

FOREST OF BOWLAND

Area of Outstanding Natural Beauty



PENDLE HILL LANDSCAPE PARTNERSHIP LANDSCAPE CHARACTER ASSESSMENT



Report commissioned by Lancashire County Council with financial support from the Heritage Lottery Fund.
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WHAT MAKES PENDLE HILL SPECIAL?

Pendle Hill has inspired many, not least George Fox, the founder of the Quaker movement, who climbed the hill in 1652 and had his vision of a 'great people' waiting to be gathered.

A landscape that is seen, by many, to hold mystical qualities whether represented in the film '*Whistle Down the Wind*' or the story of the Pendle 'witches'.

An ever-constant backdrop to the dense and populated centres of Nelson, Colne and Burnley, the area can, nevertheless, feel remote and tranquil.

A network of intimate and distinctive Lancashire villages. For example, with no electricity lines, aerials or satellite dishes the village of Downham is frequently used as a film set.

At 557 metres, this outlier has wide ranging views across the Bowland Fells to the Three Peaks of the Yorkshire Dales and across to the South Pennines.

Within the area is a surprisingly wide variety of landscape types from pastoral enclosed farmland to unenclosed moorland.

There is evidence in the landscape of the result of settlement and co-habitation of Celtic, Anglian and Norse cultures.

An intact medieval hunting landscape relatively unchanged, settlements and field patterns: some related to medieval 'vaccaries' are at least seven hundred years old.

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1.0 METHODOLOGY

The Forest of Bowland Area of Outstanding Natural Beauty was awarded stage one Heritage Lottery Funding through the Landscape Partnership Scheme to develop a Landscape Conservation Action Plan to guide potential investment in landscape restoration, interpretation and celebration of the area encompassing Pendle Hill.

It is important that any investment recognises the distinctiveness of the landscape and the drivers of change. Landscape Character Assessment is a methodology that allows consideration in a systematic approach that considers physical, ecological and cultural aspects based on analysis of individual character types.

In 2009 the AONB commissioned Chris Blandford Associates to produce a Landscape Character Assessment (LCA) for the whole AONB area. In 2016 the AONB commissioned Robin Gray, a Chartered Landscape Architect to produce a specific Landscape Character Assessment for the Pendle Hill Landscape Partnership Scheme to support and guide the five year Landscape Partnership Scheme.

The brief was to review and update the existing LCA for the Landscape Partnership area. In addition the Landscape Partnership has sought to look at Pendle Hill in its wider context, namely look outwith the Area of Outstanding Natural Beauty's designated boundary to the north, south and east (see map #1). For example, this has taken in areas to the River Calder south of the Higham that were not included within the original Landscape Character Assessment. These areas are considered in some detail within the context of the Landscape Character Area as a whole and by reference to Lancashire's Landscape Character Assessment where this forms part of the Lancashire Industrial Foothills and Valleys (LCC, 2000).

The study has been informed by the publication by Natural England of a National Character Area profile for the Bowland Fringe and Pendle Hill which takes an 'ecosystem approach' to not just the landscape but the range of natural environment assets (Natural England, 2011).

Boundary to the study

"Landscape from the Anglo Saxon - Land (a space with boundaries)scape (a composition of similar objects)."

"Landscape an area, as perceived by people, whose character is the result of the action and interaction of natural and / or human factors." (European Landscape Convention)

"I feel uneasy in the countryside; it is far too big and has no proper edges". (Anon)

The approach taken to the study area is one that is broadly reflected in Natural England's approach to Landscape Character Assessment (Natural England, 2014). When it comes to boundaries the advice is as follows:

'Boundaries are needed around landscape character areas and types, however boundaries are rarely precise and generally represent zones of transition. The precision of the boundaries will vary with the scale and level of the assessment. Broader scale assessments tend to define wide and imprecise boundaries, e.g. assessments at the national / regional level @ 1:250,000 scale. Detailed, district and local assessments often link boundaries to specific features in the landscape, e.g. @ 1:25,000 or 1:10,000 scale, but even at this scale the boundary line may mark a zone of transition. Exceptions to this may occur in an urban area where building types may be a strong determinant of character'. (Natural England, 2014)

Following these guidelines, the urban towns of Padiham (population 10,000) and Barrowford (population 6,000) are excluded from the study but the more rural villages of Fence (population 1,500) or Higham (population 800) are included. Note: It is not anticipated that there would be significant Heritage Lottery Fund LPS investment in the physical urban fabric. (The Heritage Lottery Fund has more appropriate programmes available for townscape).

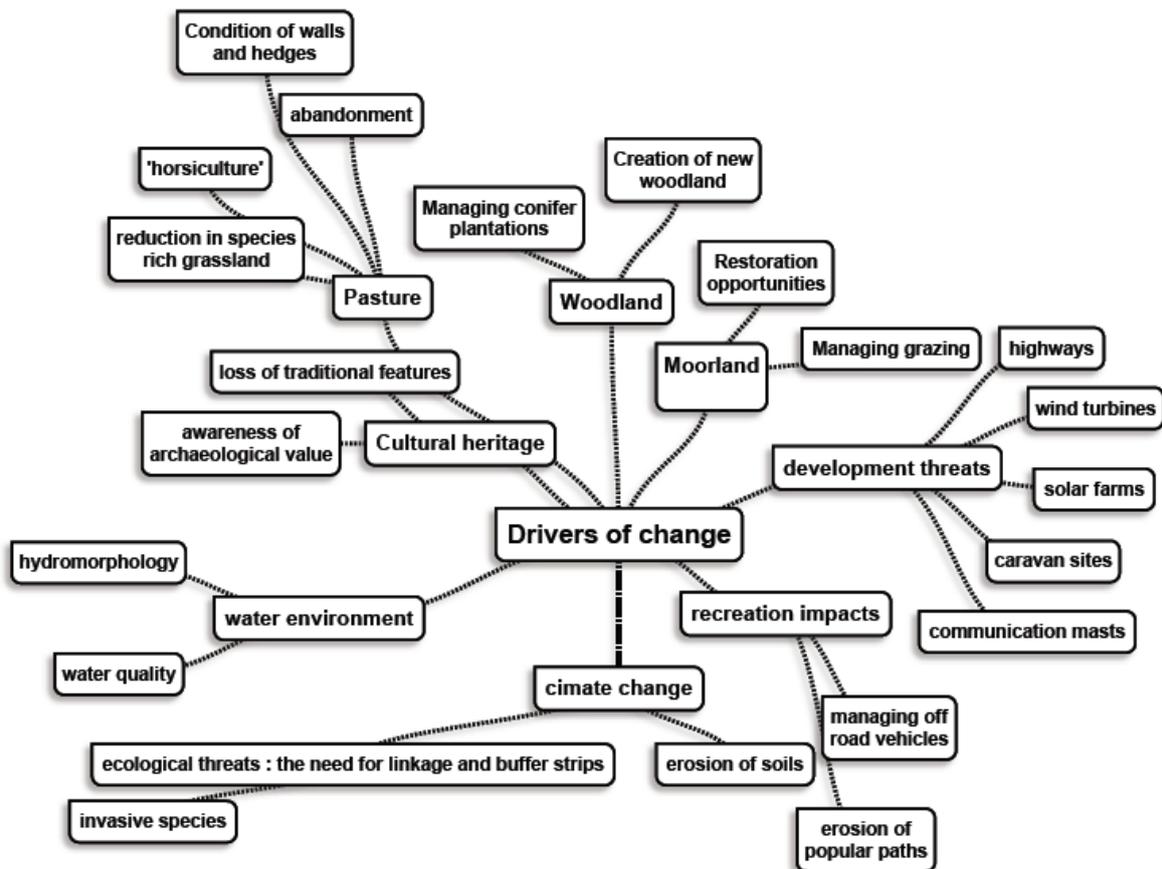
Where there is a natural feature such as the valley of Admergill, taking this valley in its entirety seems logical, rather than using the present A682 as a boundary. Taking on the wider area of moorland including Weets Hill towards Barnoldswick diminishes the physical impact of Pendle Hill although from a habitat point of view these areas have much in common with Twiston and Rimington Moors.

There are a couple of areas at the periphery of the study area where pragmatic decisions have been taken to use well known features to delineate the area. The Accrington Road at Whalley is used for a short stretch as the western boundary. This is in recognition that if the project were to take in the wider and gentler valley landscapes of the Ribble and the Calder it would begin to dilute the distinctiveness of the project area. Precedents for this exist within similar projects or indeed designated landscapes where it is not unknown for major trunk roads to form the boundaries of National Parks and Areas of Outstanding Natural Beauty over extensive areas.

There has been some consideration of the boundaries of other Heritage Lottery Fund Landscape Partnership Schemes. These vary in their approach whether they are defined by theme (Carbon Landscape), by valleys (Dearne Valley), by cultural landscapes (Blaenavon or West Penwith) or indeed by hills or mountains (Ben Nevis). Some of the boundaries appear quite arbitrary showing priorities for investment or administrative priorities; however what they all have in common is a landscape which is recognised by both local people and visitors alike as distinctive.

2.0 DRIVERS OF CHANGE

The landscape, ecological and historical resources of the Project Area are constantly changing in response to human activity and natural processes. Here we consider assessments of the predicted forces for change, both positive and negative, that are considered likely to affect the underlying condition and character of the landscape types in the future.



Figure#1: Drivers of change: Pendle Hill

Introduction: ecosystem services and the ecosystem approach

Drivers for change within the landscape can be defined within the evolving concept of ecosystem services. Ecosystem services are the processes by which the environment produces resources utilised by humans such as clean air, water, food and materials. Our health and wellbeing depends upon these services provided by ecosystems and their components: water, soil, nutrients and organisms.

The concept of ecosystem services has been developed to aid our understanding of the human use and management of natural resources. The 'ecosystem approach' (EA) has been widely recommended, both internationally and within the UK (Note: the UK National Ecosystem Assessment published in 2011), as a way in which the overall health or integrity of ecosystems can be assessed and the multiple benefits derived from them, i.e. goods and services, better described and managed (DEFRA, 2011).

The uplands are an area where the concept of ecosystem services has informed our understanding. For example, previous agriculture policies driven by the desire to increase yields of food or timber production in 'marginal land' have driven drainage without an understanding of the ecological value of habitats such as upland heath or blanket bog. The ability of active blanket bog to sequester carbon (peatlands are the largest terrestrial store of carbon) has more recently come to our attention. This has been the driver for ecological restoration of these landscapes through projects such as the Lancashire Peat Project.

In terms of hydrology, the need to ensure water quality in upland catchments has been recognized, not least by the utility companies. There are also many other benefits from restoration, not least mitigating against the impact of downstream flooding by having the greater attenuation that is achieved in an active functioning peatland habitat. With recent events of December 2015 in Whalley and Padiham and the impacts of climate change these will become ever more important. Increasingly, the solutions to these extreme events have been seen in taking a 'catchment approach' and working with, rather than against, natural processes, (DEFRA, 2016).

The review of England's Wildlife Sites and Ecological Networks conducted by Professor John Lawton looked at our landscapes and whether they are capable of responding and adapting to the growing challenges of climate change. He recognized that to ensure these habitats are resilient to the impacts of climate change they need to be 'bigger, better and more connected'. The concept of ecological connectivity that is reflected in many of the proposals for the Landscape Partnership is in part guided by these principles (Lawton, 2010).

The 'cultural' services supplied by our landscape including the inspirational, spiritual, educational and heritage values tend to be services that are neglected.

Agriculture

Pasture:

Whatever the conservation value of grassland habitats in the past, the impact of fertilisers, herbicide ('agricultural improvement') has had an impact on the botanical quality of the grassland. Despite 'improvement' this many pastures were marginal at best. A regime of 'headage' payments incentivised maximising sheep numbers and consequent over grazing of these pastures.

More recently agri environment payments have compensated for lower numbers of sheep and recognised the potential for more sensitive grazing. Hay meadow restoration could increase populations of our native species including butterflies, other invertebrates, nesting mammals and birds, and support native species of grasses and wildflowers.

Boundaries:

The boundaries to fields are an integral (if wholly man made) part of the landscape. They are part of the cultural landscape with different phases of enclosure dating back for at least seven hundred years. This landscape of hedges, banks and drystone walls is a product of piecemeal evolution over centuries.

The drystone walls of gritstone or limestone create a 'texture' to the landscape. Their deterioration can create the impression of neglect and their replacement with post and wire can appear like clutter. However, as a necessary evil, fencing can manage grazing of what can sometimes be fragile habitats. Restoring drystone walls can be up to ten times the cost of replacing with post and wire. Financial incentives whether through Heritage Lottery Funding or agri-environment can be used as a training opportunity with the skills of drystone wallers still in demand.

According to the RSPB hedgerows can support up to 80% of our woodland birds, 50% of our mammals and 30% of our butterflies (RSPB, 2016). The ditches and banks associated with hedgerows provide habitat for frogs, toads, newts and reptiles. In the past, amalgamation of land holdings has led to the loss of hedgerows. To retain these hedgerows requires on-going management. Where this does not occur the hedgerows become 'gappy' and a significant feature is lost. Again, management of hedgerows offers the potential for training opportunities.



Agri-environment grants have been the main mechanism for landscape restoration (for example, here woodland and hedgerow creation near Firber House see Landscape Character Type D9).



The moorland plateau of Pendle Hill tends to be dominated by Purple Moor grass *Molinia caerulea* due to overgrazing and past wildfire

Moorland:

Lying beyond the limit of cultivation, the fells and moors remain an integral part of an upland farming system. Their primary use is as summer grazing for cattle and sheep where tenants or commoners have rights of pasture; but they have in the past been a source of fuel.

Ecologically, blanket bog based upon deep peat is of particular note. Sphagnum, the building block for blanket bog, is localised in extent. In the past, drainage in the uplands was funded through the Common Agricultural Policy in a misguided attempt to improve agricultural productivity by lowering the surface water table and therefore creating drier conditions.

The moorland plateau of Pendle Hill tends to be dominated by Purple Moor Grass *Molinia caerulea* due to overgrazing and past wildfire. Upland heath should typically be dominated by a range of dwarf shrubs such as heather *Calluna vulgaris*, bilberry *Vaccinium myrtillus*, crowberry *Empetrum nigrum*, Bell Heather *Erica cinerea*. Wet Heath, in 'favourable condition', should be dominated by mixtures of Cross-leaved Heath *Erica tetralix*, Deer Grass *Scirpus cespitosus*, heathers and Purple Moor-Grass *Molinia caerulea*, over an understorey of mosses often including carpets of Sphagnum species (JNCC, 2008).

Overgrazing, wild fires or illegal off roading are all threats to this environment and to water quality

Forestry and woodland:

The area was once more wooded in a climate that was more favourable to tree growth. At the end of the Atlantic Period (3,500 to 3,000 BC) with a cooler wetter period, peat formed usually with a base layer of birch). Man assisted this process to the point where the remaining woodland existed only in steep valleys (cloughs) or escarpments unsuitable for grazing or cultivation. The woodland that survived grazing and the need for firewood was in these steeper cloughs and streams or it was protected by charter. Consequently there is very little wood pasture. That which survives is the last residual elements of any woodland.

Clough woodland can be classified as Upland Oak Woodland (NVC W11 and 17). Woodland within the upland region of England generally with at least 80% Oak or Birch in the potential canopy. Dominated by Sessile oak (*Quercus petraea*) with Birch (*Betula* sp.), Rowan (*Sorbus aucuparia*), Holly (*Ilex aquifolium*) and Hazel (*Corylus avellana*).

These ancient woodland sites i.e. woodland that pre-date 1600 and the onset of plantation planting are of considerable importance for UK woodland conservation. The continuity of woodland cover and longevity of management has resulted in high levels of ecological interest, compared to more recently developed woodlands. Ancient sites hold a higher richness of specialist ancient forest ground-flora than recent forest sites and contain rare flora, less likely to be found in recent woodland sites (Peterken, 1996; Rackham 2003).

Grazing by deer and wildfire are ever present threats to new woodland that need to be maintained until establishment. Invasive species such as Himalayan Balsam and Japanese Knotweed are all so significant threats to native ground flora.

Ancient and semi natural woodlands are very limited in the project area; almost totally absent to the north of the project area and with remnant ancient woodland in the cloughs that feed the River Calder. These relict clough woodland offer an opportunity for further woodland creation and restoration back to native species. The areas adjacent to wooded cloughs offer the opportunity to recreate a wood pasture landscape. Greater extent and greater connectivity will make these habitats more resilient into the future.

Plantation woodland:

The commonly quoted phrase of the right tree in the right place is true of the landscape of Pendle Hill. The conifer plantations often associated with the reservoirs date from the 1930s onwards and were an attempt to increase rural employment at a time when rural areas had fewer opportunities. There was little consideration to the ecological value of the existing habitats. Plantations have been planted on a range of habitats including dwarf-shrub heath, marshy grassland, flush habitat and species-poor semi-improved grassland.

Past dense conifer planting has the potential if thinned to re-establish lightly wooded heath or be replanted with native species over phases.



The view from Wheathead to Barley: Fence lines dictate the shape and size of plantation compartments. These blocks are largely seen as having a negative impact on the landscape.

Built environment:

The origins of some of the isolated hamlets and farmsteads can be traced back to the medieval clearings and vaccaries. The origin of the typical 'laithe' pre-dates this with Norse settlements sheltering both livestock and families in the same building. The character of vernacular buildings is determined by the availability of local building materials. The ready availability of stone leads to some substantial farmhouses and buildings within the landscape. The difference in styles can be an interesting indicator of the wider changes over time. For example, there was a great rebuilding boom in the relatively prosperous times of the 17th and 18th centuries following the amalgamation of small holdings. Representing not just increasing agricultural income but greater security of tenure, yeoman farmers invested in their farmhouses and substantial stone barns or 'shippons' (Winchester, A. 2006).

The amalgamation of small holdings in the 20th century and rural depopulation led to the potential loss of these buildings. Only since the war has the demand for the 'rural idyll' seen these buildings brought back into use (sometimes sympathetically; sometimes less so).

Development threats:

Development comes in many shape and forms. For example, the big infrastructure projects whether these are wind turbines in the adjacent South Pennine Moors or the solar farm at Todber. By the nature of the wide open and panoramic views from the area the threats of development, even far away from the area can be significant. The industrial units that are adjacent to the M65 and occupy the floodplain (such as Shuttleworth Mead Business Park) occupy a large field of vision.

The encroachment from residential developments adjacent to existing settlements can be highly controversial and have an immediate impact to the adjacent countryside. The growth

of commuter settlements such as Whalley, Higham, Fence and Rimington can also have an impact in terms of the quality and distinctiveness of the built environment. There are other unintended consequences such as increased disturbance and impact of domestic pets on wildlife.

It is anticipated that these issues will grow with the increased demand for housing in general and to live in a Lancashire rural village specifically. Better planning control with a consideration of the medium and long range views and strict control and enforcement need to be considered.



Distinctive isolated farmhouses of the area (Wheathead). Vernacular buildings using local materials are threatened by the introduction of new building materials and suburbanisation.



Utilitarian structures such as this limekiln at Twiston tell the story of agricultural development. Their loss would be detrimental to the cultural history of the area.

Higher Admergill: Example of restoration of a traditional barn



Roughlee Old Hall : (reputed) home of Alice Nutter, one of the Pendle ‘witches’ – the context of the hall has been totally lost to unsympathetic suburban residential development.



John Darch/ Geograph

Swanside Laithe: The traditional laithe design has changed little over thousands of years but their utility has and will change into the future.

What has changed since 2009?

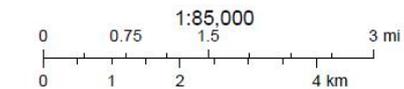
This report is based on the Landscape Character Assessment carried out in 2009. There have been some significant changes since then

- Changes in agriculture: the reduction in many rural incomes whether for beef, dairy or sheep has had an impact on this landscape whether it is the potential for amalgamation, intensification or indeed the potential for abandonment.
- Chalara dieback of Ash has become widespread with an unknown impact on Ash
- Changes in agri-environment grant regimes – i.e. the introduction of Countryside Stewardship in 2015 has brought a more tightly focused approach to delivering environmental gains. This will still support priority habitat restoration such as upland heath and blanket bog. The incentives for achieving smaller scale improvements within the wider countryside may now be harder to fund unless landowners work together on a landscape scale.
- Awareness of flood risk in the wake of extreme rainfall events such as those of Boxing Day 2015 which caused flooding in Whalley and Padiham have placed an increasing emphasis on working with natural processes on a catchment scale (so called ‘Natural Flood Management’).
- The desire to comply with the Water Framework Directive with a focus on water quality and bringing water bodies back into a more natural state has seen a focus for a catchment based perspective.
- The role of the local authority (Lancashire County Council) in maintaining many of the countryside assets and the network of public rights of way can no longer be taken for granted.
- The need to engage with local (urban) communities which are increasingly disconnected from their rural hinterland.
- New development pressures: fracking, solar farms, wind turbines could significantly impact the feeling of tranquillity and remoteness in the area.
- The as yet unknown impacts of the decision to leave the European Union.

3.0 CONTEXT



 Landscape Character Assessment Boundary



Map#1: Pendle Hill Landscape Partnership Area



Towns nestle about the base of Pendle as limpets adhere to a rock or as swallows to the eaves of a building. From time immemorial, around it, and around all great mountain masses, villages and farms have crowded as if for life and warmth. (Burnett, 1899).



Pendle Hill is the distinctive outlier to the Bowland Fells. At 557 metres it forms the backdrop to the East Lancashire former textile towns of Burnley, Nelson and Colne. Yet despite its proximity to significant urban populations it is surprisingly rural both on its eastern and western escarpments with a sense of remoteness in the heart of its moorland plateau. Intimate valleys with their distinctive villages: Sabden, Barley, Roughlee and Downham feel timeless and yet are only a step away from the towns of East Lancashire.

Pendle Hill is an ever present back drop. The limits of human settlement are reached in the uplands beyond which empty moorland stretches to the horizon. The distinctive profile dominates the surrounding area with various landscape types radiating from the Hill with a transition from the high moorland plateaux through the moorland fringe through to the undulating farmland. The farmed ridge of the Heights creates a physical barrier with the industrial valleys of the Calder.

Human influences have an impact on this landscape whether it is the medieval Forest of Pendle or the enclosures of the 17th, 18th and 19th centuries or the designed landscapes of Read and Huntingroyde.

The area was not just physically marginal but also politically and economically marginal. The area was peripheral to the centres of power – very much a frontier zone defended by the Romans contested by the Anglo Saxons and the Vikings and invaded by the Scots.

Despite its proximity and because of its topography the area was bypassed by much of the wealth generated by the industrial revolution which dominated the valley of the Calder rather than the Ribble Valley. First the Turnpike Roads, latterly the Leeds & Liverpool Canal and then the railways largely bypassed this area. It is for this reason that the significant historic features such as the ‘Forest of Pendle’ and ‘vaccaries’ remain visible today.

Figure#3:

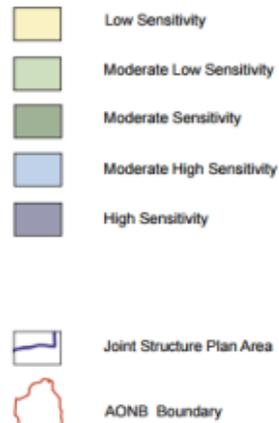
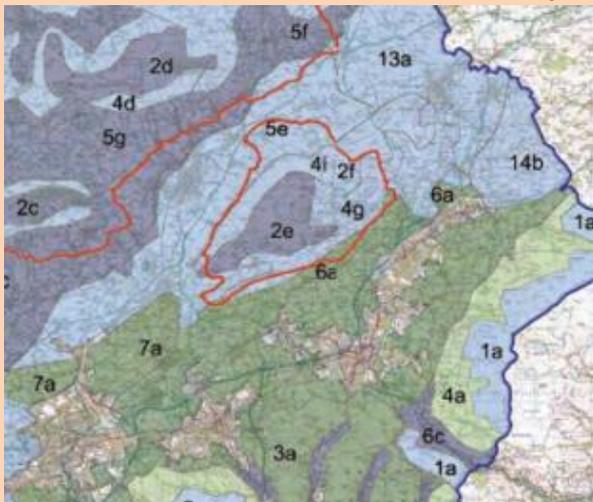
Pendle Hill: A regional landmark



Pendle Hill: A backdrop to East Lancashire



Views to East Lancashire from within the project area



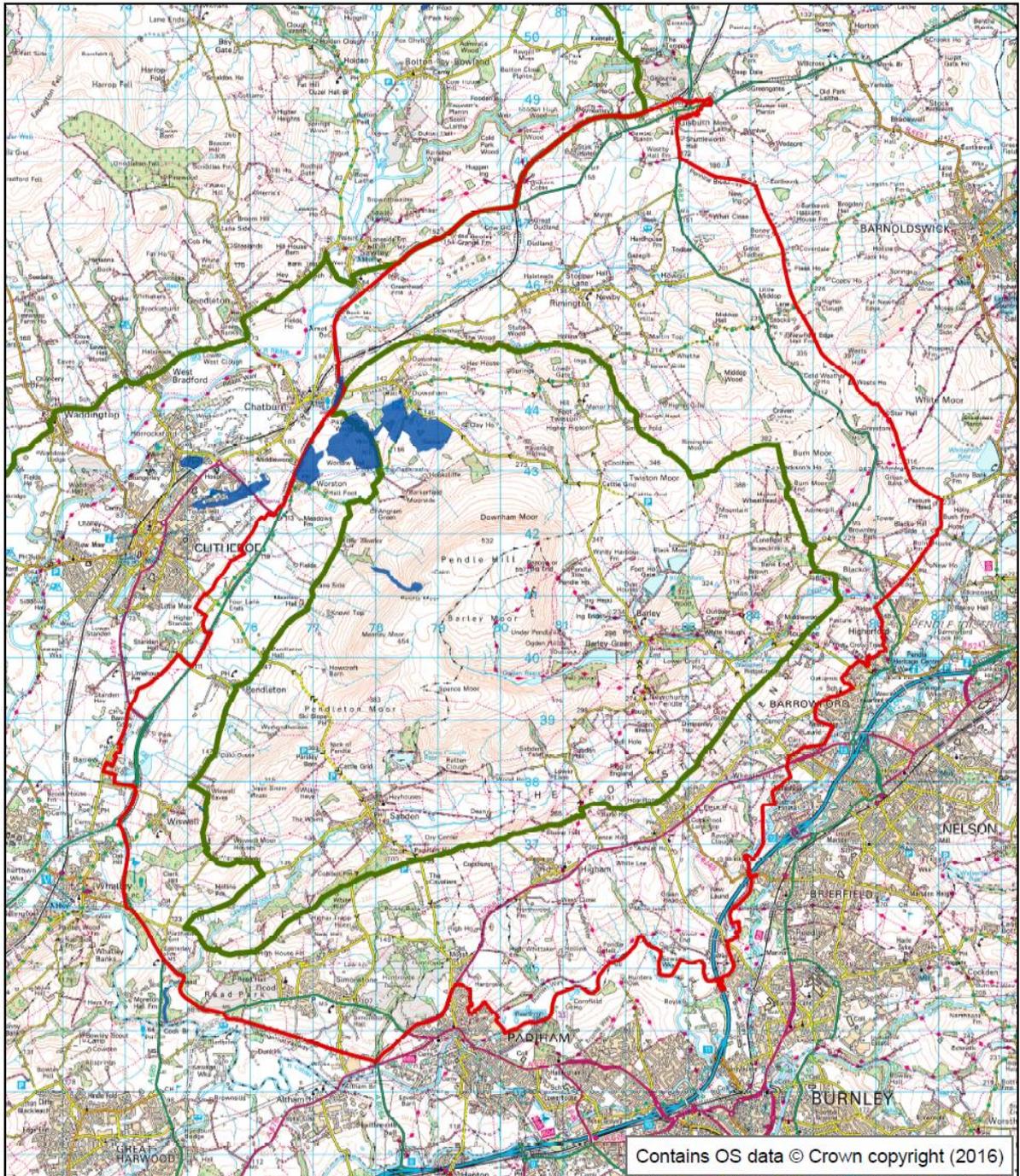
Landscape sensitivity to windfarm development : Threats to the feelings of remoteness and tranquility include the potential for windfarms (Lancashire County Council, 2005).

Designations

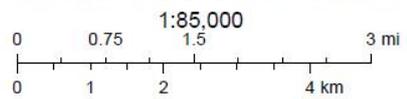
- Although the project area contains significant areas of priority habitat the extent of Sites of Special Scientific Interest are limited to the geological sites such as Little Mearley Clough and the Clitheroe Knolls Reefs.
- The lack of designation reflects the legislative driver to protect a representative range of habitats rather than a reflection of the true value of the habitats in Bowland.
- The extent of upland heath and blanket bog make this landscape important, not just from a nature conservation point of view but also in terms of supplying clean water and the wider 'eco-system services.'



Clitheroe Reef Knolls SSSI: Limestone outcrops are recognised as nationally important to the study of the Carboniferous period.



- SSSI
- Landscape Character Assessment Boundary
- Forest of Bowland AONB Boundary



Map#2: Pendle Hill Landscape Partnership Area:
Designations



Land Tenure

The physical factors of climate, geology and topography are not the only factors that contribute to a landscape. Clearly the cultural factors are at play and tenure has always been critical. For example, the protection afforded through Forest law preserved a semi natural landscape that remains to this day. In the lowland areas the ‘designed’ landscapes and ‘model’ farms sought to create a landscape as a ‘rural idyll’. Estates were and continue to be extensive, for example, the Read Estate comprised of 22 tenanted farms until the 1940s.

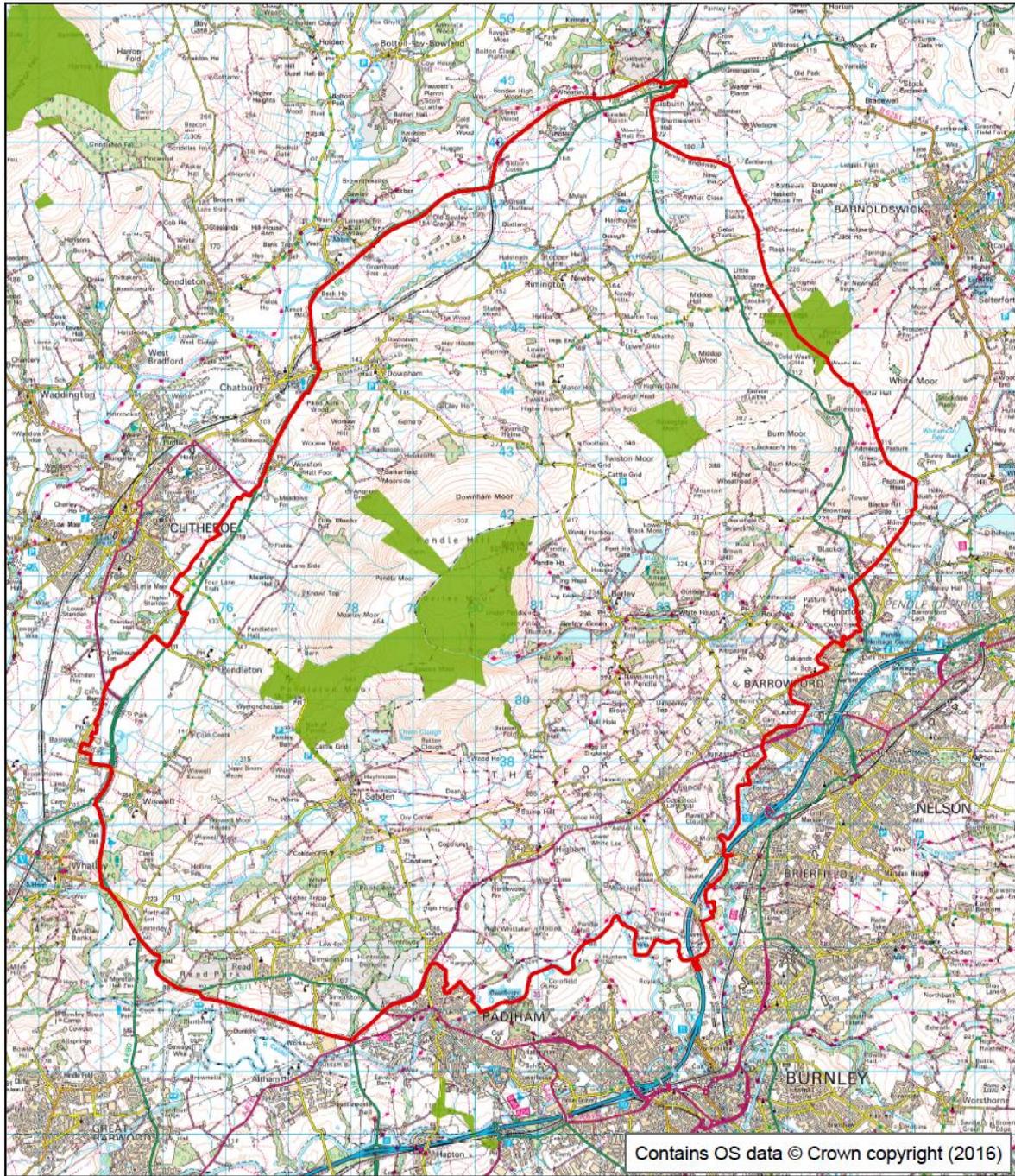
A key element is the extent of common land – land where commoners have rights such as the right to graze. It is important that a consensus is reached amongst all commoners on the level of grazing which balances the desire to increase botanical interest (i.e. dwarf shrubs that are easily grazed out) on moorland alongside the need to maintain farming incomes.

Much of this common land became privately owned through the 19th century or was purchased by local corporations to become part of the water catchment for many of the adjacent towns. Now under the stewardship of United Utilities, water quality is a major driver for land management.

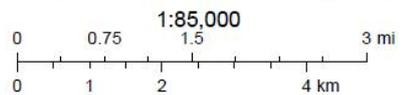
The success of a Landscape Partnership Scheme depends upon the support of landowners and commoners associations whether this is to restore existing features such as drystone walls or working with landowners to create new woodland.



Twiston Moor: Common Land



-  Landscape Character Assessment Boundary
-  Common Land



Map#3: Common Land

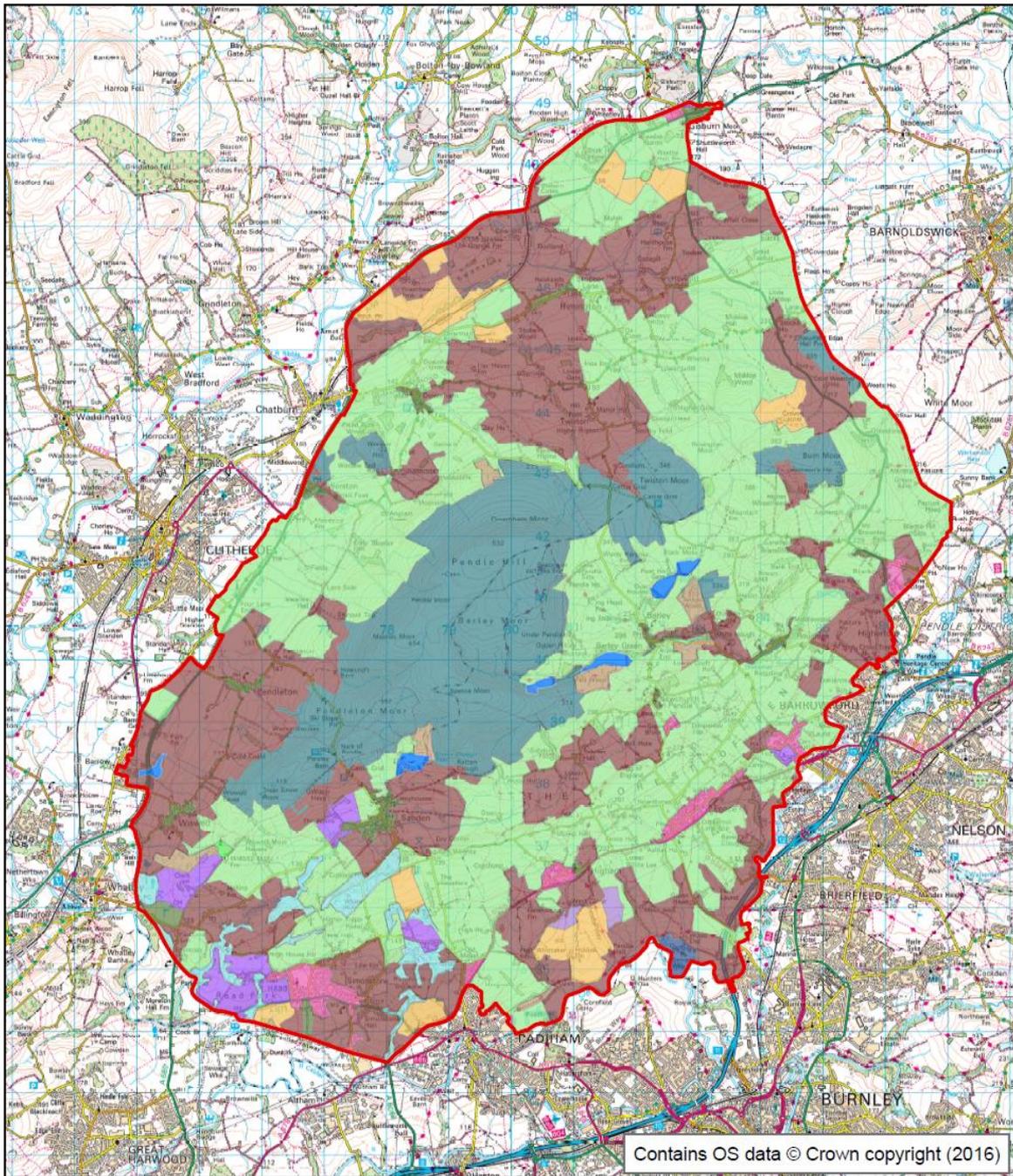


Historic Landscape Character Assessment

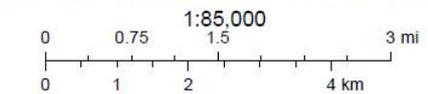
The patchwork of fields, woods and moorland tells the story of enclosure: the continual piecemeal encroachment of the 'wastes' over centuries. Moorland brought into individual ownership culminated in the agricultural revolution and parliamentary enclosures which brought in areas of what had been formerly unenclosed semi-natural areas. Landowners and their tenants saw the potential for agricultural improvement with ready access to lime and mutual enclosure of common 'rough' grazing.



The view from Pendle Hill across Barley Vaccaries: The history of the area helps explain this landscape



- | | |
|---|-------------------------|
| Landscape Character Assessment Boundary | Modern Recreation |
| Historic Landscape Character Areas | Modern Settlement |
| Ancient Enclosure | Modern Woodland |
| Ancient and PMed Industry | Moorland |
| Ancient and PMed Ornamental | Post-Medieval Enclosure |
| Ancient and PMed Wood | Reverted Moorland |
| Modern Enclosure | Water |
| Modern Industry | |



Map#4: Pendle Hill Landscape Partnership Area :
Historic Landscape Character Areas.

Landscape Change: A historic perspective

Angus Winchester identifies a common theme to this landscape of Pendle Hill and its hinterland as 'marginality' (Winchester, 2006).

This refers not just to the physical marginality of a region where environmental constraints limit the scope for agriculture and restrict the possibilities for settlement, though this is one aspect. The upland periphery; frequently a sudden edge, is never far away, marking the boundary between lowlands where arable farming was possible and hill country where cultivation was marginal at best.

Pollen evidence suggests the first woodland clearance was at the time of the Bronze Age. A deteriorating climate between 1250 to 800 BC led to the abandonment of these sites and the leaching of nutrients and water logging that led to peat formation. The wood- pastures of these areas became the acid moorland of later centuries.

The first requirement for human settlement from the Neolithic period onwards was land suitable for cultivation. Free draining soils were at a premium and limited to the lowlands or higher ground above the river valleys that were not water logged. From these arable 'islands' or ridges the territory utilised in the 'moors' (manorial wastelands) was extended into wetter and steeper territory only as a result of population pressure.

From the 9th and 10th centuries there was an intensification of cattle rearing involving seasonal movement to summer pastures. The area was prone to severe food shortages and there is evidence of steep declines in population in the 15th and 16th century related to poor harvests of the staple crops of oats, barley and wheat.

By contrast the increasing yields of the 17th and 18th century and amalgamation of small holdings and increased security of tenure led to the growth of freehold and a time of investment in farms, in substantial barns and in boundary walls . These yeoman farmers were confident in that they would be passing their investment down to future generations.

Semi natural areas were retained largely until the extent of enclosure was greatly expanded through enclosure in the 18th and 19th century. Indeed they are the basis of some of the more diverse habitats that have been lost in the lowlands where agricultural land is at a premium.

The origin of the textile industry was in part from households seeking to supplement meagre incomes with spinning and weaving. From these modest beginnings, towns such as Blackburn with a population of around 4,000 towards the end of the 18th century exploded in the 19th century. Satellite villages such as Whalley became desirable retreats from this industrial heartland.

The growth of East Lancashire impacted the area with the growth of the Estates and planned landscapes at Read and Huntroyde and the need to supply these growing towns with water. This led in turn to the construction of reservoirs and the appropriation of land for water supply.

Transport

The Roman Road following the Ribble Valley passes through the project area. The Scots invaded in 1322 and Cromwell's army used the old Gisburn to Colne Road to meet the Scots again in 1648. More peacefully, drovers driving cattle to market passed through the area for centuries. The turnpike road from Clitheroe to Skipton was opened from 1754 which today broadly follows the A59.

The area has seen the transit of men and cattle throughout the ages. As a consequence of topography, packhorses were a common feature in this part of the world well beyond the more accessible valleys and plains. As late as the latter part of the 19th century, local historian, Stephen Clarke recalled how the lime gals which so regularly came into town from Sabden, Padiham, Burnley and district were a pleasing spectacle as they '*drowsily bore their dusty burdens along the highways laden with coal, coke, or slates and taking back lime.*' (Winchester, A. 2006)

Boundaries

The resources of each community (cultivated land, common grazing, etc.) formed the boundaries for a community or hunting 'Forest'. For example, the feature known as Jeppe Knave Grave above Wiswell was used as the boundary of three parishes. These boundaries were often the source of dispute such as that at Admergill between monastic houses that lasted centuries (Clayton, 2005). Right into the 20th century the relatively recent milltown of Sabden was divided between parishes with different taxes on either side of the town.

Drystone walls: earlier walls have rounded stones literally picked from the surroundings whereas later estate walls use quarried and faced stone. Locked together with through stones and capped with stones on end they are an enduring testament to the craftsmen who built them.



The network of boundary walls (Twiston) and lanes (Wheathead) in the area are attractive features and important habitats in their own right.

A landscape of tragedy: A landscape of inspiration

Pendle ‘Witch Country’

This landscape has a quality of mystery sometimes dark, sometimes inspiring. Dark because of its association with the 17th century witch trials at nearby Lancaster Castle. In what was one of the most infamous of all the witch trials - and a gross miscarriage of justice - eleven people faced trial at Lancaster Assizes for practising witchcraft. Nine were hung at Gallows Hill, one died awaiting trial and only one was found not guilty. Those accused were mainly from the local Demdike and Chattox families.

Events came at the time of much religious persecution of Catholics and at the time when this area was considered wild and lawless (possibly for the population reverting back to Catholicism under Mary Queen of Scots). Under James I, a modern interpretation of this black period in history points to several factors that undermine the claim of witchcraft. Lancashire and, in particular, Pendle, had a poorly, if at all, educated population. Secondly, families were extremely poor and often practised “healing” to gain reward. Lastly, the persecution of Catholics was well under way again with Roger Nowell of Read investigating the “recusants” - those who refused to take the Anglican faith.

These events were played out in the landscape that we see today. The old Gisburn to Colne Road, high above the present day A682, is little changed from the 17th century. The current farmhouse pertaining to be ‘Malkin Tower’ on the side of Blacko Hill is still an isolated farm on the south east of slopes of Blacko Hill. (Note there is some debate as to the actual site of the original Malkin Tower with Barley and Roughlee also contenders).

Pendle Hill: The origin of the Quaker Movement

George Fox, the founder of the Quaker movement, is said to have had a vision on the hill. A vision that would see the Quakers flee persecution and imprisonment. Fox preached religious purity, stated that people needed no training to join the ministry and that no church was needed for prayer or rituals. His most powerful claim, and the one that could most likely have been the one to underpin his persecutions and several imprisonments, was his belief that believers could follow their own inner beliefs rather than a strict reading of scripture.

A powerful orator, Fox had a vision on Pendle Hill that his was the true path of religion. He wrote in his journal of the wonderful view from Pendle Hill and the gem of Robin Hood’s Well named after the one and only Robin Hood of whom many counties lay claim to, Lancashire amongst them.

The Forest of Pendle: Vaccaries and demesne farms



Vaccaries, deer parks and closes surrounding Pendle Hill (derived from Morris, D.)

What has retained so many medieval landscape features was their status as 'Forest' – a hunting ground belonging to the King or large landowners. The term 'Forest' was a legal, rather than an ecological one, from the Latin *Foris*, with laws there to protect game and prevent incursion. By 1300 it is possible to think in terms of 'open' forests, which were open to colonisation, and 'closed' forests, exploited directly by great landowners. In these 'closed' forest vaccaries or demesne cattle farms, herds of 30 to 40 stock with a bull were kept. Each vaccary had a keeper who managed the vaccary. There was an associated hamlet or booth where the herdsmen lived.

Wolves were a risk to oxen. For example, it is recorded in 1295, that five cows, six calves, four yearlings and two oxen were 'strangled by the wolf'. (Atkin, M. 1994).

Blackburnshire was the alternative title for the hundred or wapentake of Blackburn under the jurisdiction of the Earl of Lincoln within which the forests of Trawden, Pendle, Rossendale and Accrington were managed from the Manor at Ightenhill (just south of the River Calder across from the project area). (Atkin, M.1994).

Pendle Forest, north of Ightenhill, spread across the basin of the Pendle Water. In 1296 there were eleven vaccaries in the Forest of Pendle. From the 16th century the copyhold tenures were confirmed and commissions established to divide land into smaller landholdings with isolated farmsteads or hamlets (Winchester, A. 2006).

Features of the vaccary landscape can be seen today. The former sites of palisades and enclosed areas with gaps or 'leaps' can be picked out. Banks of fellside were enclosed to serve as pastures for the vaccary milk herd or other categories of livestock, as in the separate cow, ox, strick and calf pastures. This is a landscape that can be picked out today above Barley with the boundaries of vaccary pastures stretching from the valley floor to the moorland fringe.

Figure#4: Timeline

6,000 years ago the area was originally thickly wooded with the exception of some of the highest and most exposed summits. These rounded hills were used by Mesolithic man to look out over a great expanse of hunting grounds.

3,000 years ago climatic change (a wetter environment) and human intervention (removal of tree cover possibly by grazing pressure) changed the landscape radically – the bare open character of the moors therefore is relatively recent.

1,900 years ago : Roman influence was limited to the road from Ribchester to York passing to the north of Downham

1,000 years ago. Settlement and pastoral agriculture developed along the Ribble Valley.

Assimilation of original Norse invaders. (Their legacy can still be seen in some of the place names)

800 years ago: From the Norman Conquest the development of the 'Forests' including the Forest of Pendle reduced encroachment and habitation. (Forests were areas of 'land set apart or placed in defence and subject to special conditions imposed by the royal will' rather than necessarily wooded). Elsewhere, 'vaccaries' areas cleared of woodland to provide pasture for small holders were consented.

700 years ago: Scottish raiding parties attacked the settlements in the area.

500 years ago The disafforestation of Pendle Forest (1507). New settlements were developed such as Newchurch. Elsewhere settlement development came under the patronage of the great estates (i.e. Downham under the Assheton Family).

400 years Publication of the '*Wonderful Discoverie of Witches in the Countie of Lancashire*' by Thomas Potts.

Cromwell's army travels the present course of the old Gisburn to Colne Road to meet the Scots at Preston.

200 years ago: Parliamentary enclosure ensured that marginal land was enclosed by gritstone walls to increase the extent of pasture.

The designed landscapes of Read and Huntroyde were laid out with ornamental planting, water features, focal points and follies.

100 years ago: Construction of Lower Ogden Reservoir (1914) & Upper Ogden Reservoir (1906) & Upper Black Moss Reservoirs (1894) and Lower Black Moss Reservoir (1903) to supply the growing population of Nelson with water.

75 years ago: Continued decline in agriculture and rural population after the Great War. Afforestation such as the plantations around Barley seen as a means of encouraging rural employment.

50 years ago: Agricultural intensification followed the war and push for productivity with subsequent loss of landscape features including hay meadows and hedgerows.

50 years ago: Designation of Forest of Bowland Area of Outstanding Natural Beauty incorporating Pendle Hill.

Increasing suburbanisation of surrounding villages and settlements.

25 years ago: Introduction of agri-environment programmes to support benefits for biodiversity and landscape restoration.

2014: 400 years of the Pendle Witch Trail increases national interest in the area including the development of the Lancashire Witches Walk.

Mesolithic	Bronze Age	Roman Road constructed from Ribchester to York	Forest of Pendle	Scots invade Lancashire	Disafforestation of Pendle Forest	Pendle Witch trials	Cromwell's army passes through the area	Lead mining in Rimington	Enclosure	Turnpike road along the Ribble Valley	Designed landscapes: Read, Huntröyd	Reservoirs constructed	Great War	AONB designated
7,000 BC	2,500 BC	100 AD	1100	1322	1507	1612	1648	1660	1700s	1754	1818	1894	1914	1964



The 400 year anniversary of the trial of the Pendle Witches brought new public interest in the area.



Alice Nutter monument, Roughlee.



Good Friday egg-rolling at Barley: Pendle has always been the backdrop for local communities.

Geology, topography and hydrology

The gritstone ridge of Pendle Hill rises above drift-covered limestone vales.



Sandstones at Firber House: The geology that forms this landscape is also basis of the built environment of Pendle Hill

At 557 metres Pendle Hill is an outlier of the main bulk of Bowland fells. Together they are westerly extensions of the main Pennine monocline, but whereas the Pennines are marked on its western flank by faulting and westerly dipping beds, the bedding in the Lancashire is remarkably level. These landscapes, however, are subtly different in character despite being underlain by rocks of a similar age, with some parts being characterised by Namurian gritstones while others have Dinantian limestones at the surface. This difference in rock type can be clearly seen in buildings, drystone walls and vegetation with the lighter limestone-rich walls dividing greener fields, while the dark gritstone walls frequently surround areas of coarser dark grass, sedge and rush (GeoLancashire, 2016).

Although the landform may give the appearance of enduring stability there are occasions where water pressure within underlying limestone or mudstones can create localised landslips such as recent occurrences on Big End or Deerstones (known as a ‘burst’ or ‘brast’). Indeed ‘Burst Clough’ above Worston recognises the sometimes dynamic nature of the landscape. Elsewhere, notably on the flanks of Pendle Hill there is evidence of the power of meltwater to reform the topography of small valleys.

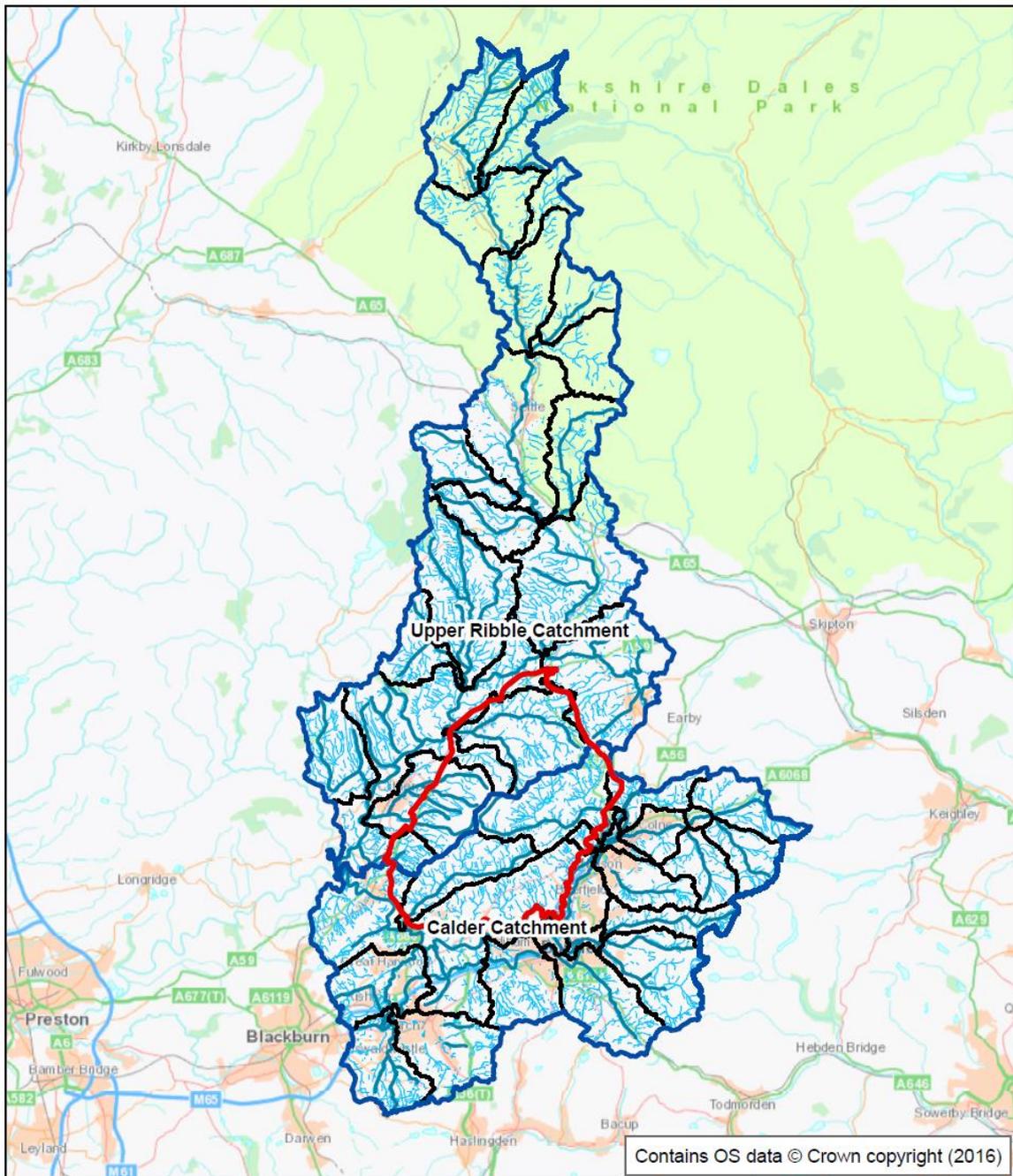
The hydrology exhibited today is a reflection of the underlying geology as well as the past and present forces. The catchments of the Rivers Ribble and Calder and their sub catchments, the Pendle Water and Blacko Water, Twiston Beck, Sabden Beck and Admergill Water create an intricate network of valleys. Increasingly, these headwaters are being considered in the context of more extreme rainfall events, and measures to reduce downstream flood events with the potential to work with natural systems across the catchment (natural flood management)

The rivers make a significant contribution to the biological diversity of the area. The upper reaches of rivers and streams such as Twiston Beck Valley (a local Biological Heritage Site) are oxygen-rich and pollution-free and support a characteristic insect fauna including Stonefly, Blackfly, Mayfly and Caddis Fly nymphs, and the species which feed on them. The rivers provide habitats for Salmon, Brown and Sea Trout; Grayling and coarse fish populations are typical in the Ribble, Calder, as well as some tributaries.

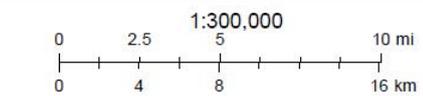
Upland streams have important bryophyte communities. Northern Spike-rush is an uncommon riverbank species. Streams and rivers provide a habitat for dippers and kingfishers which breed in low numbers and are found along the extensive river systems which hold good populations of prey species (Natural England, 2016).



Admergill Water: the water quality of these headwaters supports many invertebrates.



-  Landscape Character Assessment Boundary
-  Catchment Areas
-  Waterbodies
-  Main Watercourses
-  Minor Watercourses



Map#5: Pendle Hill Landscape Partnership Area: Catchments

Appendix I: Where to draw the boundary: a sense of place

The team took the decision to review the project area rather than taking the immediate boundary of the Area of Outstanding Natural Beauty as an article of faith. The original landscape designation of 1964 avoids some of the valleys and landscapes associated with the Hill. Some notable communities in the shadow of the Hill were excluded from the landscape designation (Rimington, Pendleton, Wiswell and Higham). One of the key tests of any boundary is whether it is one that ‘makes sense’ to its residents.

Having decided to draw in the wider apron of landscapes that radiate from Pendle Hill, there is a need to say how wide the project boundary should be drawn. After all, Pendle Hill can be seen from as far afield as Rossendale and the Yorkshire Dales Three Peaks.

We have been guided by the pre-existing Landscape Character Assessment commissioned by the Forest of Bowland and carried out by Chris Blandford Associates (LCC, 2009) and used the existing landscape types as boundaries. We tested our findings with the landscape character of adjacent areas (*i.e. do they feel similar?*) and whether this is a boundary with the support of residents and visitors (*i.e. does this boundary make sense?*).

Broadly speaking we have sought to draw the line where there is a step change in the landscape character and a reduction in the influence of the Hill. To the north and south the valleys of the **Ribble** and the **Calder** are obvious boundaries. To the east the **Whalley Gap** has historically been seen as a major physical barrier that in no small measure defined the nature of both East Lancashire (urban) and the Ribble Valley (rural).

To the east of the gap was chosen for the great transport endeavours of the industrial age: the Leeds Liverpool Canal and the Railway which formed the communications for the great expansion of urban growth of the East Lancashire milltowns. In a former era, the Ribble Valley had been relatively more important with the Roman Road and the commanding fortress of Clitheroe Castle standing testament to the strategic importance of the Ribble Valley.

To the west, we include the Admergill valley as far as the outlier of Weets Hill and the associated Pennine Bridleway. To this end the ancient **Gisburn Old Road** and **Coal Pit Road** have been used here as a western boundary rather than the current A682. To a certain extent this is an arbitrary landscape boundary but they do allow one of the reputed sites for the famous (infamous) Malkin Tower and the local landmark of Stansfield Tower on Blacko Hill to be considered within the project.

The major milltowns of Padiham and Barrowford have been excluded from the project. These are significant townscapes that a Landscape Partnership would be ill resourced and equipped to address. Although it is not intended to be carrying out physical works in the surrounding towns: Padiham, Barrowford, Clitheroe, Nelson, and Colne it is recognised that this urban hinterland is integral to the project and reaching out to the communities, many of which, never set foot on Pendle Hill is a key challenge for the project which it intends to address.

There are a number of smaller settlements that are within the project which are small, picturesque and rural (Downham, Higham, Fence, Barley, Pendleton and Wiswell) or small and former industrial hamlets (Spennithorne and Sabden). The scale of these settlements is consistent with the Landscape Partnership approach and engendering a ‘sense of place’ amongst residents as well as visitors.

