LCA 9 North Gritstone Uplands

Yorkshire Dales National Park - Landscape Character Assessment

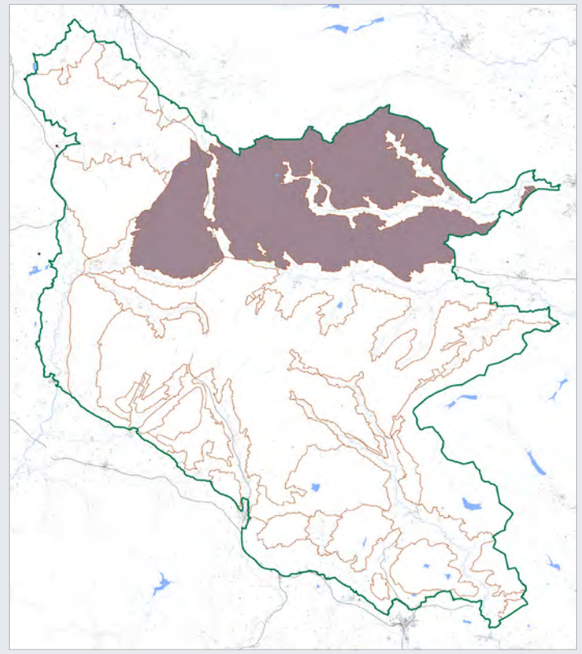
YORKSHIRE DALES
National Park Authority

Chris Sphuld at bearings steel Bottom on the slopes of Cleatham

LCA 9 North Gritstone Uplands

Key characteristics

- Elevated, gently rounded hills, often with stepped sides facing valleys, forming east-west trending broad plateaux to the north and south of Swaledale interconnected at the head of the dale.
- Plateau edges are often defined by dark, blocky gritstone outcrops, with scree below, sometimes sitting above exposed, banded Yoredales Series limestone and sandstone outcrops.
- Occasional gritstone outcrops and scattered boulder fields are found on the moor tops.
- Steep-sided, sometimes rocky side valleys cut into the main plateau areas, which are further subdivided by steep, incised, winding gullies.
- Watercourses are rocky, with grass, heather or rush banks and occasional trees on rock and cliffs in sheltered gills, widening out and accompanied by increasing tree cover and marginal herbs at lower elevations.
- Landcover comprises extensive tracts of acid grassland, blanket bog and upland heath, mainly over peat on the poorly drained gritstone plateaux. Heather moorland is mainly managed for grouse shooting, producing a distinctive mosaic pattern of different-aged plants.
- Settlement is absent from the open moor tops. Scattered traditional farmsteads with modern outbuildings are found on the dale fringes and in dale heads, accompanied by walled upland meadows, improved pastures and field barns.
- Gritstone drystone walls are concentrated around the dale fringes with occasional isolated meadows and sheep pens set within the open moor. Some moorland tops are broadly enclosed whilst others remain open.
- Evidence of coal mining and, to a much greater extent, lead mining workings and tips.
- Roads and footpaths are isolated in character with panoramic views of the northern dales and Cumbrian fells.



Numbered photographs illustrate specific key natural, cultural and perceptual features in the North Gritstone Uplands (see page 7)

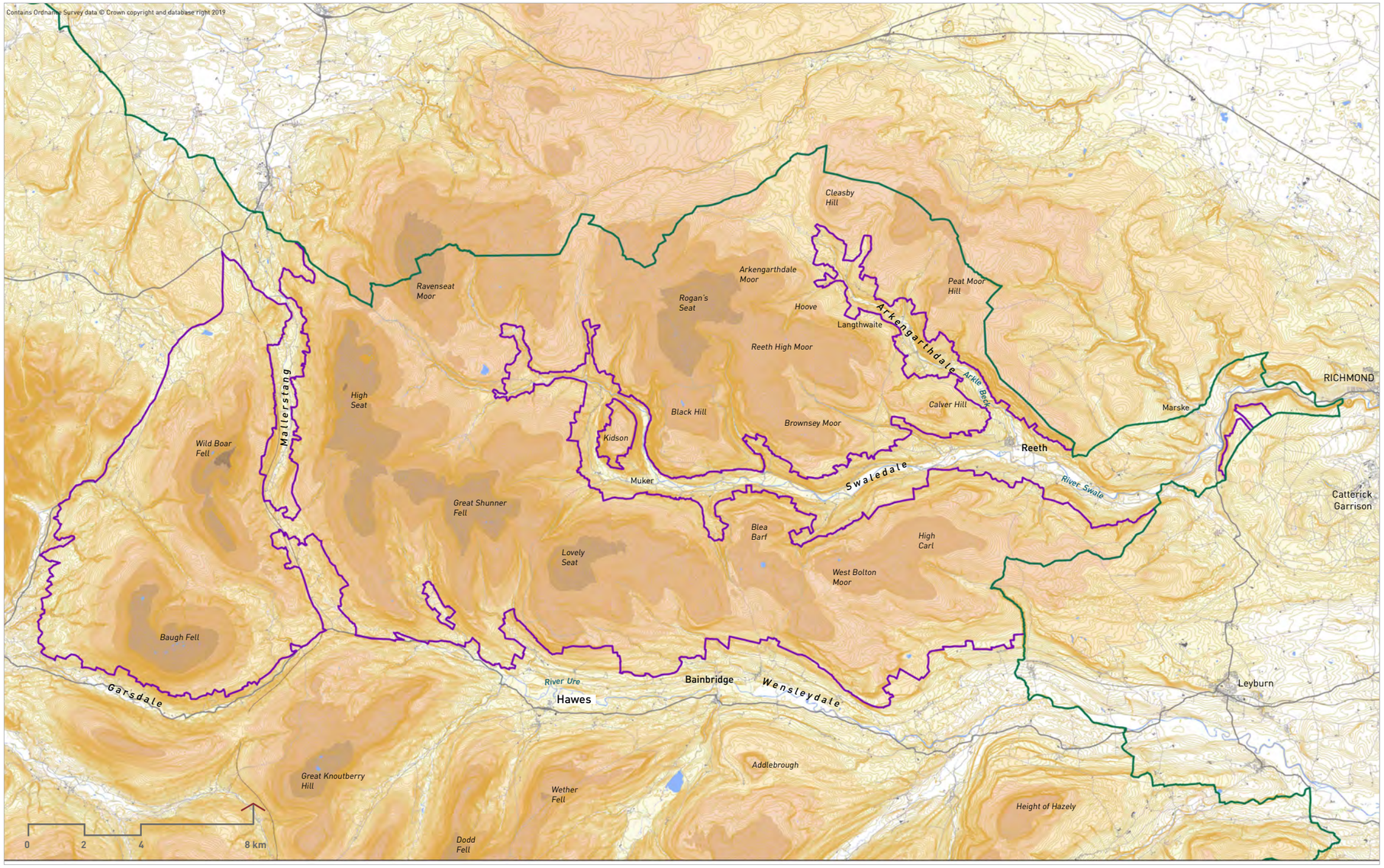




Stonesdale Beck on Ravenseat Moor



Landscape context: North Gritstone Moors



Landscape context

The northern moors and fells are underlain by the Yoredale Series rocks, however, the limestones are set far apart with thick intervening shales and sandstones. An extensive capping of Millstone Grit has created upland plateau characteristics which are more similar to that of the southern and eastern gritstone moors and fells than the widely varying peaks and valleys of the Yoredale Uplands to the south.

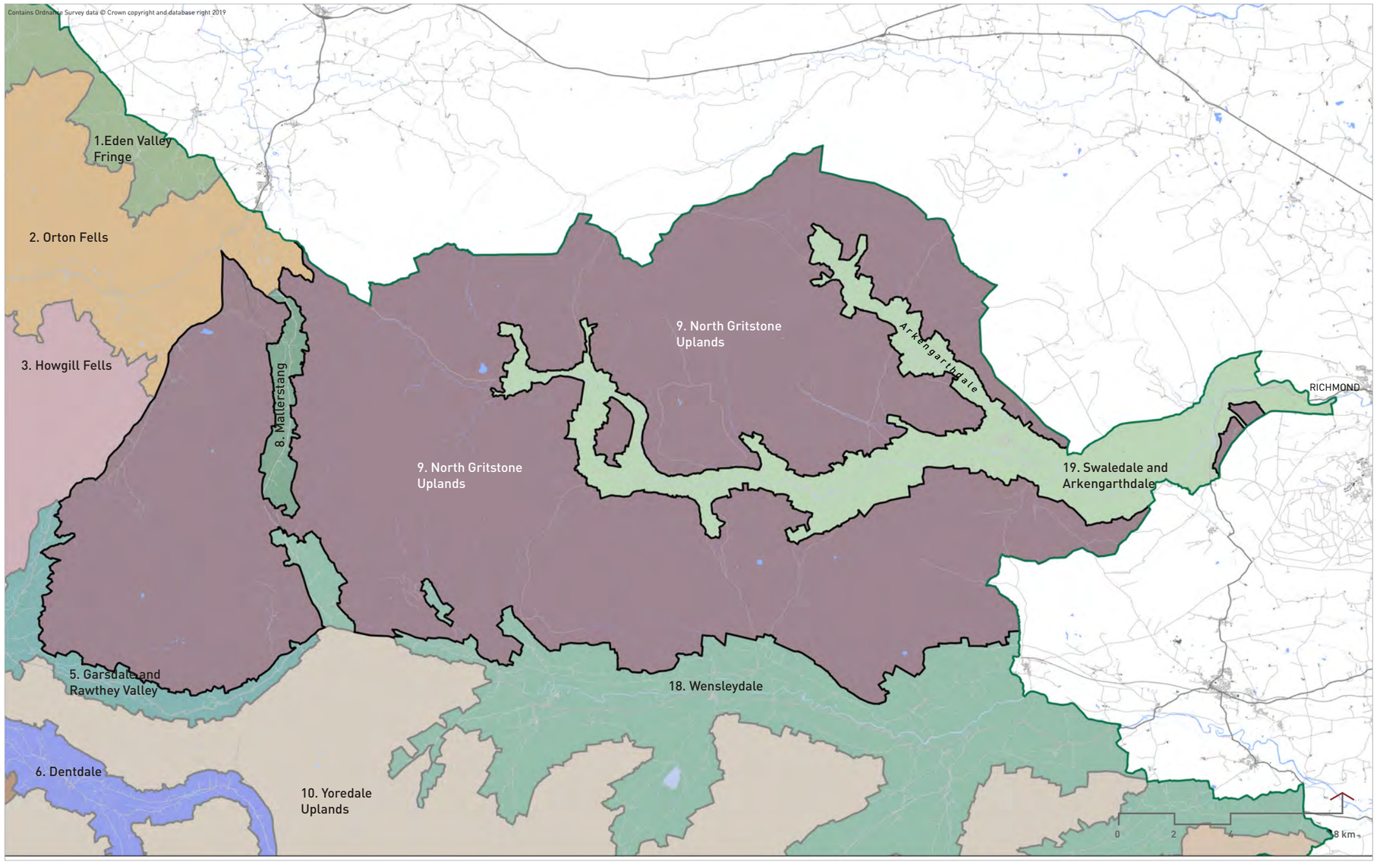
The area contains two broad east-west trending gritstone plateaux, running north and south of Swaledale and connecting at the head of the dale. Gently rolling open moor tops are cut by steep-sided, partly eroded or rocky valleys. Underlying sandstone and limestone geology is sometimes exposed within valleys as a series of stepped cliffs, which are further cut by cross gullies (eg at the valley of Cliff Side, between Stags Fell and Thwaite Common at the head of Swaledale).

The limestones form small pockets of limestone scenery within the surrounding mass of sandstones and shales, with occasional scars and scree slopes. Between Hawes and Keld, for example, the Buttertubs is an isolated area of deep limestone potholes.

Following the Ice Age, over-steepened hillsides charged with meltwater became unstable leading to many landslips and exposure of rocky sandstone and gritstone outcrops. Good examples of these are seen at Fremington Edge in Arkengarthdale and at Winterings, above Gunnerside Gill in Swaledale.

Extensive mineralisation of the sedimentary rocks occurred in Swaledale, on the slopes of Arkengarthdale and central Wensleydale, creating vertical ore veins near the surface and leading to development of the lead mining industry in these areas. Coal seams are found within the Millstone Grits and Yoredales at many locations but were worked most notably at Tan Hill and on Grinton Moor. The extracted coal helped to fuel the lead smelting mills of Arkengarthdale.

Landscape character: North Gritstone Uplands



Landscape character

The North Gritstone Uplands are part of the 'spine' of the North Pennines, which continues to the north of the National Park. The broad upland gritstone plateaux form the uplands that surround Swaledale and Mallerstang, extending to the north sides of Wensleydale and Garsdale to the south and Rawthey Valley (and the edge of the Howgill Fells) to the west.

Distinctive landscape character

The North Gritstone Moors are characterised by the fairly continuous underlying Millstone Grit series geology, which creates a consistent, rounded landform and contributes strongly to landcover characteristics through its poor drainage qualities.

Hints of the stepped Yoredales geology influence remain, showing mainly on the lower hill sides as banded outcrops or as gentle steps up to the broader main plateaux.

The underlying Gritstone rock is rarely evident on the moor tops, occurring as small outcrops or boulder fields. However, at the plateaux edges, overlooking the dales, it is sometimes exposed as dramatic dark, blocky, vertical crags (such as Fremington Edge above Arkengarthdale or Whitfield and Ellerkin Scars above Wensleydale).

Plateau areas are sub-divided by winding, incised gullies, often cutting deep through the peat surface and underlying drift to form becks with rocky beds and bare, steep, eroded, slipping banks. As gradients level out watercourses widen but remain rocky with a mixture of gravels, angular and worn boulders. Banks become grassed or heather-covered and rushy hollows form. Areas of blanket peat form dark layers where they have been partially eroded, for example at Tan Hill.

Further downstream, at the dale heads, river forms become defined, with a mixture of wide rocky beds or exposed layered rock combined with grass, herb cover and dense willow scrub with occasional trees (eg where Birkdale Beck and Great Sleddale Beck join the River Swale).

Vast tracts of the area are covered by acid grassland, blanket bog and upland heath mosaic. Heathland areas are predominant at Birkdale Common, Arkengarthdale Moor, Melbecks Moor, Reeth

Moor north of Swaledale and occupy the greater part of the moors between Swaledale and Wensleydale east

Numbered photographs illustrate specific key natural, cultural and perceptual features in North Gritstone Uplands (see page 7)



Dale head of Fossdale, looking SW towards Whernside



Photo. © David Purchase cc-by-sa/2.0
Pennine Way at Tan Hill



Photo. © Graham Hogg cc-by-sa/2.0
Buttertubs - deep limestone pot holes


Cliff Beck, near Thwaite



Birkdale Common



West Stonesdale in Pasture, north of Keld



Grinton Moor

of Stags Fell. Bracken is sometimes found in dense patches, replacing heather and acid grassland on the drier gill sides. The heather moors are managed for grouse shooting with a patchwork quilt of greys, purples, browns and olive greens identifying the cyclical burning pattern used to renew and vary heather growth.

Moorland fringes are often enclosed, providing rough grazing and occasional meadows on the upland margins of the dales. Occasional isolated pockets of walled pasture and meadow are also found within the main moorland areas, standing out as bright green islands within the darker colours of the moors.

Tree and shrub cover is absent from the moor tops with the exception of occasional conifer plantations (eg Cotterdale Common (head of Wensleydale) and Turf Moor west of Arkengarthdale. Scattered ash, sycamore and hawthorn are found within gills, eroding gullies or beside streams in more sheltered areas where the ground is firm. Tree cover increases within gills as they descend to the dale fringes and groups of ash and sycamore often accompany farm buildings at lower elevations.

Roads are often enclosed by drystone walls on the edges of the dales, but are open across the moor tops. An extensive right of way network crosses the open moors and peaks, often following historic routes.

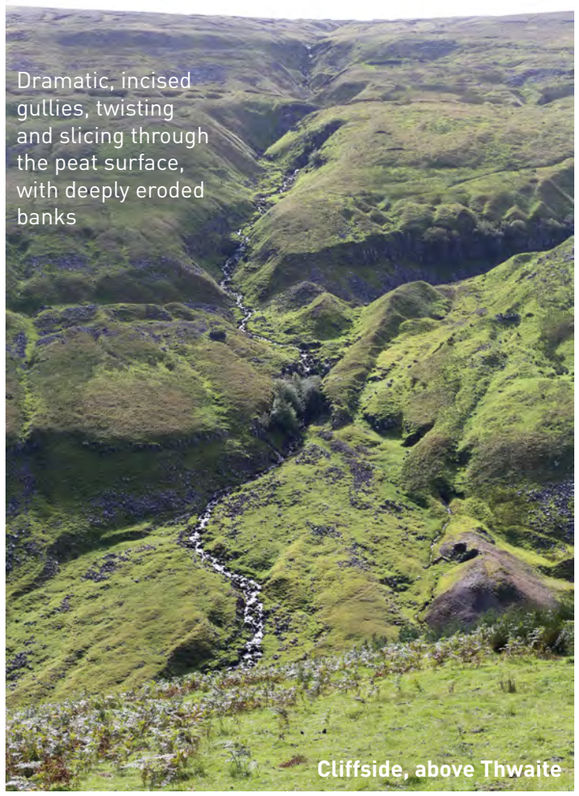
There are panoramic views over the northern dales and the Cumbrian fells to the north and west and across the overlapping plateaux of the northern fells and moors.

With the exception of Tan Hill Inn, a survivor from the days of the packhorse trade routes, the moors are devoid of settlement. There are upland farms near the dale heads of Arkengarthdale and Swaledale which comprise gritstone traditional buildings with some modern outbuildings.

Earlier mineral extraction has left a significant effect on the present-day landscape. Coal mining near Tan Hill has left spoil tip remains and small areas of disturbed ground but it is the remains of the lead mining industry, which are most prevalent, mainly across the eastern half of the character area. Lead mining remains include 'hushes' (which form large rocky ravines eg Hungry Hushes and Turf Moor Hush in Arkengarthdale, Friarfold Hush and North Hush in Gunnerside Gill), countless spoil tips and areas of disturbed ground, shafts, adits and building remains (eg Surrender Mill on Reeth Moor). Many tips have vegetated over and no longer stand out whilst others remain as slopes of raw, crushed stone, often visible due to their lighter colour than the surrounding moors.

The moors between Swaledale and Wensleydale are loosely sub-divided by drystone walls whilst those in other parts of the area remain entirely open. Drystone walls enclose in-bye land and meadow on the dale fringes and heads. Isolated pockets of walled improved pasture and meadow, accompanied by field barns, provide a strong contrast to the wilder moorland at Birk Dale and Sleddale Pasture near the western end of Swaledale and Shaw Farm and Stang House north of Arkengarthdale. Sheepfold, enclosed by walls or fences, are dotted throughout the area.

11



Dramatic, incised gullies, twisting and slicing through the peat surface, with deeply eroded banks

Cliffside, above Thwaite

10



Extensive remnants from the 19th C lead mining industry has despoiled tracts of the open moorland

Disused levels and spoil heaps at Stang Mine, Arkengarthdale

12



Photo. © Matthew Hatton cc-by-sa/2.0

Ruins of Old Gang Smelt Mills on slopes of Reeth High Moor

Key natural, cultural and perceptual features

NATURAL

Exposed dull grey gritstone outcrops, scars and screes at the 'broken' edges of the plateau – eg Fremington Edge, Arkengarthdale and Winterings, above Gunnerside Gill, Swaledale. (15)

Occasional banded outcrops and stepped slope profiles – the most dramatic are at High Seat and Wild Boar Fell, overlooking Mallerstang. (1) (14)

Dramatic incised gullies, twisting and slicing deeply through the peat surface, with steeply eroded banks. (11)

Shallow becks, winding between sharp-cut peaty banks; rushes and standing water in low-lying hollows. (2) (13)

Small but **dramatic pockets of karst scenery** where there are breaks in the Millstone Grit cap – the 20m deep potholes at the Buttertubs. (6)

Waterlogged very acid soils, which support thin sheep grazing, grouse moors and internationally important upland heath and blanket bog habitats (the majority of the moorland tops are designated as SSSI and are part of the North Pennine Moors SAC). (9)

CULTURAL

Extensive remains of lead mining, which has despoiled tracts of the open moorland landscape; terraced levels, spoil heaps, dressing floors and hushes have altered the natural slope profile and there are ruins of mine buildings and structures eg Old Gang Smelt Mills on Reeth High Moor, the Blakewate Smelt Mill near Rogan's Seat; and Sargill Lead Mine on Abbotside Common. (10) (12)

Remnants of the coal mining industry in the form of round bell pit landforms and spoil tips, which was concentrated at Tan Hill on Stonesdale Moor and on Grinton Moor.

In-bye areas on the fringes of the dales with the infrastructure of upland pastoral agriculture - large rectangular fields enclosed by low stone walls, isolated traditional farmsteads and stone barns. (3) (4) (8) (16)

Walled round sheepfolds for containing and managing flocks of sheep on the moors are often local landmarks. (7) The large stone walled Surrender Ground gathering pen on Reeth High Moor is particularly distinctive.

Dense network of historic trackways following former mining routes across the moors; herding routes which connect the dales and moors for the seasonal movement of stock; and drove roads established for driving Scottish cattle to markets in Askrigg, Hawes, Appletreewick and Skipton. (5)

PERCEPTUAL

Vast open moorland, with extensive views, which feels exposed to the elements. (1) (4)

A lonely place, devoid of settlement – people and winding open roads seem tiny and isolated in a landscape with such an immense scale. (3) (5)

Mosaic of colours and textures, particularly in places where the geology underlying the millstone grit is exposed – rocky outcrops, dark peat, heather, acid grassland, coarse grass, pockets of bright green calcareous grassland and bracken on drier slopes. (13) (15)

Photos that illustrate specific key natural, cultural and perceptual features are numbered eg. (10)



13 Mosaic of colours and textures ...

Annaside Beck from Beck Crooks Bridge



14

Birkdale Common



16 Isolated traditional farmsteads on the fringes of the moors

Park Head Farm at head of Arkengarthdale



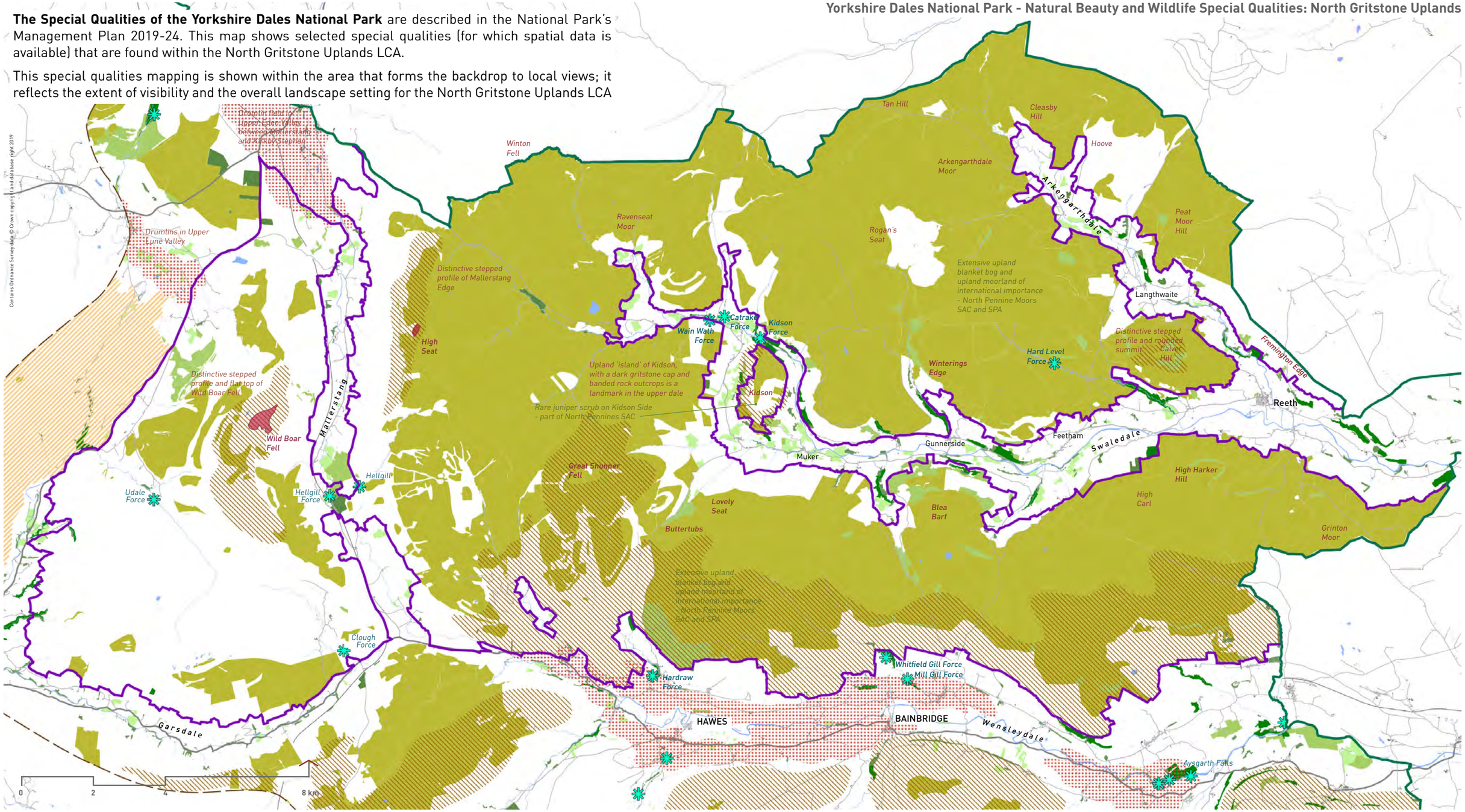
15 Exposed dull grey gritstone outcrops and scars on the 'broken' edges of the plateau

Fremington Edge, Arkengarthdale

Yorkshire Dales National Park - Natural Beauty and Wildlife Special Qualities: North Gritstone Uplands

The Special Qualities of the Yorkshire Dales National Park are described in the National Park's Management Plan 2019-24. This map shows selected special qualities (for which spatial data is available) that are found within the North Gritstone Uplands LCA.

This special qualities mapping is shown within the area that forms the backdrop to local views; it reflects the extent of visibility and the overall landscape setting for the North Gritstone Uplands LCA



Special Qualities of the YDNP

- YDNP Boundary
- North Gritstone Uplands LCA boundary
- Extent of area that forms the backdrop to views from the North Gritstone Uplands LCA

Natural beauty

- **Dales with distinctive stepped profiles**
  [Displaying outcrops of rocks from the Yoredale series]
- **Fells that rise to over 700m**
  Including the Millstone Grit capped 'Three Peaks']
- **The Howgills**
  [Areas in the YDNP underlain by Silurian rocks]
- **Significant glacial/post-glacial features**
  [Prominent drumlins and glacial drift landforms]
- **Spectacular waterfalls**
  ['Water features' noted as 'recognised attraction' in YDNPA Visitor Strategy]

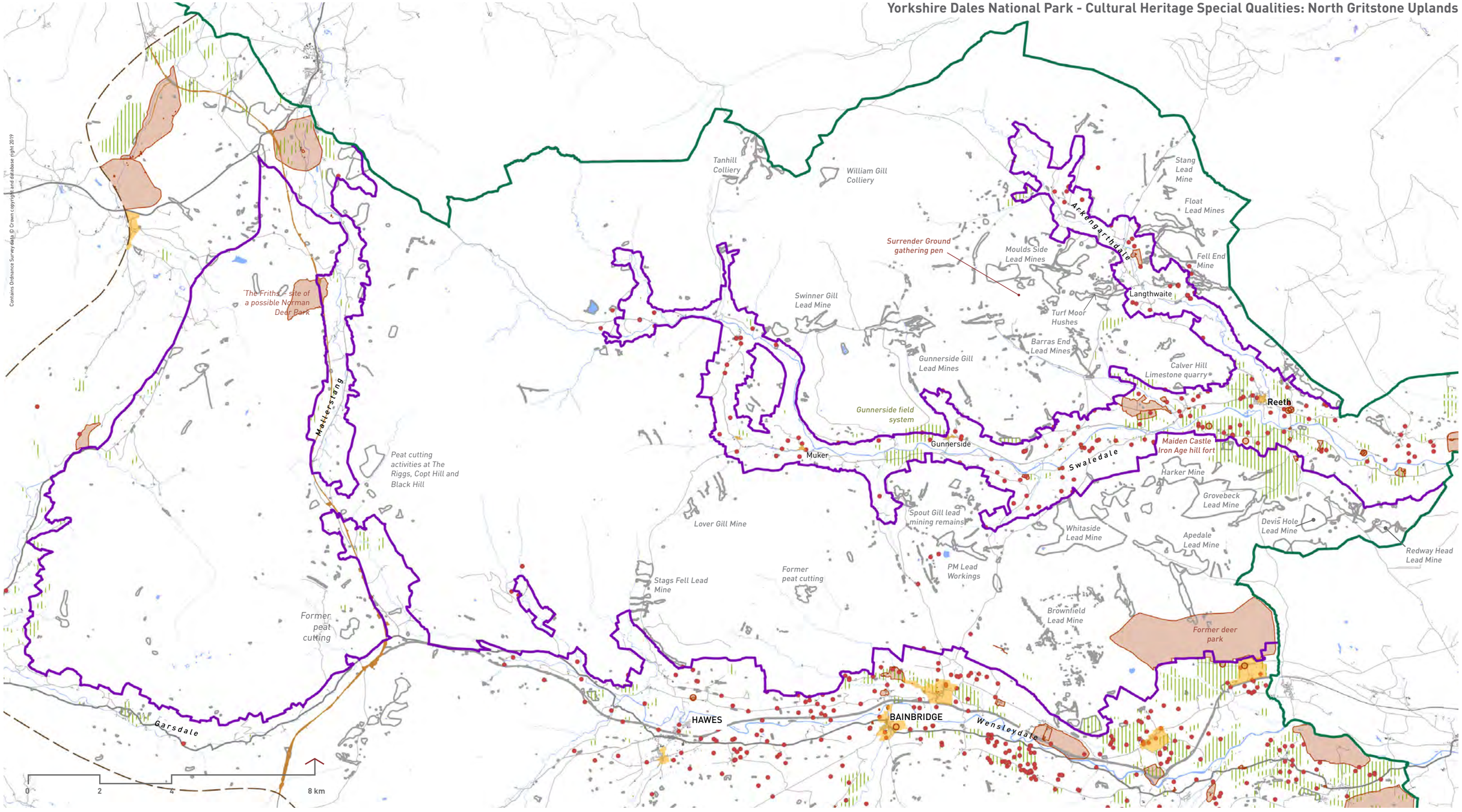
Wildlife*

- **Flower-rich hay meadows and pastures**
  [Lowland meadows; Upland hay meadows]
- **A range of rare limestone habitats**
  [Limestone pavements; Lowland calcareous grassland; Upland calcareous grassland]
- **Extensive areas of moorland**
  [Upland heathland; Blanket bog; Lowland raised bog]
- **Small areas of broadleaf woodland**
  [Deciduous woodland; ancient woodland (darker tone)]

*Priority Habitats [S41 NERC Act 2010]

Yorkshire Dales National Park - Cultural Heritage Special Qualities: North Gritstone Uplands

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Special Qualities of the YDNP

- YDNP Boundary
- North Gritstone Uplands LCA boundary
- Extent of area that forms the backdrop to views from the North Gritstone Uplands LCA

Cultural heritage*

- **A traditional pastoral landscape**
  [Traditional stone-built field barns]
- **An exceptional range of archaeology**
  [Strip lynchets & prehistoric field systems that are prominent]
- **Powerful reminders of periods of dominance by large estates and religious houses**
  [Ancient & historic parklands & other ornamental landscapes]
- **The remains of former rural industries**
  [Sites of former lead & coal mines & lime kilns]
- **Settle-Carlisle Railway Line**
  [Conservation Area]
- **Historic settlements with distinctive traditional architecture**
  [Conservation Areas - Note: the Swaledale and Arkengarthdale Barns and Walls Conservation Area is not shown]

* YDNPA Historic Environment Record

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