (2013)
Future Water (2008) Defra
Greater Lincolnshire Local Economic Partnership (GLLEP) Water for Growth - Water Management Plan 2015-2040
Greater Lincolnshire Nature Strategy 2015-20 (2015)
Humber River Basin District Flood Risk Management Plan (2015)
Landscapes for Everyone; Creating a Better Future (Consortium Publication, 2016)
Lincolnshire Chalk Streams Strategic Action Plan (2014-19)
Lincolnshire County Council Natural Environment Strategy 2012-2018 (2012)
Lincolnshire Minerals and Waste Local Plan (2016)
Lincolnshire Wolds National Character Area 43
Local Development Frameworks and Core Strategies (see Developing in the Wolds)
Local Development Plans – Saved Policies
Local Wildlife Sites: Guidelines for the Identification and Selection in the Historic County of Lincolnshire
3rd Edition (2013)
Making Space for Nature: A Review of England's Wildlife Sites and Ecological Network (2010 The Lawton Report)
Making Space for Water (2005): HA6 Catchment Scale Land-Use Management & HA7 Land
Management Practices
Natural Environment White Paper (2011)
National Planning Policy Framework (2018)
National Pollinator Strategy (2014)
National Trust - Land, Outdoors and Nature Strategy (2017)
Planning for Ancient Woodland: Planners' Manual for Ancient Woodland and Veteran Tree (2017)
State of Nature UK Report (Consortium Publication, 2016)
Steeping, Great Eau and Long Eau Catchment Abstraction Management Strategy (2008)
The Anglian and The Humber River Basin Management Plan (2015)
The European Landscape Convention (ratified by the UK in 2006)
The European Water Framework Directive (2000)
The Geodiversity Strategy for Greater Lincolnshire (2017)
The Grimsby, Ancholme and Louth Catchment Abstraction Management Strategy (2009)
The Grimsby and Ancholme Catchment Flood Management Plan (2009)
The Natural Choice: Securing the Value of Nature (2011)
The Nature Strategy for Greater Lincolnshire (revised 2015)
The Water Environment (England & Wales) Regulations (2003)
The Witham and Louth Coastal Catchment Flood Management Plans (2009)
The Witham Catchment Abstraction Management Strategy (2004)
Think Big: Ecological Recovery – National Association for AONBs joint partnership statement
Vision for Nature; Young People's Vision for the Natural World in 2050 (2016)
Water Resources Strategy for the Anglian Region (2009)
Water Resources Management Plan (Anglian Water, 2010)
Water White Paper; Water for Life (2011)
Woodland for Water: woodland measures for meeting WFD objectives (2011)

4.2.2 Meadow, Pasture and Wet Grassland

Although much of the Wolds has long been under the plough, grassland habitats remain a very important landscape, wildlife and farming resource. The majority of the Wolds' grasslands and rough pastures are found on the steeper slopes (where soils are thin and the ground hard to cultivate), in the valley bottoms as lush pastures and wet flushes, and in disused quarries and chalk pits.

Unfortunately unimproved grassland has been very scarce in the AONB with less than 1.5% coverage. Much of this semi-natural grassland remains isolated and fragmented in habitat terms, although invariably protected through a range of designations, with added management support from agri-environment measures. The agricultural census figures for 2013 revealed total grassland coverage of just over 8,000 hectares (14.5% of the AONB); this includes permanent and temporary grassland and rough grazing. In more recent years some landowners have taken up the option of reversion to unfertilised and low inputs grassland, often for added benefits including heritage protection, reducing runoff and minimising soil erosion.

Grassland is important in both landscape and biodiversity terms, with species rich swards often supporting a wide range of insects, pollinators and bird species. There has been a drive to improve management of the Wold's grassland for nature conservation, primarily by encouraging and supporting low-input fertiliser and balancing the grazing or hay and silage cutting regimes to aid self-pollination and maximise species diversity. The challenges look set to continue, not least the uncertainties from Brexit that may impact (positively and negatively) upon the livestock industry. There is clearly a need for continued collaboration, supporting grazier networks at both local and strategic levels to help maintain and enhance the grassland resource.

Key issues for the future grassland management include:

- Loss of local livestock and the infrastructure and expertise to support a thriving local livestock industry.
- Resulting loss of traditional grazing management and threat to unimproved pastures, especially a decline in biodiversity from the encroachment of invasive species (e.g. ragwort, competitive grasses and scrub).
- Continued pressures of intensive farming practices, including a more recent shift to the take-up of poultry farming.
- Potential conflict with other habitat types, e.g. new woodland planting schemes.
- The need for identifying and encouraging appropriate grassland restoration.
- Increase in energy crop planting at the expense of wet grassland and grazing marsh.
- Potentially, more limited uptake of Mid and Higher Tier Countryside Stewardship scheme options in the future.
- Development and effective implementation of new land management policy post-Brexit.
- A need to maximise opportunities for wildlife and public services – multifunctional land for flood risk management, climate change resilience, and biodiversity gains within a productive food environment.

Objective:

- GO To increase the extent and quality of wildlife-friendly grasslands across the AONB, targeting areas close to Local Wildlife Sites, watercourses, important road verges, archaeological sites, historic parkland and settlements.

Policies:

- GP1 To help maintain, enhance and where appropriate, restore, extend or connect grasslands of high wildlife, historic and landscape value.
- GP2 To raise community awareness of the rich natural and cultural heritage of the Wolds' grassland. (See also Section 6.2 Interpretation)
- GP3 To support initiatives to encourage grazing of less productive grasslands, including calcareous grassland.
- GP4 To promote to land managers the additional benefits of good grassland management including carbon sink, climate change and flood alleviation impacts.

Actions: See GA1-7 in Table 3



Grassland is a key component across the Wolds landscape

4.2.3 Grass Verges and Green Lanes

A further important grassland resource is provided by the road verge and green lane network that characterises the Wolds, many of which are on historic routeways including Roman roads and the traditional salters tracks and drovers routes. On account of their history of development, a number of the verges are very distinctive in landscape terms, often with a straight roadway dividing broad verges and adjacent hedgerows.

A significant number of verges and green lanes are botanically rich, proving important refuges for grasses, sedges and flowering plants such as yarrow and devil's bit scabious. A large number serve as important links between otherwise fragmented habitats including grassland, churchyards, veteran trees, small copses and more substantial woodlands. Our green lanes and verges can also be very advantageous in terms of the two-way buffering from both field and road runoff, helping to minimise siltation and potentially the pollution of neighbouring water courses.

There are currently 17 Roadside Nature Reserves in the AONB, comprising over 16 kilometres of verge habitat. The Life on the Verge partnership project has done much to raise the profile of this resource; work included delivering training for volunteers who then went on to help in the extensive surveying of the verge network. Information subsequently compiled on-line contributed to the review and classification of 55 roadside verges/green lanes as Local Wildlife Sites (LWS).

More recently partnership efforts have focused on working closely with Highways, Lincolnshire Wildlife Trust and other interest groups to secure good practice from a management perspective. This has comprised guidance on the appropriate levels of cutting, ideally lifting the arisings to avoid the ongoing build-up of nutrients. There is however often a balance to be struck, e.g. in terms of health and safety requirements to ensure both adequate visual splays and sight lines, and undertake salting during winter conditions, all of which can also impact detrimentally upon the neighbouring plant communities. A trial has been conducted (LCC - Peakhill Associates) from a study site buffering the Wolds to explore the potential for using verge cuttings to provide material for a local anaerobic digestion (AD) plant, generating both electricity and biogas. There is an opportunity to review further opportunities, especially in the context of Highway Authorities seeking financial savings from their future verge cutting programmes.

Threats/Pressures

Key issues for grass verge management include:

- Loss of traditional grazing and hay-cutting practises with a trend toward inappropriate mechanical cutting (over-cutting or poor timing), although often in response to road safety or amenity pressures.
- General neglect and/or poor management including inappropriate tree planting, scrub encroachment and introductions of other non-native plants, especially garden bulbs.
- Road run-off, particularly salt wash, resulting in long term damage to neighbouring plant communities.
- Illegal uses including litter and fly-tipping direct onto the verges and vehicle encroachments.
- Highway authorities' reductions in budgets for verge management – both an opportunity and a threat.

Objective:

VLO To retain, restore and encourage, positive management of the distinctive grass verges along the AONB's roadsides and green lanes. (See also Section 5.1 Farming in the Wolds)

Policies:

VLP1 To help maintain, enhance and where appropriate restore, extend or connect, grass verges for their wildlife and landscape value.

VLP2 To raise awareness and local engagement in the natural and cultural heritage of grass verges and their contribution to green infrastructure and climate change adaptation.

Actions: See VLA1-7 in Table 3



Local engagement with volunteers



Diverse range of grassland verges can be found within the Wolds

4.2.4 Woodlands, Beech Clumps and Traditional Orchards

The woodland cover of the Wolds AONB is low, at just over 3,000 hectares (less than 5%), but remains an essential habitat and landscape component. Much of the original woodland cover was cleared by the 11th century to make way for the grazing and mixed arable landscapes of the early middle-ages. However significant replanting occurred during the parliamentary enclosures from the late 18th and early 19th centuries – often for game shoots, landscaping in the vicinity of country halls and manors, and the provision of shelter belts.

The remaining native deciduous woods (just over 600 hectares) typically still provide the most diverse ecosystems, especially those with aged veteran trees, wet springs, and open glades and rides. Woodlands in particular are an important resource for wider goods and services and natural capital. They commonly provide a source of timber (soft and hard woods), shelter, and with careful management and planning, climate change resilience benefits (e.g. buffering from storm events and minimising rapid runoff problems such as soil erosion and subsequent stream sedimentation).

Defra's new 25 Year Environment Plan (A Green Future) also recognises that ancient woodland and veteran trees are of significant heritage value and irreplaceable character and seeks to work with partners to help support their future sustainable management. As documented in previous Management Plans, our local woods can be a real asset to the local community in offering wider socio-economic benefits through forestry employment, field sports and game management, as well as many opportunities for wider public engagement through access, education, recreation and tourism.

The Forestry Commission has highlighted that future woodland and estate plans must recognise that small blocks of woodland are invariably less economic to manage and have less resilience in the face of climate change. They are advocating that the extension of woodlands, carried out sensitively and in the right places, should be promoted. They have proposed that in some locations it may be recommended that up to 20% of "honorary-natives" and 20% of "non-native" stock be incorporated within new woodland planting schemes.

There is a small but important orchard resource in the Wolds, many located within the grounds, or in close proximity to country manors and halls. Previous studies have highlighted a potential of 48 traditional orchards in the AONB (People's Trust for Endangered Species, 2009) and surveys have been initiated to further assess our orchard resource. Many are now relics, where active management and pruning has ceased, however those remaining often harbour local/rare varieties of fruit trees and provide further opportunities for biodiversity (often including lichen and specialist insects and pollinators) and wider cultural gains.

Threats/Pressures

Key issues for future woodland management include:

- Lack of current data on the woodlands/copses (especially those under 0.5 hectares).
- General neglect and lack of woodland management with many of the smaller plantations, typically the overly mature 'beech clumps', with few trees of an age to replace them - although the situation is now improving with more recent planting.
- Often general isolation of small and ancient/semi-natural woodland.
- Inappropriate planting schemes including species mix and locations.
- Illegal fly-tipping in some areas.
- Climate change and impacts upon the future viability of some native species potentially resulting from both more extreme/unpredictable weather patterns, and new pests and diseases.
- A need to raise awareness of the need for felling licences and hedgerow removal notices, where appropriate.
- The need to review woodland management and planting in the light of Chalara and Acute Oak Decline.
- An increasing and expanding deer population.

Shared Priorities Statement:

Through the Joint Accord, the Lincolnshire Wolds AONB and the Forestry Commission (FC) East Midlands Region will continue to work together to enhance the contribution that trees and woodlands can make within this special landscape. The Government Forestry Policy Statement and the revised Management Plan for the AONB support the creation and sustainable management of woodland within the Lincolnshire Wolds. Most of the woodland within the area is in private ownership, and working closely with landowners will continue to be a key driver for success. As evidenced within the AONB Partnership's Annual Reviews, positive partnership activity has increased significantly since the signing of this accord.

Objective:

WBO To protect, enhance and where appropriate extend, the woodland and tree cover within the AONB, maximising their contribution to the AONB by integrating landscape, biodiversity and socio-economic benefits.

Policies:

WBP1 To reinforce the existing pattern of woodland, seeking to increase the area of native broadleaved woodland (including wet woodland), accepting some non-native planting for climate change adaptability.

WBP2 To re-establish complementary habitats adjacent to woodlands. (See also Sections 4.2.2 Meadow, Pasture and Wet Grassland and 4.2.5 Hedgerows and Landmark Trees)

WBP3 To record the extent and location of small ancient woodlands as part of an integrated digital resource database for the Lincolnshire Wolds woodlands.

WBP4 To encourage and support woodland business schemes, of an appropriate scale, within the AONB.

WBP5 To establish the extent and quality of traditional orchards and encourage suitable restoration, creation and management.

Actions: See WBA1-8 in Table 3



Active and appropriate woodland management is needed



Orchards provide key habitats and cultural connections

4.2.5 Hedgerows and Landmark Trees

The oldest hedgerows found in the Wolds are often markers of parish boundaries, or those located near to existing or deserted/shrunken settlements. As evidenced in previous Management Plans, a large proportion of the hedgerows found in the Lincolnshire Wolds today were actually planted in the 18th and 19th centuries in response to the national Enclosure Acts. Previously existing open fields, commons and rabbit warrens were subsequently parcelled into more regimented field systems. Many hedges were planted in uniform lines, adjacent to new roadways and wide verges with hawthorn the dominant species. Very often natural contours were ignored and the resulting patterns of hedgerows contrast markedly with the previous older, narrow and winding hedges that were species-rich, albeit with minimal verges.

Like much of lowland UK a significant number of hedgerows have been lost during the second half of the 20th century. It has for example been estimated that between the 1970's and 1990's an average of over 1,000 metres of hedgerow were lost for every square kilometre of farmland due to agricultural intensification and the government grants of the day. However there has been a realisation of the importance of hedgerows both in their own right for biodiversity (providing shelter, nesting and foraging opportunities for a wide range of wildlife), but also their wider role as landscape and ecosystem corridors often linking fragmented habitats and helping to provide livestock and soil protection.

The hedgerow resource found across the Lincolnshire Wolds provides an important refuge for many of the area's mature and veteran trees. The AONB Partnership's Trees of Our Time project enabled community groups to review and highlight individual trees, or groups of trees, that were prominent for wildlife and landscape reasons, or had a wider cultural significance. The pressure on our veteran trees look set to continue, not least with the new threats from climate change and spread of new pests and diseases. Post-Brexit modifications to agri-environment schemes could also bring significant changes in terms of the future support for boundary and field edge enhancements.

Threats/Pressures

Key issues for future woodland management include:

- Lack of collated hedgerows surveys and limited information on landmark trees.
- Previously loss of traditional management techniques, for example hedgelaying and rotational cutting, although situation has been improving via assistance from agri-environment schemes.
- Previously poor maintenance, particularly inappropriate timing and over frequency of cuts, however situation also improving via assistance from agri-environment schemes.
- The pressure on landowners to remove roadside trees on health and safety grounds.
- Balancing tree planting and maintenance needs with heritage and geodiversity protection.
- Resilience tree felling by powerline maintenance companies.
- Tree health issues such as Chalara and Acute Oak Decline.
- Potential loss of cross compliance options linked to CAP Pillar 1 payments which currently helps to protect hedgerow/ditch boundaries.

Objective:

HTO To protect, manage, enhance and where appropriate increase, the hedgerows and landmark trees in the AONB.

Policies:

HTP1 To help record, maintain, and where appropriate restore all species rich and ancient hedgerows, encouraging planting and management of hedgerows and trees to benefit landscape and habitat connectivity. (See also Section 4.2.4 Woodlands, Beech Clumps and Traditional Orchards)

HTP2 To raise awareness of the importance of hedgerows and landmark trees for wildlife, landscape and cultural values and encourage future community engagement.

Actions: See HTA1-5 in Table 3



Landmark tree in parkland setting



New hedgerows reinforce habitat connectivity

4.2.6 Rivers, Streams and Ponds

There are nine principal river systems within the AONB, which north to south comprise Nettleton Beck, Waithe Beck, River Rase, River Bain, River Lud (Louth Canal), Great Eau and Long Eau, River Waring and the River Lymn. These catchments are predominantly fed through the chalk aquifer and understandably chalk stream characteristics dominate; however due to the complex geology, which includes the Spilsby Sandstone aquifer in the southern Wolds, some of the streams are classed as 'mixed geology' chalk streams. Mapping records a total stream network of 258 kilometres within the AONB, both as main-river and smaller tributaries, often fed by fluctuating spring-heads and occasional swallow holes.

The Lincolnshire Chalk Streams Project (LCSP) was established in 2004 and through committed partnership support continues to work closely with farmers, land managers, statutory bodies and residents of the Wolds to help support and enhance the quality of the chalk streams. Work has also focussed on raising awareness and interest in the special qualities of this unique resource, both through volunteering, surveying and an educational programme with local schools and colleges.

The LCSP has developed and kept under close review the partnership's Lincolnshire Chalk Streams Strategic Action Plan and has sought to develop innovative catchment-wide approaches to the challenges and opportunities facing both water quality and supply – including balancing nature conservation, farming, industry and domestic household requirements. The project is ongoing and has helped to deliver over 26 kilometres of riparian habitat enhancements, securing over 45 kilometres of adjacent habitat restoration. In addition to improving water quality and species conservation there have been wider benefits to the local communities, including reducing flood risk and enhancing the opportunities for leisure and tourism (e.g. improving the quality of the visitors experience, enhancing local fishing syndicates etc).

Currently over 76% of main river in the AONB is deemed to be in moderate to good ecological condition. Partners continue to be committed to working with landowners and communities to explore further opportunities for developing and maximising environmental enhancements alongside natural flood risk mitigation – helping for example to support and complement "hard-engineered" solutions such as the Louth Flood Alleviation Scheme on the River Lud. There may be further opportunities for integrated water management solutions with the potential increase in on-farm reservoir schemes as we take action to be more climate change resilient (e.g. likelihood of variable water supplies throughout the year including more extreme weather events) and also utilising the principals of SUDs (Sustainable Urban Drainage), as per the National Planning Policy Framework guidance for securing sustainable water resources - meeting the many water demands whilst safeguarding the environment throughout our river catchments.

Threats/Pressures

Current issues include:

- Low water table and flow rates primarily through abstraction, but also anticipated future variability in rainfall through climate change.
- Diffuse pollution - arable runoff of nitrate, phosphates, organic effluent and silts.
- Loss of riverside and other marginal habitats through intensive farming practices and development.
- Increasing water demands from agriculture, industrial/commercial and residential usage.
- Flooding and prevention measures including flood alleviation schemes, and active bank maintenance.
- Non-native and invasive species especially influx of signal crayfish, mink, farmed fish and Himalayan balsam.
- Loss of small and fragile wetland habitats (spring feeds and ponds) through insensitive development and/or undesirable management practices.
- Rising water temperatures in the absence of some bankside tree cover.
- Potential loss of cross compliance linked to CAP Pillar 1 payments.
- Diffuse runoff or point source discharges of pesticides - including neonicotinoids.

Objective:

RSPO To improve, where appropriate, the function and natural environment of the river and stream catchments and their associated landscape character and wetland habitats.

Policies:

RSPP1 To maximise the extent of low-input land management adjacent to all rivers and streams and utilise floodplains to minimise impact of flooding in residential areas. (See also Section 4.2.7 Arable Farmland)

RSPP2 To rehabilitate streams and rivers to enhance their biodiversity and ecological status where appropriate and consistent with flood defence requirements and Water Framework Directive (WFD) targets.

RSPP3 To raise community awareness and where possible, community involvement, of the rich diversity of water habitats within the Wolds and how their actions impact upon this resource. (See also Section 5.2 Thriving Communities)

RSPP4 To continue to further our understanding of the springs and pond resource found across the Wolds.

RSPP5 To encourage the enhancement of existing ponds and other wetland habitats for biodiversity, landscape and wider socio-economic gains.

RSPP6 To influence any future water storage schemes to encourage multiple benefits for biodiversity, landscape, flood prevention and wider ecosystem goods and services.

RSPP7 To seek to maintain groundwater levels and their seasonal fluctuations wherever possible to safeguard rivers, streams, springs and ponds sufficient to retain characteristic wildlife communities.

Actions: See RSPA1-18 in Table 3



The Great Eau chalk stream



Volunteer undertaking stream work

4.2.7 Arable farmland

Unlike many of the chalk downland landscapes of southern England, much of the Lincolnshire Wolds sheep-walks, common land and warrens were extensively cultivated in the early 1800's, a pattern which continued apace with the Victorian High Farming Period which witnessed significant investment and the development of highly organised mixed rotational farming.

The generally high quality and permeable soils found across the Wolds, including for example loamy deposits from glacial tills, together with the area's generally drier climate (in comparison with western Britain) has favoured the ongoing intensification of arable cropping. The 1960's and 1970's saw some of the most dramatic changes to the tilling practices; and aided by mechanisation large fields took hold, the labour force shrank and many small farms and farmsteads were amalgamated.

Today, modern and commercial farming dominates much of the Wolds, invariably with a focus on a small handful of crops. Spray interventions, in the form of nutrient, pesticide and herbicide applications, together with the introduction of autumn sowing, has had a significant impact on the wildlife associated with the farmed landscape. There is increasing concern over the use of neonicotinoid pesticides and potential harmful impacts upon bees and other pollinators – the Plan seeks to support approaches to minimise pesticide and fertiliser applications. The once common cornfield weeds, including poppies, yellow charlock (ketlocks), thistles and docks were driven from the fields under the relentless drive for increased yields. A similar trend has been evidenced in the decline of many of our once common farmland birds including species such as lapwing, native partridge, tree sparrow, turtle dove and yellow hammer. However some opportunistic birds have fared better and increased in number, including for example goldfinch, stock dove, wood pigeon and rook. It is also recognised that in more recent years a number of farmers and land managers across the Wolds have utilised a range of agri-environment schemes, local grants and voluntary measures to help protect and enhance the plant, bird and wider biodiversity across their holdings.

The future for domestic agriculture is uncertain, with current methods for farm support and cross compliance measures likely to change following de-coupling from the European payment support systems under Pillar 1 and Pillar 2 (Common Agriculture Policy – Rural Payments) and the move to more open market forces. Stakeholders are recommending that the Plan seeks to secure sustainable farming across the Wolds; in the context of arable cropping that means a type and level of cultivation that can secure a profit for the landowner/farmer, improving farm efficiencies to secure high quality food and produce, whilst also delivering on a wide range of public benefits (natural capital) including innovative projects to enhance arable wildlife, explore and develop integrated pest management and minimise inputs. This accords with the Government's Agriculture Bill (2018) which introduces a new Environmental Land Management System and supports farmers and land managers in a shift to securing increased productivity whilst delivering on wider "public goods".

Threats/Pressures

- Increasing pressure for intensification to maintain economies of scale in production.
- Continuing applications of pesticides, herbicides and fertilisers reducing opportunities for arable wildlife, however ongoing innovations and integrated pest management can aid good practice to help to minimise undesirable impacts and maximise economic returns.
- Changing influences (positive and negative) on biodiversity through emerging field crops e.g. flax, borage, sunflowers, and energy crops such as maize and miscanthus.
- Brexit and changes to domestic land management policies (including potentially no cross compliance) and increasing market pressures including the increasing influence of wider global forces.

Objective:

AFO To improve the abundance and diversity of characteristic farmland wildlife within the commercially farmed landscape. (See also Section 5.1 Farming and Field Sports in the Wolds)

Policies:

AFP1 To encourage maximum take-up of agri-environment scheme options that provide enhanced conditions for arable farmland wildlife.

AFP2 To improve awareness of commercial farming's 'good practices' that can bring additional wildlife and landscape benefits, including greater use of Integrated Pest Management (IPM) and low-input systems.

AFP3 To encourage surveys to improve information on distinctive arable wildlife (e.g. native herbs and grasses, pollinators and farmland birds), helping to provide a wider evidence base to inform future land management for the area.

Actions: See AFA1-5 in Table 3



Pollinators are a key component for future farming



Well-managed margins for arable wildlife

4.3 Earth Heritage

4.3.1 Geodiversity

The Lincolnshire Wolds has a complex geology and geomorphology that has been extensively modified by a number of ice advances. Chalk from the Cretaceous period (140 million - 75 million years ago) forms the dominant bedrock for the area and is part of the strata that extends from the Chilterns north to the Yorkshire Wolds. However the chalk is typically less than 50 metres thick in places with glacial tills and gravels overlaying much of the area. The bedding planes of the Wolds dip gently eastwards, thus periodically exposing older rocks from the Lower Cretaceous (Carstone, Sutterby Marl, Roach, Upper Tealby Clay, Tealby Limestone, Lower Tealby Clay, Claxby Ironstones and Spilsby Sandstones). These deposits of sands, clays and ironstones are commonly revealed on the western facing scarp slopes and within the numerous river valley systems that cut through the Wolds. The picture is further complicated by the increasing dominance of the sandstone beds as you move southwards from the Bluestone Heath escarpment.

As indicated, the Wold's topography has been greatly modified by glacial and periglacial activity and this is one of the outstanding qualities of the area. No other upland chalk landscape in Britain has undergone such a dramatic modification on account of an extensive series of glaciations. Ancient coastal cliffs, glacial spillways, ponded-lake systems, dry valley combes cut by meltwaters, and complex glacial deposits (tills and gravels) are in abundance. One of the overriding legacies of the ice-age is the areas highly distinctive rolling plateau and incised steep valleys which are most evident in the Chalk Wolds character area.

The AONB currently has 15 registered Local Geological Sites (LGS's) with six sites still recognised as Regionally Important Geological Sites (RIGS) and awaiting further review. There are a further six Sites of Special Scientific Interest (SSSIs) on account of providing nationally important striking and memorable geological and/or geomorphological features. Four of these sites are disused quarries and two of the sites are cuttings. Many of the LGS exposures occur within redundant pits and quarries, typically where stone or chalk was extracted for local building stone, road aggregates or as a local source of lime.

There is an ongoing role for the Lincolnshire Geodiversity Group, as part of the Greater Lincolnshire Nature Partnership (GLNP), to work closely with landowners to raise awareness and interest in the geological and geomorphological features of the Wolds. No new sites have been put forward for future stone quarrying under the current Mineral Plan, so only land with historic or existing permissions will be potentially used for the purposes of future extraction. However there are alternative uses for quarry pits including recycling, road aggregate, and highway storage that clearly need careful consideration through the formal planning system. As well as retaining important bedrock exposures for the purposes of research and education there is also a balance to be struck in terms of wider reclamation interests - in some cases there may well be pressures to provide a re-supply of land for future farming, recreation or wider landscape and environmental gains. The most advantageous enhancement schemes are invariably those that have undergone careful collaborative planning and can offer multiple future benefits whilst safeguarding the intrinsic geological/geomorphological interests of the Wolds.

Threats/Pressures

Key issues for managing the Wolds' geodiversity include:

- Threats to geological sites from disuse, neglect or fly-tipping.
- Continued quarrying/mineral extraction and secondary development pressures (e.g. landfill, recycling of aggregates etc.).
- Possible threat to important localities from fossil collecting.
- Restricted or poor access to many of the RIGS/LGS sites.
- General lack of awareness and understanding.
- Unauthorised use for recreation (e.g. from quad bikes, motorcycles and other vehicles).
- Ongoing management of geodiversity sites to maintain their interest/condition.

Objectives:

GDO To protect and enhance the geological and geomorphological features of the AONB for enjoyment, education and research.

Policies:

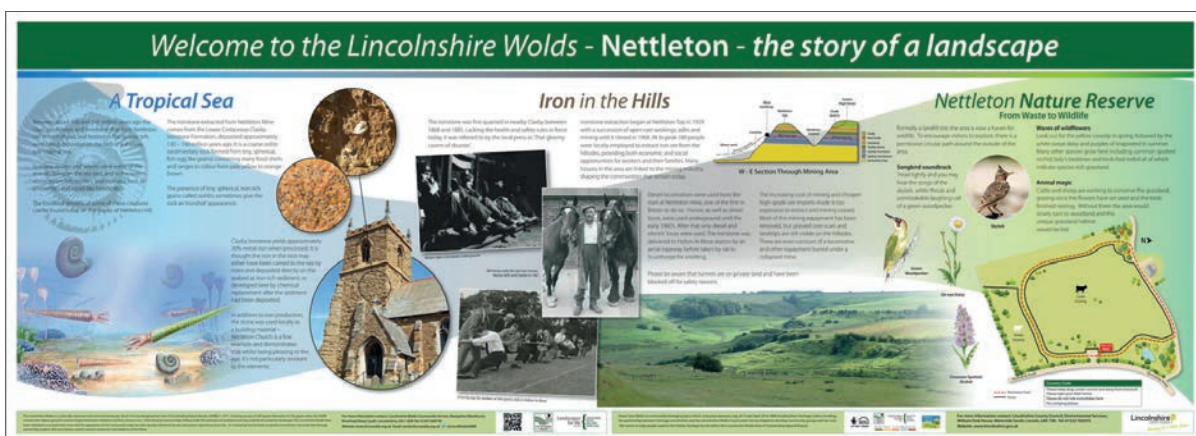
GDP1 To work with partners and landowners to safeguard and improve the intrinsic interest of geological and geomorphological sites, including improved access. (See also Section 6.3 Access, Recreation and Tourism)

GDP2 To maintain and enhance awareness and understanding of the geological and geomorphological interest through general and site specific interpretation. (See also Section 6.2 Interpretation)

Actions: See GDA1-6 in Table 3



Red Chalk exposure



Interpretation panel highlighting the links between geology, industry and wildlife

4.3.2 Soils

Soil can often be overlooked, however it is clearly a vital resource, not only providing the essential substrate for our farming industry (arable, livestock, dairy and horticulture) but also serving as the base medium for our many and varied ecosystems including woodland, grassland, hedgerows, verges, parkland and gardens. Soils play an essential role in terms of capturing and protecting our water resources and also in their ability to buffer and protect the wider environment from extreme climatic events and unfortunate pollution incidents. Soil properties are dynamic, responding to a wide array of chemical, physical and biological processes as well as local conditions such as land-use, the type and extent of vegetation cover, topography and the prevailing weather conditions.

In response to the complex geology and topography of the Lincolnshire Wolds it is no surprise that some 25 individual soil types have been identified across the AONB (Cranfield University, Soil Report 2009). Light chalky soils of varying colour and texture extend over much of the central and northern plateau tops and often provide well drained high grade agricultural land. By contrast, many of the valley bottoms in the Wolds comprise pockets of heavier and often impermeable clay soils where wet pastures, marshland and woodland carrs dominate the landscape. Similar waterlogged soils are extensive in the south-east claylands where glacial tills and moraine deposits are widespread. In turn more extensive glacial till has been deposited west of Belchford in the Bain valley. Further variety of soils is provided by Spilsby Sandstone which give rise to the more sandy substrates commonly found in a narrow westerly band and within the wider Lymn valley.

The partnership recognises the essential contribution of the Wolds soil resource to the farming sector but also its importance in safeguarding wider environmental goods and services (natural capital). There is clearly scope to explore and develop our understanding of soil management. This should include identifying and supporting good practice that can help ensure soil protection; minimising erosion and sedimentation and retaining, where needed, nutrients and organic matter (there are some circumstances where thin soils or an absence of soil is beneficial, for example geological/geomorphological exposures and plant communities that favour shallow/low fertility substrates). Such actions will help to secure sustainable and efficient levels of farming whilst aiding the wider protection of ecosystems and heritage assets, and assisting in the future availability of fresh clean water within our aquifers, streams and rivers.

Threats/Pressures

Key issues for managing the Wolds' soils include:

- Erosion from wind and water run-off.
- Appropriate land management practices to prevent the risk of erosion and subsequent diffuse pollution.
- Maintaining good soil structure and nutrient content.
- The reinstatement of grassland or use of winter cover crops or stubble to conserve the resource.
- Potential impact from uncertainties and changes relating to Brexit, global market forces and climate change.
- Potential increased risks to soil structure and water run-off (diffuse pollution) through new cropping patterns, for example, depending on location and topography, increasing maize production for anaerobic digestion.

Objectives:

SO To protect and enhance the soil resource for water protection, flood management, agricultural management, biodiversity and carbon storage.

Policies:

SP1 To work with partners and landowners to safeguard and improve the soil resource, anticipating future pressures from climate change.

SP2 To increase awareness and understanding amongst landowners, land managers and other practitioners, of the different soil types and their relationship to the wider landscape and other environmental and socio-economic issues and services.

Actions: See SPA1-4 in Table 3

Key Related Plans & Strategies (Geodiversity & Soils)

Defra 25 Year Plan – A Green Future: Our 25 Year Plan to improve the Environment (2018)

Earth Heritage Conservation in England: A Natural Areas Perspective (1996)

Lincolnshire Minerals and Waste Local Plan (2016)

Geodiversity Charter for England 2014

Lincolnshire Wolds Natural Area Profile (1997)

Local Development Frameworks and Core Strategies (see Developing in the Wolds)

Local Development Plans – Saved Policies

National Planning Policy Framework (2018)

Natural Foundations: Geodiversity for People, Places and Nature (2006)

RIGS Handbook - UK RIGS (1999 onwards)

UK Geodiversity Action Plan (UKGAP) - A Framework for Action (2009)

Local Geological Sites: Guidelines for their Identification & Selection in the Historic County of Lincolnshire (2009)

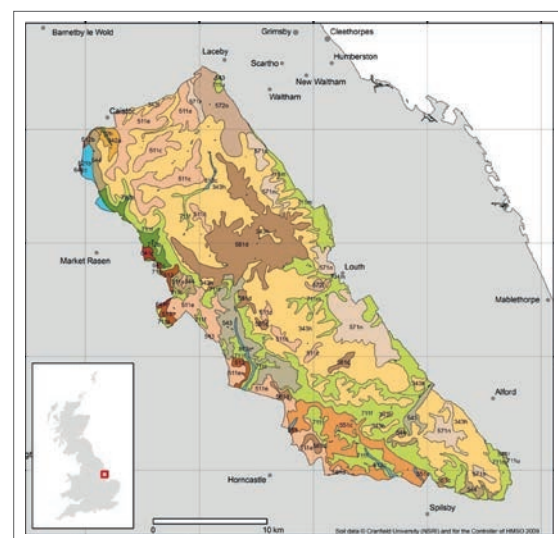
Safeguarding our Soils: A Strategy for England (2011)

Soils Report for Lincolnshire Wolds AONB (2009)

The Geodiversity Strategy for Greater Lincolnshire (2017)



Complex and varying soil types - lighter soils drying out quickly



Soil Map of the AONB

4.4 Cultural Heritage - Historic Landscapes

A key component of the Lincolnshire Wolds AONB is undoubtedly its rich and vibrant rural heritage, which itself is a further important contributor to our wider natural and cultural capital. We are continuing to discover and enhance our understanding of the areas heritage assets today, both through specialist surveys and in some cases excavation, and via community projects such as the award winning Down Your Wold project and subsequent Layers of History initiative.

Some of the oldest human remains in Britain have been found here and every period of habitation has left its mark on the landscape. A great variety of cultural features can be traced throughout the area, from ancient tumuli, long departed monastic sites, distinctive stone churches and more recent industrial heritage (ironstone mining) and our abandoned, but not forgotten wartime airfields. There is evidence of many small parklands and a number of smaller estates, which often include modest Tudor or Georgian country houses, together with a large number of Georgian and Victorian farmsteads and more isolated farm dwellings. The setting of heritage assets within the wider landscape is also significant and in the case of more prominent country houses there are often elements of designed garden and parkland landscapes which necessitate careful and sympathetic management.

The landscape has inspired many artists and writers, the most famous being Alfred, Lord Tennyson (1809 -1892). Born in Somersby and educated in Louth, he left the Wolds in 1837, but its landscape provided a source for many of his poems including 'In Memorium A.H.H.', 'Maud' and 'The Brook'. At the time of the enclosures, the well-known painter Peter de Wint (1784 -1849) produced a number of popular canvases of the Wolds. In the late 20th century, the area again provided a setting for literature in A.S. Byatt's Booker Prize-winning novel 'Possession' and continues to provide inspiration for local artists and writers.

4.4.1 Archaeology

The Wolds has a wealth of archaeological and historic landscape features. There are over 2,000 archaeological sites, of which 98 are classed as Scheduled Monuments (SMs) on account of their national interest. There is longevity of settlement which makes the Wolds a premier archaeological landscape (CCP414, 1993) and during early Medieval times it was one of the most densely populated parts of England with a thriving wool industry which helped in the development of the surrounding market towns.

The oldest remains date from the Palaeolithic period, with an important and well researched stratified site at Welton le Wold. The southern Wolds has significant Mesolithic remains, particularly in the Lymn valley and by the Neolithic period the Wolds had become a cultural focal point. The Wolds has an exceptional ritual landscape including the densest distribution of long barrows in the country and an important grouping of round barrows. Significant settlement and burial landscapes can be traced through the Bronze and Iron Ages and analysis of prehistoric and Roman remains show that many Iron Age centres were superseded as Roman settlements. The Caistor High Street, the Bluestone Heath Road and Barton Street provided an important network of ancient trackways. The line of a Roman road between Lincoln Eastgate and Burgh le Marsh can still be traced through Tetford and north of Skendleby.

A large number of Anglo-Saxon cemeteries, such as the one at South Elkington, show the continued importance of the area for ritual purposes. The Wolds was important in the formative years of Christianity in the county with a very early monastery at Partney. Substantial numbers of remains date from the Medieval period, with numerous monasteries and nunneries and one of the highest concentrations of deserted and shrunken medieval villages in England.

The Wolds archaeology is an important resource in need of ongoing protection and enhancement. In 2004 English Heritage, now Historic England (HE), identified 47 (51%) of the SMs at high risk and a further nine at medium risk. However by 2011 the number of sites at high risk was reduced to 33 (34%) with nine still remaining at medium risk. The most recent figures from 2017 highlighted that the number of SMs at high risk has once again been further reduced to 27 (28%).

A Joint Accord between HE and the NAAONB is in place and recognises the need for future integrated action to help safeguard, manage and raise awareness of the heritage assets widely evident in all of England's AONBs. A partnership approach between local landowners and respective organisations is essential for the future protection and enhancement of the archaeological assets across the Wolds. The Plan seeks to encourage increased opportunities for voluntary input and community engagement, which very much aligns with the Government's more recent strategies for protecting the historic environment (Cultural White Paper, 2016) whilst supporting sustainable development. The local Partnership recognises that there is a continued need for further holistic research, especially in respect of the important archaeological features found across the Wolds. Such studies will undoubtedly further our understanding of the AONB's cultural capital and links between people, place and landscapes, and in doing so aid future protection, interpretation and management of both protected and unprotected heritage sites and features of interest.

Threats/Pressures

- Change of land use especially conversion of pasture to arable - although the increasing use of 'min-till' (minimum tillage) and 'no-till' techniques will help to minimise future disturbances from deep ploughing which has previously been a concern.
- Potential for damage through poorly executed woodland management and inappropriate planting – tree root and wind-throw damage.
- General lack of awareness and understanding.
- Future impacts from climate change.

Objective:

AO To protect, appropriately manage and enhance archaeological and historic features, and their wider landscape setting, within the AONB, preventing further loss or damage.

Policies:

- AP1** To work with a range of partners and community groups to encourage and support research projects that can help increase our knowledge of the Wolds' heritage, identifying sites of key importance and promoting better understanding of the complexity of risk, particularly from climate change.
- AP2** To raise awareness of archaeological heritage in the Wolds, working with local communities, farmers, landowners, land managers, utility companies and relevant contract workers to support positive management. (See also Sections 5.1 Farming in the Wolds and 6.2 Interpretation)
- AP3** To increase and enhance appropriate public access and interpretation to sites of archaeological and historic interest, in consultation with landowners. (See also Sections 5.1 Farming in the Wolds, 5.2 Thriving Communities, 6.2 Interpretation and 6.3 Access, Recreation and Tourism)

Actions: See AA1-12 in Table 3



Romano-British mosaic floor



University-led excavations of a multi-period ritual complex

4.4.2 Built Heritage

Attractive farmsteads, country houses, hamlets and distinctive (often nucleated) villages all contribute to the special character of the Lincolnshire Wolds AONB. There is no one unified pattern of architecture in the area, but rather a wide range of rural buildings that often reflects the diversity of local building stones and local bricks.

Claxby Ironstone, with its rich ochre and the paler Tealby Limestone, are used extensively in the traditional church and cottage buildings in the north-west of the Wolds – for example at Nettleton, Walesby, Claxby and Tealby. In contrast, Spilsby Sandstone was the dominant building material in the southern Wolds, often providing a distinctive dark brown/greenish hue on account of the presence of the mineral glauconite (widely associated with greensand). Some churches, farm buildings and cottages have also made use of local chalk, usually blocks from the firmest Totternhoe Beds. When used, the chalk was usually incorporated in the main facades of the building, often on top and within more resistant foundation and cornering stones and hardwood timbers.

Brick became available from the 14th century and with the presence of local clays encouraged the development of local brick pits. Brick buildings, initially with thatch roofs, became much more dominant over the proceeding centuries for domestic properties. From the 17th century clay pantiles were the preferred roofing material, although imported slates were also being used, increasingly for more prestigious buildings including country houses such as Harrington Hall, Hainton Hall and South Ormsby Hall. Other important buildings in the Wolds include the now rare 'mud and stud' cottages within the southern Wolds, water and windmills, and Georgian and Victorian farmstead buildings and cottages.

As highlighted in previous plans, many of the current stock of rural buildings can provide important roost opportunities for protected species including barn owls and bats, and any future renovation plans need to be managed sensitively. There are currently some 325 Listed Buildings found across the Wolds with less than 1% deemed at risk. The recent farmstead study for the AONB has identified 586 traditional farmsteads, some 8% of which include either a farmhouse or work building that is listed. Nearly half of the farmsteads recorded still retain over 50% of their original features and clearly provide an important resource. Restoration and enhancement of redundant historic buildings thoughtfully planned and carefully implemented, can support further development and diversification of the local economy, and can add real value to the local built fabric and distinctive sense of place evident across the AONB.

Threats/Pressures

- Abandonment/dereliction of farm, cottage and watermill buildings – although the situation is improving through more recent renovation opportunities.
- Previously poorly planned and constructed development/renovation/conversion, especially within some of the Wolds' villages, leading to loss of local distinctiveness – the situation is improving through local planning authorities increased attention to quality of design.
- Limited sources for local materials.
- Loss of traditional building expertise.



Unused farmstead



Part of a large planned farm complex

Objectives:

BHO To protect and enhance the historic and locally distinctive character of rural settlements, buildings and features within the AONB. (See also Section 7.1 Planning)

Policies:

BHP1 To work with property owners, residents, owner occupiers and developers to encourage sympathetic and innovative design and management of buildings in keeping with local distinctiveness and character.

BHP2 To work with a range of partners and community groups to raise awareness of the built heritage in the Wolds and increase understanding of its contribution to the AONB.

BHP3 To encourage and support sympathetic repair and sustainable re-use of redundant buildings for uses directly supportive of the local economy, encouraging use of local materials. (see also Section 5.2 Thriving Communities)

BHP4 To embrace appropriate technologies that promote sustainability and energy efficiency whilst complementing the AONB's special character.

Actions: See BHA1-8 in Table 3

Key Related Plans & Strategies (Archaeology and Built Heritage)

Adapting Traditional Farm Buildings; Best Practice Guidelines for Adaptive Reuse (Historic England, 2017)

Adaptive Reuse of Traditional Farm Buildings; Historic England Advice Note 9 (2017)

Conservation Principles for the Sustainable Management of the Historic Environment (Historic England, 2017)

County Archaeology Manual - Lincolnshire County Council (2016)

Cultural Heritage - Government White Paper (2016)

Defra 25 Year Plan – A Green Future: Our 25 Year Plan to improve the Environment (2018)

English Heritage National Heritage Protection Plan (Version 1: May 2011)

Every Street Matters (2006)

Heritage Counts 2016: Heritage and the Economy (2016)

Heritage White Paper - Heritage Protection for the 21st Century (2007)

Joint Statement on the Historic Environment in Areas of Outstanding Natural Beauty: English Heritage, CADW and National Association for AONBs (2004)

Lincolnshire Design Guide for Residential Areas (1996)

Lincolnshire Wolds AONB Traditional Farmstead and Landscape Statement (2017)

Local Development Frameworks & Core Strategies (emerging)

Local Development Plans – Saved Policies

Looking After Our Landscapes Post Brexit (Heritage Alliance, 2017)

National Planning Policy Framework (2018)

Our Lincolnshire, Our Past - The Lincolnshire County Council Historic Environment Strategy 2017-22 (2017)

Planning Policy Statement 5: Planning and the Historic Environment (2010)

Power of Place: The Future of the Historic Environment (2000)

Streets for All (2005)

Streetscape Design Manual - Lincolnshire County Council (2016)

The Greater Lincolnshire Farmstead Assessment Framework - Guidelines for Best Practice (2015)

The Greater Lincolnshire Farmsteads Character Statements (2015)

The Historic Environment: A Force for Our Future (2010)

The Maintenance and Repair of Traditional Farm Buildings; A Guide to Good Practice (Historic England, 2017)

5. Living and Working in the Wolds - Theme 2

The Lincolnshire Wolds is sparsely populated, comprising small villages and hamlets and dispersed farm dwellings, surrounded by a number of small market towns. The area is deeply rural in character, and although characterised with some of the finest landscapes in the East Midlands, some communities still suffer from economic deprivation and rural isolation. Limited public transport connections beyond the primary main roads means many individuals are heavily dependent upon personal transport to access wider employment and service hubs.

It is important that there are sufficient local employment opportunities to enable people not only to continue living in the Wolds but also to have the opportunity of working close to home. As well as the important service and cultural links to the larger market towns, local residents are very aware of the need to utilise future benefits from new technologies (e.g. via the ongoing roll-out of mobile phone and broadband). There is also community awareness and understanding of the need to help maintain and support a wide range of local services including the village shop, post office, pub and tea room. Such facilities remain invaluable at a local level and often provide opportunities for important social connections, especially for the more isolated and vulnerable in our communities. As detailed within Natural England's Conservation 21 Strategy, a healthy local natural environment is a central part of health, wealth and prosperity - it is important that both residents and visitors to the Wolds are given every opportunity to become actively involved in both the enjoyment and management of the area's natural and cultural environments (natural beauty).

5.1 Farming and Field Sports in the Wolds

The character of the Lincolnshire Wolds remains heavily shaped by farming, with field sizes and cropping patterns reinforcing local landscapes and having an ever-changing impact upon the visual character of the area. With over 75% of the AONB in cultivation any market changes through Brexit, and the potential de-coupling from subsidies and move towards WTO (World Trade Organisation) rules, has the potential for wide reaching impacts upon not only the farming community but also on the character and landscape of the Wolds.

Some 16% of employment in the AONB is in the farming sector, supporting a workforce of almost 800 individuals, including a significant number of full-time workers, farmers and farm managers. Almost half of the 231 farms registered in the area are primarily cereal producers (2013 Defra Agricultural Census). However approximately a quarter of the total number of Wolds farms continue to operate as mixed or lowland grazing units. These are commonly smaller holdings, but nevertheless also make an important contribution to the local economy and help to maintain the grassland pastures.

The current rural landscape of the Wolds, including its woodland copses, field headlands and winter cover crops owes much of its existence to both the previous and ongoing pursuit of various country field sports, including legal hunts and game shooting. The AONB Partnership continues to recognise that hunting, shooting and fishing interests can generate significant local income and employment to help support the local rural economy. There is a balance to be struck in terms of managing potential conflict with the wider public, for example potential noise and disturbance issues. Many landowners are equally aware of the need to sensitively stock and manage reared game birds, including the careful siting of release pens and game feeding stations to minimise impacts upon the local woodland and hedgerows, and maximise the opportunities for wider environmental benefits. As indicated, many of the Wolds woodlands, copses, hedgerows and field margins continue to be actively managed to help support game rearing habitats and in so doing also provide very important habitat diversity in support of wider wildlife interests, including small mammals, farmland birds and insects.

Returning to general farming matters, there has been a reported reluctance for landowners and tenants to commit to fresh Countryside Stewardship Schemes; common concerns include both the high levels of bureaucracy and the perceived difficulties from locking into fresh long-term agreements at this point in time.

The current messages from Government suggest that any future agri-environment schemes beyond the current EU arrangements will more than likely have to demonstrate clear public benefit - above and beyond food production - to include for example an emphasis on natural capital and wider goods and services. Future collaboration across the farming, environmental and economic sectors are essential, not only to help support individual farmers, but also encourage increased catchment-scale approaches to land management.

Threats/Pressures

The majority of farmland in the Wolds is used for agricultural purposes and any market changes have the potential for wide reaching impact upon the landscape and character of the Wolds. Key issues include:

- Increasing uncertainty and continuing pressure for higher yields and increasing economies of scale through intensification to compete in the global market and resist declining incomes - although farm sizes predicted to stay fairly static.
- Potentially significant impacts and future uncertainties from both Brexit and the subsequent reform of domestic farming policy, including possible implications on farm subsidies for future agri-environment options.
- Continuing decline in livestock farming and associated infrastructure with its likely degradation of landscape character.
- Changing cropping patterns in response to climate change issues, weed/chemical control and market forces.

Objective:

FWO To acknowledge and promote sustainable farming as a key activity in maintaining the Wolds' landscape character and other natural and heritage assets.

Policies:

FWP1 To develop and promote agricultural good practice to conserve and enhance the natural beauty and landscape character of the Wolds.

FWP2 To monitor and proactively influence changes in local, regional and national agriculture policy to maximise benefits to farmers in the Wolds.

FWP3 To encourage and support initiatives to sustain livestock farming in the AONB. (See also Section 4.2.2 Meadow, Pasture and Wet Grassland)

FWP4 To support farm diversification schemes appropriate to the AONB and which accord with planning policy. (See also Section 7.1 Planning)

FWP5 To seek to maintain traditional rural skills and activities that can protect, appropriately manage and enhance the landscape. (See also Section 5.2 Thriving Communities)

FWP6 To recognise and support the contribution of well-managed field sport activities for the benefits of wildlife, rural character and the local economy.

FWP7 To raise awareness within the farming community of the growing issues of climate change, sustainable energy and carbon management.

Actions: See FWA1-15 in Table 3

Key Related Plans & Strategies (Farming in the Wolds)

Creating a Great Place for Living; Defra's Strategy to 2020 (2016)
Defra 25 Year Plan – A Green Future: Our 25 Year Plan to improve the Environment (2018)
Greater Lincolnshire LEP Strategic Economic Plan 2014-2030 (refreshed 2016)
Local Development Frameworks and Core Strategies (see Developing in the Wolds)
Local Development Plans – Saved Policies
National Planning Policy Framework - NPPF (2018)
New Model Farming: resilience through diversity (2016)
Rural Business 2030: Unlocking Investment-Unlocking Potential (2016)
Rural Development Programme for England (2015-2020)
Uncertain Harvest: does the loss of farms matter (2017)



A working landscape



Field sports are a key component for some estates (N. Gurnhill)



Native breeds form part of the grazing network

5.2 Thriving Communities

As indicated previously, the Lincolnshire Wolds is deeply rural, with a much dispersed infrastructure. Using 2011 census data, the LWCS estimates a population of 10,701 for the AONB, with a further 36,316 living in the surrounding market towns of Alford, Caistor, Horncastle, Louth, Market Rasen and Spilsby. There are 74 parishes within the protected landscape, only five of which have more than 450 residents. There are some 89 settlements, the larger ones being Brookenby, Tealby and Walesby within West Lindsey; Belchford, Binbrook, Ludford and Tetford within East Lindsey; and Hatcliffe within North East Lincolnshire.

The Wolds' communities are generally small, and often physically isolated, and their connections with the surrounding market towns remain essential to maintain the socio-economic vitality of the area. Equally important are the role of the many local facilities across the AONB. An LWCS audit in 2017 highlighted the following: 20 public houses; 6 post offices; 12 local stores; 9 tea rooms and 5 fishing lakes. The AONB Partnership is increasingly aware of the importance that such amenities provide, both within and between communities at the local level, providing a wide range of services for both residents and visitors to the area.

There is often a common perception that the Wolds is dominated by an elderly population with an influx of retirees and an outward movement of young adults. However closer examination of the population figures indicates that currently there is a fairly even distribution across all of the age categories, although the largest grouping is the 45-59 years old group. The LWCS estimates that in 2011 some 4,890 people were in employment, with 258 unemployed, the latter at 5% is slightly above the more recent UK unemployment average (4.2% - March 2018). As evidenced in the recent State of the AONB Report there are some 375 rateable businesses in the AONB including 70 workshops/factory premises, 54 warehouses/stores and 52 tourism accommodation providers including self-catering. Employment is varied across sectors with approximately 42% in professional, managerial or technical fields and 17% working in a skilled trade.

There is currently some concern at the local level in terms of recent housing applications both within and immediately adjacent to the AONB. Clearly a balance needs to be struck to maintain sustainable and viable communities by ensuring for example that any new housing proposed is in the right location, of the right size and of the right design and wherever possible can provide affordable homes. The respective Local Authorities and their formal Local Plans provide the mechanisms and legal policy frameworks for robustly assessing housing needs and supply, and allocating accordingly future parcels of land for housing. Local engagement in all levels of the process should be actively sought, including the further support and encouragement of community Neighbourhood Plans.

There is recognition of the increasing importance of communication technologies and the ongoing need to upgrade and enhance the provision of IT and broadband services to many of our rural communities and businesses. The AONB Partnership respects this position and has sought to support and encourage the roll-out of both broadband and mobile phone coverage that is sympathetic and can ideally complement the landscape of the Wolds, through for example the careful siting, design, and landscaping of any critical infrastructure. Wherever possible, there should be an additional emphasis on encouraging mast sharing and the subsequent removal of any redundant infrastructure.

Returning to wider access to services, this also extends into green space provision, and although there is an extensive network of public rights of way many settlements have limited access to more formal areas of open space such as country parks, allotments and playing fields. With increasing awareness of the public health benefits from leading/experiencing active lifestyles there is considerable potential to enhance physical and mental wellbeing for all ages utilising the Wolds resource - supporting, promoting and enhancing the opportunities for local communities and the wider public to enjoy, experience and connect to the AONB's unique sense of place, tranquillity and rural charm.

Ongoing issues highlighted during the peer review and public consultation:

- A sense of unease over the future of many rural services and facilities, typically the post office and village shop.
- Impact of unsightly development (buildings, wind turbines etc.).
- Loss of scenic beauty through changes to landscape.
- A generally poor public transport system because of the sparse settlement pattern.
- Concern over the decline in the rural economy and the need to sustain local employment.
- The increasing housing difficulties for the young.
- The limited access to public open space.
- The ongoing EU review of the Common Agricultural Policy (CAP) and development of a future British Agricultural Policy.
- Vulnerabilities to communities and the business sector through the continuing outward migration of young people.

Objective

TCO To support and promote partnership activity to help safeguard and enhance the prosperity and well-being (quality of life) of communities within the Wolds AONB, ensuring the Wolds remain a place to live, work, invest in, and visit, whilst meeting the needs of this unique landscape. (See also Section 7 Developing the Wolds)

Policies:

TCP1 To foster safe, vibrant and inclusive communities, working with relevant agencies to support local businesses and communities, encouraging both innovation and wider good practice. (See also Sections 4.2.4 Woodlands, Beech Clumps and Traditional Orchards and 5.1 Farming in the Wolds)

TCP2 To encourage measures to reverse the declines in rural services and facilities, and promote healthier lifestyles.

TCP3 To encourage existing and new businesses to have a high regard for environmental sustainability and an active engagement in enhancing natural capital, especially in the context of the AONB.

TCP4 To sensitively utilise the Wolds as a recreational resource, in particular promoting accessible 'green infrastructure' close to communities within and adjacent to the AONB. (See also Sections 4.2.2 Meadow, Pasture and Wet Grassland, 4.2.4 Woodlands, Beech Clumps and Traditional Orchards and 6 Discovering the Wolds)

Actions: See TCA1-13 in Table 3

Key Related Plans and Strategies (Thriving Communities)

- Forestry and Woodland Policy Statement (2013)
- Greater Lincolnshire LEP Strategic Economic Plan 2014-2030 (refreshed 2016)
- Health and Wellbeing in Lincolnshire; Joint Strategic Needs Assessment (2017)
- Local Development Frameworks and Core Strategies (see Developing in the Wolds)
- Local Development Plans – Saved Policies



Supporting diversification of local businesses

6. Discovering the Wolds - Theme 3 (Interpretation, Access, Recreation and Tourism)

6.1 Overview for discovering the Wolds

The primary purpose of the Lincolnshire Wolds AONB designation is the protection and enhancement of the area's natural beauty and unlike National Parks there is no statutory duty placed on the relevant authorities to actively promote the area for the purposes of recreation and tourism. However since the publication of the Lincolnshire Wolds Interpretation Strategy (2000) and subsequent AONB Management Plans there has been an increasing awareness and recognition of the value of supporting and encouraging "appropriate" recreation and tourism. The AONB Partnership's understanding of "appropriate" in this context, is a level of promotion and management of access, recreation and tourism that can help to support "quiet enjoyment" of the area and foster interest and respect in the natural beauty of the Wolds.

The superb views, attractive villages and hamlets, and unique natural and cultural heritage assets provide considerable opportunities for future recreation and tourism development. As evidenced in the State of the AONB Report, there is an increasing awareness of the tourism sector's contribution to the local economy, including wider visitor expenditure which can often assist local ancillary services important to the social fabric of the area. There is however a widespread view that promotion of the Wolds needs to be respectful of the protected landscapes special qualities, which include its deeply rural sense of place and tranquillity.

Key issues for the managing interpretation, access, recreation and tourism:

- Raising the profile of the Lincolnshire Wolds - its unique landscape and natural/heritage/cultural assets - as a place to visit, enjoy and appreciate.
- Balancing an increase in visitors with the Wolds sense of tranquillity and isolation.
- Developing an appropriate access, recreation and tourism infrastructure, including suitable facilities for specialist interests.
- Exploring opportunities to develop links with the surrounding market towns and neighbouring venues.
- Enhancing partnership working to aid the promotion and interpretation of the Wolds.
- Promoting walking, cycling, horse riding and carriage driving.
- Promoting access for all and the principle of least restrictive access.
- Promoting appropriate specialist leisure interests, exploring further opportunities for field sports activity, 'energetic/high adrenalin' pursuits and other emerging markets.
- Supporting and promoting established festivals and events programmes that can help to maintain and encourage the vitality and cultural interest of the Wolds area.
- The need to be aware and sensitive to landowner and farmer interests, especially in respect of unwarranted trespass and the dangers of working farms and machinery, similarly the concerns with livestock disturbance and wider anti-social behaviour.

6.2 Interpretation – Awareness Raising

There is an important role for the ongoing roll-out of high quality interpretation: as well as helping to direct and inform visitors, utilising a wide range of interpretive media has been shown to be a very important tool in engaging local residents and encouraging active interest and participation in the protection and enhancement of the Wolds AONB.

A people-focused approach to interpretation has always been fully supported and encouraged by the AONB Partnership, helping communities to discover and share in the understanding of local sites, places and the wider AONB – depending on levels of interest and expertise, outcomes will often be across a wide range of environmental and heritage topics.

This approach recognises and builds on the wealth of local knowledge and local voices for exploring and promoting the area – including the area's local character, history, wildlife, folklore and cultural strengths. Local engagement links with wider national strategies (for example Defra's A Green Future and Natural England's Conservation 21 Strategy) will be encouraged, with Government plans advocating putting people at the heart of the environment to help encourage and support future "natural capital" place-shaping. Such endeavours can get more people connected, involved and inspired in their natural environment, local landscapes and cultural heritage (i.e. The Wolds natural beauty and its special qualities).

The Management Plan will continue to recognise the important connections between the Wolds and the surrounding market towns, all of which, to varying degrees, act as both physical and intellectual "gateways" into the AONB. The future emphasis will be on the further development of a coordinated approach to interpretation, helping to promote the special attributes of the area through a diverse range of media. This should in turn help provide an enhanced sense of place and improve the visitor experience for not only those travelling into the Wolds but also for the benefit of our local residents.

Objective:

- IO** To raise the profile of the AONB through increasing visitors' and residents' enjoyment and understanding of its special qualities, in turn helping to support the local economy. (See also Sections 5.2 Thriving Communities, 6.3 Access, Recreation and Tourism and 7.2 Transport in the Wolds)

Policy:

- IP1** To provide visitors and residents with a greater understanding and appreciation of what makes the Lincolnshire Wolds a special place, encouraging interpretation facilities and services that can be utilised by all.
- IP2** To strengthen the profile of the AONB as a visitor destination by highlighting the area's unique landscape character and sense of place to the general public.
- IP3** To encourage residents and landowners to become actively involved in the interpretation and promotion of their area for visitors.

Actions: See IPA1-9 in Table 3



Locals are often best placed to deliver events



Encouraging education at an early stage

6.3 Access, Recreation and Tourism

As highlighted earlier in the Plan, although there is a limited number of country parks and recreational open space immediate to many of the settlements in the Lincolnshire Wolds there is an extensive network of public rights of way. There are six well established long distance routes, including most notably the Viking Way, and also a wide range of walking, cycling and further promotional literature that has been produced by the AONB Partnership.

The Partnership has more recently linked up with the relevant local authorities and local businesses to help support and promote the work of the new "Love Lincolnshire Wolds" (LLW) tourism partnership; a group which seeks the careful promotion of both the Wolds and its surrounding network of market towns to aid the delivery of its Destination Management Plan (Lincolnshire Wolds and Market Towns). This Strategy has specific actions aimed at increasing visitors, identifying gaps in provision and further developing partnerships to help enhance facilities and bring additional economic benefits into the area.

The LLW group has highlighted the benefits of utilising wider countywide tourism initiatives, including the more recent success of the Lincoln Castle renovation programme and its national/international promotion of the Magna Carta. As highlighted in the State of the AONB report, the STEAM data analysis for the wider Lincolnshire Wolds National Character Area and the Wolds surrounding market towns estimates the total number of annual visitor days for 2016 as 4.05 million, bringing in an estimated £166.58 million in tourism income.

Clearly there is scope to further promote the area as an all-round destination and to continue to support the enhancement of the tourism and recreation offer to help attract new visitors and extend overnight stays. There is also an opportunity to make additional positive connections with the Greater Lincolnshire Nature Partnership, in this context, working to secure and enhance engagement with "green tourism" initiatives to help build on the wider nature conservation/natural environment infrastructure.

A collaborative approach to recreation and tourism management involving public, private and third sector organisations is being actively encouraged for the area and is very much work in progress. An objective review of unsolicited comments from Trip Advisor and Google Maps (see Appendix 4 – State of the AONB Report), demonstrates the generally high regard held for the Wolds AONB as a recreation/tourism destination and its value to local residents and visitors for enjoyment, discovery, health and wellbeing - these widespread views echo the general findings from the Wolds Have Your Say Surveys (Section 2.7 and Appendix 5). The AONB Partnership recognises that the area is very much a living and working landscape and all visitors need to be mindful and respectful of both landowner and local resident interests.



Exploring the Wolds on horseback



Highlighting key aspects of the AONB

Objective:

ARTO To develop, promote and seek implementation of a wide range of sustainable access, recreation and tourism initiatives appropriate to the Lincolnshire Wolds AONB.

Policies:

ARTP1 To maximise access opportunities for all visitors and residents of the AONB, improving provision for quiet recreation. (See also Sections 4.2.2 Meadow, Pasture and Wet Grassland, 4.2.4 Woodlands, Beech Clumps and Traditional Orchards, 5.1 Farming in the Wolds and 5.2 Thriving Communities)

ARTP2 To provide coordinated, accurate and up-to-date information on the access, recreation and tourism opportunities within the Wolds AONB. (See also Section 6.2 Interpretation)

ARTP3 To develop joint promotion and marketing initiatives to raise the profile of the Lincolnshire Wolds AONB, including utilising the surrounding market towns as gateways to the Lincolnshire Wolds. (See also Sections 5.1 Farming in the Wolds and 6.2 Interpretation)

ARTP4 To review current access, recreation and tourism provision and support new measures and good practice to improve the infrastructure where compatible with the AONB.

Actions: See ARTA1-19 in Table 3

Key Related Plans and Strategies (Interpretation, Access, Recreation and Tourism)

Creating a Great Place for Living – Defra's strategy to 2020

Cycling and Walking Investment Strategy - Dept. for Transport (2016)

Countryside Access and Rights of Way Improvement Plan - Lincolnshire (2012)

Delivering a Golden Legacy; A growth strategy for inbound tourism to Britain from 2012 to 2020 (2012)

Forestry and Woodland Policy Statement (2013)

Lincolnshire Wolds Interpretation Strategy (2001)

Local Authorities Tourism / Economic Development Strategies (various)

Love Lincolnshire Wolds Destination Management Plan (2016)

Structure and Local Plans – Saved Policies and Emerging Local Plans

7. Developing the Wolds - Theme 4

As highlighted in the scene setting chapters, the Lincolnshire Wolds AONB is a nationally recognised and protected landscape on account of its high scenic quality and its unusual combination of features. Originally designated in 1973, there have been continual efforts and action by the AONB Partnership - including local authorities, the Lincolnshire Wolds Countryside Service, government agencies, and other third sector organisations - to work closely with landowners, local communities and businesses to help direct, influence and manage landscape change and future development in a positive way.

The Wolds scenery is subtle and complex, with many different facets combining to create the area's overall intrinsic character and distinctive sense of place. As is often said, the more one comes to know the area the greater its appeal. However there is a widespread view that the Wolds are very much a living and working landscape and should not be preserved in aspic. A key challenge remains in terms of fostering and supporting development that can work with, not against, the grain of the Wolds and its people. The Plan recognises that there may be some differences of opinions in terms of securing future sustainable development appropriate to the AONB. The strength of the JAC Partnership is in its power to convene, to listen and appreciate the varying viewpoints and work to secure a collaborative and positive outcome for the designation – this encompasses taking account of and respecting the various (and sometimes differing) needs of local residents, landowners, businesses and visitors.

7.1 Planning and Development Management

The Wolds AONB is particularly vulnerable to inappropriate development on account of its strong rural character and tranquillity, its extensive plateau tops and open views, and its dark night skies. Furthermore there is wide spread recognition that the topography of the Wolds is subtle and complex, and that its juxtaposition with the low lying costal grazing marshes to the east and the equally flat clay vale to the west, make the area especially sensitive to neighbouring development which can potentially impact upon both the setting and the expansive views to and from the AONB.

As highlighted previously, individual planning decisions are taken by the relevant local planning authorities based upon national guidance and legislation as expressed through the National Planning Policy Framework (NPPF) and the corresponding suite of Local Plan, Highways, and Mineral and Waste policies. The Management Plan seeks to complement these strategies and not oppose them; it has been demonstrated through national planning appeals that AONB Management Plan policies are a material consideration in the decision making process for securing sustainable development. The current NPPF makes it clear that there should be a general presumption in favour of granting development, however there is a duty on relevant decision making bodies to apply great weight to the protection and enhancement of our nationally protected landscapes (our National Parks and AONBs) as highlighted in Paragraph 172.

New development, of the right type, of the right scale, and in the right location should be actively supported. This should include thoughtfully designed and well-constructed development that seeks to complement and enrich local distinctiveness and the natural beauty of the AONB. The active use of relevant and up-to-date site surveys (including flora, fauna and heritage assets), relevant design guides and best practice should be the norm, accompanied by the comprehensive use of LVIA's (landscape and visual impact assessments) to help shape and assess both formal and informal proposals. The new 25 year Government plan for the environment has reaffirmed the importance of our nationally protected landscapes - AONBs and National Parks - and highlighted the need to explore and develop natural capital approaches to help secure positive outcomes for the universal benefit of people, places and wildlife.

Key issues highlighted included:

- Proliferation of often unsightly telecommunication masts and their associated infrastructure (similarly with overhead powerlines).
- Poor design and build of some developments, including village infilling, and farm and cottage renovations.
- Growing impact of light pollution.
- Negative view of planning restrictions which are seen to be limiting socio-economic development.
- Lack of affordable housing for local people and key workers.
- Renovation/development of redundant farm buildings.
- Potential impact of development and land use change on sites adjacent to the AONB.
- Wind farms – pros and cons.
- House builders/developers utilising formulaic national designs.
- Potential for future increase in future hydro-carbon (oil and gas) exploration, together with increasing public concern with fracking.

Objective:

PO To seek to ensure that development plans and planning guidance consistently recognise and uphold the primary purpose of the Lincolnshire Wolds AONB designation – the protection and enhancement of its natural beauty and special character. (See also Section 4.4.2 Built Heritage and Section 5 Living and Working in the Wolds)

Policies:

- PP1** To protect and enhance local character and distinctiveness through the highest quality of design in new development and re-development, including making space for biodiversity, being sensitive to the considerations of heritage assets and tackling climate change.
- PP2** To encourage and support the sensitive conversion of traditional buildings to new viable uses to support the local economy and community, including making space for biodiversity and tackling climate change.
- PP3** To support the development of local needs/affordable housing provision which is appropriate to local character and consistent with AONB objectives and LA planning policies.
- PP4** To minimise damage to the AONB's landscape and natural beauty as a result of mineral working and associated activity and help implement the Lincolnshire Geodiversity Strategy.
- PP5** To promote awareness and encourage consideration of the impact of adjacent development on the views to and from the AONB.
- PP6** To recognise and protect the AONB night skies and general tranquillity through ensuring future development minimises impact upon light and noise levels.
- PP7** To ensure a general presumption against wind energy schemes in any location which could cause significant and demonstrably detrimental effects upon the natural beauty and intrinsic characteristics of the AONB.
- PP8** To support general waste reduction measures and recycling initiatives that are in accordance with the special requirements of the AONB and help the shift towards a circular economy.

PP9 To ensure that where larger scale development must proceed within or adjacent to the AONB, because of other national interests, the highest regard is placed on minimising any impacts upon the primary purpose of the designation – the area’s natural beauty.

PP10 To develop a comprehensive assessment approach to securing opportunities for renewable energy provision across the AONB and its wider setting.

Actions: See PA1-16 in Table 3

Key Related Plans and Strategies (Planning)

- A New Vernacular for the Countryside (2004)
- EC Rural Development Regulations (2007 onwards)
- Fixing our Broken Housing Market - Dept. for Communities and Local Government (2017)
- Greater Lincolnshire LEP Strategic Economic Plan 2014-2030 (refreshed 2016)
- Guidelines for Landscape and Visual Impact Assessment – Landscape Institute (3rd Ed, 2013)
- Lincolnshire Design Guide for Residential Areas (1996)
- Lincolnshire Charter for Agriculture and Horticulture Implementation Plan (2003)
- Lincolnshire Minerals and Waste Local Plan Core Strategy and Development Management Policies (2016)
- Local Development Frameworks and Core Strategies
- Local Development Plans – Saved Policies
- National Planning Policy Framework (2018)
- Planning Act 2008
- Streetscape Design Manual - Lincolnshire County Council (2016)
- The Lindsey Action Zone Local Development Strategy 2014-2020
- The Localism Act (2011)
- The Infrastructure Act (2015)
- The Planning and Compulsory Purchase Act (2004)



Opportunities for recycling facilities



Quarrying within or adjacent to the AONB can have significant impact

7.2 Transport and Signage in the Wolds

The Partnership recognises that a good transport network is essential to the future well-being and prosperity of those living in the Wolds, helping to ensure that local residents and visitors have good access to a wide range of amenities both within and adjacent to the AONB. These include links to the essentials for modern living – connections to commerce, retail, education, finance and health services - in addition to regular access to the wider countryside and its various rural attractions.

There is an expectation on developing and maintaining a good road infrastructure that can support the needs of local farming, forestry, tourism, recreation and the needs of other rural businesses. Whilst there is a network of arterial roads linking the surrounding market towns many of the Wolds interior routes are narrow and deeply rural in nature. Currently over 90% of the highway network is managed directly by Lincolnshire County Council, the remainder by North East Lincolnshire Council. Comparing the average annual average daily traffic flow counts (AADT) for all vehicles using the principal A and B roads in the Wolds the average vehicle movements for A roads was 7,433 (2017 counts) with 2,078 vehicle movements for B roads (2016 counts). As evidenced in the State of the AONB report, the detailed picture is more complicated, but there has clearly been a net increase in road vehicle movements since 2010.

The AONB partnership has sought to encourage and develop local transport solutions to aid traffic management for example with the regular review of road signage, including the Lincolnshire Wolds gateway/entrance signs found on most of the principal routes. Whilst being mindful of the need to minimise roadside furniture and visual clutter the group has actively supported the ongoing renovation and maintenance of the AONBs locally distinctive, black and white, traditional road signs.

As noted in earlier chapters the settlement pattern across the Wolds is highly scattered and dispersed making the efficient running of a fully integrated transport network challenging. The InterConnect and CallConnect Services remain very important to the area, in particular providing vital links for those that are totally reliant upon public transport or private taxi providers. Most of the arterial routes are covered by a scheduled bus route but the number of journeys can be fairly limited.

With an increasing partnership emphasis on encouraging sustainable recreation and tourism there will be ongoing pressures on the transport infrastructure and the need to review both services and the signage across the Wolds. There will also be fresh opportunities to explore the linkages with recreation and active lifestyles, helping for example to review and develop the InterConnect Bus Walks. Further provision for other user groups - cyclists, horse-riders and those with particular special needs - will also be important, including exploring and developing innovative good practice through public, private and community sector engagement.

Key issues highlighted included:

- Limited transport infrastructure.
- Sparse public transport links, especially in the northern half of the AONB.
- Lack of a fully integrated public transport network.
- Increasing loss of rural character through proliferation of urban style road development.
- Road safety issues, particularly dangerous driving.
- Increase in commuting from the Wolds.
- In isolated cases, village signage that fail to capture adequately the links with the local character and distinctiveness of the Wolds.

Objective:

TWO To encourage and support the development and promotion of a sustainable and fully integrated transport network which respects the AONB landscape and character, and addresses local community and visitor needs.

Policies:

TWP1 To encourage integrated public and community-based transport schemes that can help to improve the links between communities within the AONB and the surrounding market towns. (See also Sections 5.2 Thriving Communities and 6.2 Interpretation)

TWP2 To support and encourage traffic management that will promote safe and attractive walking, cycling and riding in the AONB.

TWP3 To encourage transport infrastructure improvements to support appropriate tourism development, ensuring schemes are sympathetic to the landscape and character of the AONB.

TWP4 To encourage a consistent approach to the use of road signage, furniture and maintenance to promote and respect the character of the AONB.

TWP5 To support and encourage the development of an integrated and well-maintained public rights of way network, maximising the opportunities for achieving access for all.

TWP6 To encourage the Highway Authorities to adopt traffic management measures and schemes commensurate with AONB designation and rural environments.

Actions: See TWA1-13 in Table 3

Key Related Plans and Strategies (Transport in the Wolds)

Community Strategies

Countryside Access and Rights of Way Improvement Plan - Lincolnshire (2012)

Every Street Matters (2006)

Lincolnshire Local Transport Plan 4 - (2013)

Lincolnshire Streetscape Design Manual (2012)

Local Development Plans – Saved Policies

Local Transport Act (2008)

National Planning Policy Framework (2018)

North East Lincolnshire Local Transport Plan (2011)



Cycling in the Wolds has seen an upsurge in popularity

7.3 Climate Change and Energy

There remains a requirement to increase our understanding of the full suite of pressures from climate change, the anticipated type, scale and rate of change and the steps that can be taken to both mitigate and adapt to "climate-proof" our precious natural and developed landscapes. The worldwide understanding of climatic changes are continually improving, and although there are still sceptics to global warming, it is clearly evident that weather patterns are changing markedly, both home and abroad. Climate change, in addition to the spread of plastics, is now widely recognised as posing one of the most serious long-term threats to both global and UK ecosystems, with a host of direct and indirect impacts upon our landscapes, wildlife and habitats, and the wider goods and services they provide – including provision of water, food and outdoor environments for recreation and tourism.

The Partnership continues to recognise that the problems associated with climate change have the potential to have a significant impact upon the Lincolnshire Wolds AONB. Anticipated long term changes include a likely change to future cropping and farming patterns across the Wolds, as farmers increasingly review and adapt their growing regimes to help maximise their future commercial returns. There is likely to be increased pressure on wildlife and habitats, although some species may adapt well and expand their ranges, others will struggle and their coverage could become further restricted. Pressures on both farmed and indigenous plants and animals are likely to increase through the emergence and spread of new pests and diseases. Extreme and more unpredictable weather events are anticipated to become more frequent, including severe storms with high winds and intense rainfall. This has the potential to cause harm and disruption to crops, wildlife (including notably woodlands, parklands, landscape trees and our rivers and streams), historic buildings, infrastructure (transport, communications and utilities) and our communities, especially those residential and commercial properties within/adjacent to flood plains and historic spring-lines.

As well as working to reduce emissions (most notably fossil fuels), including the shift towards a circular economy and reduced 'carbon footprint', a landscape scale/catchment scale collaborative approach is highly advantageous to help build long term resilience and aid adaptations. The Lincolnshire Wolds AONB can clearly provide a test-bed for more innovative multiple land management. An obvious example is the review and development of further green networks and habitat corridors to crucially connect isolated and fragmented habitats. Such an approach would be in-line with current Government thinking expressed within Natural England's Conservation 21 Strategy. For example, encouraging a mosaic of varying and connected habitats can aid the future migration of our native plant and animal species, whilst aiding natural pest control and crop pollination for adjoining cultivated land, and safeguarding our water resources through increasing infiltration rates in the upper catchments.

Key issues will be:

- Predicting and managing the increasing burdens on our natural and built resources, including impacts upon our water, food, biodiversity, housing and recreation interests.
- Securing energy conservation measures and reducing reliance upon fossil fuels.
- Ensuring that future sustainable energy technologies minimise their impact upon the Wolds' landscape and other environmental assets.
- Water availability and quality issues, including lower river flows, temperature changes, fluctuating water tables and expected increased demand for flood alleviation and water storage areas.
- Changes to future cropping patterns and impacts (positive and negative) upon local distinctiveness.
- Wildlife migration pressures and the mobility of habitats and species through adaptation.
- Likely emergence of new pests, diseases and invasive species.
- Increasingly integrating solutions to climate change through applying a landscape-scale and ecosystems approach to land management including the provision of breathing spaces for nature.
- Encouraging sustainable forms of recreation and tourism to help enhance the local environment and economy.

- Increased pressure on woodlands to supply woodfuel to meet Renewable Heat Incentive requirements.
- Potential impacts from anaerobic digestion plants – including issues with design, infrastructure, transportation and future cropping patterns (increasing demand on monocultures).

Objective:

CCO To seek to develop and implement a long-term climate change strategy to help safeguard the Lincolnshire Wolds AONB, recognising and responding to the key local pressures through effective adaptation and mitigation.

Policies:

CCP1 To establish, monitor and review key indices for monitoring the possible effects of climate change.

CCP2 To develop practices that promote a sustainable landscape approach to tackle and respond to climate change pressures through a range of mitigation and adaptation measures.

CCP3 To support and develop practices that promote healthy, well-connected and managed landscapes and ecosystems resilient and flexible to the effects of climate change.

CCP4 To encourage and promote innovative low carbon energy reduction/generation schemes that are conducive to the requirements of the AONB designation and complement local landscape character.

Actions: See CCA1-8 in Table 3

Key Related Plans and Strategies (Climate Change and Energy)

Community Strategies

Climate Change and Sustainable Energy Act (HMSO, 2006)

Climate Change – The UK Programme (Defra, 2006)

Energy White Paper – Meeting the Energy Challenge (DBERR, 2007)

Energy White Paper: Our Energy Future – Creating a Low Carbon Economy (2003)

Local Development Frameworks and Core Strategies (see Developing in the Wolds)

Local Development Plans – Saved Policies

National Planning Policy Framework (2018)

Natural England's Climate Change Risk Assessment and Adaptation Plan (2015)

The Economics of Climate Change – The Stern Review (2006)

The Kyoto Protocol – United Nations Framework Convention on Climate Change (1992 & 1998)

The UK Government Sustainable Development Strategy – Securing the Future (Defra, 2005)



Pests and diseases of our wildlife are increasing due to climate change

8. Partnership in the Wolds - Theme 5

Partnership Management Aspiration:

All agencies, organisations, communities, landowners/managers and local businesses will work in partnership to protect and enhance the Lincolnshire Wolds AONB.

This partnership management aspiration is an overall statement of intent for all partners involved in the ongoing delivery of the objectives, policies and resulting actions of this Plan.

We wish to thank once again everyone who has contributed their thoughts and views to aid the formulation of the revised Management Plan for the period 2018-23. This has included - through the Have Your Say Survey, Peer Review and Public Consultations - comments and suggestions from local farmers and landowners, local residents and communities, visitors, and a wide range of organisations with an active interest in the Lincolnshire Wolds inclusive of those formally represented on the Lincolnshire Wolds Joint Advisory Committee (JAC, The AONB Partnership).

The Partnership, including all of our relevant local authorities, continues to welcome help and support in taking forward the new collaborative Strategy and Action Plan for the Lincolnshire Wolds AONB, one that can best protect and enhance the Wolds, both now and for generations to come. Future success continues to remain dependent upon understanding, appreciating and collaborating both within and across sectors and interest groups. There are many pressures and issues that continue to face the area, against a backdrop of ever increasing demand on resources and budget pressures. The Management Plan aims to operate as both a strategic guide for the area (complementing the suite of relevant Local Plans and national AONB guidance) but also crucially operating as a stimulus for future positive action, identifying common points of synergy and encouraging innovation, at local, strategic, national and international levels.

Our links to the wider family of protected landscapes, including both AONBs and National Parks, remain important. The Partnership will continue with its active engagement with the National Association for AONBs (NAAONB), helping for example to review and share good practice, and explore new ways of working within and beyond the protected landscapes family. Our collaborative goal is to continue to help conserve and enhance these nationally treasured landscapes, safeguarding their natural beauty for future generations through fostering sustainable social, economic and environmental enhancements.



Undergrounding overhead powerlines – before



After