

## **Arnside & Silverdale Area of Outstanding Natural Beauty**

### **State of the AONB Report: 2019 (Draft)**

Prepared by Arnside & Silverdale AONB Partnership

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# Introduction

## 1.1 Background

The State of the AONB Report has drawn upon all available data sources to produce an evidence base to underpin the new Arnside & Silverdale AONB Management Plan, 2019–24. The agreed indicators provide a snapshot view of the area and provide a baseline for future AONB condition monitoring.

Where possible trends, since publication of the previous Arnside & Silverdale AONB Management Plan 2014-19, have been analysed and reasons explored. The Arnside & Silverdale AONB State of the AONB Research and Report Projects: Habitats, Species and Biodiversity (2012) and Historic Environment (2013), and the Environment Report (2014) provided evidence to support the 2014-19 Management Plan and comparisons have been made between the new data and data presented in these reports.

## 1.2 Indicators

In preparation of the State of the AONB Report, the indicators included in the 2014 Environment Report and the AONB Management Plan 2014-19 were reviewed and potential new indicators identified. The availability of new data and its potential usefulness to inform the current picture of the AONB condition was taken into account and also consideration of the range of natural capital within the AONB and understanding the state of the natural capital assets and ecosystem services.

There are a number of recommendations made for additional indicators, see section 5.

A summary of the indicators and current data are set out in Section 6.

# 2 An outstanding landscape, rich in natural and cultural heritage

## 2.1 Landscape and seascape

### 2.1.1 Landscape characterisation/quality

#### *Background*

The landscape and seascape character assessment (LSCA) of the Arnside & Silverdale AONB was published in 2015<sup>1</sup>. The LSCA identified 6 landscape character types within the AONB – See Figure 1.

The assessment identifies and describes the key elements and qualities that make up the distinctive landscape character and seascape of the AONB and classifies its distinctive character types and areas. The assessment also identifies the inherent sensitivity of the AONB's landscape and seascape character and sets out guidelines for future management of each of the landscape character types.

The Landscape and Seascape Character Types are divided into the following:

- **Seascape:** The AONB seascapes combine extensive areas of Morecambe Bay with the River Kent and the River Keer estuaries. The dynamic and changing coastline includes mud and sand, and saltmarshes, bounded in places by shingle bays, rising to low cliffs with caves. The Seascape Character Types are:
  - Seascape Character Type A: **Intertidal Flats**
  - Seascape Character Type B: **Bay Saltmarshes and Lagoons**
- **Transitional and lowland landscapes:** The lowland landscapes of the AONB comprise a diversity of low mosses and wetland landscapes contrasting with enclosed limestone pastures and areas of historic parkland. The Transitional and lowland Landscape Character Types are:
  - Landscape Character Type C: **Lowland Moss**
  - Landscape Character Type D: **Coastal Limestone Pasture**
  - Landscape Character Type E: **Inland Pasture and Parkland**

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<sup>1</sup> Arnside & Silverdale Area of Outstanding Natural Beauty Landscape and Seascape Character. Prepared by Arnside & Silverdale AONB Partnership and Land Use Consultants in conjunction with Lancashire County Council, Lancaster City Council, South Lakeland District Council, Cumbria County Council and Natural England, 2015.

- **Wooded limestone hills:** Wooded limestone hills and pavements rise above the lowland landscapes. Inland woodlands are rich and verdant, characterised by the highly distinctive flat bedding planes of the limestone pavements amongst which many of them grow. The Wooded limestone hills Landscape Character Type is:
  - Landscape Character Type F: **Wooded Limestone Hills and Pavements**
- Landscape character types forming the setting of the AONB: The setting of the AONB includes those areas from where the AONB can be seen ie. when looking towards the AONB, and areas which are seen from the AONB, when looking out from within its boundaries. The landscape character types forming the setting of the AONB are:
  - Landscape Character Type G: Drumlin Farmland
  - Landscape Character Type H: Low Coastal Drumlins
  - Landscape Character Type I: Lowland Valley and Coastal Margins

**Figure 1 Landscape and Seascape Characters**

#### Current status

##### **Indicator: Landscape character type condition**

The condition of the landscape character types within the Arnsdale & Silverdale AONB are:

##### **Good: 3**

Intertidal Flats  
Bay Saltmarshes and Lagoons  
Inland Pasture and Parkland

##### **Moderate to Good: 3**

Lowland Moss  
Coastal limestone Pasture  
Wooded Limestone Hills and Pavements

Source: Arnsdale & Silverdale Area of Outstanding Natural Beauty Landscape and Seascape Character, 2015

##### **Indicator: NCA Landscape Change Database**

Overall landscape effects of Environmental Stewardship until 2013 for:

|                                      |                             |
|--------------------------------------|-----------------------------|
| Morecambe Bay Limestones NCA         | <b>Positive<sup>2</sup></b> |
| Morecambe Coast and Lune Estuary NCA | <b>Neutral</b>              |

Source: NE, 2013

#### Interpretation

The landscape and seascape character in the AONB, as described in the Arnsdale & Silverdale AONB LSCA, has a high or very high level of inherent sensitivity with limited or very limited overall capacity to accommodate change. The landscape and seascape condition is **good** or **moderate to good**. There is some evidence, however, of disrepair in the field boundary walls and there are some gappy, overgrown and neglected hedges. Some have been lost, poorly or inappropriately maintained or, grubbed up and replaced by fencing. There is also loss or disrepair of parkland features and lime kilns and some loss of species rich limestone pasture. There are some unmanaged woodland areas and also remnant coppiced areas which have not been managed for this form of timber production for many years. Also, there is some loss of species rich hay meadows resulting from intensification of agriculture, drainage and flood alleviation schemes.

Based on the National Character Areas (England), the majority of the Arnsdale & Silverdale AONB is within the Morecambe Bay Limestones National Character Area (NCA 20). A sliver of the southern end of the AONB around the

<sup>2</sup> This is based on assessment of ES only

River Keer estuary and floodplain falls within the Morecambe Bay Coast and Lune Estuary National Character Area (NCA 31), which also covers the low lying coastal area bordering east Morecambe Bay.

The 'Countryside Quality Counts' (CQC) project, sponsored by Natural England in partnership with Defra and English Heritage, measured landscape change within the NCAs by assessing change in landscape character for two periods: 1990-1998 and 1999-2003. The project used England's NCAs as the geographical framework for reporting and assessing both the magnitude and the direction of landscape change for each NCA, using four categories: maintained, enhancing, neglected, diverging.

Details of the 1999-2003 results are set out in Appendix 1. The overall assessment, 1999-2003, was that **'development pressures are transforming the rural character of the area in some localities, but other elements of character such as agriculture, semi-natural and woodland cover are stable or enhancing'**.

The CQC results indicated that between 1990 and 1998 within the NCA there was some change inconsistent with the countryside character but between 1999 and 2003, the character was generally maintained. It is important to note, however, that the AONB formed only a part of NCA 20 and that the results given may not have reflected accurately the situation within the AONB.

The NCA profiles were revised by Natural England in 2014.

Natural England are currently developing an NCA landscape change database. A set of landscape (character) change indicators for the NCAs have been prepared based upon an analysis of the Statements of Environmental Opportunity that had similar objectives. A range of 6 or 7 themes (e.g. semi-natural habitat, development and settlement patterns, agricultural land use, water/rivers, woodland etc.), similar to those used in the CQC, are proposed.

A discrete element of the NCA landscape change database is the monitoring of the impacts of environmental stewardship (ES) on landscape character and quality. Across all agreements, ES options are assessed for their impact on landscape character and quality – this is achieved through both data analysis and rapid landscape surveys across 100s of 1km survey squares (a number of these squares fall within the AONB). A threshold has been identified for each option (ie. for its contribution to maintaining landscape character), that has allowed NE to make a judgment as to whether ES is having a 'strongly positive', 'positive' or 'neutral' effect on landscape character and quality. A more comprehensive judgement on whether changes in the character and quality of landscape across NCAs are deemed 'strongly positive', 'positive' or 'neutral', including other data/indicators is currently being explored.

The current judgement on uptake of ES until 2013 for NCA 20: Morecambe Bay Limestones overall is **'Positive'**. This is based on assessment of ES only at this point. Currently NE is updating the assessment and judgement for 2013-2018 ES data and should have results later in 2019.

## **2.1.2 Farmed landscape**

### *Background*

Farming has been a principal influence on the development of the AONB landscape. 56% of the AONB area was registered as agricultural land in 2016 (Defra, June agricultural survey).

Agri-environment schemes are voluntary schemes which give an annual payment to farmers and landowners to ensure they manage their land in an environmentally sensitive way and supports biodiversity, enhances the landscape, protects and enhances historic and archaeological features and improves the quality of water, air and soil. Climate change is an over-arching priority.

The Environmental Stewardship Scheme (ESS) was launched in March 2005 to build upon the Environmentally Sensitive Areas (ESA) Scheme, the Countryside Stewardship (CS) Scheme and the Organic Farming Scheme (OFS). There are two levels of Environmental Stewardship Schemes: Entry level (rewards straight forward environmental management) and Higher level (rewards much higher standards of environmental management). The individual agreements each have a lifetime span of ten years. ES closed in 2014 and has been replaced from 2016 by Countryside Stewardship.

Countryside Stewardship (CS) provides financial incentives for land managers to look after their environment through activities such as:

- conserving and restoring wildlife habitats
- flood risk management
- woodland creation and management
- reducing widespread water pollution from agriculture
- keeping the character of the countryside
- preserving features important to the history of the rural landscape
- encouraging educational access

There are two elements of CS: Mid Tier which offers options and capital items to achieve simple but effective environmental benefit (not for woodland or educational access) and Higher Tier which covers the most environmentally significant sites, commons and woodlands.

ES and CS data is the best nationally available information relating to the management of the wide range of landscape features and elements. Bringing these under management can contribute to their good condition and to an area's landscape character, which are both indicators of natural beauty.

Work is being carried out nationally on the design for a successor agri-environment approach after Britain's exit from the European Union. The key drivers behind this are expected to be priority policy objectives contained in the Defra 25 year Environment Plan.

#### *Current status*

##### ***Indicator: Number of agri-environment agreements (PLNB3)***

In 2018:  
**19** Environmental Stewardship agreements were live, and of these 1 was at Higher Level  
  
**5** Countryside Stewardship agreements were live  
  
In total, **24** agri-environment agreements

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##### ***Indicator: Area managed under agri-environment agreements (PLNB3)***

In 2018:  
**1,196 ha** within the AONB was in Environmental Stewardship, including 25% at Higher Level  
  
**118 ha** was in Countryside Stewardship, including 96% at High Tier  
  
In total **1,314 ha** within the AONB was in agri-environment agreements

Source: © Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2018

##### ***Indicator: The uptake of themed groups of ES options that contribute to conserving and enhancing landscape character (PLNB1)***

In 2018:  
Area of land under ES specifically for the management and protection of archaeological features was **14.4 ha**  
  
Number of hedgerow trees and in-field trees managed under ES was **304**  
  
Area of woodland managed and created under ES was **30 ha**

Area of low input grassland managed, restored or created under ES was **272 ha**

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**Indicator: Land use within the agricultural setting**

In 2016:  
**80%** of the farmed land was grassland  
**11%** was woodland  
**5%** was crops and bare fallow

Source: Defra Agricultural Survey, 2016

**Indicator: Livestock numbers**

In 2016 livestock numbers within the AONB were:  
**2,570** cattle (257 beef herd, 621 dairy herd)  
**12,047** sheep  
**10,580** poultry  
**62** horses

Source: Defra Agricultural Survey, 2016

*Interpretation*

Agricultural land in the Arnside & Silverdale AONB comprises 4,275 ha (2016 Defra June Agricultural Survey, see Appendix 2), around 56% of the AONB. The main land use is Grassland (permanent, temporary and rough grazing (80%). Woodland accounts for a further 11% of the agricultural land and 5% is crops and bare fallow.

The figures from the annual Defra surveys indicate that since 2010 the total farmed area in the AONB has increased by 38%, from 3,105 ha to 4,275 ha. The agricultural land use within the AONB has changed over recent years with 80% of the farmland being used for grazing in 2016 compared with 90% in 2013. Woodland has increased over this period from 6 to 11% and also crops and bare fallow from 3 to 5%.

Grazing livestock (beef and dairy cattle and sheep) is the predominant farm type within the AONB. Sheep are the main grazing livestock type (82% of stock) although cattle (both dairy and beef) make up around 18%. The number of cattle and sheep within the AONB have varied over the last 8 years (cattle increasing from 2,935 in 2010 to 3,231 in 2013 and decreasing to 2,570 in 2016 and the numbers of sheep varying from 12,157 to 13,116 to 12,047 respectively) with an overall decline of 12% and 1% respectively. The number of horses have declined from 82 in 2010 to 62 in 2016 and the poultry numbers have increased significantly from 296 in 2010 to 10,580 in 2016.

In a predominantly agricultural landscape like the Arnside & Silverdale area, agri-environment schemes have been the main tool for delivery of positive land management that contributes to conserving and enhancing landscape character. There is significant uptake of Environmental Stewardship and Countryside Stewardship within the AONB, with 24 live agreements in 2018 covering 1,314 ha, see Figure 2. However overall coverage has decreased over the last 5 years from 2,095ha and 33 agreements in 2013. This is because certain ES schemes within the AONB will have come to an end and Environmental Stewardship closed in 2014. Countryside Stewardship schemes were initially introduced in the AONB in 2017 and there are now five CS schemes within the AONB, including at Trowbarrow and Warton Crag.

Options within the AONB as part of Environmental Stewardship schemes have included, for example, management and protection of archaeological features and hedgerow trees and in-field trees and woodland managed and created, and low input grassland managed, restored or created. Management under ES has declined steadily over the last 5 years: in 2013, management and protection of archaeological features was 41.9 ha, and in 2018 is 14.4 ha; number of hedgerow trees and in-field trees managed under ES in 2013 was 336, and is 304 in 2018; area of

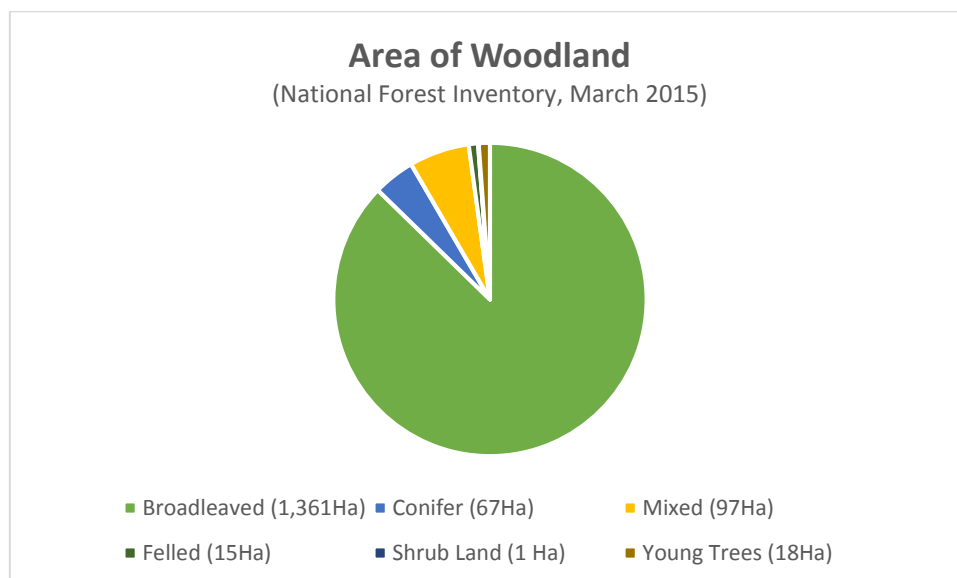
woodland managed and created under ES was 90 ha and is now 30 ha; and area of low input grassland managed, restored or created under ES was 442 ha in 2013 and is 272 ha in 2018.

## Figure 2 Environmental Stewardship and Countryside Stewardship Schemes within the AONB

### 2.1.3 Woodland landscape

#### Background

Woodland is a key component of the AONB landscape and features strongly within the landscape character assessment. Woodland is often associated with the hills and pavements and covers about a third of the terrestrial AONB. 87% of the AONB woodland is broadleaved, 6% mixed woodland and 4% coniferous woodland – see pie chart and Figure 3 below.



© Forestry Commission copyright (2017), Mixed (combining both Mixed predominantly Conifer *plus* Mixed predominantly Broadleaved)

### Figure 3 Woodland Types

Ancient Woodlands are an important feature within the AONB. They are woods that are present on maps dating back to 1600 in England and Wales, and are likely to be even older. Each ancient wood is unique; it has its own local soil, environment, wildlife and cultural history. For this reason ancient woodland is irreplaceable. There are two types of ancient woodland: Ancient Semi-Natural Woods (ASNW) - woods that have developed naturally; most ancient woods have been managed for timber and other products over centuries but have always had woodland cover, and Plantations on Ancient Woodland Sites (PAWS) - ancient woods that were felled and planted with non-native trees, often conifers. Figure 4 shows the areas of Ancient Woodland within the AONB.

English Woodland Grant Schemes (EWGS) have provided funding for sustainable woodland management, over 10 to 15 years. Figure 5 shows the EWGS present within the AONB, approved from 2005 to 2015, covering an area of 12,639ha. Countryside Stewardship has now replaced the English Woodland Grant Scheme.

### Figure 4 Ancient Woodlands within the AONB

### Figure 5 English Woodland Grant Schemes (2005 – 2015)

#### Current status

#### Indicator: Area and % of AONB which is woodland (PLEco5)

In 2015:  
The area of woodland in the AONB is **1,559 ha** covering around a **third** of the terrestrial AONB

Source: Forestry Commission copyright (2017), 2015 data

### **Indicator: Area and % of Ancient Woodland (PLNB13)**

In 2017:  
The area of Ancient Woodland in the AONB is **652 ha**  
  
Ancient & Semi-Natural Ancient Woodland (ASNW) – **488 ha**  
Plantations on Ancient Woodland sites (PAWS) – **164 ha**

Source: © Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2017.

### **Indicator: Woodland in Active Management (PLNB2)**

In 2017:  
**73%** of woodland in the AONB is in positive management

Source: © Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2018

### **Indicator: Number of ancient, veteran and notable trees**

In 2018 in the Arnsdale & Silverdale AONB there are:  
**2** Ancient trees  
**110** Veteran trees  
**16** Notable trees

Source: Ancient tree inventory

### **Indicator: Area of Forestry Commission managed land**

In 2018 in the Arnsdale & Silverdale AONB:  
Total area land managed by Forestry Commission - **221 ha**

Source: Forestry Commission

### **Interpretation**

The area of woodland in the AONB is 1,559 ha, covering around a third of the terrestrial AONB. The percentage of woodland cover has remained fairly stable over recent years. Ancient woodland is very important in the area. There is 652 ha of Ancient Woodland in the AONB (around 14% of the terrestrial AONB). 488 ha are Ancient and Semi Natural Woodland and 164 ha is replanted – Plantations on Ancient Woodland Sites (PAWS).

73% of the woodland in the AONB is in active management in 2017. This has increased significantly since 2013 (54%) as a result of the Nature Improvement Area project undertaken from 2013 to 2015.

Woodland management provides local timber and woodfuel products. Management of woodlands for amenity, recreation and wildlife value is also important. Silverdale District Woodbank is a community group that carries out woodland management work, producing wood fuel and aiming to help people in fuel poverty. There is the potential in the AONB for the development and growth of a successful local woodfuel economy.

There are two ancient trees within the AONB, Common Beech at The Hyning, Warton and Oak in the Dallam Tower Estate. There are 16 veteran and numerous (110) notable trees throughout the area occurring in open fields, within boundaries, within areas of woodland, and as part of designed landscapes and settlements.

## **2.1.4 Development**

### **Background**

Development is a key issue within the AONB and can have a significant impact on the landscape character and visual amenity of the AONB.

The AONB Partnership only concerns itself with planning matters (applications and policy documents) affecting the AONB 'Affecting' means directly affecting, in that the policy or application relates to land or areas within the AONB itself, or indirectly affecting, in that it relates to land or areas which are contiguous with, or can be seen from the AONB and therefore form part of its setting, or where the policy or application is of such a nature that it might

undermine the quality or purposes of the AONB. The Partnership, through formal responses, provides independent advice to local planning authorities to assist with the formal decision-making process.

The Arnside & Silverdale AONB Development Plan Document (DPD) was adopted by Lancaster City Council (LCiC) on 13<sup>th</sup> March 2019 and by South Lakeland District Council (SLDC) on 28<sup>th</sup> March 2019. The AONB DPD is a joint document prepared by both local authorities and now forms part of their Development Plans. The Arnside & Silverdale AONB DPD, which complements the AONB Management Plan, is the first plan in the country that has been prepared to apply policies and allocations across an AONB.

The DPD places development more clearly in the context of the primary purpose of the AONB - to conserve and enhance the natural beauty of the area – and to put this at the heart of planning for the AONB. A landscape capacity-led approach to development, which is consistent with the primary purpose and the AONB's special qualities, is identified in the plan. The DPD identifies sites for new housing and employment within the AONB to meet local needs and sets out planning policies to ensure that development reflects the AONB designation.

As is the case in many rural areas, within the AONB there is a recognised need for housing to meet local needs, in particular affordable housing. In Arnside & Silverdale AONB there are only a very limited number of sites that are considered appropriate for development (i.e. can be developed without causing harm to the special qualities of the AONB). It is therefore very important to ensure that affordable housing is in fact delivered on the appropriate sites that have been allocated, as well as windfall developments or redevelopments on other sites, otherwise the need and the consequent pressure for development will remain.

#### *Current status*

##### ***Indicator: Number of planning approvals within the AONB (years 2013 to 2017)***

|   |            |
|---|------------|
| Number of planning approvals within the AONB: |            |
| 2013-2014                                     | <b>100</b> |
| 2014-2015                                     | <b>120</b> |
| 2015-2016                                     | <b>112</b> |
| 2016-2017                                     | <b>117</b> |
| 2017-2018                                     | <b>116</b> |

Source: SLDC/LCiC

##### ***Indicator: Number of formal responses to planning applications submitted by the AONB Partnership***

|  |           |
|--|-----------|
| Number of formal responses to planning applications submitted by the AONB Partnership: |           |
| 2013-2014  | <b>23</b> |
| 2014-2015  | <b>38</b> |
| 2015-2016  | <b>53</b> |
| 2016-2017  | <b>68</b> |
| 2017-2018  | <b>51</b> |
| 2018-2019 (Jan)  | <b>78</b> |

Source: AONB

##### ***Indicator: Number of new homes delivered within the AONB***

|  |
|--|
| Between 2013 and 2017:<br>Number of new homes delivered within the AONB is <b>33</b> |
|--|

Source: SLDC/LCiC

#### *Interpretation*

Over the last 5 years the number of planning applications submitted and approved within the AONB have increased and, for the last 4 years, there have been over 110 approvals each year.

The number of new homes completed within the LCiC AONB area (2013 - 17) is 24. Permissions granted over this period for new homes is 27. The number of housing completions within the SLDC AONB area (2013 - 18) is 9. No new affordable homes were delivered within the AONB between 2013 and 2017, see section 3.1.3 below. All the new dwellings were market housing.

Formal responses to development applications made by the AONB Partnership have increased significantly over the last 5 years. Formal consultations from the local authorities to the AONB Partnership have also increased. The time spent by the AONB Partnership has significantly increased recently in responding to planning applications, setting out our objections or serious concerns and the non-compliance with relevant local plan policies.

The AONB DPD provides detailed policies that, following its recent adoption, will now be used in the determination of planning applications and will help to help manage and shape the quality of new development. **Policy AS01: Development Strategy** requires all development within the Arnsdale & Silverdale AONB to be consistent with the primary purpose of the AONB designation and support the Special Qualities of the AONB. **Policy AS02: Landscape** requires proposals to demonstrate how they conserve and enhance the landscape and natural beauty of the area and that proposals will not be permitted where they would have an adverse effect upon the landscape character or visual amenity of the AONB. In addition for development proposals within the AONB, **Policy AS08: Design** states that the highest standards of design and construction will be required to conserve and enhance the landscape, built environment, distinctive settlement character and historic, cultural and architectural features.

## 2.2 Biodiversity

### 2.2.1 Designated sites

#### *Background*

Sites of Special Scientific Interest (SSSIs) safeguard England's most important areas of natural heritage. They include some of our most spectacular and beautiful habitats and provide a refuge for many of our rarest plants and animals. They also protect our most important features of geology and physical geography, places where valuable records of the Earth's history are revealed. Most SSSIs are in private ownership and their management is a shared responsibility with Natural England which is the body responsible for designating SSSIs and for monitoring their condition according to the following classification:

- Favourable
- Unfavourable, recovering
- Unfavourable, no change
- Unfavourable, declining

Figure 6 shows the distribution of these designated sites within the AONB.

In addition, the AONB contains Special Areas of Conservation (Morecambe Bay, Morecambe Bay Pavements) and Special Protection Areas (Morecambe Bay and Duddon Estuary, Leighton Moss) as illustrated in Figures 7 and 8; Morecambe Bay and Leighton Moss are also Ramsar sites.

There are also a range of Local Wildlife Sites in the AONB, Figure 9, one National Nature Reserve (Gait Barrows) and two Local Nature Reserves (Trowbarrow and Warton Crag), Figure 10.

**Figure 6 Sites of Special Scientific Interest (SSSIs)**

**Figure 7 Special Areas of Conservation (SAC)**

**Figure 8 Ramsar Sites and Special Protection Areas (SPA)**

**Figure 9 Local Wildlife Sites**

**Figure 10 National and Local Nature Reserves**

## Current status

### Indicator: Number/area of sites and % of AONB

Designated sites within the AONB:

**19 SSSIs**, covering **4,079 ha**, **54%** of the total area of the AONB

**2 SACs**, covering **3,548 ha**, **47%** of the total area of the AONB

**3 SPAs**, covering **3,312 ha**, **43%** of the total area of the AONB

**64 LWS**, covering **857 ha**, **11%** of the total area of the AONB

Source: NE, LCC, CCC

### Indicator: Condition of SSSIs (PLNB12)

In 2018:

**99.1%** of the SSSI area in **favourable or recovering** condition

Source: © Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2018

### Indicator: Condition of broad habitats within SSSIs (PLNB 5)

In 2017:

**98.7 %** of Broadleaved, mixed and yew woodland (upland)

**100%** of Calcareous grassland (lowland)

**100%** of Calcareous grassland (lowland)

**100%** Earth heritage

**90%** Fen, marsh and swamp (lowland)

**91.9%** Inland rock

**100%** Littoral sediment

**100%** Standing open water and canals

within SSSIs were in **favourable or recovering** condition

Source: © Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2018

### Indicator: Condition of Local Wildlife Sites

In 2015:

**21** of the 64 LWS were in **positive management**

Source: G Skelcher, County Wildlife Sites Survey (2014/15)

## Interpretation

There are 19 Sites of Special Scientific Interest (SSSI) in the AONB area (either completely or partially within the boundary):

- |  |                          |
|--|--------------------------|
| - Arnside Knott                          | - Coldwell Farm Pasture  |
| - Cringlebarrow and Deepdale             | - Eaves Wood             |
| - Far Arnside                            | - Gait Barrows           |
| - Hale Moss Caves                        | - Hawes Water            |
| - Jack Scout                             | - Leighton Moss          |
| - Marble Quarry and Hale Fell            | - Middlebarrow           |
| - Morecambe Bay                          | - Silverdale Golf Course |
| - Thrang End and Yealand Hall Allotments | - Thrang Wood            |
| - Trowbarrow                             | - Underlaid Wood         |
| - Warton Crag                            |                          |

The sites cover a total area of 4,078 ha. This represents 54% of the total area of the AONB.

48% of the total AONB area is designated under European Directive (combined SACs and SPAs – see above) for its habitat, species or bird interest.

There are also 64 Local Wildlife Sites in the AONB covering 11% of the AONB area. The list of sites can be found in Appendix 3.

Figure 11 shows the condition of the units within the SSSIs within the AONB. In 2018, 64.7 % of the SSSI area were in favourable condition, 34.4 % is in unfavourable but recovering condition, 0.7 % is in unfavourable no change and 0.2 % in unfavourable, declining condition.

#### **Figure 11 Sites of Special Scientific Interest (SSSI) Unit Condition**

In 2013, 99.8% of the SSSI areas were in favourable or recovering condition but by 2018 this has declined to 99.1%. Over this period, the area of unfavourable no change has increased from 3 ha to 28 ha and area of unfavourable declining condition has increased from 7 to 10 ha. Middlebarrow unit 3 remains in decline. Hawes Water unit 8 declined from favourable to declining. Hawes Water unit 12 remains unfavourable no change. Gait Barrow's unit (Little Hawes Water) and Warton Crag (Three Brothers allotments) have declined from favourable to unfavourable no change.

Details of the reasons for decline are given in Appendix 3. In summary:

The removal of around 1 ha of beech plantation at Hawes Water SSSI unit 8 was the reason for decline in condition. This work has been undertaken in 2018.

At Middlebarrow SSSI unit 3 cotoneaster removal and deer control are the reasons for adverse condition. At Gait Barrows SSSI merged units, the decline in condition was because the extent of priority habitat (marl lake and base-rich fen) is greatly reduced due to the modified state of Little Hawes Water. Restoring the hydrology by blocking the channel between Hawes Water and Little Hawes Water to increase the extent of the open water and surrounding base rich fen (features of MB Limestones SAC) is underway.

At Warton Crag SSSI unit 6 over grazing is the reason for adverse conditions.

The condition of broad habitats within SSSIs (favourable and recovering) has remained the same over the last 5 years in woodland (99%), grassland (99%), earth heritage (100%). The condition of Inland Rock has improved (88% to 91.9%) and littoral sediment (78% to 100%). Wetland (fen, marsh and swamp) has declined from 100% to 90%, based on Gait Barrows – as above.

In 2014/2015 a survey was undertaken<sup>3</sup> to assess the status of the local wildlife sites within the AONB. Of the 64 LWS, 21 were assessed as being broadly in acceptable management. For most of the sites, however, recommendations were made for management improvements of the sites such as extending areas of grassland by scrub control, more sympathetic grassland management, controlling non-native trees.

Habitats and species are sensitive to and can be harmed by new development, for example through degradation or absolute loss or through impacts such as increased activity or light spillage. The AONB DPD **Policy AS04: Natural Environment** requires new development to conserve and enhance the AONB's biodiversity and geodiversity, avoid the fragmentation and isolation of or disturbance to wildlife, habitats and species. International, national and local designated sites and priority habitats and species are protected by this policy.

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<sup>3</sup> County Wildlife Sites Survey 2014/15, G Skelcher

## 2.2.2 Priority habitats

### Background

Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006 requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. Fifty-six habitats of principal importance are included on the S41 list and are regarded as conservation priorities.

In 2016 a detailed survey was undertaken within the AONB to confirm the location, extent and type of priority habitat within the AONB<sup>4</sup>.

### Current status

#### Indicator: Extent and type of priority habitat within the AONB

Extent of priority habitat within the AONB – **5,096 ha, 67% cover of the AONB**

#### Types of priority habitat:

##### Coastal

Intertidal mudflats

Coastal saltmarsh

Maritime cliff and slopes

##### Woodland

Lowland mixed deciduous woodland

Upland mixed ashwoods

Wet woodland

Wood-pasture and parkland

##### Wetland

Coastal and floodplain grazing marsh

Reedbed

Lowland fen

##### Grassland

Lowland calcareous grassland

Lowland meadows

Purple moor-grass and rush pastures

##### Heathland

Lowland heathland

##### Inland rock

Limestone pavements

Inland rock outcrop and scree habitats

##### Freshwater

Oligo-mesotrophic lakes

Ponds

Rivers

##### Marine

Estuarine rocky habitats

##### Arable and horticultural

Traditional orchards

##### Boundary

Hedgerows

Source: G Skelcher, Priority Habitat Survey, 2016, NE 2018

<sup>4</sup> Priority Habitat Survey, 2016, G Skelcher

**Indicator: Hectares of land enhanced for nature through the work of the AONB Partnership**

In 2018:  
Hectares of land enhanced for nature through the work of the  
AONB Partnership – **36.3 ha**

Source: AONB

**Indicator: Hectares of nature reserves (NNR, LNR, NT, RSPB, WT, Woodland Trust, Landscape Trust plus private nature reserves) in the AONB**

In 2018:  
Hectares of nature reserves in the AONB: **2,636 ha**

Source: Natural England, National Trust, RSPB, Cumbria and Lancashire Wildlife Trusts, Woodland Trust

*Interpretation*

Figure 12 shows the geographic extent and location of the priority habitats within the AONB.

**Figure 12 Priority habitats**

Priority habitats cover around 70% of the AONB. The most extensive single priority habitat type is the **intertidal mudflats**, covering some 2,475 ha, 33%. Together with the 379 ha of **coastal saltmarsh** and 3.6 ha of **maritime cliff and slopes**, the coastal habitats cover almost 40% of the whole AONB.

Nearly 20% (1330 ha) of the AONB comprises priority habitat woodland; at least 775 ha of which is **upland mixed ashwoods** (316 ha of woodland incorporated from Natural England data is not defined beyond 'deciduous woodland' and it is likely that a large proportion of this will also be **upland mixed ashwoods**).

There are nearly 500 ha of wetland habitats, mainly comprising 309 ha of **coastal and floodplain grazing marsh** (principally found within three large areas at Arnside Moss, Hale and Warton), and 135 ha of **reedbed** (mainly at Leighton Moss, Barrow Scout and Hawes Water). **Lowland fen** contributes 52 ha to the wetland total, but much of this at Silverdale Moss has recently been planted over to create an additional reedbed, which will result in about half of this total being lost and added to the area of **reedbed**.

183 ha (2.4% of the AONB) falls into grassland categories. The most extensive of these is **lowland calcareous grassland**, which has a mapped coverage of 127 ha, and also includes Lowland meadows (51ha) and Purple moor-grass and rush pastures (6ha).

Inland rock covers about 217 ha (c.3%), limestone pavements and inland rock, outcrop and scree habitats (161ha).

Freshwater (**oligo-mesotrophic lakes, ponds and rivers**) contribute just under 10 ha, while the total area of **traditional orchards** is just over 3 ha. Upper shore **estuarine rocky habitats** occur below the Silverdale and Arnside cliffs (Skelcher 2016), but these areas have not been mapped.

The AONB Partnership, through the volunteer programme and contractors, have enhanced over 36 ha of land in 2018. This has included scrub, woodland and grassland management at Trowbarrow (14 ha) and Warton Crag (17 ha) Local Nature Reserves, and a range of small sites across the AONB: Bank Well (0.1 ha, 957 sq m), Crossfield Wood (0.1 ha 600 sq m), Sandside verge (0.1 ha 400 sq m), Sandside cutting (0.5 ha 5000 sq m), Dobshall Wood, including woodland and grassland work, (4.1 ha - directly worked on 0.2 ha grassland and 0.2 ha woodland coppicing), Ashmeadow (0.2 ha 2000 sq m), Woodwell 0.1 ha 237 sq m) and Beechwood (0.1 ha 1320 sq m).

There are a number of nature reserves across the AONB, owned and managed by conservation organisations such as National Trust, RSPB, Cumbria and Lancashire Wildlife Trusts, Woodland Trust, the Arnside and Silverdale AONB Landscape Trust and also private owners. At the beginning of 2018, the area of nature reserves in the AONB was

2,636 ha and then increased to 2,844.5 ha by the end of the year. In June 2018, RSPB purchased Warton Mires (32.5 ha), with contributions from other organisations, and the site is currently being restored as wet grassland.

The Landscape Trust owns and manages a number of reserves in the AONB including Teddy Heights, Coldwell Parrock and Coldwell Meadow. In May 2018, the Trust purchased new land at Coldwell (3.95 ha). There will be links to Coldwell Parrock and Coldwell Meadow and the new land creates an overall horseshoe shaped extended reserve.

Fell End Nature Reserve (12 ha) has been created as part of the Fell End Holiday Park and is now open to both guests and the general public.

### 2.2.3 Species

#### Background

There is an amazing diversity of species found within the AONB, many of which are uncommon in a national or international context but thrive within the unique mosaic of habitats. There are over **1,100 species**, regarded as **notable**, which have been recorded in the AONB, and this includes over **170 S41 species**, most of which are likely to be resident or regular visitors<sup>5</sup>. Of particular note are the Bittern, High Brown Fritillary and the Lady's-slipper orchid.

#### Current status

##### Indicator: Species records - birds

|   |           |
|---|-----------|
| In 2018:  |           |
| Total counts from Leighton Moss, Silverdale Moss, Barrow Scout and Saline Lagoons - |           |
| <b>Bittern</b>  |           |
| Booming:  | <b>2</b>  |
| Nests:  | <b>1</b>  |
| <b>Bearded Tit</b>  |           |
| Pairs:  | <b>25</b> |
| Young:  | <b>29</b> |
| <b>Marsh Harrier</b>  |           |
| Nests:  | <b>3</b>  |
| Young fledged:  | <b>6</b>  |
| <b>Avocet</b>   |           |
| Pairs:  | <b>29</b> |
| Fledged young:  | <b>20</b> |

Source: RSPB

##### Indicator: Species records - butterflies

|  |           |
|--|-----------|
| In 2018:   |           |
| Butterflies of RSPB Warton Crag Nature Reserve – |           |
| High Brown Fritillary                            | <b>0</b>  |
| Pear-bordered fritillary                         | <b>0</b>  |
| Small pearl-bordered fritillary                  | <b>73</b> |
| Northern Brown Argus                             | <b>49</b> |
| Dingy Skipper                                    | <b>41</b> |

Source: RSPB

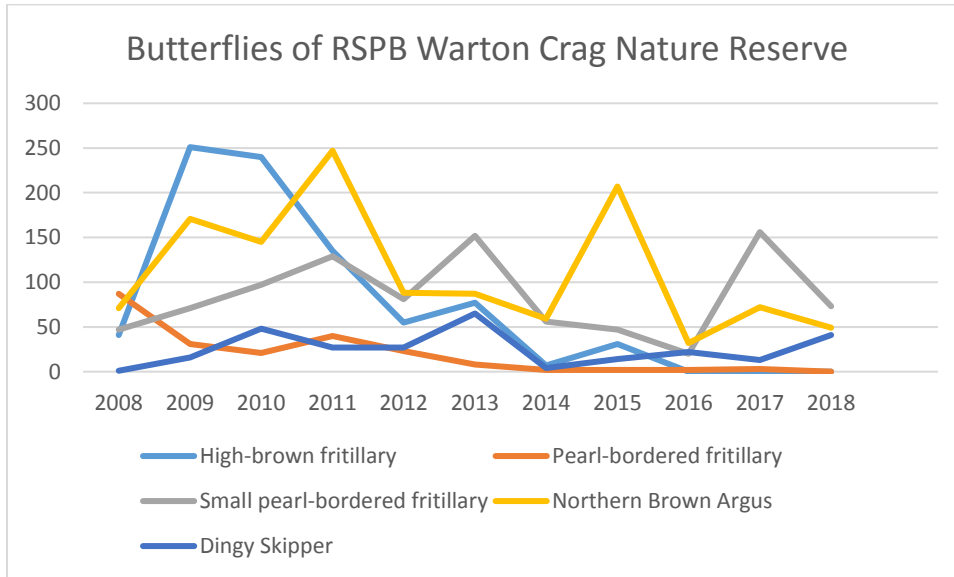
##### Indicator: Number of species recovery programmes delivered

|  |
|--|
| Number of species recovery programmes delivered: <b>1</b> (Ladys slipper Orchid) |
|--|

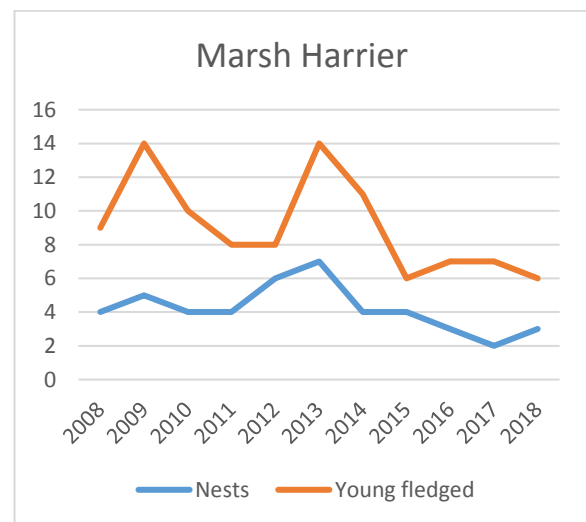
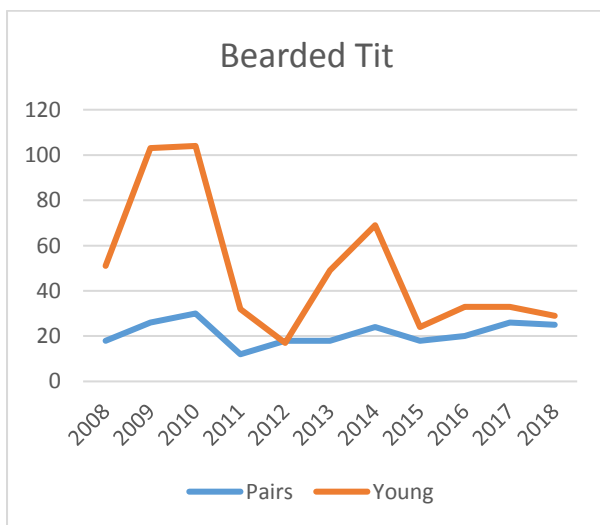
<sup>5</sup> Notable and Characteristic Species in the Arnsdale & Silverdale AONB, G Skelcher, 2016

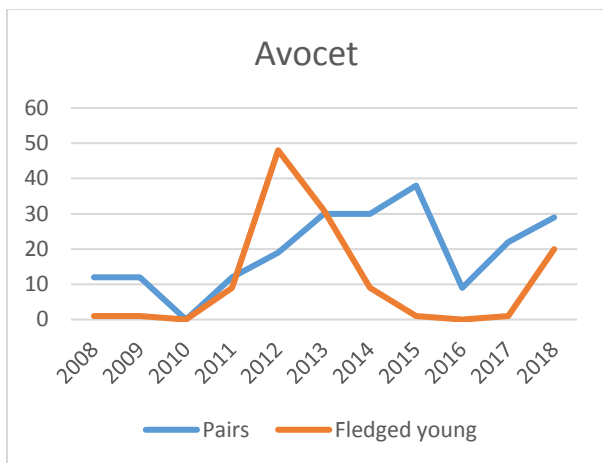
### Interpretation

The number of High Brown Fritillaries have varied significantly over the last decade from 50 in 2008, increasing to 251 in 2009 and then declining to zero in 2018. Northern Brown Argus have also varied significantly, from 71 in 2008 up to 247 in 2011 to 49 in 2018. Pearl-bordered fritillaries have declined over this period, from 87 in 2008 to zero in 2018. The numbers of Small pearl-bordered fritillaries and Dingy Skippers have varied, increasing and decreasing, over the years, from the lowest of 20 in 2016 to the highest of 156 in 2017 and from 1 in 2008 up to 65 in 2013, respectively.



### Total bird counts from Leighton Moss, Silverdale Moss, Barrow Scout and Saline Lagoons





Over the past 9 years, from 2008, there has only been one booming bittern within the AONB but in 2018 there were 2. There was one bittern nest in both 2008 and 2009 but then none until one again in 2018. The number of pairs of Bearded Tits was 25 in 2018 and has varied a little over the years. The numbers of young, however, has varied significantly, from a maximum of 104 in 2010 to a minimum of 17 in 2012 and 29 in 2018. The young fledged Marsh Harriers and Avocets have also varied over the years –from 14 Marsh Harriers (in 2009 and 2013) down to 6 in both 2015 and 2018 , and no Avocets in 2010 to 48 in 2012, down to zero again in 2016 and up to 20 in 2018. The number of Avocet pairs has also varied over the years, with zero in 2010, a maximum of 8 in 2015 and 29 in 2018.

One species recovery programme has been delivered within the AONB over the past five years – the Ladys slipper Orchid. Following this successful project, Gait Barrows National Nature Reserve is now home to a thriving population of Lady’s-slipper orchid, the rarest of British wild flowers.

The University of Cumbria, working with the Forestry Commission, Natural England and Cumbria Wildlife Trust, is planning/delivering a South Cumbria Species Restoration project which will be aiming to restore up to twelve species of plants, animals, birds and invertebrates which are missing from sites in the region.

## 2.3 Geodiversity

### 2.3.1 Geology

#### *Background*

The Carboniferous limestone bedrock of the Arnside and Silverdale area underpins the natural beauty of the AONB. The limestone unifies its character and creates the conditions that have allowed the wide diversity of habitats to develop.

The superficial geology, for example tidal flats, saltmarsh, lacustrine and peat deposits, also contribute to the natural beauty by creating broad areas of flat ground which contrast with, and provide a natural setting for, the limestone hills. The saltmarsh areas, dynamically changing in their location and extent, provide natural beauty in their contrast with the different colours and textures of the tidal flats beyond. Deposits have contributed to the development of reedbed, fen and mosses.

Key geological elements of the mosaic of landscape characters across the AONB are the limestone hills, open and wooded limestone pavements, limestone scarps and slacks (including ‘The Trough’ close to Trowbarrow Quarry), the limestone quarries themselves, locally complex geological structures, low coastal cliffs, shingle bays, saltmarshes, tidal flats, former and current lakes, former areas of lowland raised bogs, residual peat bogs and reedbeds, and the shapely rounded low hills known as ‘drumlins’ which are associated with former ice sheets and glaciers.

However, it is not just the geology (i.e. the characteristics of the rocks, sediments and geological structures), which is important; it is also the ‘geodiversity’, the sheer variety of geological features, including the fossils, minerals, natural processes, landforms and soils – as well as the rocks – which underlie and determine the physical character of the landscape and the natural environment. Other features of geological interest which also contribute to the landscape

character include solution hollows (or dolines) in the limestone, sea caves, scree-covered slopes, erratic boulders, karstic features and Carboniferous limestone fossil assemblages.

The landscape has been shaped, primarily, by its limestone geology but also by range of 'geomorphological' processes, which have acted upon it over many millions of years. Current active processes, such as losing saltmarsh, channel shifts across the estuary, lead to continuing changes; this is clearly not a static landscape.

A Geology Audit and Assessment<sup>6</sup> has been undertaken in 2018. A detailed AONB-wide audit has been carried out and research undertaken into the geological evolution of the area. This has provided a robust evidence base of the geodiversity of the AONB for monitoring delivery of the AONB Management Plan, monitoring landscape change and to inform an ecosystems approach to AONB management activity, helping to ensure the landscape is resilient to change and continues to deliver multiple benefits for people.

Maps of the bedrock and superficial geology of the AONB, prepared as part of the Assessment, are shown in Figures 13 and 14.

### Figure 13 Bedrock Geology

### Figure 14 Superficial Geology & Landforms

#### Current status

#### Indicator: Number/area of geological sites and % of AONB

Designated sites within the AONB:  
**2** geological SSSIs, covering **30ha, 0.4%** of the AONB area  
**8** Local Geological Sites (LGS), covering **429ha, 6%** of the AONB area  
**16** Limestone Pavement Orders (LPOs), covering **1178ha, 15%** of the AONB area

Source: NE, LCC, Cumbria Geoconservation

#### Indicator: Condition of geological SSSIs (PLNB12)

In 2018:  
**100%** of the geological SSSI area in **favourable** condition

Source: © Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2018NE

#### Indicator: Condition of Local Geological Sites

In 2018:  
**100%** of the LGS are in **favourable** condition

Source: AONB Geology Audit and Assessment, 2018, Cuesta Consulting

#### Interpretation

There are two nationally important geological sites within the AONB, designated as SSSIs for their geological interest - Trowbarrow Quarry and Hale Moss Caves. The condition of both these sites remains favourable. While both Gait Barrows and Leighton Moss SSSIs are primarily designated for their biological interest they are also important for their geology.

There are 16 Limestone Pavement Orders covering 15% of the AONB area (see Figure 15):

- |  |                                    |
|--|------------------------------------|
| - Burton Well and Silverdale Golf Course | - Challan Hall Allotment           |
| - Cringlebarrow and Deepdale             | - Eaves Wood                       |
| - Gait Barrows                           | - Haverbrack Bank                  |
| - Heald Brow                             | - Hynning Scout Wood               |
| - Leighton Beck Wood and School Lots     | - Major Woods                      |
| - Marble Quarry and Hale Fell            | - Middlebarrow                     |
| - Thrang End and Yealand Hall Allotment  | - Trowbarrow Quarry and the Trough |

<sup>6</sup> Geology Audit and Assessment, Final Report, Cuesta consulting, January 2019

- Underlaid Wood
- Warton Crag and Grisedale Wood

There are 8 Local Geological Sites, covering 6% of the AONB area (see Figure 16):

- Arnside Foreshore
- Sandside (Sandside Rail cutting and Throughs Lane)
- Burton Well, Silverdale
- Warton Crag
- Warton Dolines (Hawes Water and Little Hawes Water, Deepdale Pond, Three Brothers, NW of Warton Crag)
- Far Arnside
- Blackstone Point
- Jack Scout/Silverdale Shore

**Figure 15 Limestone Pavement Orders**

**Figure 16 Local Geological Sites**

The Geology Audit and Assessment concluded that generally, the sites recognised for their geodiversity importance are in favourable condition. The main conservation issue is the need for vegetation clearance at a number of exposure sites, including Sandside Cutting, parts of Trowbarrow Quarry SSSI, the small quarry within the Arnside Foreshore LGS and possibly the natural outcrop of Whin Scar within which Fairy Steps is situated.

### 2.3.2 Soils

#### Background

Soils within the AONB are generally thin and free draining. The range of 'Soilscapes' present within the AONB (categorised by the National Soils Research Institute) are shown in **Figure 17**.

**Saltmarsh soils** are exclusively in areas of saltmarsh development, and are therefore constantly changing in extent with the growth and erosion of the saltmarsh in response to the changing position of the main channels within the Kent Estuary and Morecambe Bay.

**Freely draining, slightly acid loamy soils** are present in areas of glacial deposits which, in turn, are derived from a wide range of rock types eroded and transported by glaciers from source areas in the Lake District and Yorkshire Dales, further north. In contrast to the limestone geology of the AONB, these transported materials include many which are more 'acidic' (rather alkaline) in nature. **Freely-draining slightly acid but base-rich soils** developed preferentially on outcrops of limestone, and thus contain higher proportions of 'basic' (in this case Calcium carbonate) minerals.

**Loamy and sandy soils with naturally high groundwater and a peaty surface** are present in low-lying areas near the coast which are underlain by 'raised marine' sediments from times of higher sea level in the past. These areas subsequently developed into mosses (Arnside Moss, Silverdale Moss and Barrow Scout Moss) or coastal marsh (the inland portion of Warton Marsh).

**Raised bog peat soils** developed in areas which were once characterised by lowland raised bogs (including Leighton Moss, Storrs Moss, White Moss, Hale Moss and Warton Moss). However, these specialised habitats no longer exist, having been cut for peat and/or drained for agriculture in 19<sup>th</sup> and 19<sup>th</sup> centuries. Only the lower layers of groundwater-saturated peat now remain in these areas, and the peaty soils now support fen, carr or reedbed habitats.

#### Current status

#### Indicator - Agricultural land classification within the AONB

Agricultural land classification within the AONB:

**31%** in Grade 3

**39%** in Grade 4

**22%** in Grade 5

Source: Natural England, 2018

#### Interpretation

The majority of Arnside & Silverdale AONB soils are relatively poor and highly variable over short distances.

Agricultural Land Classification within the AONB (see Figure 18) identifies 31% of the terrestrial AONB as Grade 3 (good/moderate), 39% as Grade 4 (poor), and 22% as Grade 5 (very poor). There is no Grade 1 (excellent) or Grade 2 (very good) agricultural land within the AONB.

### Figure 18 Agricultural Land Classification

## 2.4 Water Environment

### 2.4.1 Water quality

#### Background

As a consequence of its geology, the Arnside & Silverdale AONB is a relatively dry landscape. However, water has played an important role in the formation of the area and is a key feature of the landscape. The two principal rivers in the area, River Bela and River Keer form the AONB boundaries, to the north east and south respectively. Leighton Beck, Quicksand Pool and Black Dyke are smaller water courses which are present within the terrestrial AONB. Standing water is rare in a limestone landscape where most water finds its way underground. The main water body within the AONB is Hawes Water, an internationally important marl lake, one of only a small number in England. Open water is also present at Leighton Moss and there is also a small lake at Haverbrack. There are numerous springs and small ponds across the AONB. The springs are historically important having been a key factor in the location of settlements, particularly Silverdale village and its dispersed pattern.

About 37 % of the AONB is covered by the tidal waters of the Kent Estuary and Morecambe Bay.

In 2015, England adopted new Water Framework Directive (WFD) monitoring and classification standards laid out in cycle 2 of WFD. This is a step change in classifications from cycle 1 of WFD and the cycle 1 and 2 data cannot be compared. The data reported in a given year relates to data collected over the previous year and in 2016, the Environment Agency (EA) moved to a triennial reporting system and will report next in 2019. The river water bodies in the AONB monitored by the Environment Agency are Leighton Beck, Leighton Moss and the Pool, River Keer (Lower) and River Bela (14.33km total length in Cycle 2). The standing water bodies monitored by the EA in the AONB include only Hawes Water and the transitional water bodies are the Kent estuary.

The Government promoted the Catchment Based Approach (CaBA) to help improve the quality of the water environment. CaBA embeds collaborative working at a river catchment scale to deliver cross-cutting improvements to the water environments and aims to generate more effective stakeholder engagement in order to tackle environmental problems at a more local scale. The collaborative ways of working to consider the needs of the water environment and acting to enhance it in a truly collaborative way fit comfortably with the AONB management approach. 'Becks to Bay', led by South Cumbria Rivers Trust (SCRT), and the Lune Rivers Trust (LT) are the local catchment partnerships covering the AONB area.

#### Current status

#### **Indicator: Ecological status of river, standing and transitional water bodies**

Bespoke water quality data set provided by Andrew Frankish of Environment Agency (EA) based on data on EA Catchment Planning System (classification data to 2016).

Source: Environment Agency

The 2016 AONB water quality data is set out in Appendix 4.

In 2018, Wood Well, Burton Well and Bank Well were sampled by the Environment Agency, as part of the Leighton Moss and Hawes Water Diffuse Water Pollution Plan Judicial Review Consent Order, being undertaken by Natural England and the EA, and were found to be free from any contamination. The locations of the monitoring points and the full data can be found in Appendix 4.

### *Interpretation*

Where water quality monitoring takes place in the AONB it shows that water quality is overall generally good in the rivers and streams and in Hawes Water. At Leighton Moss monitoring indicates levels of phosphorus and nitrate elevated above the level required to ensure that the SSSI is in favourable condition. Agriculture has been identified as the primary reason for the elevated levels.

While there is currently little monitoring information to confirm it, there are concerns about groundwater quality in the Silverdale area. Discharges from private sewage treatment infrastructure and assets are the cause of concern here. The vast majority of the area drains to private sewerage treatment infrastructure rather than the public sewerage system.

The Leighton Moss and Hawes Water Diffuse Water Pollution Plan Judicial Review Consent Order was brought about by a national legal challenge to the Environment Agency by a number of Non-Governmental Organisations, including Fish Legal and the World Wide Fund for Nature. The challenge concerned the deployment of Water Protection Zones. The site at Leighton Moss and Haweswater is a Natura 2000 site and Natural England are required to look at issues affecting water quality there and consider whether a Water Protection Zone would be appropriate, or whether water quality targets could be met by using current legislation and voluntary action. Environment Agency are leading overall on consent order work nationally, but Natural England are leading at Leighton Moss.

An improved water quality monitoring programme for Leighton Moss and Hawes Water has been developed with involvement from local landowners, to identify suitable sites and also to record field management practices which could affect results at the monitoring points. The new sampling and monitoring schedule should give a fuller picture of nutrient and bacterial levels in the water and surrounding drains. The schedule will also include macrophyte sampling which will examine the food sources of the species the site is designated for.

The catchment is managed for agriculture, forestry, sporting and public amenities as well as for wetland habitat. Farming in the catchment is generally pastoral cattle and sheep grazing, with some conservation grazing and smallholdings. Land management practices might be contributing nutrients.

In addition, there is no mains foul drainage in the catchment. Properties are instead served by septic tanks/sewage treatment plants. The source apportionment in the DWPP attributed a small proportion of the problem nutrient levels in the waterbodies to discharges from this infrastructure. Samples from the new Environment Agency monitoring programme referred to above will be analysed to give an indication of the origin of the source of pollutants they contain. This should help indicate whether the share of the problem nutrients currently allocated to the sewage treatment infrastructure is correct.

The AONB DPD **Policy AS12: Water quality, sewerage and sustainable drainage** seeks to ensure that water quality, sewerage and sustainable drainage are planned and managed in ways that avoid adverse impacts on water bodies, ensuring that existing problems are not made worse by new development proposals and that where possible, improvements are made.

#### **2.4.2 Bathing water quality**

##### *Background*

Bathing water quality is not monitored within the AONB but is monitored by the Environment Agency in two locations close by: north Morecambe and south Morecambe and samples are taken during the bathing water season between May and September. Classification for each bathing water is calculated annually, based on samples from the previous four years. These classifications, from best to worst, are "excellent", "good", "sufficient" or "poor".

The revised Bathing Water Directive (2006/7/EC) has come into force and from 2015 there are new, tighter standards – all bathing waters are to be classified as 'sufficient'. The first official classification under these new standards was published towards the end of 2015, when a full four-year dataset was first available.

##### *Current status*

##### **Indicator: Bathing water quality classifications**

In 2017, at Morecambe North and Morecambe South:  
The bathing water quality classifications were **'good'**

Source: © Environment Agency and database right.

Assessments for each of the beaches over the last 4 years are given in Appendix 4.

#### *Interpretation*

Both beaches in Morecambe were classified as 'sufficient' in 2014\* and 2015 and 'good' in 2016 and 2017.

\*A classification from before 2015 indicates the class that the bathing water would have achieved if the new bathing water quality standards had been in force.

### **2.4.3 Water Resources**

#### *Background*

The Environment Agency is responsible for managing water resources in England. To make sure there is enough water for people (public water supply, industry and agriculture) and a healthy environment, the Environment Agency controls how much water is taken with a permitting system. They regulate existing licences and grant new ones and use the catchment abstraction management strategy (CAMS) process and abstraction licensing strategies to do this.

Regarding Private Water Supplies, Section 77 of the Water Industry Act 1991 requires a local authority to keep itself informed about the wholesomeness and sufficiency of every private water supply within its area.

#### *Current status*

##### ***Indicator: Abstraction licences within the AONB***

In 2018 there are:  
**8** licences:  
- **4 surface water** abstractions  
- **4 groundwater** abstractions

Source: © Environment Agency and database right.

There are 8 abstraction licences within the AONB, permitting 4 surface water abstractions (3 from the River Bela and one from the River Keer) and 4 groundwater abstractions. Details of the use, volume and locations are set out in Appendix 4.

##### ***Indicator: Private water supplies within the AONB***

In 2018 there are:  
**9** private water supplies (pws):  
- **8 groundwater** pws  
- **1 rainwater harvesting** pws

Source: © SLDC, LCiC.

#### *Interpretation*

Abstraction from ground and surface water is not extensive within the AONB.

Abstraction licensing strategies for South Cumbria and Lune and Wyre, Feb 2013, indicate that there is water available for licensing within the AONB area generally. However, there is no water available from Hawes Water and restricted water available from the Bela. Licensing strategies remain unchanged since 2004, indicating no particular or increasing pressure on water resources in AONB area. Overall, water resources are not considered to be an issue within the AONB.

### **2.4.4 Flood risk**

#### *Background*

Fluvial flood risk has been low within the Arnside & Silverdale AONB but in December 2015 Storm Desmond led this to be the wettest calendar month overall since records began and there was flooding in Warton and Beetham villages and flooding across the mosses. Surface water flooding is an issue in Warton and coastal flooding is a

potential risk in certain low lying areas of the AONB. The issue of coastal flooding and salt water inundation of the low lying moorlands within the AONB is cross cutting with climatic factors.

The Cumbria Strategic Floods Partnership (CSFP) has evolved since the devastating floods of December 2015 and South Cumbria Rivers Trust (SCRT) are locally co-ordinating the Catchment Management Group (CMG) for South Cumbria. The aims are to deliver projects and actions to help increase flood resilience. The South Cumbria CMG currently sits alongside Becks to Bay, the catchment partnership, and as they develop will become more aligned in the future. Becks to Bay will continue to deliver activity to improve flood resilience alongside the other aims of the catchment partnership.

#### Current status

##### **Indicator: Distribution of areas at risk of fluvial flooding**

|   |
|---|
| Environment Agency Flood risk maps, 2018: <ul style="list-style-type: none"><li>- risk of flooding both from rivers and sea (Figure 19)</li><li>- surface water flooding risk (Figure 20)</li></ul> |
|---|

Source: Environment Agency

##### **Figure 19 Likelihood of flooding – from rivers and sea**

##### **Figure 20 Risk of flooding from surface water**

##### **Indicator: Number of natural flood management projects within the AONB**

|  |
|--|
| Within the AONB, 2013-2018:<br>Number of natural flood management projects = 0 |
|--|

Source: SCRT

#### Interpretation

It can be seen on Figure 19 that the area contains a number of areas at risk of flooding, both from rivers and sea. Land and property in flood zone 2 have a medium probability of flooding - land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding. Land and property in flood zone 3 have a high probability - land having a 1 in 100 or greater annual probability of river flooding; or land having a 1 in 200 or greater annual probability of sea flooding.

Figure 20 shows the surface water flooding risk within the AONB. Areas at high risk of flooding have each year a greater chance of flooding than 1 in 30 (3.3%). Areas of medium risk of flooding have a chance of flooding between 1 in 100 (1%) and 1 in 30 (3.3%). Both medium and high risk levels of flooding can be difficult to predict, much more so than river or sea flooding.

An initial assessment of the Beetham flood defences following the December 2015 floods has been undertaken and recommended actions in the report - Beetham and Milnthorpe, Flood Investigation Report<sup>7</sup> - include 'exploring opportunities for natural flood management solutions to be used upstream of Beetham and Hang Bridge area in order to 'slow the flow' and manage peak river levels'.

The Lancaster District Flood Report<sup>8</sup>, includes Gardners Road Area, Warton.

The AONB Partnership will support Natural Flood Management, whose wider benefits include better wildlife habitats, recreation opportunities and water quality. Natural flood management can play an important role in flood and coastal risk management. The South Cumbria Catchment Management Group are developing a pipeline of projects. Phase I are those which are being currently delivered. Phase II is probably more strategic looking at the communities at risk and developing a strategy for where resources/ projects etc are focused and Phase III is a much longer timeframe. There are no current natural flood management projects within the AONB.

<sup>7</sup> Beetham and Milnthorpe, Flood Investigation Report, Environment Agency in partnership with Cumbria County Council, final report, July 2017, <http://www.cumbria.gov.uk/eLibrary/Content/Internet/536/6181/4292615406.pdf>

<sup>8</sup> Lancaster District Flood Report, Lancashire County Council, February 2017, <https://www.lancashire.gov.uk/media/901161/lancaster-final-report.pdf>

## 2.5 Historic Environment

### Background

The rich historic heritage of the AONB and the distinctive settlement characters are two of the special qualities of the area and are integral to its character. The historic environment includes all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged. This includes designated assets but also not only involves undesignated (or local heritage assets) but the potential for unrecorded archaeology, and historic landscape character areas.

### Current status

#### **Indicator: Number of heritage assets**

In 2018 in the Arnsdale & Silverdale AONB there are:

- 10** Scheduled Monuments
- 115** Listed Buildings (6 Grade 1, 10 Grade II\*, and 99 Grade II)
- 1** Registered Parks and Gardens
- 3** Conservation Areas
- 695** Historic Environment Records

Source: Historic England, Cumbria County Council, Lancashire Archaeology Advisory Service, SLDC/LCIC

#### **Indicator: Number of heritage assets at risk**

In 2017:

- 4** sites within the AONB are on the Heritage at Risk Register - - Arnsdale Tower, Beetham Hall (curtain wall and uninhabited portion), Hazelslack Tower and Warton Crag small multivariate hillfort

Source: Historic England

#### **Indicator: Number of heritage assets where condition has been improved through the work of the AONB Partnership (volunteer work)**

In 2018:

The condition of **4 heritage assets** has been improved through the work of the AONB Partnership (volunteer work) - Hynning historic designed garden, Bank Well and Woodwell ponds and the hedgelaying competition

Source: AONB

#### **Indicator: Number of research projects that have been undertaken to improve understanding of the heritage assets of the AONB over the last 5 years through work of or support of the AONB Partnership**

Over 2013- 2018 in the Arnsdale & Silverdale AONB there have been :

- 5** research projects

Source: Morecambe Bay Partnership, UCLAN, Mourholme society

### Interpretation

Within the Arnsdale & Silverdale AONB there are 10 Scheduled Monuments and 1 Registered Parks and Gardens (see Figure 21), and 115 Listed Buildings, see Figure 22.

The 10 Scheduled Monuments are:

- Arnsdale Tower, Arnsdale
- Beetham Hall (curtain wall and uninhabited portion), Beetham
- Hazelslack Tower, Beetham

- Ringwork in Dallam Park 380m south east of Dallam Tower, Beetham
- Dog Holes Cave, Warton Crag, Warton
- Badger Hole, Barrow Scout, Warton
- Warton Crag Hillfort, Warton
- Old Rectory, Warton
- Round cairn on Summerhouse Hill, Yealand Conyers
- Stone circle on Summerhouse Hill, Yealand Conyers

Dallam Tower is the single Registered Parks and Gardens within the AONB and is a Grade II (see Figure 21). Of the listed buildings, there are 6 Grade 1, 10 Grade II\*, and 99 Grade II. The Grade I and II\* Listed Buildings are listed in Appendix 5.

There are 3 Conservation Areas in the AONB: Beetham, Warton and Yealands, as shown in Figure 22. These are sites which are designated locally to assist in the management of areas of special architecture or historic interest. Up to date Conservation Area Appraisals (CAA) are available for Beetham and Warton. Lancaster City Council is planning to prepare a new appraisal for Yealand.

### **Figure 21 Scheduled Monuments and Registered Parks and Gardens**

### **Figure 22 Listed Buildings and Conservation Areas**

Historic designed landscapes (HDLs) are an important element of the landscape and heritage of the Arnside & Silverdale AONB. The 18th century deer park at Dallam Tower, including a natural rock garden and a water garden and ornamental gardens, is the only Registered Park and Garden within the AONB. Six undesignated historic designed landscapes were identified to be of exceptional interest and quality and potential national importance in a 2015 research study<sup>9</sup>:

- Ashton House, Beetham
- Bleasdale School, Silverdale
- Hazelwood, Silverdale
- Ridgeway Park (previously Greywalls), Silverdale
- Leighton Hall
- The Hyning, Warton

The Historic Environment Record (HER) holds information on known archaeological sites, finds, landscapes, buildings and other aspects of the historic environment. In addition it contains information on past research and investigations. There are currently 695 data entries within the AONB (in the Cumbria HER and Lancashire HER). The HERs are shown in Figure 23. The Cumbria HER is continually updated with new information provided by professional archaeologists, historians, researchers, and through enhancement projects grant-aided by Historic England and other bodies. The Lancashire HER has not been updated since 2016.

### **Figure 21 Historic Environment Records**

Historic Landscape Characterisation Reports for both Lancashire<sup>10</sup> and Cumbria<sup>11</sup> provide valuable tools for understanding the cultural heritage of the AONB. Figure 22 shows the historic landscape types across the AONB. Brief descriptions are given in Appendix 5.

### **Figure 22 Historic Landscape Types**

There are four sites which remain on the Historic England Heritage at Risk Register 2017: Arnside Tower, Hazelslack Tower, Beetham Hall (curtain wall and uninhabited portion) and Warton Crag small multivariate hillfort. Since 2013, Slackwood Farm has been removed from the register. Arnside Tower and Hazelslack Tower remain in very bad

<sup>9</sup> Arnside & Silverdale AONB Historic Designed Landscapes Research Report, E. Bennis, 2015

<sup>10</sup> The Lancashire Historic Landscape Characterisation Report, December 2002.

<sup>11</sup> Cumbria Historic Landscape Characterisation – final report, July 2009

condition and Beetham Hall remains in bad condition. The small multivallate hillfort on Warton Crag is in generally unsatisfactory condition with major localised problems. Scrub/tree growth is the principal vulnerability but its trend is now improving; was declining back in 2013. Details of the designations and their conditions are given in Appendix 5.

Over the last 5 years as part of the Morecambe Bay Partnership Headlands to Headspace project, there have been a number of research projects undertaken within the AONB: Warton Crag Iron Age hillfort (recording and understanding what remains on the site and helping to develop appropriate land management which balances the needs of the archaeology of the site with the natural heritage and environmental importance of the site); Jenny Browns Point, Silverdale (investigating the chimney site including excavation); Crossfields boatyard and Rock Terrace workshop, Arnside (undertaking a building recording survey and research); documentary research into the salt industry. Archaeological investigations have also been undertaken at Summerhouse Hill by University of Central Lancashire, supported by the Mourholme Society<sup>12</sup>.

Historic England has recently entered into discussions with the owner of Arnside and Hazelslack Towers about developing a sustainable management solution as part of a strategic South Lakeland tower houses project. A conservation plan was produced in 2004 for Beetham Hall and plans to reuse the remaining medieval buildings, including the Hall, were approved in 2016.

The Warton Crag research has resulted in a change in how Historic England interpret the scheduled site; what had previously been described as an Iron Age Hillfort is now best interpreted as a Bronze Age Hilltop Enclosure, most likely used as a site with significance for gatherings, rather than as a defensive structure. Work is currently being undertaken to establish a conservation management plan to balance the needs of the archaeology of the site with its natural heritage importance and management. Once this plan is being implemented it is likely that the site will be removed from the Heritage At Risk Register.

The AONB Partnership are actively involved through our volunteer programme in maintaining and managing numerous heritage assets and features throughout the area such as ponds, wells, water troughs, milestones, orchards, hedgerows, drystone walls, and historic designed gardens. In 2018 four assets were managed, the Hynning historic designed garden, Bank Well and Woodwell ponds and a hedgelaying competition was held. In 2017 there were seven assets managed, as above and including walling training and repainting of milestones at Beetham and hazel hurdle training. 50m of drystone wall, an important heritage feature in the AONB, was also undertaken the year before.

Pressures for development within the AONB are ongoing and there is continuing risk of damage to the rich archaeological resource and traditional character of settlements and individual buildings and heritage features.

**Policy AS04: Historic Environment** in the new Arnside & Silverdale AONB Development Plan Document requires all development proposals in the AONB to take into account the unique heritage assets and historic character of the area, including built, natural, historic and cultural heritage features, and protect, conserve and enhance the significance of heritage assets (including any contribution made by their setting), historic landscape character and the distinctiveness of settlements. Following adoption of the AONB DPD, in March 2019, compliance with this policy should ensure that new development supports the AONB's heritage assets and special historic character.

## 2.6 Tranquillity

### *Background*

'Tranquillity, space and place' is one of the special qualities of the AONB and 'Tranquillity' and 'Sense of place and inspiration' are identified as benefits to society (cultural ecosystem services) provided by the AONB. Dark skies at night and peace and quiet contribute to this special quality.

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<sup>12</sup> The Mourholme Magazine of Local history 2018, No 1, issue 73, <http://www.mourholme.co.uk/users/UserFiles/File/Spring%202018%20Issue%2073.pdf>

### Current status

#### Indicator: Levels of tranquillity

CPRE tranquillity map, 2007

Source: CPRE

#### Indicator: Levels of intrusion

CPRE intrusion map, 2007

Source: CPRE

#### Indicator: Dark night skies

CPRE dark night skies map, 2016

Source: CPRE

### Interpretation

Figures 25 and 26 depict levels of tranquillity across the AONB and in the context of Cumbria and Lancashire.

The CPRE maps clearly show that Arnside & Silverdale AONB is one of the tranquil areas in the region. The western side of the AONB is 'most tranquil'. The levels of tranquillity decline eastwards, and are particularly less along the eastern boundary, adjacent to the A6. Levels of tranquillity also decline a little around the villages of Silverdale and Arnside and along the B5282 coastal road from Arnside to Milnthorpe. It should be noted that this data is now relatively old and has not been updated since 2006.

#### Figure 25 Tranquillity, Cumbria

#### Figure 26 Tranquillity, Lancashire

The CPRE Intrusion Map, North West, 2007, see Figure 29, identifies the areas in the AONB disturbed by noise and visual intrusion. The map indicates Arnside/Storth/Sandside is the area mostly disturbed by noise and visual intrusion.

#### Figures 27 – 29 Intrusion, 1960, 1990, 2007

The early 1960s and early 1990s maps, in addition to the 2007 map, show the gradual changing and increase of disturbance within the AONB.

Figure 30 shows very recent data on the extent of light pollution within the AONB. Most light pollution is concentrated around the villages of Arnside, Silverdale, Warton, Beetham and Sandside. The darkest areas are over the estuary and towards the central part of the AONB.

#### Figure 30 Dark skies

## 2.7 Air quality

### Background

Air quality affects the state of the natural environment and has implications for human health. The Air Quality (England) Regulations 2000 place a duty on local authorities to review and assess air quality for seven pollutants and ensure that standards and objectives laid down for each will be met. The Environment Act 1995 also requires the local authorities to review and assess air quality.

### Current status

There are no Air Quality Management Areas (AQMA) within the AONB designation and air quality monitoring is not carried out within the AONB by either South Lakeland District Council or Lancaster City Council. Air quality is not considered to be a current issue within the AONB.

## 3 Vibrant and sustainable Communities

### 3.1 Sustainable communities

#### 3.1.1 Population – Demographics

##### *Background*

The most recent demographic data is taken from the Office for National Statistics (mid 2016 estimates) using 'wards' which are partly within the AONB boundary. This data is not exactly cut to the AONB but, assuming 96% of Arnside & Beetham ward and 82% of Silverdale and Warton ward populations reside within the AONB (% provided by SLDC and LCC respectively), provides approximate figures. Previous demographic data and human health data is from the 2011 Census.

##### *Current status*

##### **Indicator: Age distribution**

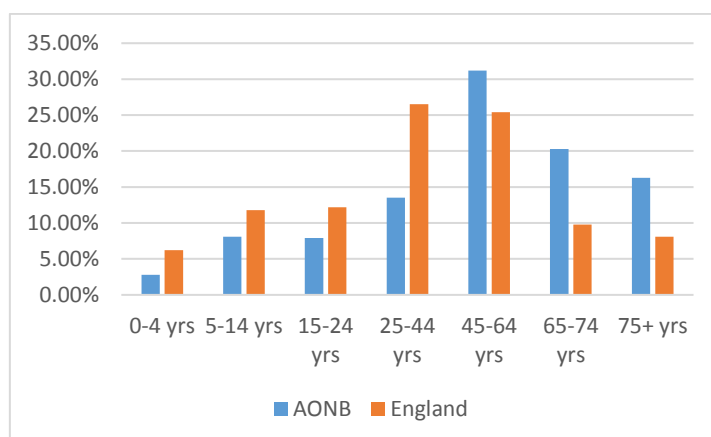
In 2016 in the AONB:  
**2.8%** of the population were under 4 years old  
**8.1%** aged 5-14  
**7.9%** aged 15-24  
**13.5%** aged 25-44  
**31.2%** aged 45-64  
**20.3%** aged 65-74  
**16.3%** aged 75+

Source: Cumbria Observatory, Office for National Statistics

##### *Interpretation*

The most recent estimate of the population living in the AONB (mid 2016) is **7070**. This represents a slight decrease in the population from 2011 of around 480 (2011 Census). Appendix 6 shows the populations in each of the wards in 2016.

The largest percentage age group in the AONB is 45-64. The chart below shows the age distribution of the AONB population compared to the England average. The AONB has fewer children and young working age people than in England overall and a greater proportion of people over 45 and particularly over 65. The AONB also has fewer children and young working age people, and a greater proportion of people over 65 than in Cumbria and Lancashire – see Appendix 7.



Source: Cumbria Observatory, Office for National Statistics

There appears to have been a continued shift towards an older population since the census in 2011, with a greater percentage of over 65s and a smaller percentage of younger adults and also 0-14 year olds.

### 3.1.2 Indices of Multiple Deprivation

#### Background

The Index of Multiple Deprivation (IMD) 2015 is the official measure of relative deprivation for small areas (or neighbourhoods) in England<sup>13</sup>. The Index of Multiple Deprivation ranks every small area (LSOA) in England from 1 (most deprived area) to 32,844 (least deprived area).

The Indices of Deprivation 2015 provide a set of relative measures of deprivation for small areas (Lower-layer Super Output Areas) across England, based on seven domains of deprivation. The domains were combined using the following weights to produce the overall Index of Multiple Deprivation:

- Income Deprivation (22.5%)
- Employment Deprivation (22.5%)
- Education, Skills and Training Deprivation (13.5%)
- Health Deprivation and Disability (13.5%)
- Crime (9.3%)
- Barriers to Housing and Services (9.3%)
- Living Environment Deprivation (9.3%)

In addition to the Index of Multiple Deprivation and the seven domain indices, there are two supplementary indices: the Income Deprivation Affecting Children Index and the Income Deprivation Affecting Older People Index.

#### Current status

##### **Indicator: Levels of deprivation**

In 2015:  
The Index of Multiple Deprivation ranks of the 6 LSOAs covering the AONB show that deprivation is scarce within the AONB.

#### Interpretation

There are 32,844 Lower Super Output Areas in England. The Index of Multiple Deprivation (IMD) ranks (as set out in Appendix 7) show that the overall deprivation of the AONB is low, with none of the six AONB LSOAs in the bottom 10% for overall deprivation.

The ranks do not mean that deprivation does not exist within the AONB but that it is scarce.

### 3.1.3 Housing

#### Background

The continued higher cost of housing in the area compared with average earnings means that provision of affordable housing for local need remains an issue. While this is recognised nationwide, the affordability ratio (average house price to household income) within the AONB is significantly higher than the national average.

Affordable housing is that which is described in the National Planning Policy Framework (NPPF) as 'social rented, affordable rented and intermediate housing' and is defined as that which is 'provided to eligible households whose needs are not met by the market. Eligibility is determined with regard to local incomes and local house prices. Affordable housing should include provisions to remain at an affordable price for future eligible households or for the subsidy to be recycled for alternative affordable housing provision.'

#### Current status

##### **Indicator: Affordability ratio**

<sup>13</sup> Lower-layer Super Output Areas, based on the 2011 Census

The affordability ratio of median earnings to median house prices in 2018:  
 Arnside & Beetham ward – **7.8**

The affordability ratio of average wage of the district to average house prices in 2016:  
 Silverdale ward – **12.1**  
 Warton ward – **8.6**

Source: CACI Ltd/SLDC/LCC

The affordability ratio for the Arnside and Beetham ward in 2018 was based on median house prices and median earnings<sup>14</sup>, see Appendix 8. The affordability ratios for the Silverdale and Warton wards in 2016 were based on average house prices and average earnings, see Appendix 8. The SLDC and LCiC figures cannot be directly compared because of dates and way calculated.

**Indicator: Number of new affordable homes delivered within the AONB**

Number of new affordable homes delivered within the AONB over 5 years, 2013 – 2017: **0**

Source: SLDC/LCiC

*Interpretation*

House prices remain high within the AONB and the affordability ratios within the AONB are much higher than the local districts and the two counties, Cumbria and Lancashire. High house prices and a high affordability ratio lead to an increased demand for affordable housing.

There has been no delivery of affordable housing within the AONB over the last five years.

The AONB DPD **Policy AS03: Housing Provision** requires proposals for new housing development of two or more properties to deliver no less than 50% affordable housing. The policy seeks to ensure that the approach to housing delivery in the AONB reflects the local needs within the AONB and better ensures that new development supports the AONB's primary purpose and Special Qualities.

**3.1.4 Local services**

*Background*

Basic services within the AONB are classified as provision of: Schools, Post Offices, convenience stores, GPs, village halls, libraries, bus routes and train lines.

The Furness line services operating between Barrow and Lancaster pass through the AONB. There are stations at both Arnside and Silverdale and also at Carnforth, just to the south of the AONB boundary.

*Current status*

**Indicator: Numbers of rural services**

**Number of rural services within the AONB in 2018;**

|                     |                     |
|---------------------|---------------------|
| Schools:            | <b>6</b>            |
| Post Offices:       | <b>4</b>            |
| Convenience stores: | <b>8</b>            |
| GPs:                | <b>2</b>            |
| Village halls:      | <b>5</b>            |
| Libraries:          | <b>2</b>            |
| Bus services:       | <b>3 bus routes</b> |
| Trains:             | <b>1 train line</b> |

<sup>14</sup> CACI Ltd

The locations of the rural services are set out in Appendix 8.

**Indicator: Train passenger figures for Silverdale and Arnside**

Train passenger figures within the AONB in 2016/17:  
**Arnside – 110,610**  
**Silverdale – 55,892**

Source: Office of Rail and Road

*Interpretation*

The provision of services is key to retaining healthy and sustainable local communities within the AONB, however it is limited by value for money and viability. There are six primary schools within the AONB at Arnside, Storth, Beetham, Yealands, Warton and Silverdale and village halls in Arnside, Storth, Yealands Warton and Silverdale. There are post offices in Arnside, Silverdale, Storth and Warton and GP surgeries (Ash Tree Surgery) and libraries only in Arnside and Silverdale.

Silverdale library was closed in 2016 by Lancashire County Council in response to government cuts to its budget but it was reopened on 1<sup>st</sup> November 2017 and has limited openings. Arnside library is an unstaffed library managed by a member of Cumbria Libraries staff who visits weekly. There are libraries both in Carnforth and Milnthorpe, just outside the AONB.

Also, there are Stoneleigh and Park View surgeries in Milnthorpe and Ash Trees and New Street surgeries in Carnforth.

There are three bus routes within the AONB, two within the Lancashire part of the AONB and one within the Cumbria part. These are: Carnforth, Yealand Redmayne, Silverdale Station, Silverdale village and Holgates Caravan Park (51); Warton, Carnforth (49, 55); and Arnside, Silverdale, Milnthorpe (552). Service 51 and Silverdale Shuttle were merged in 2016. Travel by bus within the AONB, however, can be difficult, with lack of coordination of services between the Lancashire and Cumbria parts of the AONB and infrequent services. For example, there is no bus service between Arnside and Silverdale.

Arnside and Silverdale stations within the AONB are well used. Passenger numbers (details provided in Appendix 8) at both stations, and at Carnforth, have increased over the past five years (from 2012/13 to 2016/17) – 0.5% increase at Arnside, 22% at Silverdale and 1% at Carnforth. The numbers were at even higher levels at each station over 2013/15 and then declined.

## **3.2 Local Economy**

### **3.2.1 Employment**

*Background*

The 2011 census employment data which is provided below is the employment of residents within the AONB, and this is different from the jobs which are available within the AONB.

*Current status*

**Indicator: Employment by sector**

Within the AONB (in 2011), industries employed:  
**2.0%** of the population in agriculture, forestry, fishing  
**7.0%** in accommodation and food service activities  
and  
**15.0%** in education

**14.6%** in human health and social work activities  
**13.6%** in wholesale and retail trade

Source: ONS, Census 2011

Appendix 9 shows the occupation by industry within the AONB and also Cumbria, Lancashire and England (2011 Census).

**Indicator: Total employment in farming**

In 2016:  
**107** total labour (28 farmers full time, 37 part time)

Source: Defra Agricultural Survey, 2016

**Indicator: Economic activity - Proportion of economically active/employed/retired people**

Within the AONB (2011)  
**63.4%** of the population are economically active  
**59.6%** are in employment  
**28.5%** are retired

Source: ONS -2011 Census

*Interpretation*

Agriculture, forestry and fishing industries within the AONB employ 2% of the population whereas for England it is 1%. This shows that agriculture forestry and fishing is important within the AONB. However, the main occupation of people in the AONB is education (15%) followed by 14.6% in human health and social work activities, 13.6% in wholesale and retail trade and 8.6% in construction. Tourism is a key component of the local economy within the AONB and 7% of the population work in accommodation and food service activities.

It is important to note that many residents living within the AONB work outside the area and these statistics therefore do not provide full information on the types of employment industries and the main occupations within the AONB.

The Defra June Agricultural Surveys, however, do provide farming labour numbers within the AONB. In 2016, the total farming labour numbers was 107. 26% of those employed in farming were full time farmers, 35% part time and the remainder full and part time employees and casual workers. Following a period of decline, employment in farming within the AONB has increased by 23% since 2010.

Within the AONB, 63.4% of the population are economically active (2011 census) and 59.6% are in employment. 28.5% are retired. In comparison, 69.7% of the population in Cumbria are economically active and 68.1% in Lancashire with 63.9% and 60.7% in employment respectively. 18.1% of people in Cumbria are retired and 16.2% in Lancashire. It is clear that the retired population within the AONB is significantly greater than the overall counties and that the economically active and employed population is less.

In 2017 (December), unemployment within Arnsdale & Beetham ward was 0.5 % which is significantly less than in Cumbria (1.8%), North West (2.4%) and the whole of England (1.9%). Unemployment between April 2017 and March 2018 was 2.0% in South Lakeland, 4.5% in Lancaster, 3.1% in Cumbria, 5.6% in Lancashire, 4.4% in Northwest and 4.3% in Great Britain. Similar data (2017/18) for Silverdale and Warton wards is not currently available. However, in 2011 (2011 Census), 1.7% of the residents in the AONB were unemployed (1.3% in Arnsdale & Beetham ward, 1.5% in Silverdale and 2.2% in Warton). It is clear that unemployment rates within the AONB are less than in either Cumbria, Lancashire or the nation as a whole.

**3.2.2 Farming, Forestry and Land Management**

*Background*

With the majority of the land area of the AONB being used for agriculture, the way in which it is farmed is important to the landscape. The annual survey of agriculture is carried out each June by Defra, and the latest data for the AONB area is from 2016. The next update is due in 2021.

Agricultural land within the AONB comprises 4275ha.

### *Current status*

#### **Indicator: Farm size**

In 2016:  
**38%** of farms are under 20 ha, **35%** are 20 to 100ha and **27%** are over 100 ha

Source: Defra Agricultural Survey, 2016

#### **Indicator: Farm type**

In 2016:  
**63%** of farms are grazing livestock and **17%** general cropping farms

Source: Defra Agricultural Survey, 2016

There are a total of 48 commercial farm holdings in the AONB, most being under 20 ha according to the 2016 survey. Farms grazing livestock (beef and dairy cattle and sheep) are the predominant farm type, 63%, with 17% being general cropping farms.

#### **Indicator: Total annual values of agri-environment agreements**

In 2018:  
Total value of Environmental Stewardship agreements - **£227,143**  
  
Total value of Countryside Stewardship agreements - **£81,059**

Source: © Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2018

#### **Indicator: Area of Forestry Commission land**

**Total land area management by Forest Enterprise in the AONB: 221 ha**

Source: Forestry Commission, 2018

### *Interpretation*

The figures from the annual Defra surveys indicate that since 2010 the total farmed area has increased by 38%, from 3105 ha to 4275 ha and the number of commercial farm holdings in the AONB has increased from 43 in 2010 to 48 in 2016. There has also been an increase in the percentage of larger farms and a shift away from small holdings over this period: 20 ha to <100 ha increasing from 30 to 35% and farms over 100ha increasing from 23 to 27%; farms <20ha decreasing from 47% to 38%.

30 out of the 48 holdings (63%) in 2016 are used for grazing livestock and this has reduced from 81% (35 out of 43) in 2010. The use of general cropping appears to have increased over this period and was 17% (8) of the holdings in 2016. This increase in number of general cropping holdings is not as a result of holdings having changed type it is mainly due to 'Specialist Grass and Forage' holdings now being classified as general cropping (see Appendix 2). In a change to the previous classification system, holdings without livestock that also have grassland and forage crops accounting for more than two thirds of the total Standard Outputs are assigned to general cropping.

The ownership of farmland within the AONB is changing. In 2016, 42% of the farmland is owned, which has increased from 31% in 2010. In 2016, 50% of the farmland is rented (land rented for at least 365 days on either a Full Agricultural Tenancy, Farm Business Tenancy or other long term agreement), which has decreased from 60% in 2010.

Agri-environment schemes provide funding and support for farmers and land managers to deliver sensitive environmental management on their land. The values of Environmental Stewardship agreements have been slowly declining over the last 5 years, from £307,654 in 2013 to £227,143 in 2018, as the 10 year agreements have been coming to their end. Environmental Stewardship closed in 2014 and has been replaced from 2016 by Countryside Stewardship. Countryside Stewardship annual values are beginning to increase within the AONB from £76,434 in 2017 and £81,059 in 2018.

The Forest Enterprise (the executive agency of the Forestry Commission that manages the nation's forest estate for the UK government) manages 221 ha of woodland in the AONB as part of the Public Forest Estate. The four woodlands are Marble Quarry (58 ha), Underlaid, including Burnt Barrow (132 ha), Hagg Wood (19 ha) and Middlebarrow (22 ha)<sup>15</sup>.

### 3.2.3 Sustainable visitor economy

#### Background

Tourism is a key component of the local economy within the AONB. Around 14%<sup>16</sup> of businesses are involved in tourism business activity (7.2% in accommodation and transport, 6.6% in food and beverage & culture and leisure businesses). This compares with 12.4% for all AONBs and 27.3% in National Parks. Tourism accounts for nearly a fifth of total employment within the AONB.

In the 2013 Morecambe Bay Visitor Survey<sup>17</sup> the most popular reasons for visiting the area were for its beautiful scenery and its peace and tranquillity. Almost 90% of respondents were interested in visiting places where they can see and or experience wildlife. 94% agreed that Morecambe Bay was good for nature and scenery; 70% of visitors agreed that the area was good for culture and heritage.

#### Current status

##### Indicator: Number of caravan pitches

In 2018 within the AONB there are:

**1,684** caravan pitches

Source: SLDC, LCiC

##### Indicator: Number of visits to key visitor attractions

In 2017/18, the visitor numbers were:

**114,373** at RSPB Leighton Moss

**12,000** at Heron Corn Mill

**14,650** at Leighton Hall

Source: RSPB, Heron Corn Mill, Leighton Hall

#### Interpretation

The AONB is a popular tourist and visitor destination, with a well-developed range of camping, caravanning and visitor accommodation. There are 1,684 caravan pitches (1,388 static, 292 touring and 4 residential) on 14 registered sites (split between touring and static) caravans/holiday parks/pitches<sup>18</sup>. This represents a significant part of the visitor economy of the AONB but the large number and type of caravans have an adverse impact on the landscape. The AONB DPD policy **AS11** takes a restrictive approach to new development.

<sup>15</sup> Forestry Commission, 2018 and Arnsdale and Silverdale Woodlands Forest Design Plan October 2012

<sup>16</sup> Protected Landscapes Monitoring, Source: IDBR, 2009, Local Units

<sup>17</sup> Morecambe Bay Visitor Survey, 2013

<sup>18</sup> Arnsdale & Silverdale AONB DPD, SLDC, LCiC

Key attractions include RSPB Leighton Moss, Leighton Hall, Silverdale Golf Club, Wolf House Tearooms and Gallery, Arnside promenade and Arnside Knott, Warton Crag, Heron Corn Mill and the Cross Bay Walks.

Leighton Moss visitor figures have grown steadily over the last three years from 99,669 in 2015/16, 105,137 in 2016/17 to 114,373 in 2017/18. Visitor numbers at Heron Corn Mill (approximate but including all participants and barn hires as well as mill visitors) are also increasing: 10,000 in 2015/16 and 12,000 in 2017/18 and at Leighton Hall: 13,524 in 2016/17, 14,650 in 2017/18 and 13,659 from April 2018 to December 2018.

### 3.2.4 Skills for the future/skills development

#### Background

The AONB Partnership runs an annual programme of training and events to support and promote traditional rural skills, to ensure traditional field boundaries are maintained and remain part of the landscape into the future. We providing a range of events, training and competitions and working with local hedgelaying and drystone walling associations and training providers.

#### Current status

**Indicator: Number of AONB led training events as part of the AONB Rural Skills Programme**

In 2017 within the AONB there were:  
**3** training events held (drystone walling and hurdle training)  
and  
**1** hedgelaying competition, with **17** competitors

Source: AONB

#### Interpretation

The AONB Partnership's training events have included hedgelaying, drystone walling, brush cutting and hurdle training over the last five years and also annual hedgelaying competitions. In 2014, 2015 and 2016, 2 events were held each year and 3 in 2017. The annual hedgelaying competitions, Lancashire & Westmorland Hedgelaying Association Grand Prix events, included 17, 16, 18 and 17 competitors, respectively each year. Where competitors take up the challenge of laying a section of hedge this is done in the traditional Westmorland Style. A well-laid hedge will make the field stock-proof for the farmer and regenerate the hedge with new growth providing a wonderful haven for wildlife and a valuable wildlife corridor.

## 3.3 Community engagement and volunteering

#### Background

There is a concentration of local societies and groups that share interests in the special qualities of the AONB. The Arnside & Silverdale AONB Landscape Trust is a registered charity run entirely by volunteers, and plays an important role in raising awareness of and achieving conservation of the AONB. The Bittern Countryside CIC is a social enterprise, run entirely by volunteers, that seeks to promote a more sustainable future by delivering a programme of community-based sustainable development initiatives with local communities, businesses and organisations active in and around the AONB. Other community-led groups and societies, such as Arnside and District Natural History Society and the Mourholme society, play an important part in providing opportunities to learn about and understand the area.

The AONB team runs a volunteer programme with a focus on an annual programme of weekly practical tasks of habitat and access management, together with a monthly litter pick around the lanes of the AONB. The positive role played by volunteering programmes, delivered by the AONB team and other partner organisations such as the Landscape Trust, the National Trust, the Wildlife Trusts, RSPB, Butterfly Conservation and Natural England, in supporting practical management work provides an important focus for community involvement in the conservation and enhancement of the AONB.

#### Current status

#### **Indicator - Number of AONB Landscape Trust members**

In January 2018:  
Number of AONB Landscape Trust members - **1126**

Source: AONB Landscape Trust

#### **Indicator: Number of people actively volunteering**

In 2018:  
Number of people actively volunteering - **42**

Source: AONB

#### **Indicator: Number of hours worked on conservation management by AONB Partnership volunteers**

In 2017/18:  
Number of hours worked on conservation management by AONB Partnership volunteers: **3200**

Source: AONB

#### **Interpretation**

The membership of the Arnsdale & Silverdale AONB Landscape Trust has been steadily increasing over recent years and is currently over 1100 members. The Trust is one of the largest charities in the country that is associated with an AONB.

The AONB Partnership is continuing to run a very successful volunteer programme offering over 50 opportunities each year to carry out practical conservation work throughout the AONB, and in particular at the two Local Nature Reserves, Warton Crag and Trowbarrow. These tasks each year represent a significant number of hours of volunteer effort. In 2016/17 this was 3338 hours and in 2017/18 3200 hours.

Also, in 2013/14, the AONB Partnership took part in the coordinated "BIG Volunteer day" on Warton Crag which gave volunteers, old and new, the opportunity to carry out practical management tasks on the nature reserves led by the AONB, RSPB and Wildlife Trusts.

In 2018, there were 42 people actively volunteering to deliver the AONB volunteer programme. The AONB team has been co-ordinating a weekly volunteer programme for many years and the scale and ambition of the work carried out is remarkable. 2013-2018 there were 64 active volunteers.

## **4 A strong connection between people and the landscape**

### **4.1 Enjoyment and understanding**

#### **4.1.1 Effective communication**

##### **Background**

Residents and visitors need high quality information, interpretation and communications about the special qualities of the area and opportunities for enjoyment such as walking, cycling and bird watching in a range of formats to enable them to make the most of what the area has to offer and to enable them to support its conservation.

##### **Current status**

#### **Indicator: Number of unique website pageviews**

In 2017/18:  
Number of unique website pageviews: **95,942**

Source: AONB

**Indicator: Social media performance (followers on Twitter, 'likes' on Facebook)**

In September 2018:  
Number of **Twitter followers: 2788** and **Facebook page followers: 1611**

Source: AONB

**Indicator: Number of AONB newsletter subscribers**

In September 2018:  
Number of AONB newsletter subscribers: **791**

Source: AONB

**Indicator: Number of visitors to the AONB Information Centre**

In 2017:  
Number of face to face enquiries within the AONB Information Centre: **1734**

Source: AONB

*Interpretation*

The AONB Partnership produces a variety of high quality online and printed communications and operates a small Information Centre at Arnside station. There were 95,942 unique pageviews on the AONB website in 2017/18 and 1734 face to face enquiries were dealt with at the AONB Information Centre in 2017. In September 2018 the AONB Facebook page had 1611 followers, with 2788 on Twitter and there were 791 subscribers to the AONB e-newsletter.

The number of followers the Partnership has on social media and visits to the website are increasing, for example the number of followers on Twitter was over 1400 in 2015/16 and is now 2788. The number of subscribers to the AONB e-newsletters prior to 2018, was around 1000. However, following the General Data Protection Regulation (GDPR), which came into effect on 25<sup>th</sup> May 2018, the number of subscribers declined.

Improving awareness and understanding of the special qualities of the AONB and helping people to understand the benefits (ecosystem services) provided by the landscape will help people better understand the importance of the better management of the area and lead to greater appreciation and enjoyment of the special qualities of the AONB and action to conserve them. The opportunity to access information about the AONB should be available to all.

**4.1.2 Events and Learning**

*Background*

Events encourage people to enjoy, learn about and celebrate the special qualities of the area, connecting people with nature and encouraging participation and engagement. The AONB Partnership and partner organisations organise a vibrant programme of events throughout the year for all age groups including walks, talks, activities and festivals.

*Current status*

**Indicator: Number of AONB Partnership events held to promote awareness and understanding of the AONB**

Over past 5 years (2014 -2018):  
**5** Annual conferences  
**2** Apple Days (2015, 2017)  
**5** Festivals:  
Wet & Wild Festival, 2014  
A Taste of the Landscape Festival, 2015  
A Taste of the Landscape Festival, 2016  
WILD! Project, 2017  
WILD! Project, 2018

Source: AONB

**Indicator: Number of educational visits facilitated by the AONB Partnership (stewardship claims)**

In 2018:  
Number of educational visits facilitated by the AONB  
Partnership – **29** (Warton Crag LNR, 25, Trowbarrow LNR, 4)

Source: AONB

**Indicator: Number of university research projects facilitated by the AONB Partnership**

In 2018:  
Number of university research projects facilitated by the AONB  
Partnership – **2**: Crag butterflies, palaeomagnetic sampling

Source: AONB

**Interpretation**

The AONB Partnership runs a range of opportunities for local people and visitors to learn about, enjoy and explore the area. The Partnership holds Annual Conferences and every two years holds an Apple Day attracting visitors, including many young families, to come and discover the orchards of the AONB, learn all about the wildlife and sample the orchard produce. Over 1000 visitors attended the Apple Days in 2013 and 2015 and, in spite of the unpredictable weather, over 800 visitors came in 2017.

The Partnership has held festivals every year, including events arranged by ourselves and including other events organised by partners such as RSPB, National Trust. Details of the events and the number of visitors attending the AONB events are in Appendix 10.

In 2014 we held the Wet & Wild Festival to which we had 700 visitors. A Taste of the Landscape Festival was held in 2015, which included 14 events (Bitter and Butterflies walk and Herbal Ramble run by the AONB) and attracted over 800 people. Another Taste of the Landscape Festival was held in 2016: 25 events including Orchard Ramble, Woodwell Family Herbal Ramble, Warton Crag LNR Butterfly Walk, Woodwell Herbal Ramble, Farm Open Day, all organised by the AONB Partnership. WILD! Project, was held in both 2017 and 2018: Woodland Family Fun Day with 120 visitors and Brilliant Butterflies walk in 2017 and two Woodland Family Fun Days (200 attendees) in 2018 along with 6 Landart events engaging 82 people.

Within the agri-environment stewardship agreements there is an educational access option to host a visit. The AONB Partnership runs a successful education programme, hosting educational visits to Warton Crag and Trowbarrow Local Nature Reserves. In 2018, 29 visits were hosted, 25 in Warton Crag LNR and 4 in Trowbarrow LNR. In the previous 4 years (2014 -2017), the number of visits hosted, to Warton Crag were: 39, 20, 23 and 13 respectively.

The AONB Partnership worked with scientists from Lancaster Environment Centre, Lancaster University and University of Liverpool enabling paleomagnetic sampling to be undertaken at various sites within the AONB, including Trowbarrow LNR. This sampling geological sampling is part of an internationally important Lower Carboniferous magnetic polarity research project and will help improve the understanding of the lower Carboniferous successions in this part of northern England.

## **4.2 Access and Recreation**

### **4.2.1 Countryside Access**

#### **Background**

There is an extensive network of Public Rights of Way (PRoW) in the AONB including footpaths and bridleways – see Figure 31. Included within this network is 18km of easy access walks. Significant areas of the AONB are also openly accessible to the public such as National and Local Nature Reserves, National Trust, RSPB and AONB Landscape Trust owned land. The outstanding level of access within the AONB is one of the special qualities of the area.

Public Rights of Way should be easy to use by all legal users and, wherever reasonable, access should be available to people with a wide range of mobility difficulties. The AONB Tramper is currently hosted at RSPB Leighton Moss

The coast is also an important part of the AONB for recreation, particularly for walking, running, sailing and angling.

Work is well underway by Natural England on the England Coast Path - a new National Trail around all of England's coast. The England Coast Path is due to be completed in 2020. The trail runs along the coast of the AONB.

#### *Current status*

##### ***Indicator: Length of PRow and National Trails***

In 2018:  
Length of PRow – **116km**  
Length of National Trails - **0**

Source: AONB

##### ***Indicator: Length of National Cycle Routes***

In 2018:  
Length of National Cycle Routes within the AONB – **49km**

Source: Sustrans

##### ***Indicator: Number of uses of the AONB tramper routes***

In 2017:  
Number of uses of the AONB tramper routes - **100**

Source: RSPB

##### ***Indicator: Number of promoted tramper routes***

In 2018:  
Number of promoted tramper routes - **3** : Gait Barrows/Hawes Water route , Leighton Moss, Arnside embankment path

Source: AONB

#### *Interpretation*

Retaining the high quality access network within the AONB and ensuring that it is maintained and promoted will ensure that residents and visitors can continue to access and enjoy the area fully.

The length of public rights of way within the AONB is 116km. There are also a number of permissive paths. Cumbria and Lancashire County Councils have a statutory duty to manage and maintain all public rights of way throughout the counties. The AONB Partnership's volunteer programme also includes ongoing improvements to the network of public rights of way and concessionary footpaths, through good quality signage and vegetation management. Also, the installation of fingerposts helps to guide visitors to the area through the intricate network of footpaths.

The Silecroft to Silverdale and Silverdale to Cleveleys parts of the England Coast Path, which include the whole coastline of the AONB, are within Stage 2 (Develop). Natural England is currently (August 2018) considering, on a case by case basis, the implications for its coastal access reports of the recent judgement of the Court of Justice of the European Union of the 12th April 2018 in case C-323/17 People Over Wind. It is not known when NE will be in a position to publish the reports for public consultation.

There are three National Cycle Routes within the AONB: Route 6 (13km), Route 90 (18km) and Route 700, The Bay Cycle Way (18km). The Bay Cycle Way is part of a long distance route around Morecambe Bay from Walney Island, Barrow in Furness to Glasson Dock, Lancaster, and was launched in 2015 as part of Morecambe Bay Partnership's 700 Days Scheme, funded by the Coastal Communities Fund and Heritage Lottery Fund.

The AONB Tramper is currently hosted at RSPB Leighton Moss to enable people with limited mobility to discover the reserve and its use is increasing; it was used 100 times in 2017 and has been used over 90 times so far in 2018 (October 2018). In 2015, there were 4 uses and 45 in 2016. The More to Explore project is now enabling new routes to be added so that Tramper users can also explore further afield for example at Gait Barrows National Nature Reserve and at Sandside embankment. Improving the opportunities for people with disabilities and improving the quality and enjoyment of the recreational experience for all should be a priority.

## 4.3 Health and wellbeing

### Background

The AONB landscape provides a range of health (physical and mental) and wellbeing benefits, the natural beauty, sense of place, tranquillity, and recreation can provide relaxation and unwinding, exercise, connection to nature, fresh air inspiration and spiritual refreshment.

Active outdoor activity such as walking, running, cycling and conservation work has been shown to boost both mental and physical health and wellbeing including enabling people to lead happier more fulfilling lives. Good access to the countryside is key to delivering these benefits and the AONB offers a range of opportunities to enjoy the countryside.

### Current status

#### Indicator: Health of population

In the 2011 census:  
**95%** of the AONB population were in very good, good or fair health

Source: 2011 Census

#### Indicator: Number of health and wellbeing events

In 2018:  
Number of health and wellbeing events - **0**

Source: AONB

#### Indicator: Most visited and valued parts of the AONB

Arnside Knott, Leighton Hall, Arnside promenade and shore, Leighton Moss nature reserve, Fairy Steps, Sandside, Gait Barrows National Nature Reserve, Middlebarrow/Eaves Wood, Haweswater, Silverdale, Jenny Brown's Point and Jack Scout, Woodwell, Warton Crag

Source: AONB/NE PGIS project 2016

#### Indicator: Reasons for valued sites

Top 4 reasons for valued sites:  
Views – 23%  
Recreation – 21%  
Wildlife – 19%  
Beauty – 17%

Source: AONB/NE PGIS project 2016

### Interpretation

95% of people are in 'very good, good or fair health' within the AONB (Census 2011). This percentage is comparable with and very slightly above that in Cumbria and nationally (94 and 94.4% respectively) and slightly above that in Lancashire (93.6%), (see Appendix 7).

The AONB Partnership is well placed to contribute to public health and wellbeing through its work to conserve and enhance the natural environment of the AONB and through the management and promotion of opportunities to access and enjoy it.

The AONB Partnership is currently developing a project, Dementia-friendly walks project, which will see a weekly programme of short guided walks for people living with dementia and their carers.

In Autumn 2016 Natural England and the AONB Partnership undertook a joint project to understand the places people go to within the Arnside & Silverdale AONB, what they value and what benefits they experience and enjoy when they are there. People use and value their local landscapes for a variety of reasons and get many different benefits from them. It may be an opportunity for recreation, or the opportunity to see nature and wildlife, or gain emotional benefits such as inspiration, tranquillity, or a sense of belonging or history – or a combination of these. It may simply be a place or landscape with a unique character or a beautiful view that people enjoy.

ADAS were commissioned for this project to pilot an approach to mapping valued landscapes across the AONB. People who live or work in the AONB, or enjoy visiting it were asked to map the places that they valued, and to identify what they valued them for. 95 participants took part in the pilot, with 399 pins being placed at different locations around the AONB. This has enabled a robust picture to form on how people value the area.

The ADAS mapping identified 13 locational clusters that are valued by the public<sup>19</sup>: Arnside Knott, Leighton Hall, Arnside promenade and shore, Leighton Moss nature reserve, Fairy Steps, Sandside, Gait Barrows National Nature Reserve, Middlebarrow/Eaves Wood, Haweswater, Silverdale, Jenny Brown's Point and Jack Scout, Woodwell, Warton Crag.

They are the most visited parts of the AONB and are valued for a variety of reasons but the top four reasons are: Views (23%), Recreation (21%), Wildlife (19%), Beauty (17%).

The information collected and mapped has helped to better understand what people value in the AONB so that it can be considered when making decisions about landscape and nature conservation or other types of landscape change.

## 5 Recommendations

Following the Management Plan review and the preparation of this State of the AONB Report, the AONB Partnership has a number of recommendations for additional indicators.

### ***Suggested Indicator: Changes to landscape character identified through fixed point photography (for each of the landscape character types identified in the LSCA)***

A series of photographs could be taken with viewpoints selected to capture both the key features and in the landscape to provide data for an indicator for monitoring landscape change. These photographs will represent a baseline and it is hoped that repeat surveys at a minimum of 5 year intervals will illustrate trends in landscape change over the medium to long term. This indicator can help monitor any notable changes in landscape quality.

### ***Suggested Indicator: Local Heritage Assets***

The two local authorities covering the AONB, South Lakeland District Council and Lancaster City Council, are preparing lists of local heritage assets within their districts. A local heritage asset is a building, structure or man-made landscape of local historic or architectural importance which contributes to the local landscape, the local built character, settlement formation and 'sense of place' but is not covered by statutory legislation.

Other possible indicators:

Area of saltmarsh erosion/deposition

Number of Soil Management Plans within the AONB

Number of visitor beds

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<sup>19</sup> Natural Capital and Resilient Landscapes in Arnside & Silverdale AONB, Dan Hunt & Jenny Wain, Bowfell Consulting, March 2017

Number of members of Cumbria Tourism/Marketing Lancashire within the AONB

Number of tourism businesses within the AONB

We also recommend to improve monitoring of information about the local economy.

## 6 Summary of Indicators

| Description  | Source                          | Latest data   |
|--|---------------------------------|---|
| <b>An outstanding landscape, rich in natural and cultural heritage</b>   |                                 |   |
| <b>Landscape and Seascape</b>  |                                 |   |
| <b>Landscape characterisation/quality</b>  |                                 |   |
| <b>Landscape character type condition</b>  | AONB LSCA, 2015                 | <p>The condition of the landscape character types within the Arnside &amp; Silverdale AONB are:</p> <p><b>Good: 3</b><br/> Intertidal Flats<br/> Bay Saltmarshes and Lagoons<br/> Inland Pasture and Parkland</p> <p><b>Moderate to Good: 3</b><br/> Lowland Moss<br/> Coastal limestone Pasture<br/> Wooded Limestone Hills and Pavements</p>  |
| <b>NCA Landscape Change Database</b>   | NE                              | <p>Overall landscape effects of Environmental Stewardship until 2013 for:</p> <p>Morecambe Bay Limestone NCA <b>Positive</b><sup>20</sup><br/> Morecambe Coast and Lune Estuary NCA <b>Neutral</b></p>  |
| <b>Farmed landscape</b>  |                                 |   |
| <b>Number of agri-environment agreements</b>   | PLNB3, NE                       | <p>In 2018:<br/> <b>19</b> Environmental Stewardship agreements were live, and of these 1 was at Higher Level<br/> <b>5</b> Countryside Stewardship agreements were live</p> <p>In total, <b>24</b> agri-environment agreements</p>   |
| <b>Area managed under agri-environment agreements</b>  | PLNB3, NE                       | <p>In 2018:<br/> <b>1,196 ha</b> within the AONB was in Environmental Stewardship, including 25% at Higher Level<br/> <b>118 ha</b> was in Countryside Stewardship, including 96% at High Tier</p> <p>In total <b>1,314 ha</b> within the AONB was in agri-environment agreements</p>   |
| <b>The uptake of themed groups of ES options that contribute to conserving and enhancing landscape character</b> | PLNB1, NE                       | <p>In 2018:<br/> Area of land under ES specifically for the management and protection of archaeological features was <b>14.4 ha</b><br/> Number of hedgerow trees and in-field trees managed under ES was <b>304</b><br/> Area of woodland managed and created under ES was <b>30 ha</b><br/> Area of low input grassland managed, restored or created under ES was <b>272 ha</b></p> |
| <b>Land use within the agricultural setting</b>  | Defra Agricultural Survey, 2016 | <p>In 2016:<br/> <b>80%</b> of the farmed land was grassland<br/> <b>11%</b> was woodland<br/> <b>5%</b> was crops and bare fallow</p>  |
| <b>Livestock numbers</b>   | Defra Agricultural Survey, 2016 | <p>In 2016 livestock numbers within the AONB were:<br/> <b>2,570</b> cattle (257 beef herd, 621 dairy herd)<br/> <b>12,047</b> sheep</p>  |

<sup>20</sup> This is based on assessment of ES only

|  |   |  |
|--|---|--|
|  |   | <b>10,580</b> poultry<br><b>62</b> horses  |
| <b>Woodland landscape</b>  |   |  |
| Area and % of AONB which is woodland   | PLEco5, FC  | In 2015:<br>The area of woodland in the AONB is <b>1,559 ha</b> covering around a <b>third</b> of the terrestrial AONB   |
| Area and % of Ancient Woodland   | PLNB13, FC  | In 2017:<br>The area of Ancient Woodland in the AONB is <b>652 ha</b><br>Ancient & Semi-Natural Ancient Woodland (ASNW) <b>488 ha</b><br>Plantations on Ancient Woodland sites (PAWS) - <b>164 ha</b>  |
| Woodland in Active Management  | PLNB2, FC   | In 2017:<br><b>73 %</b> of woodland in the AONB is in positive management  |
| Number of ancient, veteran and notable trees   | Ancient tree inventory                                      | In 2018 in the Arnside & Silverdale AONB there are:<br><b>2</b> Ancient trees<br><b>110</b> Veteran trees<br><b>16</b> Notable trees   |
| Area of Forestry Commission managed land   | FC  | In 2018 in the Arnside & Silverdale AONB:<br>Total area land managed by Forestry Commission - <b>221 ha</b>  |
| <b>Development</b>   |   |  |
| Number of planning approvals within the AONB (years 2013 to 2107)                                      | SLDC<br>LCiC  | Number of planning approvals within the AONB:<br>2013-2014 <b>100</b><br>2014-2015 <b>120</b><br>2015-2016 <b>112</b><br>2016-2017 <b>117</b><br>2017-2018 <b>116</b>  |
| Number of formal responses to planning applications submitted by the AONB Partnership                  | AONB  | Number of formal responses to planning applications submitted by the AONB Partnership:<br>2013-2014 <b>23</b><br>2014-2015 <b>38</b><br>2015-2016 <b>53</b><br>2016-2017 <b>68</b><br>2017-2018 <b>51</b><br>2018-2019 (Jan) <b>78</b>   |
| Number of new homes delivered within the AONB  | SLDC<br>LCiC  | Between 2013 and 2017:<br>Number of new homes delivered within the AONB is <b>33</b>   |
| <b>Biodiversity</b>  |   |  |
| <b>Designated sites</b>  |   |  |
| Number/area of sites and % of AONB   | NE/CCC/LCC  | Designated sites within the AONB:<br><b>19 SSSIs</b> , covering <b>4,079 ha</b> , <b>54%</b> of the total AONB area<br><b>2 SACs</b> , covering <b>3,548 ha</b> , <b>47%</b> of the total AONB area<br><b>3 SPAs</b> , covering <b>3,312 ha</b> , <b>43%</b> of the total AONB area<br><b>64 LWS</b> , covering <b>857 ha</b> , <b>11%</b> of the total AONB area  |
| Condition of SSSIs   | PLNB12, NE  | In 2018:<br><b>99.1%</b> in <b>favourable or recovering</b> condition  |
| Condition of broad habitats within SSSIs<br>Woodland, grassland, freshwater wetlands, coastal habitats | PLNB 5, NE  | In 2017:<br><b>98.7 %</b> of Broadleaved, mixed and yew woodland (upland)<br><b>100%</b> of Calcareous grassland (lowland)<br><b>100%</b> of Calcareous grassland (upland)<br><b>100%</b> Earth heritage<br><b>90%</b> Fen, marsh and swamp (lowland)<br><b>91.9%</b> Inland rock<br><b>100%</b> Littoral sediment<br><b>100%</b> Standing open water and canals<br>within SSSIs were in <b>favourable or recovering</b> condition |
| Condition of Local Wildlife Sites  | G Skelcher,<br>County Wildlife<br>Sites Survey<br>(2014/15) | In 2015:<br><b>21</b> of the 64 LWS were in <b>positive management</b>   |

|  |  |  |
|--|--|--|
| <b>Priority habitat</b>  |  |  |
| Extent and type of priority habitat within the AONB  | G Skelcher, Priority Habitat Survey , 2016                 | Extent of priority habitat within the AONB – <b>5,096 ha, 67%</b> cover of the AONB  |
| Hectares of land enhanced for nature through the work of the AONB Partnership  | AONB   | In 2018:<br>Hectares of land enhanced for nature through the work of the AONB Partnership – <b>36.3 ha</b>   |
| Hectares of nature reserves (NNR, LNR, NT, RSPB, WT, Woodland Trust, Landscape Trust plus private nature reserves) in the AONB | NE, NT, RSPB, WT, LT, Woodland Trust                       | In 2018:<br>Hectares of nature reserves in the AONB: <b>2,636 ha</b>   |
| <b>Species</b>   |  |  |
| Species records - birds  | RSPB   | In 2018:<br>Total counts from Leighton Moss, Silverdale Moss, Barrow Scout and Saline Lagoons -<br><b>Bittern</b><br>Booming: <b>2</b><br>Nests: <b>1</b><br><b>Bearded Tit</b><br>Pairs: <b>25</b><br>Young: <b>29</b><br><b>Marsh Harrier</b><br>Nests: <b>3</b><br>Young fledged: <b>6</b><br><b>Avocet</b><br>Pairs: <b>29</b><br>Fledged young: <b>20</b> |
| Species records - butterflies  | RSPB   | In 2018:<br>Butterflies of RSPB Warton Crag Nature Reserve –<br>High Brown Fritillary <b>0</b><br>Pear-bordered fritillary <b>0</b><br>Small pearl-bordered fritillary <b>73</b><br>Northern Brown Argus <b>49</b><br>Dingy Skipper <b>41</b>  |
| Number of species recovery programmes delivered  | NE   | Number of species recovery programmes delivered: <b>1</b> (Ladys slipper Orchid)   |
| <b>Geodiversity</b>  |  |  |
| <b>Geology</b>   |  |  |
| Number/area of geological sites and % of AONB  | NE/LCC/ Cumbria Geo-conservation                           | Designated sites within the AONB:<br><b>2</b> geological SSSIs, covering <b>30ha, 0.4%</b> of the AONB area<br><b>8</b> Local Geological Sites (LGS), covering <b>429ha, 6%</b> of the AONB area<br><b>16</b> Limestone Pavement Orders (LPOs), covering <b>1178ha, 15%</b> of the AONB area   |
| Condition of geological SSSIs  | PLNB12, NE   | <b>100%</b> in favourable  |
| Condition of Local Geological Sites  | AONB Geology Audit and Assessment, 2018, Cuesta Consulting | In 2018:<br><b>100%</b> of the LGS are in <b>favourable</b> condition  |
| <b>Soils</b>   |  |  |
| Agricultural land classification within the AONB   | NE   | Agricultural land classification within the AONB:<br><b>31%</b> in Grade 3<br><b>39%</b> in Grade 4<br><b>22%</b> in Grade 5   |
| <b>Water Environment</b>   |  |  |
| <b>Water quality</b>   |  |  |
| Ecological status of river, standing and transitional water bodies   | EA   | Bespoke water quality data set provided by Andrew Frankish of Environment Agency (EA) based on data on EA Catchment Planning System (classification data to 2016)  |

|  |   |  |
|--|---|--|
| <b>Bathing water quality</b>   |   |  |
| Bathing water quality classifications  | EA  | In 2017, at Morecambe North and Morecambe South:<br>The bathing water quality classifications were <b>'good'</b>   |
| <b>Water resources</b>   |   |  |
| Abstraction licences within the AONB   | EA  | In 2018 there are:<br><b>8</b> licences:<br>- <b>4 surface water</b> abstractions<br>- <b>4 groundwater</b> abstractions   |
| Private water supplies   | SLDC<br>LCiC  | In 2018 there are:<br><b>9</b> private water supplies (pws):<br>- <b>8 groundwater</b> pws<br>- <b>1 rainwater harvesting</b> pws  |
| <b>Flood risk</b>  |   |  |
| Distribution of areas at risk of fluvial flooding  | EA  | Environment Agency Flood risk maps, 2018:<br>- risk of flooding both from rivers and sea<br>- surface water flooding risk  |
| Number of natural flood management projects within the AONB  | SCRT  | Within the AONB, 2013-2018:<br>Number of natural flood management projects = <b>0</b>  |
| <b>Historic Environment</b>  |   |  |
| Number of heritage assets  | Historic England, CCC/ Lancashire Archaeology Advisory Service, SLDC/LCiC | In 2018 in the Arnsdale & Silverdale AONB there are:<br><b>10</b> Scheduled Monuments<br><b>115</b> Listed Buildings (6 Grade 1, 10 Grade II*, and 99 Grade II)<br><b>1</b> Registered Parks and Gardens<br><b>3</b> Conservation Areas<br><b>695</b> Historic Environment Records |
| Number of heritage assets at risk  | Historic England  | In 2017:<br><b>4</b> sites within the AONB are on the Heritage at Risk Register<br>- Arnsdale Tower, Beetham Hall (curtain wall and uninhabited portion), Hazelslack Tower and Warton Crag small multivariate hillfort   |
| Number of heritage assets where condition has been improved through the work of the AONB Partnership (volunteer work)  | AONB  | In 2018:<br>The condition of <b>4 heritage assets</b> has been improved through the work of the AONB Partnership (volunteer work) - Hynning historic designed garden, Bank Well and Woodwell ponds and the hedgelaying competition   |
| Number of research projects that have been undertaken to improve understanding of the heritage assets of the AONB over the last 5 years through work of or support of the AONB Partnership | MBP<br>UCLAN<br>Mourholme Society   | Over 2013- 2018 in the Arnsdale & Silverdale AONB there have been :<br><b>5</b> research projects  |
| <b>Tranquillity (or Perceptual Qualities)</b>  |   |  |
| Levels of tranquillity   | CPRE  | CPRE tranquillity map, 2007  |
| Levels of intrusion  | CPRE  | CPRE intrusion map, 2007   |
| Dark night skies   | CPRE  | CPRE dark night skies map, 2016  |
| <b>Vibrant and sustainable communities</b>   |   |  |
| <b>Sustainable Communities</b>   |   |  |
| <b>Population – Demographics</b>   |   |  |
| Age distribution   | Cumbria Observatory, Office for National Statistics                       | In 2016 in the AONB:<br><b>2.8%</b> of the population were under 4 years old, <b>8.1%</b> aged 5-14, <b>7.9%</b> aged 15-24, <b>13.5%</b> aged 25-44, <b>31.2%</b> aged 45-64, <b>20.3%</b> aged 65-74, <b>16.3%</b> aged 75+  |
| <b>Indices of Multiple Deprivation</b>   |   |  |
| Levels of Deprivation  | Cumbria Observatory, Lancaster City Council                               | In 2015:<br>The Index of Multiple Deprivation ranks of the 6 LSOAs covering the AONB show that deprivation is scarce within the AONB.  |

|  |                                       |  |
|--|---------------------------------------|--|
| <b>Housing</b>   |                                       |  |
| <b>Affordability ratio</b>                                       | SLDC<br>LCiC                          | The affordability ratio of median earnings to median house prices in 2018:<br>Arnside & Beetham ward – <b>7.8<sup>1</sup></b><br><br>The affordability ratio of average wage of the district to average house prices in 2016:<br>Silverdale ward – <b>12.1<sup>21</sup></b><br>Warton ward – <b>8.6<sup>1</sup></b>      |
| <b>Number of new affordable homes delivered within the AONB</b>  | SLDC<br>LCiC                          | Number of new affordable homes delivered within the AONB over 5 years, 2013 – 2017: <b>0</b>   |
| <b>Local services</b>  |                                       |  |
| <b>Numbers of rural services</b>                                 | LCC, CCC, NHS<br>Choices              | Within the AONB in 2018 :<br>Schools: <b>6</b><br>Post Offices: <b>4</b><br>Convenience stores: <b>8</b><br>GPs: <b>2</b><br>Village halls: <b>5</b><br>Libraries: <b>2</b><br>Bus services: <b>3</b> bus routes<br>Trains: <b>1</b> train line  |
| <b>Train passenger figures for Silverdale and Arnside</b>        | Office of Rail<br>and Road            | In 2016/7:<br>Arnside – <b>110,610</b><br>Silverdale – <b>55,892</b>   |
| <b>Local Economy</b>   |                                       |  |
| <b>Employment</b>  |                                       |  |
| <b>Employment by sector</b>                                      | 2011 census                           | Within the AONB (in 2011), industries employed:<br><b>2.0%</b> of the population in agriculture, forestry, fishing<br><b>7.0%</b> in accommodation and food service activities and<br><b>15.0%</b> in education<br><b>14.6%</b> in human health and social work activities<br><b>13.6%</b> in wholesale and retail trade |
| <b>Total employment in farming, Defra</b>                        | Defra<br>Agricultural<br>Survey, 2016 | In 2016:<br><b>107</b> total labour (28 farmers full time, 37 part time)   |
| <b>Proportion of economically active/employed/retired people</b> | 2011 census                           | Within the AONB (2011)<br><b>63.4%</b> of the population are economically active<br><b>59.6%</b> are in employment<br><b>28.5%</b> are retired   |
| <b>Farming/forestry/land management</b>                          |                                       |  |
| <b>Farm size</b>   | Defra<br>Agricultural<br>Survey, 2016 | In 2016:<br><b>38%</b> of farms are under 20 ha, <b>35%</b> are 20 to 100 ha and<br><b>27%</b> are over 100ha  |
| <b>Farm type</b>   | Defra<br>Agricultural<br>Survey, 2016 | In 2016:<br><b>63%</b> of farms are grazing livestock and <b>17%</b> general cropping farms  |
| <b>Total annual values of agri-environment agreements</b>        | PLSC9                                 | In 2018:<br>Total value of Environmental Stewardship agreements -<br><b>£227,143</b><br><br>Total value of Countryside Stewardship agreements -<br><b>£81,059</b>  |

<sup>21</sup> The SLDC and LCiC figures cannot be directly compared because of dates and way calculated.

|   |   |  |
|---|---|--|
| Area of Forestry Commission land  | Forestry Commission                         | Total land area management by Forest Enterprise in the AONB: <b>221 ha</b>   |
| <b>Sustainable visitor economy</b>  |   |  |
| Number of caravan pitches   | SLDC<br>LCiC                                | In 2018 within the AONB there are:<br><b>1,684</b> caravan pitches   |
| Number of visits to key visitor attractions   | RSPB<br>Leighton Hall<br>Heron Corn<br>Mill | In 2017/18, the visitor numbers were:<br><b>114,373</b> at RSPB Leighton Moss<br><b>12,000</b> at Heron Corn Mill<br><b>14,650</b> at Leighton Hall  |
| <b>Skills for the future/skills development</b>   |   |  |
| Number of AONB led training events as part of the AONB Rural Skills Programme             | AONB  | In 2017 within the AONB there were:<br><b>3</b> training events held (drystone walling and hurdle training) and<br><b>1</b> hedgelaying competition, with <b>17</b> competitors  |
| <b>Community engagement and volunteering</b>  |   |  |
| <b>Community engagement</b>   |   |  |
| Number of AONB Landscape Trust members  | AONB<br>Landscape<br>Trust                  | In January 2018:<br>Number of Landscape Trust members - <b>1126</b>  |
| <b>Volunteering</b>   |   |  |
| Number of people actively volunteering  | AONB  | In 2018:<br>Number of people actively volunteering - <b>42</b>   |
| Number of hours worked on conservation management by AONB Partnership volunteers          | AONB  | In 2017/18:<br>Number of hours worked on conservation management by AONB Partnership volunteers: <b>3200</b>   |
| <b>A strong connection between people and the landscape</b>                               |   |  |
| <b>Enjoyment and understanding</b>  |   |  |
| <b>Effective communication</b>  |   |  |
| Number of unique website pageviews  | AONB  | In 2017/18:<br>Number of unique website pageviews: <b>95,942</b>   |
| Social media performance (followers on Twitter, 'likes' on Facebook)                      | AONB  | In September 2018:<br>Number of <b>Twitter followers: 2788</b> and <b>Facebook page followers: 1611</b>  |
| Number of AONB newsletter subscribers   | AONB  | In September 2018:<br>Number of AONB newsletter subscribers: <b>791</b>  |
| Number of visitors to the AONB Information Centre   | AONB  | In 2017:<br>Number of face to face enquiries within the AONB Information Centre: <b>1734</b>   |
| <b>Events and learning</b>  |   |  |
| Number of AONB Partnership events held to promote awareness and understanding of the AONB | AONB  | Over past 5 years (2014 -2018):<br><b>5</b> Annual conferences<br><b>2</b> Apple Days (2015, 2017)<br><b>5</b> Festivals:<br>Wet & Wild Festival, 2014<br>A Taste of the Landscape Festival, 2015<br>A Taste of the Landscape Festival, 2016<br>WILD! Project, 2017<br>WILD! Project, 2018 |
| Number of educational visits facilitated by the AONB Partnership (stewardship claims)     | AONB  | In 2018:<br>Number of educational visits facilitated by the AONB Partnership – <b>29</b> (Warton Crag LNR, 25, Trowbarrow LNR, 4)  |
| Number of university research projects facilitated by the AONB Partnership                | AONB  | In 2018:<br>Number of university research projects facilitated by the AONB Partnership – <b>2</b> : Crag butterflies, palaeomagnetic sampling  |

|  |  |  |
|--|--|--|
| <b>Access and recreation</b>                     |  |  |
| <i>Countryside access</i>                        |  |  |
| <b>Length of PRoW and National Trails</b>        | SLDC<br>LCiC                                 | In 2018:<br>Length of PRoW – <b>116km</b><br>Length of National Trails - <b>0</b>  |
| <b>Length of National Cycle Routes</b>           | Sustrans                                     | In 2018:<br>Length of National Cycle Routes – <b>49km</b>  |
| <b>Number of uses of the AONB tramper</b>        | RSPB   | In 2017:<br>Number of uses of the AONB tramper routes - <b>100</b>   |
| <b>Number of promoted tramper routes</b>         | AONB   | In 2018:<br>Number of promoted tramper routes - <b>3</b> : Gait Barrows/Hawes Water route , Leighton Moss, Arnside embankment path   |
| <b>Health and wellbeing</b>                      |  |  |
| <i>Population – Human Health</i>                 |  |  |
| <b>Health of population</b>                      | 2011 census                                  | In the 2011 census:<br><b>95%</b> of the AONB population were in very good, good or fair health  |
| <b>Number of health and wellbeing events</b>     | AONB   | 2018 - <b>0</b>  |
| <i>Valuing the landscape</i>                     |  |  |
| <b>Most visited and valued parts of the AONB</b> | AONB/NE – Mapping your valued places project | Arnside Knott, Leighton Hall, Arnside promenade and shore, Leighton Moss nature reserve, Fairy Steps, Sandside, Gait Barrows National Nature Reserve, Middlebarrow/Eaves Wood, Haweswater, Silverdale, Jenny Brown's Point and Jack Scout, Woodwell, Warton Crag |
| <b>Reasons for valued sites</b>                  | AONB/NE - PGIS project                       | Top 4 reasons for valued sites:<br>Views – <b>23%</b><br>Recreation – <b>21%</b><br>Wildlife – <b>19%</b><br>Beauty – <b>17%</b>   |

## Appendix 1 – Landscape

### NCA Landscape Change Database

#### NCA 20 Morecambe Bay Limestones

Source: (Developing Indicators and Thresholds for Monitoring the Landscape Impacts of Environmental Stewardship at the National Character Area Scale, Assessments, prepared by LUC in association with Julie Martin Associates, November 2013)

#### Landscape effects of ES: Assessment results

| Overall effect on theme:          |                   |          |
|-----------------------------------|-------------------|----------|
| Woodland tree cover               | Neutral           | 0        |
| Field patterns and boundary types | Strongly positive | 1        |
| Agricultural land use             | Neutral           | 0        |
| Traditional farm buildings        | Positive          | 0.5      |
| Historic environment              | Strongly positive | 1        |
| Semi-natural habitats             | Positive          | 0.5      |
| Coast                             | Strongly positive | 1        |
|                                   |                   |          |
| <b>Total score</b>                | <b>Positive</b>   | <b>4</b> |

**ES seems to be benefiting the landscape in respect of:** scrub management, conservation of traditional orchards and parkland, hedgerows, ditches and dykes and the highly characteristic limestone walls, retention of historic farm buildings and archaeology on grass, and conservation of wetlands and salt marsh.

**ES seems to be having more limited impact on:** broadleaved woodland management and protection, management of low input, wet and rough pasture, use of traditional mixed stock grazing, and conservation of upland and lowland species-rich grasslands and hay meadows.

**Detailed comments:** in this NCA which falls partly within the Lake District National Park and two AONBs (together covering some 37% of the NCA) ES is having a POSITIVE effect on the landscape and a strongly positive effect on field boundaries, the historic environment and coastal salt marshes, and is helping conserve the highly distinctive lowland raised bogs. ELS is the main driver in relation to hedgerows, ditches and walls, low input pastures and mixed stocking, retention of historic farm buildings, and archaeology on grassland. HLS is more influential in relation to scrub management, orchards and parklands, wet and rough pasture, and conservation of species-rich grasslands, wetland, and coastal salt marsh habitats. Increased uptake of measures for ditches and wet grasslands would be particularly helpful along with greater uptake to cover the range of different species-rich grasslands.

#### Countryside Quality Counts, 1999-2003, (2007)

Source: <http://webarchive.nationalarchives.gov.uk/20101219015512/http://countryside-quality-counts.org.uk/jca/Consultation/Theme.aspx?CqcJcaID=20&CqcThemeID=2>

#### CQC Overall Character Assessment

CQC Overall Assessment, 1999-2003:

**Enhancing**

Agriculture

Semi-natural habitats

**Maintained**

Trees and woodland

Boundary features (fields are generally enclosed by limestone walls or hedges)

**Diverging**

Settlement & development

**Neglected**

Historic features

River and coastal

Source: Countryside Quality Counts, 1999-2003, NE, Defra, English Heritage

## **Trees & woodland - Maintained**

### CQC Assessment

Woodland character is stable, although there are opportunities for further enhancement. About 49% of the woodland cover is on an ancient woodland site. The proportion of these sites covered by a Woodland Grant Scheme agreement has increased since 1999 from 12% to 27%.

### Key Characteristics

Some scrub and broadleaved woodland is found in the inland areas, with some areas of ancient and semi-natural woodland. There are relatively few trees on the coast. Traditional coppice woodlands.

## **Boundary features - Maintained**

### CQC Assessment

There appears to have been only limited uptake of management agreements that would enhance or restore quality of boundary features which have in the past suffered loss. The estimated boundary length for the JCA is about 2838km. Total length of agreements between 1999-2003 is equivalent to about 8% of this total. The resource has probably just been maintained.

### Key Characteristics

Fields are generally enclosed by limestone walls or hedges.

## **Agriculture - Enhancing**

### CQC Assessment

Loss of grasslands observed up to 1998 has been mostly reversed. There has been a significant decline in grazing pressure since 1998. The most extensive annual Countryside Stewardship agreements in 2003 were for upland limestone grassland (387ha) and lowland pastures on neutral/acid soils (140ha). These data suggest some enhancement in character.

### Key Characteristics

Sheep and cattle graze the coastal pasture and intertidal commons. Lowland raised mires surrounding the limestone outcrops have been reclaimed for agriculture. Rough grazing is a feature of the higher grounds on unimproved limestone grassland or rough fell vegetation.

## **Settlement & development - Diverging**

### CQC Assessment

Development outside the major settlements appears to be significant along major route corridors of the A590 and A5087 to the south and west of Ulverston, around Grange, Silverdale and Wharton, and to east of the M6 corridor around Nether-Kellet.

### Key Characteristics

Settlements are generally dispersed and rural in character, having usually grown around large farmsteads. Larger centres include Grange-over-Sands, Arnside, Silverdale and Milnthorpe which have a seaside resort character, reflecting the growth in the use of the area for recreation from the 18th Century onwards.

## **Semi-natural habitats - Enhancing**

### CQC Assessment

The area of SSSIs is significant, and about 57% are in favourable condition or recovering. The most extensive annual Countryside Stewardship agreements in 2003 were for upland limestone grassland (387ha) and lowland pastures on neutral/acid soils (140ha), but there is limited evidence of management of coastal habitats.

### Key Characteristics

Semi natural areas include a mosaic of species rich grassland, limestone pavements, scrub, semi-natural coppice woodland, herb-rich grasslands, peaty fenlands and mosslands. The coastline consists of shifting intertidal sandflats and saltmarsh with minor channels and pools. Areas of scaurs and pebble patches, mudflats, sandy beaches, bedrock and pebble and shingle beaches are exposed at low tide.

## **Historic features - Neglected**

### CQC Assessment

In 1918 about 3% of the JCA was historic parkland. In terms of its share of the resource the JCA was ranked 84. By 1995 it is estimated that 32% of the 1918 area had been lost. About 24% of the remaining parkland is covered by an Historic Parkland Grant, and 23% is included in an agri-environmental scheme. While most existing historic farm buildings are intact structurally, only about 71% remain unconverted. These data suggest that the character of important aspects of the historic landscape is continuing to weaken.

### Key Characteristics

Historic features include burial mounds and stone circles on higher grounds, prehistoric settlements and enclosures on Birkkrigg Common and medieval field patterns. Coppice woodlands are a further feature of the area which reflect past traditional management practices.

## **River and coastal - Neglected**

### CQC Assessment

There has been limited evidence of Countryside Stewardship agreements for enhancement of coastal habitats, whose character has in the past been weakened. The biological river water quality in 1995 was predominantly average and it has been maintained. The chemical water quality in 1995 was predominantly good and it has also been maintained.

### Key Characteristics

The Rivers Leven and Kent flow into Morecambe Bay.

## Appendix 2 – Defra June Agricultural Survey

### Defra Agricultural Survey – Land use, livestock and agricultural workforce on commercial holdings

This data is taken from the Defra statistical data set ‘Structure of the agricultural industry at 1 June in England and UK: <https://www.gov.uk/government/statistical-data-sets/structure-of-the-agricultural-industry-in-england-and-the-uk-at-june> Areas of Outstanding Natural Beauty 2016 June Agricultural Survey, accessed 1<sup>st</sup> June 2018.

These data series show land and crop areas, livestock populations and agricultural workforce estimates for England and the UK as at 1 June each year. The results come from the long-running June surveys of agriculture and horticulture that are carried out each year in England, Scotland, Wales and Northern Ireland. The information includes long-term trends or detailed results for different types of farm, farm size or geographical area.

#### Farm types (number of farms)

| Year | Total Holdings | Cereals | General cropping <sup>1</sup> | Horticulture | Specialist pigs | Specialist Poultry | Dairy | Grazing Livestock (LFA) | Grazing Livestock (lowland) | Mixed | Other |
|------|----------------|---------|-------------------------------|--------------|-----------------|--------------------|-------|-------------------------|-----------------------------|-------|-------|
| 2016 | 48             | #       | 8                             | 0            | 0               | #                  | #     | 21                      | 9                           | #     | #     |
| 2013 | 46             | 0       | 6                             | #            | 0               | #                  | #     | 23                      | 11                          | #     | #     |
| 2010 | 43             | 0       | #                             | #            | 0               | 0                  | #     | 22                      | 13                          | #     | #     |

# = suppressed to prevent disclosure of information about individual holdings, LFA – Less Favoured Areas, established in 1975 as a means to provide support to mountainous and hill farming areas

#### Farm size in hectares (number of farms)

| Year | <5 | >=5 and <20 | >=20 and <50 | >=50 and <100 | >=100 |
|------|----|-------------|--------------|---------------|-------|
| 2016 | 8  | 10          | 10           | 7             | 13    |
| 2013 | 5  | 12          | 8            | 5             | 16    |
| 2010 | 6  | 14          | 6            | 7             | 10    |

#### Land use (area)

| Year | Total area | Rented land | Owned land | Crops and bare fallow | Temporary grass | Permanent grass | Rough grazing (sole right) | Woodland | All other land |
|------|------------|-------------|------------|-----------------------|-----------------|-----------------|----------------------------|----------|----------------|
| 2016 | 4275       | 2150        | 1790       | 222                   | #               | 2270            | #                          | 474      | 137            |
| 2013 | 4089       | 2183        | 1488       | 139                   | 198             | 2409            | 1065                       | 262      | 17             |
| 2010 | 3105       | 1874        | 955        | #                     | 100             | 2547            | #                          | 125      | 14             |

Defra confirmed (email 1/06/2018) that rough grazing and temporary grass = 1171ha. Rented land – land rented for at least 365 days on either a Full Agricultural Tenancy, Farm Business Tenancy or other long term agreement.

#### Livestock (numbers)

| Year | Cattle (number) |           |              | Pigs (number) | Sheep (number) | Poultry (number) | Other Livestock (number) |        |
|------|-----------------|-----------|--------------|---------------|----------------|------------------|--------------------------|--------|
|      | Dairy herd      | Beef herd | Total cattle | Total pigs    | Total sheep    | Total poultry    | Goats                    | Horses |
| 2016 | 621             | 257       | 2570         | #             | 12047          | 10580            | #                        | 62     |
| 2013 | 725             | 215       | 3231         | #             | 13116          | 9682             | #                        | 81     |
| 2010 | 568             | 177       | 2935         | #             | 12 157         | 296              | #                        | 82     |

#### Labour (numbers)

| Year | Farmers Full time | Farmers Part-time | Employees Full-time | Employees Part-time | Casual workers | Total labour |
|------|-------------------|-------------------|---------------------|---------------------|----------------|--------------|
| 2016 | 28                | 37                | 13                  | 13                  | #              | 107          |
| 2013 | 30                | 43                | 9                   | 11                  | 6              | 104          |
| 2010 | 25                | 39                | 7                   | 6                   | 5              | 87           |

#### 1. Noticeable changes in the June Survey

The substantive increase in the number of general cropping holdings under Standard Output typology is not as a result of holdings having changed type, it is mainly due to ‘Specialist Grass and Forage’ holdings under the Standard

Gross Margins typology (12,533) now being classified as general cropping. In terms of their robust type these 'Specialist Grass and Forage' holdings were grouped as 'Other' under SGM typology. Since these holdings do not have any other enterprises, particularly grazing livestock enterprises, the grassland is considered as being "forage for sale" which under the standard output typology is treated as a general cropping product.

## **June Survey of Agriculture and Horticulture: Methodology**

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/182206/defra-stats-foodfarm-landuselivestock-june-junemethodology-20120126.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/182206/defra-stats-foodfarm-landuselivestock-june-junemethodology-20120126.pdf)

### **'5.2 Farm type classification**

As part of the production of the holding level dataset, we also assign each holding to a farm type to indicate the main type of activity on the holding. To meet EU requirements, from 2010 the methodology employed to do this has changed to using "Standard Outputs" rather than "Standard Gross Margins". The Standard Output (SO) is a measure of the total value of the output costs on a farm based on standardised coefficients, whereas Standard Gross Margins (SGM) are a measure of the profitability. Full details of these changes and an explanation of the impact on farm type classification can be found in the June standard output typology document available at <http://www.defra.gov.uk/statistics/foodfarm/landuselivestock/junesurvey/junesurveyresults/>.

#### **General cropping**

Holdings on which arable crops (including field scale vegetables) account for more than two thirds of the total SO and also holdings with a mixture of arable and horticultural crops which again account for more than two thirds of the total SO. In a change to the previous classification system, holdings without livestock that also have grassland and forage crops accounting for more than two thirds of the total SO are assigned to general cropping.'

## Appendix 3 - Biodiversity

### Local Wildlife Sites

|  |
|--|
| <b>Lancashire – Biological Heritage Sites (44)</b>                                       |
| Lambert's Meadow   |
| Sixteen Buoys  |
| Challan Hall Allotment Limestone Pavements outside SSSI                                  |
| Gait Barrows Limestone Pavement, Grassland and Woodland outside the SSSI/NNR             |
| Thrang Coppice   |
| Yealand Storrs Fields  |
| Thrang Fields  |
| Thrang End and Creep-a-Crawl Woods   |
| Post Office Lots   |
| Woodwell (Including Bottoms Wood, Scout Wood, Pointer Wood and Long Wood)                |
| Hazelwood Farm Grasslands  |
| Heald Brow (Including Fleagarth Wood and Magstone Wood)                                  |
| Warton Crag Quarry and Cliffs  |
| Warton Crag North of Occupation Road (Including Grisedale Wood and Stoney Wood)          |
| White Moss   |
| Hyning Scout Wood and Adjoining Land   |
| Crag Road Verge  |
| Chapel Lane and The Row Roadside Verges  |
| Moss Lane Roadside Verge   |
| Red Bridge Lane Roadside Verges  |
| Burton Well Scroggs  |
| Eaves Wood Limestone Pavement and Woodland Outside SSSI                                  |
| Burton Well Limestone Pavements and Woodlands (Including Burton Well Scar and Hagg Wood) |
| Silverdale Golf Course   |
| Silverdale Golf Course East  |
| Myers Dyke   |
| Red Bridge Railway Cutting   |
| Ford Lane Bridge Railway Cutting   |
| Silverdale Moss  |
| Trowbarrow Quarry and The Trough Plantation  |
| Alders Watering Hole   |
| Coldwell Farm Limestone Pavement and Grassland   |
| Thrang end Fields  |
| Trowbarrow Pasture   |
| Bank Well  |
| Silverdale Coastal Cliffs and 'The Lots'   |
| Cow Close Wood   |
| Outflow from Leighton Moss to Morecambe Bay  |
| Barrow Scout   |
| Warton Crag South of Occupation Road   |
| Ings Point Cliff   |
| Ings Point Railway Cutting   |
| Morecambe Wood, Flat Wood and Storrs Brow  |
| Dykedale Wood and Summerhouse Hill   |

|   |
|---|
| <b>Cumbria – County Wildlife Sites (20)</b> |
| Grubbins Limestone Plateau                  |
| Grubbins Wood                               |
| Dobshall Wood                               |
| Hare Parrock                                |
| Hollins Farm Verges                         |
| Middlebarrow Plain                          |
| Middlebarrow Wood                           |
| Hagg Wood (Arnside)                         |
| Storth Corner Pasture                       |
| Creep-i'-th'-Call Bridge Wood               |
| Longthroughs Wood                           |
| Dolly Wood                                  |
| Whinscar Fieryhouse and Longtail Woods      |
| Major Woods                                 |
| Slack Head Wood                             |
| Red Hills Wood                              |
| Red Hills Pasture                           |
| Haverbrack Bank                             |
| Crow Wood (Dallam)                          |
| Hale Fell                                   |

## Habitats

### Unfavourable declining and unfavourable no change sites (Natural England, Designated Sites View, accessed 13<sup>th</sup> August 2018)

#### **Hawes Water SSSI unit 8, 2.8ha, Broadleaved, mixed and yew woodland - upland - last assessed 21/03/2017**

Condition assessment comment: 'This unit has been changed from UR to UD because of the need to remove around 1ha of beech plantation. This is an action of the MB Limestones SIP and a recommendation from Iain Diack (NE Wetland Specialist). Removing the trees from the mainly marl and peaty substrate will allow restoration marl grassland and base-rich fen priority habitat (and SAC qualifying features). It will also reconnect grazing of the lakeside habitat at Hawes water back to the pastures at gait barrows.'

Reason for adverse condition: Forestry – forestry and woodland management

#### **Middlebarrow SSSI unit 3, 7.35ha, Inland rock – last assessed 20/10/2010**

'Middlebarrow unit 3 was assessed for limestone pavements and VPA. There is no evidence of loss of pavement. Non natives are present- Cotoneaster which occurs on the margins of grassland, woodland & pavement clearings. This is locally well above below the 1% threshold and this urgently needs attention. There is also local Buddleja and occasional pine. There are no agricultural weeds and bracken is rare. Structure in pavement vegetation is good with a mixed mosaic of open and wooded pavement, clearings and scrub edge. Pavement vegetation is emergent but evidence of deer browse on yew (and occasionally ash) is marked. The yew skirts are no worse than in 2005 but have not improved and are still degraded by deer. Juniper is occasional. The VPA is favourable with Sorbus lanc, Sesleria, Cx digitata, & Epipactis all evident. Dryopteris submontana was not seen on this visit. Condition is assessed as unfavourable with cotoneaster removal being the required action and deer control needing addressing.'

Reason for adverse condition: Forestry – deer grazing/browsing, Forestry – forestry and woodland management, Other – other – specify in comments

#### Unfavourable no change

#### **Gait Barrows SSSI merger of units 16-18, 20-21 and 27), 16.41ha, Fen, marsh and swamp – last assessed 21/03/2017**

'This unit has been changed from favourable to unfav no change because it has been agreed with national wetland specialist (Iain Diack) that the extent of the priority habitat (marl lake and base-rich fen) is greatly reduced due to the modified state of Little Hawes Water. A bid has been made to WELF for 17/18 to restore the hydrology by blocking the channel between Hawes Water and Little Hawes Water to increase the extent of the open water and surrounding base rich fen (features of MB Limestones SAC).'

Reason for adverse condition: Freshwater – inappropriate water levels

#### **Warton Crag SSSI unit 6 (Three Brothers Allotment), 10.32ha, Inland rock – last assessed 06/06/2016**

'The unit has woodland and very small amounts of calcareous grassland and semi-open pavement. Non designated parts are the bracken/neutral grassland and wooded pavement. The unit fails as the woodland is largely grazed (though with small areas fenced off) - resulting in loss of ground flora and is bramble/grass dominated. Dead wood is also sparse. Sycamore is about 10% cover - just acceptable as not regenerating strongly.

The small calcareous grassland patches are rank and with low herb cover apart from small area around the Brothers stones. Grassland along the rides is mostly semi improved and not calcareous and is bracken dominated in many places despite some past treatment.

Most of the pavement is wooded but small areas in the west are semi-open but the best area in the NW where it is fenced has over 30% scrub cover and fails on this. A good patch of lily of valley occurs next to pavement.

The allotment has potential for butterflies but is not designated for them. Only whitebeam out of the vascular plant assemblage occurs here'.

Reason for adverse condition: Agriculture – overgrazing

**Hawes Water SSSI unit 12**, 0.7258ha, Broadleaved, mixed and yew woodland – upland – last assessed 08/03/2012

‘The unit is assessed as remaining in unfavourable no-change. Although it would appear that positive action has been taken in the felling of non-natives in the Northern part of the unit, this has unfortunately created a significant area with very low canopy cover (<10%), there is also evidence of recent die back of all ash saplings / young trees in the Northern Part of the unit (cause unknown) and dense bramble cover across the entire area. The loss of canopy cover has allowed the bramble to become established and could possibly make it difficult for natural regeneration of to occur (although it may in fact protect any regen from deer browsing). It may be necessary to encourage re-establishment of tree cover by securing natural regeneration with tree shelters. Discussion is needed with the site owner to ensure that appropriate actions are taken to aid recovery. The Southern half of the unit (NNR) was in better (unfavourable recovering) condition, but still failing some of the FCT targets, most notably on the lack of understory cover, however, ash regeneration was present and deer browsing did not appear to be a problem.’

Reason for adverse condition: forestry – forestry and woodland management

### Condition of broad habitats within SSSIs (ha)

| Broad habitat                                | Favourable and recovering condition |                               | Unfavourable no change   | Unfavourable declining                                |
|--|-------------------------------------|-------------------------------|--|---|
|  | Ha                                  | % of total broad habitat area |  |   |
| Broadleaved, mixed and yew woodland – upland | 315                                 | 98.7                          | <i>Hawes Water SSSI unit 12</i> , 0.7ha                                | <i>Hawes Water SSSI unit 8</i> , 2.8ha                |
| Calcareous grassland - lowland               | 142                                 | 100                           |  |   |
| Calcareous grassland - upland                | 19                                  | 100                           |  |   |
| Earth heritage                               | 30                                  | 100                           |  |   |
| Fen, marsh and swamp - lowland               | 144                                 | 90                            | <i>Gait Barrows SSSI merger of units 16-18, 20-21 and 27</i> , 16.4ha, |   |
| Inland rock                                  | 205                                 | 91.9                          | <i>Warton Crag SSSI unit 6</i> (Three Brothers Allotment), 10.3ha,     | <i>Middlebarrow SSSI unit 3</i> , 7.35ha, Inland rock |
| Littoral sediment                            | 3144                                | 100                           |  |   |
| Standing open water and canals               | 6                                   | 100                           |  |   |
|  |                                     |                               |  |   |

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### Area of Priority Section 41 habitats within the Arnside & Silverdale AONB and proportion of AONB each covers

Source: G Skelcher, Priority Habitat Survey, 2016

| Broad habitat           | Habitat name                                    | Area (ha)           | % cover of AONB (7561 ha) |
|-------------------------|---|---------------------|---------------------------|
| Arable and horticulture | Traditional orchards                            | 3.41                | 0.05                      |
|                         | <b>Total Arable &amp; Horticulture</b>          | <b>3.41</b>         | <b>0.05</b>               |
|                         | Boundary  | <i>Not assessed</i> |                           |
|                         | <b>Total Boundary</b>                           | <i>n/a</i>          |                           |
| Coastal                 | Coastal saltmarsh                               | 378.82              | 5.01                      |
|                         | Intertidal mudflats                             | 2474.69             | 32.73                     |
|                         | Maritime cliff and slopes                       | 3.58                | 0.05                      |
|                         | <b>Total Coastal</b>                            | <b>2857.09</b>      | <b>37.79</b>              |
| Freshwater              | Oligotrophic and dystrophic lakes <sup>22</sup> | 4.45                | 0.06                      |
|                         | Ponds   | 1.92                | 0.03                      |
|                         | Rivers  | 3.12                | 0.04                      |
|                         | <b>Total Freshwater</b>                         | <b>9.48</b>         | <b>0.13</b>               |
| Grassland               | Lowland calcareous grassland                    | 126.85              | 1.68                      |
|                         | Lowland meadows                                 | 50.69               | 0.57                      |
|                         | Purple moor-grass and rush pastures             | 5.67                | 0.08                      |

<sup>22</sup> Oligo-mesotrophic lakes, NE, 18/10/2018

| Broad habitat                  | Habitat name                           | Area (ha)      | % cover of AONB (7561 ha) |
|--------------------------------|--|----------------|---------------------------|
|                                | <b>Total Grassland</b>                 | <b>183.22</b>  | 2.42                      |
| Heathland                      | Lowland heathland                      | 0.07           | 0.001                     |
|                                | <b>Total Heathland</b>                 | <b>0.07</b>    | <b>0.001</b>              |
| Inland rock                    | Inland rock outcrop and scree habitats | 161.02         | 2.13                      |
|                                | Limestone pavements                    | 56.31          | 0.74                      |
|                                | <b>Total Inland Rock</b>               | <b>217.33</b>  | <b>2.87</b>               |
| Marine                         | Estuarine rocky habitats               |                |                           |
|                                | <b>Total Marine</b>                    |                |                           |
| Wetland                        | Coastal and floodplain grazing marsh   | 308.78         | 4.08                      |
|                                | Lowland fens                           | 51.66          | 0.68                      |
|                                | Reedbeds                               | 134.73         | 1.78                      |
|                                | <b>Total Wetland</b>                   | <b>495.15</b>  | <b>6.55</b>               |
| Woodland                       | Lowland mixed deciduous woodland       | 220.58         | 2.92                      |
|                                | Upland mixed ashwoods                  | 775.13         | 10.25                     |
|                                | Wet woodland                           | 14.43          | 0.19                      |
|                                | Wood-pasture and parkland              | 3.95           | 0.05                      |
|                                | undefined deciduous woodland           | 316.03         | 4.18                      |
|                                | <b>Total Woodland</b>                  | <b>1330.11</b> | <b>17.59</b>              |
|                                |  |                |                           |
| <b>Total Priority Habitats</b> |  | <b>5095.85</b> | <b>67.4</b>               |

### Nature Reserves within the AONB

|  | Site Name                            | Area (ha)       | Data Source  |
|--|--------------------------------------|-----------------|--|
| National Nature Reserve                    | Gait Barrows NNR                     | 121.6           | LCiC, 2018   |
| Local Nature Reserves                      | Trowbarrow                           | 15.8            | LCiC, 2018   |
|  | Warton Crag                          | 18.7            |  |
|  | Warton Crag Quarry                   | 6.8             |  |
| National Trust                             | NT land within the AONB              | 278             | NT, 2017   |
| Wildlife Trust (Lancashire and Cumbria)    | Warton Crag                          | 35              | <a href="https://www.wildlifetrusts.org/nature-reserves">https://www.wildlifetrusts.org/nature-reserves</a> , Feb 2019   |
|  | Hale Moss                            | 3               |  |
|  | Grubbins Wood                        | 9               |  |
| RSPB                                       | Leighton Moss                        | 132.6           | <a href="https://opendata-rspb.opendata.arcgis.com/datasets/rspb-reserves">https://opendata-rspb.opendata.arcgis.com/datasets/rspb-reserves</a> , Feb 2019   |
|  | Silverdale Moss                      | 70.2            |  |
|  | Warton Crag                          | 32.5            |  |
|  | Barrow Scout                         | 9.1             |  |
|  | Morecambe Bay (part within the AONB) | 1862.4          |  |
| Butterfly Conservation                     | Myers Allotment                      | 7.2             | <a href="https://butterfly-conservation.org/our-work/reserves/myers-allotment-lancashire">https://butterfly-conservation.org/our-work/reserves/myers-allotment-lancashire</a> , Feb 2019   |
| Woodland Trust                             | Crossfield Wood                      | 0.08            | <a href="https://www.woodlandtrust.org.uk/visiting-woods/map/Arnsdale,%20Cumbria,%20United%20Kingdom/54.1978454589844/-2.83351898193359/?newTemplate=true">https://www.woodlandtrust.org.uk/visiting-woods/map/Arnsdale,%20Cumbria,%20United%20Kingdom/54.1978454589844/-2.83351898193359/?newTemplate=true</a> , Feb 2019 |
|  | Dobshall Wood                        | 3.87            |  |
|  | Hynning Scout Wood                   | 20.86           |  |
| Arnsdale & Silverdale AONB Landscape Trust | Teddy Heights                        | 4.98            | AONB   |
|  | Coldwell Parrock                     | 2.55            |  |
|  | Coldwell Meadow                      | 1.89            |  |
| <b>Total</b>                               |                                      | <b>2,636.13</b> |  |
|  |                                      |                 |  |
| RSPB                                       | Warton Mires                         | 32.5            | Land bought in 2018  |
| Arnsdale & Silverdale AONB Landscape Trust | Coldwell – new land                  | 3.95            | Land bought in 2018  |
| Fell End Holiday Park, Pure Leisure        | Fell End                             | c. 12           | ‘just under 30 acres’ <a href="https://www.pure-leisure.co.uk/nature-reserve/history/">https://www.pure-leisure.co.uk/nature-reserve/history/</a><br>Reserve created in 2018   |
| <b>Total</b>                               |                                      | <b>48.45</b>    |  |
|  |                                      |                 |  |
| <b>Grand Total</b>                         |                                      | <b>2,684.58</b> |  |

## Species

### RSPB data

#### Total counts from Leighton Moss, Silverdale Moss, Barrow Scout and Saline Lagoons

|                      | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 |
|----------------------|------|------|------|------|------|------|------|------|------|------|------|
| <b>Bittern</b>       |      |      |      |      |      |      |      |      |      |      |      |
| Booming              | 2    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    |
| Nests                | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 1    |
|                      |      |      |      |      |      |      |      |      |      |      |      |
| <b>Bearded Tit</b>   |      |      |      |      |      |      |      |      |      |      |      |
| Pairs                | 25   | 26   | 20   | 18   | 24   | 18   | 18   | 12   | 30   | 26   | 18   |
| Young                | 29   | 33   | 33   | 24   | 69   | 49   | 17   | 32   | 104  | 103  | 51   |
|                      |      |      |      |      |      |      |      |      |      |      |      |
| <b>Marsh Harrier</b> |      |      |      |      |      |      |      |      |      |      |      |
| Nests                | 3    | 2    | 3    | 4    | 4    | 7    | 6    | 4    | 4    | 5    | 4    |
| Young fledged        | 6    | 7    | 7    | 6    | 11   | 14   | 8    | 8    | 10   | 14   | 9    |
|                      |      |      |      |      |      |      |      |      |      |      |      |
| <b>Avocet</b>        |      |      |      |      |      |      |      |      |      |      |      |
| Pairs                | 29   | 22   | 9    | 38   | 30   | 30   | 19   | 12   | 0    | 12   | 12   |
| Fledged young        | 20   | 1    | 0    | 1    | 9    | 31   | 48   | 9    | 0    | 1    | 1    |

#### Butterflies of RSPB Warton Crag

|                                  | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 |
|----------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| <b>High-brown fritillary</b>     | 0    | 0    | 0    | 31   | 7    | 77   | 55   | 135  | 240  | 251  | 41   |
| <b>Pearl-bordered fritillary</b> | 0    | 3    | 2    | 2    | 2    | 8    | 23   | 40   | 21   | 31   | 87   |

|  |    |     |    |     |    |     |    |     |     |     |    |
|--|----|-----|----|-----|----|-----|----|-----|-----|-----|----|
| <b>Small pearl-bordered fritillary</b> | 73 | 156 | 20 | 47  | 56 | 152 | 81 | 129 | 97  | 71  | 47 |
| <b>Northern Brown Argus</b>            | 49 | 72  | 32 | 207 | 59 | 87  | 88 | 247 | 145 | 171 | 71 |
| <b>Dingy Skipper</b>                   | 41 | 13  | 22 | 14  | 4  | 65  | 27 | 27  | 48  | 16  | 1  |

## Appendix 4 Water Environment

### Water Resources

#### Licensed Abstractions within the AONB (Environment Agency)

| Site Operator                 | Location                         | Permit Number           | NGR            | Volume  | Source   | Use                                  |
|-------------------------------|----------------------------------|-------------------------|----------------|---|--|--------------------------------------|
| Tarmac Trading Ltd            | Sandside Quarry, Milnthorpe      | 2673619005              | SD 4813 8089   | Not Exceeding<br>4.5 m <sup>3</sup> /hour<br>85 m <sup>3</sup> /day<br>28,000 m <sup>3</sup> /year  | Underground Strata/<br>Carboniferous Limestone | Dust Suppression/ Mineral<br>Washing |
| John Dobson (Milnthorpe) Ltd  | Bela Mill, Milnthorpe            | 2673615001              | SD 4960 8110   | Not Exceeding<br>2631 m <sup>3</sup> /hour<br>31582 m <sup>3</sup> /day<br>1646743 m <sup>3</sup> /year   | River Bela                                     | Power Generation/<br>Cooling         |
| Heron Corn Mill (Beetham) Ltd | Heron Corn Mill, Beetham         | 2673614008              | SD 49608 79944 | No abstraction until minimum<br>flow depth above weir is met<br>(52mm)  | River Bela                                     | Power Generation                     |
| Billerudkorsnas Beetham Ltd   | Waterhouse Mills, Beetham        | 2673614001              | SD 4960 7990   | Maximum<br>197 m <sup>3</sup> /hour<br>4733 m <sup>3</sup> /day<br>1727480 m <sup>3</sup> /year   | River Bela                                     | Paper Production                     |
| Pure Leisure Group            | Fell End Caravan Park, Hale      | 2673619006              | SD 50090 77890 | Maximum<br>4.64 m <sup>3</sup> /hour<br>55.71 m <sup>3</sup> /day<br>20278 m <sup>3</sup> /year   | Underground Strata/<br>Carboniferous Limestone | Private Water Supply                 |
| Lakeland Wildlife Oasis       | Lakeland Wildlife Oasis, Hale    | 2673614005              | SD 5090 7780   | Maximum<br>2.5 m <sup>3</sup> /hour<br>25 m <sup>3</sup> /day<br>7500 m <sup>3</sup> /year  | Underground Strata/<br>Carboniferous Limestone | Agriculture                          |
| Pure Leisure Group            | Lakeland Leisure Village, Warton | NW/073/0622/001/R0<br>1 | SD 51334 72729 | Maximum<br>4.32 m <sup>3</sup> /hour<br>90 m <sup>3</sup> /day<br>32760 m <sup>3</sup> /year  | Underground Strata/<br>Carboniferous Limestone | Use in Holiday Complex               |
| Warton Stock Car Club         | Warton Stock Car Club, Warton    | 2673600002              | SD 4830 7080   | Maximum<br>Dust Suppression<br>10.02 m <sup>3</sup> /hour<br>127.64 m <sup>3</sup> /day<br>2553.70 m <sup>3</sup> /year<br><br>Domestic<br>1.8 m <sup>3</sup> /hour<br>14.2 m <sup>3</sup> /day<br>283 m <sup>3</sup> /year | River Keer                                     | Dust Suppression/<br>Domestic        |

## Private water supplies within the AONB

Within SLDC area there are 8 private water supplies in total. 4 of these are boreholes. 4 of these are private distribution systems. This is where water is supplied by a water undertaker or licensed water supplier (United Utilities), and is then further distributed by a person other than a water undertaker or licensed water supplier. These are caravan parks in this instance. There are no springs or surface water supplies within this area. Source: SLDC

Within Lancaster District area there are 5 in total, 4 considered to be groundwater sources and one rainwater harvesting. Source: LCiC

## Water Quality

### Bathing water annual classifications

#### Bathing Water Profile for Morecambe North, SD 43781 64956

(results from water quality assessments under the Bathing Water Directive)

2017 - Current water quality classification is **Good**, based on samples taken from 2014 through to 2017.

2017 classification good

2016 classification good

2015 classification sufficient

2014 classification sufficient\*

Samples taken weekly between May 1st 2017 and Sep 30th 2017

#### Bathing Water Profile for Morecambe South, SD 42746 64454

2017 - Current water quality classification is **Good**, based on samples taken from 2014 through to 2017.

2017 classification good

2016 classification good

2015 classification sufficient

2014 classification sufficient\*

Samples taken weekly between May 1st 2017 and Sep 30th 2017

Classification for each bathing water is calculated annually, based on samples from the previous four years. These classifications, from best to worst, are "excellent", "good", "sufficient" or "poor".

From 2015 there are new, tighter standards. The first official classification under these new standards was published towards the end of 2015, when a full four-year dataset was first available.

\*A classification from before 2015 indicates the class that the bathing water would have achieved if the new bathing water quality standards had been in force.

Source: Environment Agency, 2018

## 2018 Final Bespoke AONB WQ Data Set (Source: Environment Agency)

Table 1

| River WB Name                | River WB ID    | Length (km) in Cycle 2 | Overall Waterbody WFD Classification 2016 | Biology WFD Classification 2016 | Comments   |
|------------------------------|----------------|------------------------|---|---------------------------------|--|
| River Keer (Lower)           | GB112073064430 | 0.65                   | Moderate                                  | Inverts = Mod                   | Inverts classification confidence = uncertain  |
| Leighton Beck                | GB112073071040 | 5.76                   | Bad                                       | Fish = Bad<br>Inverts = Mod     | Inverts classification confidence = uncertain. If correct then likely that site habitat/morphology limits fauna. Further investigation planned into fish to check whether "Bad" is truly reflective and if so why. |
| Leighton Moss and the Pool   | GB112073071032 | 4.90                   | Moderate                                  | Inverts = Mod                   | Inverts. Site habitat (sandy/silty substrate) likely to limit fauna  |
| River Bela                   | GB112073071070 | 3.02                   | Good                                      | Fish = High<br>Inverts = Good   |  |
| Total Length (km) in Cycle 2 |                | 14.33                  |   |                                 |  |

Table 2

| River WB Name              | Official Phys-Chem WFD Classification 2016 by element   | Underlying* Phys-Chem WFD Classification 2016 by element | Comments   |
|----------------------------|---|--|--|
| River Keer (Lower)         | Amm = High<br>DO = Good<br>pH = High<br>P = High<br>Temp = High                                 |  |  |
| Leighton Beck              | Amm = Good<br>DO = Bad<br>pH = High<br>P = Mod<br>Temp = High                                   | DO = Good<br>P = Good                                    | 2016 classification based on data from unsuitable WQ sample point (tidally influenced). Data from more suitable sample point gives classification of Good for DO and P. Request made to alter WQ sample point used for official classification for future years. |
| Leighton Moss and the Pool | Amm = High<br>DO = Mod<br>pH = High<br>P = High<br>Temp = High                                  | DO = Good  | DO only Mod due to a single outlying (and obviously erroneous) value   |
| River Bela                 | Amm = High<br>Acid NC = High<br>BOD = High<br>DO = High<br>pH = High<br>P = Good<br>Temp = High |  |  |

Table 3

| Standing WB Name | Standing WB ID | Overall Waterbody WFD Classification 2016 | Biology WFD Classification 2016         | Phys-Chem WFD Classification 2016                              | Comments  |
|------------------|----------------|---|---|--|---|
| Hawes Water      | GB31229647     | Moderate                                  | Good (all elements either High or Good) | Moderate (due solely to DO at Bad, all other elements at High) | Confidence in DO classification uncertain – due to uncertain nature of the method used to derive DO classification in lakes. DO consistently classified as being at High until 2016 |

Table 4

| TraC WB Name | TraC WB ID     | Overall Waterbody WFD Classification 2016 | Comments   |
|--------------|----------------|---|--|
| Kent         | GB531207312000 | Bad                                       | The only element not at either Good or High is Phytoplankton – which is at Bad and gives rise to the Overall Classification of Bad. On CPS under reason for failure it suggests "suspect data" |

# Water quality monitoring at Wood Well, Burton Well and Bank Well, Silverdale

| DATE       | TIME  | COMMENTS               | PRN      | BOD ATU mg/l | COD as O2 mg/l | Ammonia (N) mg/l | Nitrogen Total Oxidised mg/l | Nitrite - N mg/l | Suspended Solids mg/l | Chloride Ion mg/l | Ortho-phosphate mg/l | E-Coli Confirmed NO/100ml | IE Confirmed CFU/0.1l | MST Filter | Grid Ref       |
|------------|-------|------------------------|----------|--------------|----------------|------------------|------------------------------|------------------|-----------------------|-------------------|----------------------|---------------------------|-----------------------|------------|----------------|
| 20/03/2018 | 10:50 | WOOD WELL SILVERDALE   | 90192011 |              |                |                  |                              |                  |                       |                   |                      | < 10                      | < 10                  | yes        | SD 46480 74393 |
| 20/03/2018 | 10:51 | WOOD WELL SILVERDALE   | 90192015 | < 1          | < 10           | < .03            | 2.41                         | < .004           | 3.83                  | 23.7              | < .01                |                           |                       |            | SD 46480 74393 |
| 20/03/2018 | 11:15 | BURTON WELL SILVERDALE | 90192010 |              |                |                  |                              |                  |                       |                   |                      | < 10                      | < 10                  | yes        | SD 47105 75158 |
| 20/03/2018 | 11:16 | BURTON WELL SILVERDALE | 90192014 | < 1          | < 10           | < .03            | 1.87                         | < .004           | < 3                   | 29.1              | < .01                |                           |                       |            | SD 47105 75158 |
| 20/03/2018 | 11:45 | BANK WELL SILVERDALE   | 90192012 |              |                |                  |                              |                  |                       |                   |                      | < 10                      | < 10                  | yes        | SD 47198 75417 |
| 20/03/2018 | 11:46 | BANK WELL SILVERDALE   | 90192013 | 4.65         | 24             | < .03            | < .2                         | < .004           | 3.23                  | 17.7              | < .01                |                           |                       |            | SD 47195 75417 |

Source: Natural England, Environment Agency

## Appendix 5 Historic Environment

### Scheduled Monuments

| Monument Name   | Listed building | At risk  |
|---|-----------------|----------|
| Arnside Tower   | Grade II*       | Y        |
| Beetham Hall (curtain wall and uninhabited portion)     | Grade II*       | Y        |
| Hazelslack Tower  | Grade II        | Y        |
| Ringwork in Dallam Park 380m south east of Dallam Tower |                 |          |
| Dog Holes Cave, Warton Crag                             |                 |          |
| Badger Hole, Barrow Scout, Warton                       |                 |          |
| Warton Crag Hillfort                                    |                 | Y        |
| Round cairn on Summerhouse Hill, Yealand Conyers        |                 |          |
| Old Rectory, Warton                                     | Grade I         |          |
| Stone circle on Summerhouse Hill, Yealand Conyers       |                 |          |
|   |                 |          |
| <b>Total No.</b>  | <b>10</b>       | <b>4</b> |

Historic England, 2018

### Grade I and II\* Listed buildings

| Grade            | Name/Address of buildings                                       | Scheduled Monument | At risk  |
|------------------|---|--------------------|----------|
| I                | Dallam Tower  |                    |          |
|                  | Orangery attached to south of Stables to north of Dallam Tower  |                    |          |
|                  | Statue approximately 5m south of Orangery to Dallam Tower       |                    |          |
|                  | Church of St Michael, Beetham                                   |                    |          |
|                  | St Oswalds Vicarage, Main Street, Warton                        |                    |          |
|                  | Old Rectory, Warton   | Y                  |          |
| II*              | Arnside Tower   | Y                  | Y        |
|                  | Beetham Hall and attached outbuildings                          |                    |          |
|                  | Curtain wall approximately 30m north of Beetham Hall            | Y                  | Y        |
|                  | Ashton House, Beetham   |                    |          |
|                  | Heron Corn Mill and attached Mill Race, Beetham                 |                    |          |
|                  | Leighton Hall, Yealand Conyers                                  |                    |          |
|                  | Quaker Meeting House (formerly listed as Friends Meeting House) |                    |          |
|                  | Slackwood Farm, Slackwood Lane, Silverdale                      |                    |          |
|                  | Church of St. John, Emesgate Lane, Silverdale                   |                    |          |
|                  | The Castle, 15 Silverdale Road, Yealand Redmayne                |                    |          |
|                  |   |                    |          |
| <b>Total No.</b> | <b>16</b>   | <b>3</b>           | <b>2</b> |

Historic England, 2018

### Historic Parks and Gardens

| Name             | Grade    |
|------------------|----------|
| Dallam Tower     | II       |
|                  |          |
| <b>Total No.</b> | <b>1</b> |

Historic England, 2018

### At Risk sites (Heritage at Risk Register 2017 – North West, Historic England)

|                          | Arnside Tower, Arnside  | Beetham Hall (curtain wall and uninhabited portion), Beetham                                       | Hazelslack Tower, Beetham  | Warton Crag small multivallate hillfort, Warton        |
|--------------------------|---|--|--|--|
| <b>Designation</b>       | Scheduled Monument and Listed Building grade II*  | Scheduled Monument and Listed Building grade II*, LB grade II                                      | Scheduled Monument and Listed Building grade II  | Scheduled Monument                                     |
| <b>Condition</b>         | Very bad  | Poor   | Very bad   | Generally unsatisfactory with major localised problems |
| <b>Occupancy</b>         | N/A   | Occupied/in use  | Vacant/not in use  | -  |
| <b>Priority Category</b> | C (C)   | F (F)  | C (C)  | -  |
|                          | Fortified tower house, probably C15. Burnt 1602, repaired probably mid C17. One wall has completely | Fortified manor house, mid C14. Hall block and cross wings with an extensive courtyard enclosed by | C14 pele tower, probably in ruins since C17. Recent stone collapse within the interior and cracks on the | -  |

|                                |  |   |   |                   |
|--------------------------------|--|---|---|-------------------|
|                                | collapsed and there are cracks in some lintels. Historic England has recently entered into discussions with the owner about developing a sustainable management solution as part of a strategic South Lakeland tower houses project. | defensive curtain wall. A conservation plan was produced in 2004. Plans to reuse the remaining medieval buildings, including the Hall, were approved in 2016. | outside. Saplings growing through the walls. Historic England has recently entered into discussions with the owner about developing a sustainable management solution as part of a strategic South Lakeland tower houses project. |                   |
| <b>Principal vulnerability</b> |  |   |   | Scrub/tree growth |
| <b>Trend</b>                   |  |   |   | Improving         |
| <b>Condition in 2012</b>       | Very bad   | Poor  | Very bad  | Trend - declining |

## Historic Landscape Characters

### Cumbria Historic Landscape Character Types within the AONB

(Source: Cumbria Historic Landscape Characterisation – final report, July 2009)

**Woodland:** ancient and plantation

**Ancient Enclosure:** fields that were created before the period of planned enclosures, and many are medieval in origin

**Planned enclosure:** fields that were enclosed mainly from the end of the 18th century.

**Former common arable:** Former cultivated common fields. They are relatively easy to recognise by their slightly curving boundaries, regular, or semi-regular shapes, and are sometimes found in groups of long, parallel fields.  
Intake

**Designed Landscape:** the landscape park owned by Dallam Tower Estate

**Settlement:** individual dwellings, hamlets, and towns. The difference between dispersed (individual) and nucleated settlements is identified: discrete, nucleated

**Extractive Industry:** Middlebarrow, Sandside quarries and near Marble quarry

**Built Environment:** records areas of non-domestic development - Sandside (previous railway station)

**Recreation:** a wide field that includes public amenities, as well as holiday sites, golf courses and sports grounds.

**Water:** Natural features such as rivers, streams, lakes and tarns - Arnside Tower Farm, Haverbrack

**Arnside and Beetham Character Area** is a small character area which lies almost wholly within the AONB.

Dominated by large areas of woodland and nucleated settlements of largely 19th/20th century. The field pattern is dominated by ancient enclosures, some of which include enclosures on former mossland. There is some planned enclosure of low limestone fells, but these are largely overlain by more recent woodland. Field boundaries are mixed consisting both dry-stone walls and hedgerows. The woodland is a mixture of ancient woodland and more recent plantations with the majority of both being deciduous. Limestone quarries and limekilns are notable features

### Lancashire Historic Landscape Character Types within the AONB

(Source: The Lancashire Historic Landscape Characterisation Report, December 2002)

**Sand and mudflats:** Communication across the type continued until the early 19th century when horse-drawn coaches would regularly traverse the mudflats of Morecambe Bay between Lancaster and the Furness peninsula. Salt production, or sleeching, took place on the flats off Silverdale and may have been a significant industry locally.

**Saltmarsh:** an important resource for grazing since the medieval period, if not earlier.

**Lowland Moss & Grassland/Scrub:** This represents the last remaining vestiges of a once widespread landscape which, three hundred years ago, extended over many thousands of hectares. The area has been reduced through the cutting of peat for fuel and the improvement of land through drainage. Today most of the former mossland is used for agriculture

**Ancient & Post-medieval woodland:** There may be coppice and pollarded trees indicating such earlier (or continuing) management regimes. There may also be wood boundaries and other ditch and bank boundaries for coppice compartments, saw-pits, drainage grips and evidence for charcoal production.

**Modern woodland:** includes planted woodland dating from some time since the 1<sup>st</sup> edition O.S. mapping of the mid-19<sup>th</sup> century.

**Water:** Hawes Water natural lake

**Ancient enclosure (Pre-AD1600):** The type is characterised by an irregular enclosure pattern with sinuous or wavy-edged field boundaries and winding lanes or tracks connecting a dispersed settlement pattern of isolated farmsteads and small villages/hamlets. Fields are irregularly shaped.

**Post-medieval enclosure (AD1600 – 1850):** type comprises a variety of field forms. Size tends to be medium (4 to 16 hectares) but with a significant percentage of small enclosures. Mainly an irregular layout with some showing a more regular, planned pattern. There is very little wavy-edged enclosure, most enclosures being bounded by straight edges.

**Modern enclosure (after AD1850):** have been so altered in the last 150 years that any underlying pattern from before AD1600 has been largely destroyed.

**Ancient & Post-medieval ornamental:** includes mainly later 18th and 19th century designed landscapes, created to look 'natural' with lakes, stands of trees and particular vistas.

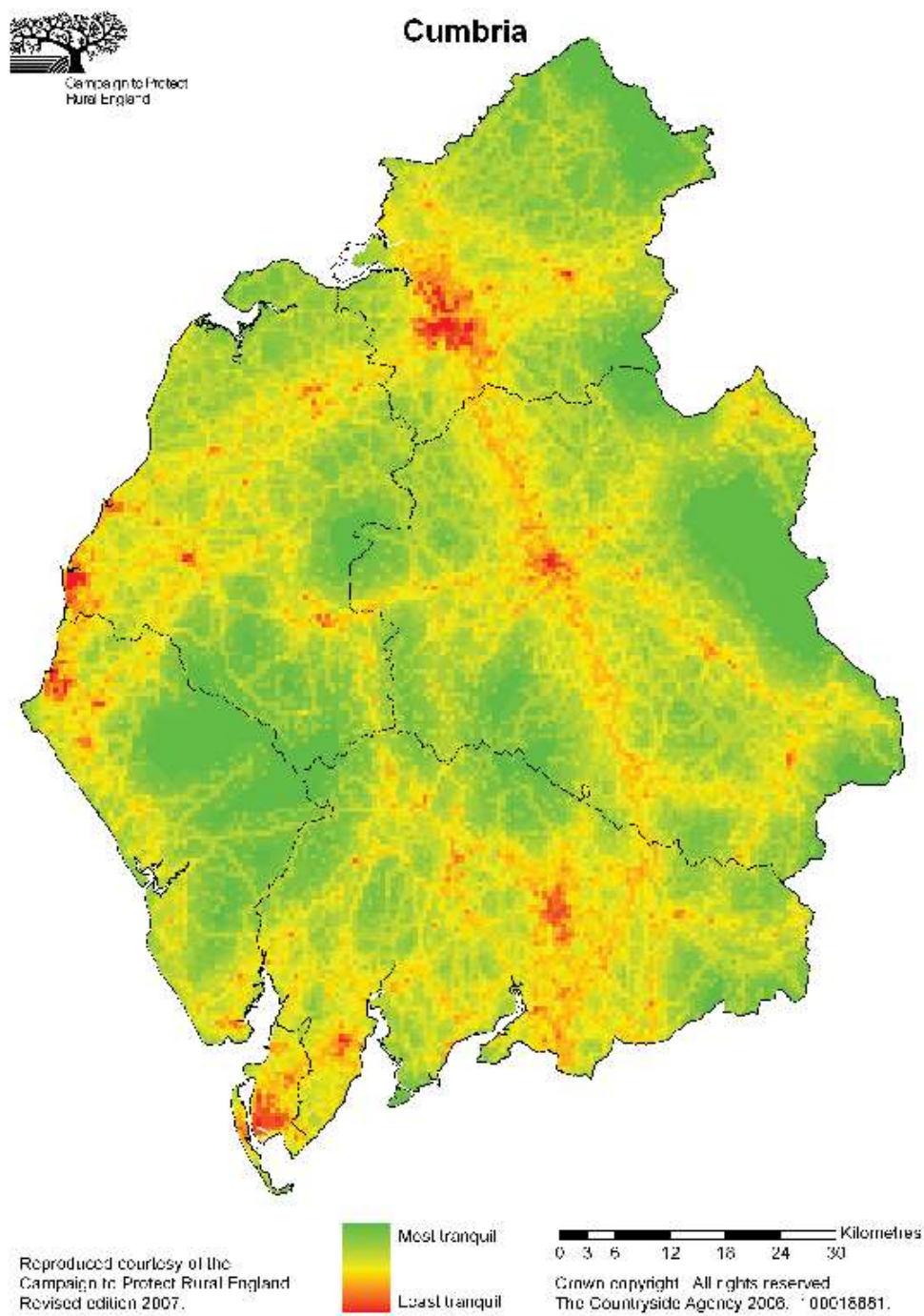
**Modern recreation:** amenity, golf courses, caravan parks

**Ancient & Post-medieval industry:** limestone quarries and limekilns

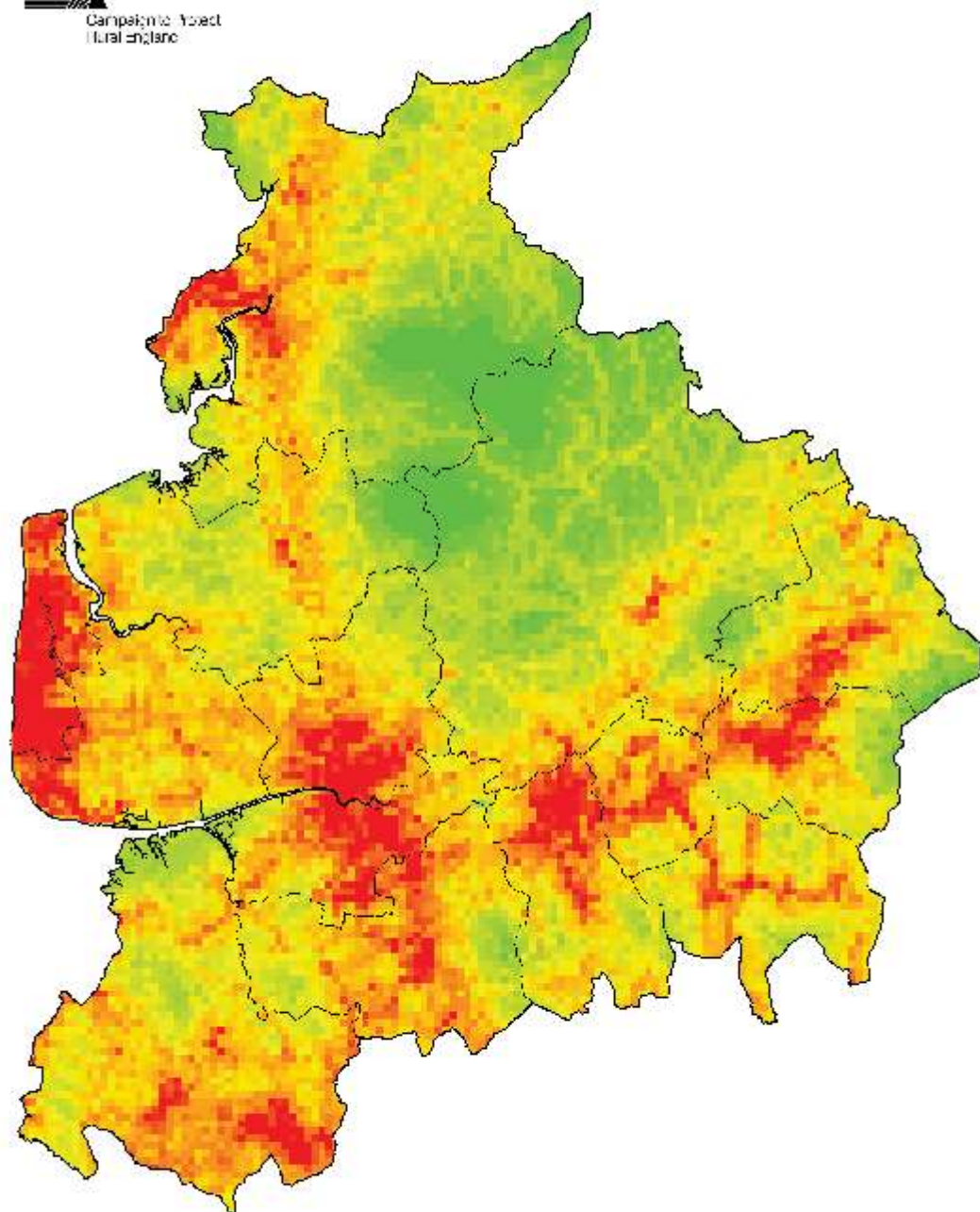
**Ancient & Post-medieval settlement:** These historic settlements represent a past history when the main economy of Lancashire was agricultural.

**Modern settlement:** mainly an expansion of previously existing settlements so, often, the Ancient & Post-Medieval Settlement type is to be found at its core. Even where the earlier settlement type has not been mapped, Modern Settlement is likely to focus on a small pre-1850 core comprising a farm building, hamlet or small village.

Appendix 6 Tranquillity



## Lancashire



Reproduced courtesy of the  
Campaign to Protect Rural England  
Revised edition 2007.



0 2 4 8 12 16 20 Kilometres

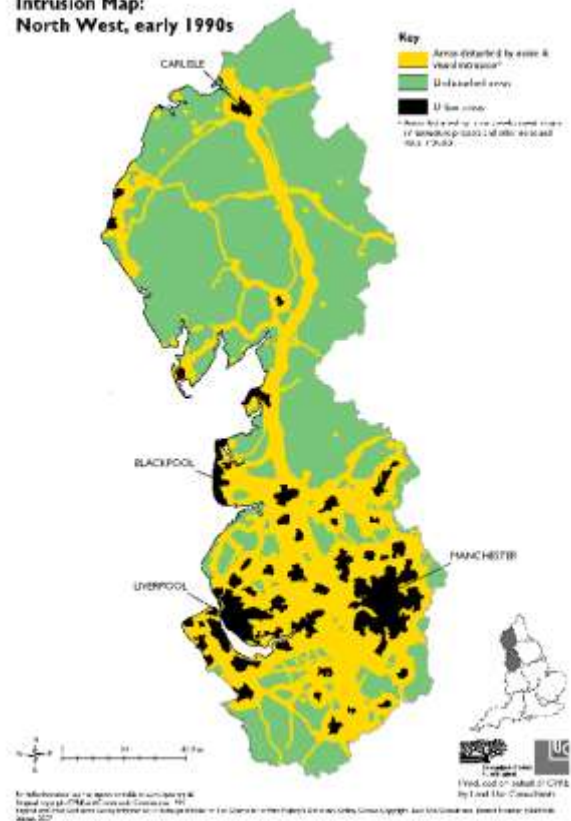
Crown copyright. All rights reserved.  
The Countryside Agency 2006. 100018881.

## CPRE Intrusion maps

**Intrusion Map:**  
**North West, early 1960s**



**Intrusion Map:**  
**North West, early 1990s**



**Intrusion Map:  
North West, 2007**



## Appendix 7 Demographics and Health

### Demographics

This data is taken from the Office for National Statistics (mid 2016 estimates) using 'wards' which are partly within the AONB boundary. This data is not exactly cut to the AONB but, assuming 96% of Arnsdale & Beetham ward and 82% of Silverdale and Warton ward populations reside within the AONB (% provided by SLDC and LCC respectively), provides approximate figures.

#### Population of Wards, Mid 2016 Estimate

| Ward               | Total Population | AONB Population |
|--------------------|------------------|-----------------|
| Arnsdale & Beetham | 4016             | 3855            |
| Silverdale         | 1889             | 1549            |
| Warton             | 2031             | 1665            |
|                    |                  | 7069            |

Source: Cumbria Observatory, Office for National Statistics

#### Age group breakdown estimates (2016)

| Age range | % of population    |            |        |      |         |            |         |
|-----------|--------------------|------------|--------|------|---------|------------|---------|
|           | Arnsdale & Beetham | Silverdale | Warton | AONB | Cumbria | Lancashire | England |
| 0-4       | 2.4                | 2.4        | 3.5    | 2.8  | 5       | 5.7        | 6.2     |
| 5-14      | 7.5                | 7.8        | 9.0    | 8.1  | 10.4    | 11.5       | 11.8    |
| 15-24     | 6.4                | 7.8        | 9.4    | 7.9  | 10.4    | 12.5       | 12.2    |
| 25-44     | 11.9               | 12.7       | 15.9   | 13.5 | 21.3    | 23.5       | 26.5    |
| 45-64     | 29.7               | 31.3       | 32.5   | 31.2 | 29.4    | 26.7       | 25.4    |
| 65-74     | 22.3               | 21.9       | 16.8   | 20.3 | 13.0    | 11.2       | 9.8     |
| 75+       | 20                 | 16.1       | 12.9   | 16.3 | 10.5    | 8.9        | 8.1     |

Source: Cumbria Observatory, Office for National Statistics

### Health (2011)

This data is from the 2011 census.

| Health           | % of population    |            |        |      |         |            |         |
|------------------|--------------------|------------|--------|------|---------|------------|---------|
|                  | Arnsdale & Beetham | Silverdale | Warton | AONB | Cumbria | Lancashire | England |
| Very bad health  | 0.8                | 1.4        | 1.3    | 1.2  | 1.3     | 1.4        | 1.3     |
| Bad health       | 3.4                | 3.0        | 4.0    | 3.5  | 4.7     | 5.0        | 4.3     |
| Fair health      | 16.7               | 14.9       | 13.9   | 15.2 | 14.4    | 14.3       | 13.2    |
| Good health      | 36.7               | 34.1       | 35.2   | 35.3 | 34.6    | 33.7       | 34.1    |
| Very good health | 42.3               | 46.5       | 44.8   | 44.5 | 45      | 45.6       | 47.1    |

Source: Cumbria Observatory Self-reported health per 100 persons (2011 Census, ONS), Local Government Association

<http://reports.esd.org.uk/reports/516?pat=LA&pa=E07000121%3AAdministrativeWard>,

Lancashire CC <http://www.lancashire.gov.uk/media/897688/cen2011-health.pdf>, Lancaster City Council (2011 Census, nomis, official labour market statistics

#### Index of Multiple Deprivation (IMD) ranks of the 6 LSOAs covering the AONB (2015)

| LSOA   | Rank out of 32,844 small areas (LSOA) in England | %                          |
|--|--|----------------------------|
| South Lakeland 011A (Arnsdale & Beetham: South West) | 30,645   | 90 – 100% (least deprived) |
| South Lakeland 011B (Arnsdale & Beetham: Central)    | 26,962   | 80 – 90%                   |
| South Lakeland 011C (Arnsdale & Beetham: East)       | 25,245   | 70 – 80%                   |
| Lancaster 001E                                       | 28,383   | 80 – 90%                   |
| Lancaster 001F                                       | 19,463   | 50 – 60%                   |
| Lancaster 001G                                       | 22,101   | 60 – 70%                   |

There are 32,844 Lower Super Output Areas in England. The Index of Multiple Deprivation (IMD) ranks in the table above, show that the overall deprivation of the AONB is low, with none of the six LSOAs in the bottom 10% for overall deprivation.

The small area 011A in South Lakeland, covering from Far Arnside to Carr Bank and including outer parts of Arnside, is ranked 30,645 out of 32,844 small-areas in England, where 1 is the most deprived. This means that 011A is in the upper 10% of least deprived areas of the country. 011B, covering the main part of Arnside village , and 001E in Lancaster City, covering part of Warton, are ranked 26,962 and 28,383 respectively and are amongst the 80% least deprived small areas of the country. In contrast, the small area 001F within Lancaster City Local Authority area, including Silverdale and the Yealands, is ranked 19,463. This means area 001F is above the 50 per cent least deprived small areas in the country. The areas covering the rest of Warton and the Beetham and Hale area are between 60 and 80%.

## Appendix 8 Housing and Local Services

### Housing

#### Arnside and Beetham

Median price all house types Q2-2017 Cumbria £155,000 (Q3-2014, £147,000); Source: Cumbria Observatory/ONS. There has been a gradual increase over last three years.

Q2 – 2017 Arnside & Beetham £257,500, (Q3-2014, £225,000); Source: Cumbria Observatory/ONS. Variable over last 3 years, peak of £273,000 in Q1 2016.

House prices are significantly higher in Arnside & Beetham ward than in Cumbria as a whole.

#### Median price (all house types) for Silverdale and Warton

| Silverdale Ward |                 |                |         |                |
|-----------------|-----------------|----------------|---------|----------------|
|                 | 90th percentile | Upper Quartile | Average | Lower Quartile |
| Jun 2013        | 361,000         | 355,000        | 259,497 | 219,000        |
| Dec 2013        | 435,000         | 300,000        | 275,525 | 190,000        |
| Jun 2014        | 312,500         | 275,000        | 259,621 | 233,000        |
| Dec 2014        | 425,000         | 390,000        | 312,978 | 256,000        |
| Jun 2015        | 358,500         | 325,000        | 280,354 | 164,000        |
| Dec 2015        | 415,000         | 375,000        | 300,187 | 230,000        |
| Jun 2016        | 485,000         | 420,000        | 337,811 | 235,000        |
| Dec 2016        | 510,000         | 370,000        | 346,046 | 288,000        |
| Jun 2017        | 385,000         | 325,500        | 249,450 | 195,000        |
| Dec 2017        | 380,000         | 375,000        | 294,112 | 250,000        |

Source: Lancaster City Council, 7<sup>th</sup> March 2018

| Warton Ward |                 |                |         |                |
|-------------|-----------------|----------------|---------|----------------|
|             | 90th percentile | Upper Quartile | Average | Lower Quartile |
| Jun 2013    | 285,000         | 275,000        | 215,000 | 160,000        |
| Dec 2013    | 360,000         | 300,000        | 256,286 | 185,000        |
| Jun 2014    | 263,675         | 263,675        | 211,239 | 197,000        |
| Dec 2014    | 280,000         | 220,000        | 207,406 | 180,000        |
| Jun 2015    | 485,000         | 367,500        | 258,278 | 120,000        |
| Dec 2015    | 332,500         | 310,000        | 294,233 | 200,000        |
| Jun 2016    | 430,000         | 260,000        | 240,113 | 159,000        |
| Dec 2016    | 351,000         | 275,000        | 239,577 | 170,000        |
| Jun 2017    | 280,000         | 250,000        | 214,458 | 166,000        |
| Dec 2017    | 190,000         | 190,000        | 185,000 | 180,000        |

Source: Lancaster City Council, 7<sup>th</sup> March 2018

Silverdale Ward: Average price Q2-2017 £249,450, (Q2 -2014, £259,621), *variable of last 3 years, peak of £346,046 in Q4 2016.*

Warton Ward: Average price Q2-2017 £214,458, (Q2 -2014, £211,239), *variable of last 3 years, peak of £294,233 in Q4 2015.* Source – Lancaster City Council

#### Affordability ratio

Source: Lancaster City Council, 7<sup>th</sup> March 2018 - Affordability ratio for each ward : unfortunately data does not exist on this, as ONS only looks at this at district level, however, the SHMA Part II did identify the % of households in need. This can be compared against a district affordability ratio of 5.36 median gross annual wages of residents 2016 = £28,004. If we take the average wage of the district and apply this to average (not median as in the district) house prices in Warton (taken as 240,000 in 2016) this would equate to a ratio of 8.57 and Silverdale on the same basis would be 12.10 (average house price £339,000).

Data from CACI Ltd (SLDC 19th February 2018) provides an affordability ratio of 7.8 for the Arnside and Beetham ward, with median house price of £283,059, and median earnings of £36, 514.

2017 data:

|   | Mean | Median |
|---|------|--------|
| <b>House Prices and Housing Affordability Ratios, Cumbria Intelligence Observatory<sup>23</sup></b> |      |        |
| Great Britain   | 7.5  | 6.5    |
| Cumbria   | 5.3  | 5.4    |
| South Lakeland  | 7.0  | 6.9    |
|   |      |        |
| <b>House price to earnings ratios, 2005 to 2017, Lancashire County Council<sup>24</sup></b>         |      |        |
| Lancaster   |      | 5.43   |
| Lancashire  |      | 5.60   |
| England   |      | 7.91   |

## Number of new affordable homes within the AONB over 5 years, 2013 - 2017

Not aware of any from the completions record; Source: Lancaster City Council, 7th March 2018

|  | 2012/13 | 2013/14 | 2014/15 | 2015/16 | 2016/17 |
|--|---------|---------|---------|---------|---------|
| Affordable housing completions within AONB | 0       | 0       | 0       | 0       | 0       |

Source: SLDC: 20<sup>th</sup> February 2018

## Local Services

| Services         | Schools  | Post Offices  | Convenience Stores   | GPs  | Village halls  | Libraries              |
|------------------|--|---|--|--|--|------------------------|
| <b>Locations</b> | Arnsdale<br>Beetham<br>Silverdale<br>Storth<br>Warton<br>Yealand | The Promenade,<br>Arnsdale<br>Emesgate Lane,<br>Silverdale<br>Storth Road, Storth<br>Main Street Warton | Premier – Anthony's<br>Village Store, Arnsdale<br>Londis, Arnsdale<br>Beetham Stores,<br>Beetham<br>Co op Silverdale<br>Storth village Shop,<br>Storth<br>Warton Post Office | Arnsdale Medical<br>Practice<br>Silverdale Surgery | Arnsdale - WI<br>Storth – Village<br>Hall<br>Silverdale –<br>Gaskell Hall<br>Warton – Village<br>Hall<br>Yealand - Village<br>Hall | Arnsdale<br>Silverdale |
| <b>Numbers</b>   | 6  | 4   | 6  | 2  | 5  | 2                      |

Source: Lancashire County Council, Cumbria County Council; NHS Choices: <https://www.nhs.uk/Service-Search/GP/LocationSearch/4>

## Bus routes

Cumbria - <http://www.cumbria.gov.uk/roads-transport/public-transport-road-safety/transport/publictransport/busserv/busservmap.asp>

552 – Arnsdale, Silverdale, Milnthorpe

Lancashire - <http://lancsbus.blogspot.com/p/local-bus-t.html>

49, 55 – Warton, Carnforth

51 – Carnforth, Yealand Redmayne, Silverdale Station, Silverdale village (and Holgates Caravan Park).

## Train passenger numbers travelling from or to the station (entries and exits)

| Station Name | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|--------------|---------|---------|---------|---------|---------|
| Arnsdale     | 110,032 | 115,464 | 114,090 | 109,736 | 110,610 |
| Silverdale   | 45,818  | 50,404  | 59,352  | 54,872  | 55,892  |
| Carnforth    | 196,470 | 206,590 | 204,196 | 206,572 | 198,270 |

Source: Estimates of station usage, Office of Rail and Road, <http://orr.gov.uk/statistics/published-stats/station-usage-estimates>, Accessed 21/09/2018

<sup>23</sup> <http://www.cumbria.gov.uk/eLibrary/Content/Internet/536/671/4674/17217/17221/43109113524.pdf>

<sup>24</sup> <https://www.lancashire.gov.uk/media/898478/housepriceearnings.pdf>

## Appendix 9 Employment

### Economic activity

| Ward                              | Arnsdale and Beetham |      | Silverdale |      | Warton |      | AONB  |      | Cumbria | Lancs |
|-----------------------------------|----------------------|------|------------|------|--------|------|-------|------|---------|-------|
|                                   | Count                | %    | Count      | %    | Count  | %    | Count | %    |         |       |
| All usual residents aged 16 to 74 | 2,872                | 100% | 1,460      | 100  | 1,733  | 100  | 6065  | 100  | 100     | 100   |
| Economically active               | 1,768                | 61.6 | 881        | 60.3 | 1,184  | 68.3 | 3,833 | 63.4 | 69.7    | 68.1  |
| In employment                     | 1,677                | 58.4 | 832        | 57.0 | 1,105  | 63.8 | 3,614 | 59.6 | 63.9    | 60.7  |
| Unemployed                        | 36                   | 1.3  | 22         | 1.5  | 38     | 2.2  | 96    | 1.6  | 3.3     | 3.8   |
| Economically inactive             | 1,104                | 38.4 | 579        | 39.7 | 549    | 31.7 | 2,232 | 36.6 | 30.3    | 31.9  |
| Retired                           | 888                  | 30.9 | 440        | 30.1 | 400    | 23.1 | 1,728 | 28.5 | 18.1    | 16.2  |

Source: ONS - 2011 Census (Other economically inactive – students, looking after home or family, long term sick or disables, other)

### Unemployment

Claimant Count (the stock of Universal Credit and Job Seekers allowance claimants):

| Claimant Count                           | % of population    |         |            |         |
|--|--------------------|---------|------------|---------|
|  | Arnsdale & Beetham | Cumbria | North West | England |
| Age 16+ total – claimant count 2017, Dec | 0.5                | 1.8     | 2.4        | 1.9     |

Source: Cumbria Observatory

### Unemployment (Apr 2017 – Mar 2018)

|                                       | South Lakeland | Lancaster | Cumbria | Lancashire | Northwest | Great Britain |
|---------------------------------------|----------------|-----------|---------|------------|-----------|---------------|
| % of economically active people 16-64 | 2.0            | 4.5       | 3.1     | 3.6        | 4.4       | 4.3           |

Source: Nomis

### Occupation by industry

|  | Persons              |      |                  |      |                  |      |      |
|--|----------------------|------|------------------|------|------------------|------|------|
|  | Arnsdale and Beetham |      | Silverdale       |      | Warton           |      | AONB |
|  | 2011 Census Ward     |      | 2011 Census Ward |      | 2011 Census Ward |      |      |
|  | Count                | %    | Count            | %    | Count            | %    | %    |
| All usual residents aged 16 to 74 in employment the week before the census | 1,725                | 100  | 856              | 100  | 1,140            | 100  | 100  |
| Agriculture, forestry, fishing   | 34                   | 2    | 17               | 2    | 20               | 1.8  | 2    |
| Mining and quarrying   | 9                    | 0.5  | 2                | 0.2  | 7                | 0.6  | 0.4  |
| Manufacturing  | 118                  | 6.8  | 43               | 5    | 75               | 6.6  | 6.1  |
| Electricity, gas, steam and air conditioning supply                        | 18                   | 1    | 19               | 2.2  | 27               | 2.4  | 1.9  |
| E Water supply; sewerage, waste management and remediation activities      | 10                   | 0.6  | 6                | 0.7  | 6                | 0.5  | 0.6  |
| Construction   | 151                  | 8.8  | 64               | 7.5  | 107              | 9.4  | 8.6  |
| G Wholesale and retail trade; repair of motor vehicles and motor cycles    | 222                  | 12.9 | 119              | 13.9 | 159              | 13.9 | 13.6 |
| H Transport and storage  | 42                   | 2.4  | 33               | 3.9  | 73               | 6.4  | 4.2  |
| Accommodation and food service activities                                  | 153                  | 8.9  | 57               | 6.7  | 60               | 5.3  | 7.0  |
| Information and communication  | 48                   | 2.8  | 21               | 2.5  | 28               | 2.5  | 2.6  |
| Financial and insurance activities   | 29                   | 1.7  | 19               | 2.2  | 21               | 1.8  | 1.9  |
| Real estate activities   | 26                   | 1.5  | 10               | 1.2  | 17               | 1.5  | 1.4  |
| Professional, scientific and technical activities                          | 114                  | 6.6  | 78               | 9.1  | 48               | 4.2  | 6.6  |
| Administrative and support service activities                              | 67                   | 3.9  | 26               | 3    | 53               | 4.6  | 3.8  |

|   |     |      |     |      |     |      |      |
|---|-----|------|-----|------|-----|------|------|
| Public administration and defence; compulsory social security | 92  | 5.3  | 43  | 5    | 41  | 3.6  | 4.6  |
| Education   | 262 | 15.2 | 132 | 15.4 | 167 | 14.6 | 15.1 |
| Human health and social work activities                       | 245 | 14.2 | 125 | 14.6 | 171 | 15   | 14.6 |
| R, S, T, U Other  | 85  | 4.9  | 42  | 4.9  | 60  | 5.3  | 5.0  |

Source: ONS - 2011 Census (KS605EW)  
provided by SLDC

## Employment types, 2011 Census

|  | % of population    |            |        |            |         |
|--|--------------------|------------|--------|------------|---------|
|  | Arnsdale & Beetham | Silverdale | Warton | Lancashire | England |
| All usual residents aged 16 to 74 in employment the week before the census | 100                | 100.0      | 100.0  |            |         |
| Agriculture, forestry, fishing   | 2                  | 2.0        | 1.8    | ?          | 1.0     |
| Mining and quarrying   | 0.5                | 0.2        | 0.6    | 0.1        | 0.1     |
| Manufacturing  | 6.8                | 5.0        | 6.6    | 13.9       | 7.5     |
| Electricity, gas, steam and air conditioning supply                        | 1                  | 2.2        | 2.4    | 0.4        | 0.4     |
| E Water supply; sewerage, waste management and remediation activities      | 0.6                | 0.7        | 0.5    | 1.0        | 0.6     |
| Construction   | 8.8                | 7.5        | 9.4    | 5.6        | 6.5     |
| G Wholesale and retail trade; repair of motor vehicles and motor cycles    | 12.9               | 13.9       | 13.9   | 15.9       | 14.2    |
| H Transport and storage  | 2.4                | 3.9        | 6.4    | 4.2        | 5.3     |
| Accommodation and food service activities                                  | 8.9                | 6.7        | 5.3    | 7.8        | 6.7     |
| Information and communication  | 2.8                | 2.5        | 2.5    | 2.2        | 4.3     |
| Financial and insurance activities   | 1.7                | 2.2        | 1.8    | 1.8        | 3.3     |
| Real estate activities   | 1.5                | 1.2        | 1.5    | 1.4        | 1.7     |
| Professional, scientific and technical activities                          | 6.6                | 9.1        | 4.2    | 6.6        | 9.2     |
| Administrative and support service activities                              | 3.9                | 3.0        | 4.6    | 7.0        | 9.2     |
| Public administration and defence; compulsory social security              | 5.3                | 5.0        | 3.6    | 4.6        | 3.9     |
| Education  | 15.2               | 15.4       | 14.6   | 10.0       | 8.4     |
| Human health and social work activities                                    | 14.2               | 14.6       | 15.0   | 14.3       | 11.9    |
| R, S, T, U Other   | 4.9                | 4.9        | 5.3    | 3.2        | 5.8     |

Source: Lancaster City Council – Nomis, official labour market statistics1.4

## Employment by sector (ONS- Neighbourhood Statistics)

| geography                                 | Arnsdale and Beetham |     | Silverdale |     | Warton |     | South Lakeland |     | Cumbria |     | NorthWest |     | England    |     |
|---|----------------------|-----|------------|-----|--------|-----|----------------|-----|---------|-----|-----------|-----|------------|-----|
| Occupation                                | count                | %   | count      | %   | count  | %   | count          | %   | count   | %   | count     | %   | count      | %   |
| Industry                                  |                      |     |            |     |        |     |                |     |         |     |           |     |            |     |
| All categories: Industry                  | 1725                 |     | 856        |     | 1,140  |     | 52,190         |     | 245,045 |     | 3,244,687 |     | 25,308,888 |     |
| A, B, D, E Agriculture, energy and water  | 71                   | 4%  | 44         | 5%  | 60     | 5%  | 2,350          | 5%  | 14,484  | 6%  | 72,255    | 2%  | 573,232    | 2%  |
| C Manufacturing                           | 118                  | 7%  | 43         | 5%  | 75     | 7%  | 4,685          | 9%  | 32,456  | 13% | 334,000   | 10% | 2,242,259  | 9%  |
| F Construction                            | 151                  | 9%  | 64         | 7%  | 107    | 9%  | 4,418          | 8%  | 21,448  | 9%  | 239,690   | 7%  | 1,941,767  | 8%  |
| G, I Distribution, hotels and restaurants | 375                  | 22% | 176        | 21% | 219    | 19% | 15,232         | 29% | 60,426  | 25% | 734,044   | 23% | 5,438,290  | 21% |
| H, J Transport and communication          | 90                   | 5%  | 54         | 6%  | 101    | 9%  | 2,574          | 5%  | 14,472  | 6%  | 259,321   | 8%  | 2,294,687  | 9%  |

|  |     |      |     |      |     |      |        |      |        |      |         |      |           |      |
|--|-----|------|-----|------|-----|------|--------|------|--------|------|---------|------|-----------|------|
| <b>K, L, M, N<br/>Financial, Real<br/>Estate,<br/>Professional<br/>and<br/>Administrative<br/>activities</b> | 236 | 14%  | 133 | 16%  | 139 | 12%  | 6,258  | 12%  | 26,280 | 11%  | 497,135 | 15%  | 4,421,878 | 17%  |
| <b>O, P, Q Public<br/>administration,<br/>education and<br/>health</b>                                       | 599 | 35%  | 300 | 35%  | 379 | 33%  | 13,735 | 26%  | 64,271 | 26%  | 959,286 | 30%  | 7,129,531 | 28%  |
| <b>R, S, T, U Other</b>  | 85  | 5%   | 42  | 5%   | 60  | 5%   | 2,938  | 6%   | 11,208 | 5%   | 148,956 | 5%   | 1,267,244 | 5%   |
|  |     | 100% |     | 100% |     | 100% |        | 100% |        | 100% |         | 100% |           | 100% |

Source: ONS Crown Copyright Reserved [from Nomis on 20 February 2018] Provided by SLDC

## **Appendix 10 Enjoyment and Understanding**

### **AONB Partnership events and visitor numbers**

#### **Annual Conference**

Conference 2019 100  
Conference 2018 64  
Conference 2017 84  
Conference 2016 81

#### **Festivals**

##### **2014**

##### **Wet & Wild Festival**

Over 700 people introduced to some spectacular wildlife and helping them gain a greater understanding of the landscape during the AONB Wet & Wild Festival.

##### **2015**

Bitter and Butterflies 2015 21

Herbal Ramble 2015 22

Generally the Taste of the Landscape Festival in 2015 attracted over 800 people to events (including the ones run by the AONB)

##### **2016**

Orchard Ramble 8

Family Herbal Ramble 15

Bitter and Butterflies 5

Herbal Ramble 9

##### **Wild 2017**

Brilliant Butterflies 18

Woodland Family Fun Day 120

##### **Wild 2018**

Woodland Family Fun Day (May) 100

Woodland Family Fun Day (July) 100

Landart (across 6 events in Easter/September) 82