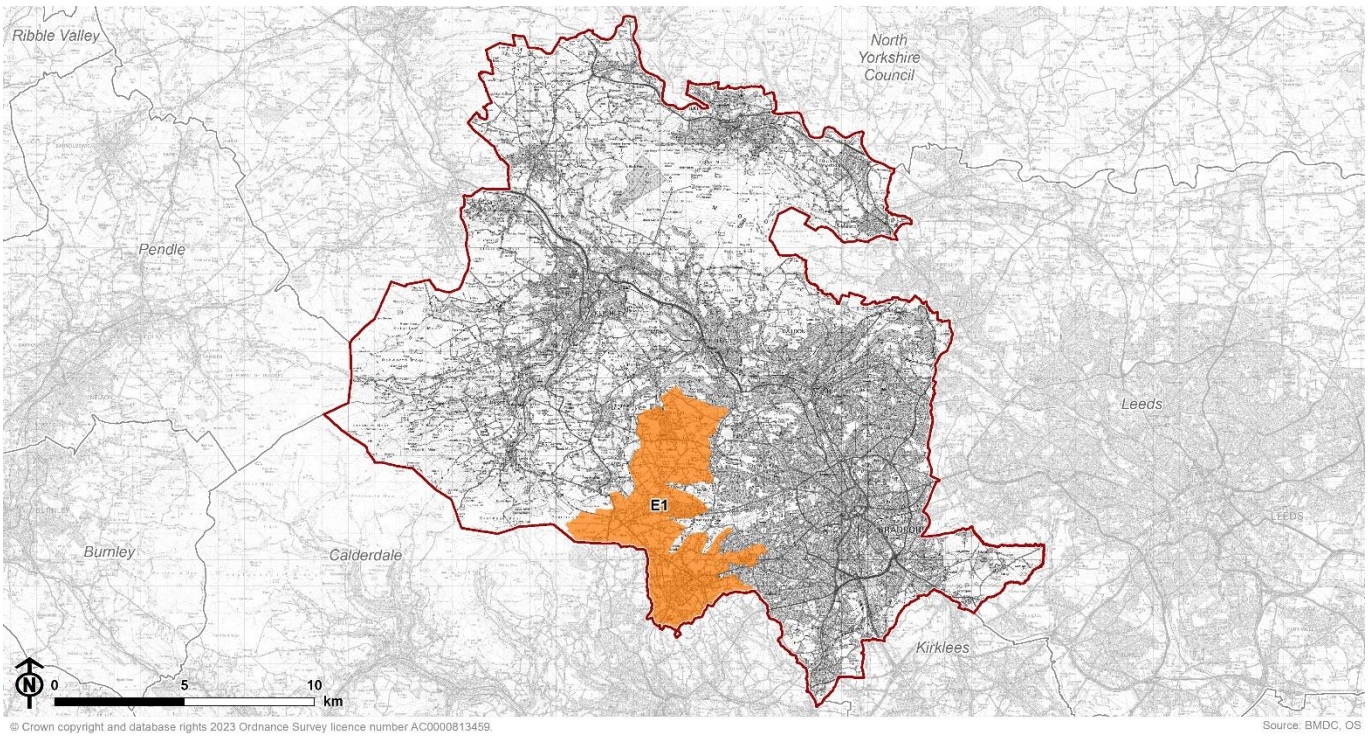
Landscape Character Type E: Mixed Upland Pasture

Figure 3.101: Location of the Mixed Upland Pasture



LCT E Overview

Stretching from the elevated moorland plateaus and moorland fringe landscape to the more settled areas in proximity to the river valleys, the Mixed Upland Pasture character type primarily consists of undulating pastoral fields. These are generally lined by drystone walls typical of the Yorkshire region, and the landscape possesses a rural feel, though it is influenced by urban fringe elements. Farmsteads are dotted across the landscape, yielding to small hamlets and larger settlements moving to the west. While tree cover is slightly more extensive within this character type than is found in the Moorland Fringes (LCT B), it is scattered in nature, and generally confined to field boundaries and roadside vegetation. The proximity to settlement and the incised wooded river valleys that draw down from the plateau contribute to a diversity of natural and human elements, with electrical and road infrastructure prominent across the landscape.

There is one LCA within this LCT:

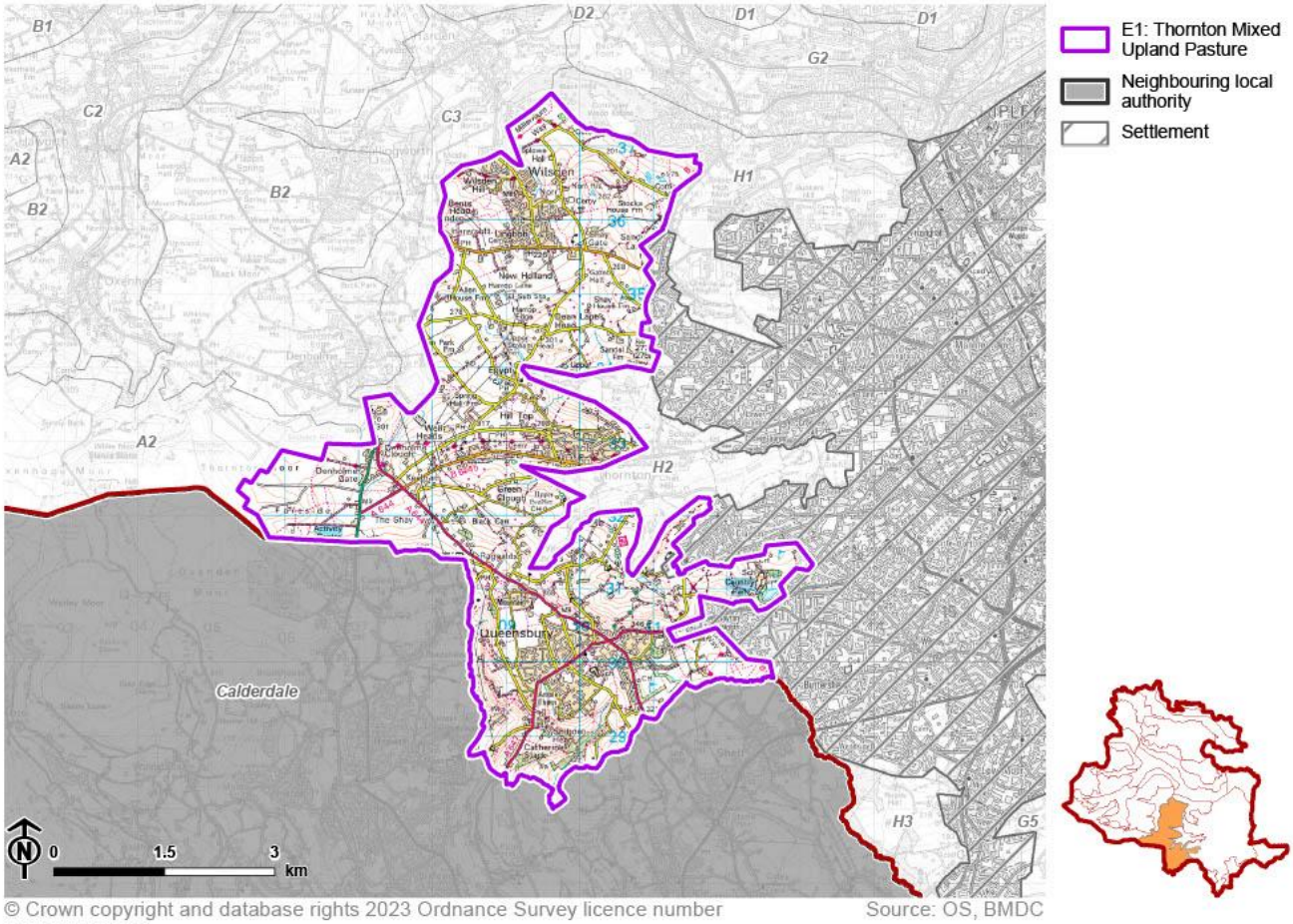
- E1. Thornton Mixed Upland Pasture

E1. Thornton Mixed Upland Pasture

Location, Context and Summary

The Thornton Mixed Upland Pasture LCA comprises an exposed, undulating plateau that transitions from the higher moorland of the South Pennines to the wooded river valleys and urban edge of Bradford. The area is predominantly characterised by small-scale field patterns, gritstone walls, scattered farmsteads and sheep pasture. Contrasting with the area's rural qualities, a multitude of large electricity pylons march prominently across the landscape. While the lower lying settlement of Wilsden nestles into a bowl-shaped depression in the plateau landscape, the more elevated settlements of Thornton and Queensbury appear superimposed on the upper slopes. To the north and west the area's boundaries are defined by the plateau edge which borders the wooded and sloping forms of Denholme Beck, Harden Beck and Wilsden Beck. The southern boundary follows the district boundary as the plateau starts to drop steeply to neighbouring Calderdale. To the east the area's boundaries meet the urban core of Bradford and the upper extent of the wooded river valleys of Pitty Beck and Clayton Beck that surround Thornton (LCA H2. Clayton Urban Edge Wooded River Valleys and Slopes).

Figure 3.102: Location of LCA E1



Source: OS, BMDC

Key Characteristics

- In contrast to the rest of the South Pennines this LCA possesses Coal Measure geology, with several outcrops of sandstone bedrock. The landform is highly undulating due to the presence of softer mudstones.
- An elevated, undulating plateau with a long dip slope towards Bradford, generally ranging in elevation between 250m AOD and 300m AOD.
- Acidic, low fertility soils have resulted in a largely pastoral rural landscape.
- Extensive, small-scale rectilinear field patterns, defined by drystone walls. Strict, geometric field patterns as a result of surveyed enclosure on the higher ground, transition to less regular piecemeal and strip field pattern at the lower elevations.
- Tree cover is fragmentary and limited to linear bands along field boundaries and occasional small blocks.
- Industrial heritage in the form of textile mills, local building vernacular, delfs and quarry spoil deposits.
- Urbanising influences from traffic, infrastructure and housing development. Wind turbines and in particular, large electricity pylons, are visually prominent throughout and create a degree of clutter within the landscape.
- Thornton and Queensbury appear as skyline settlements on the plateau, Wilsden sits at a lower elevation and is more nestled into the surrounding shallow basin.
- Despite local undulations providing a sense of enclosure, the overwhelming perception is one of elevation and exposure.
- The area has a strong visual connection with the urban area of Bradford to the east.

Figure 3.103: Example photos from LCA E1

Plateau landscape with settlement interspersed amongst pasture, with pylons seen on the skyline.

Expansive views of Bradford including mill chimney structure.

Pylons and wind turbines are prominent features within the LCA.

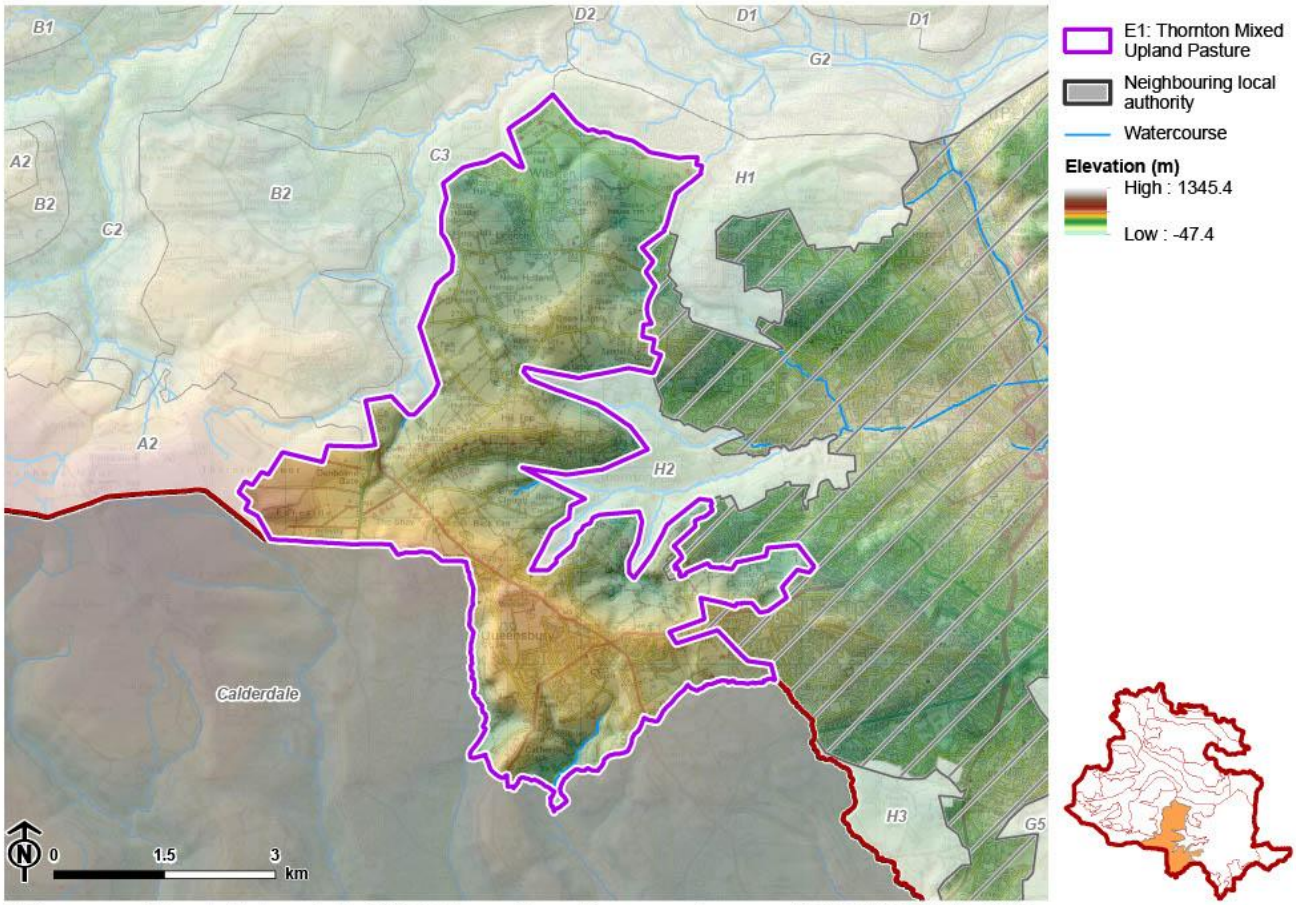
In place the area exhibits strong rural character.

At the higher points, such as at Queensbury the topography is flat and the settlement edges are exposed.

At lower elevations the field pattern is more intricate and tree cover is more extensive.

Landscape Character

Figure 3.104: Topography of LCA E1

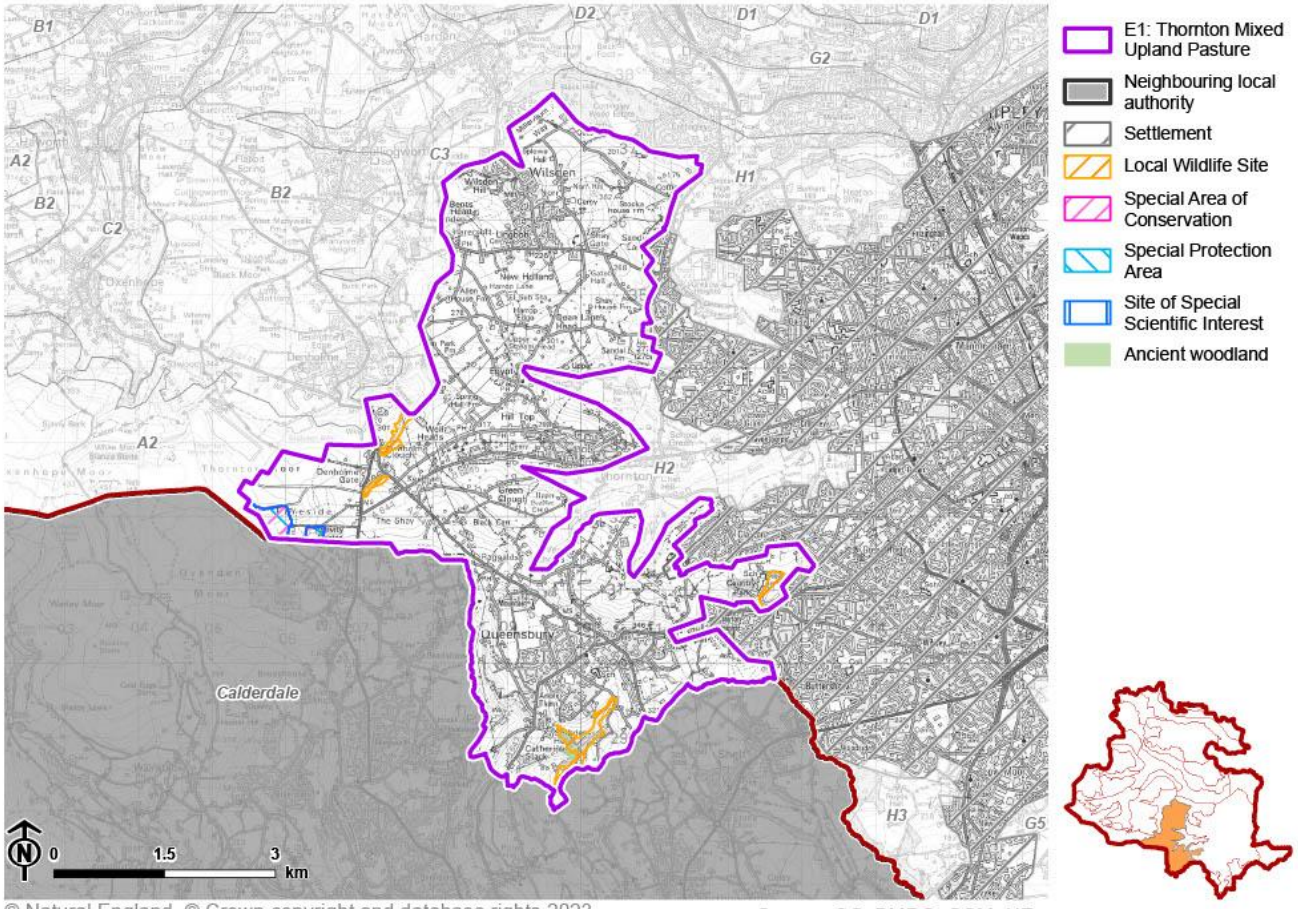


Source: OS, BMDC, OSM

Geology, Soils, Topography and Drainage

- The underlying geology is a composite of mudstone, siltstone and sandstone of the Pennine Lower Coal Measure Formation as well as Elland Flags sandstone. These were historically mined and quarried in the LCA, particularly in the vicinity of Thornton and Queensbury. The undulating landform across the LCA is due to the presence of softer mudstones, eroded by the many becks that pass through the area.
- There are no major watercourses within the LCA, though runoff from the plateau drains into surrounding tributaries such as Denholme Beck, Pitty Beck, Pinch Beck, Clayton Beck and Shibden Brook in the valleys below.
- The majority of the LCA occurs on relatively high ground, with most land between 250m-300m and a high point of approximately 385m near the summit of Soil Hill. In the northern extents of the area the landform dips steadily towards Wilsden, reaching a low point of approximately 175m.
- Queensbury sits on a high promontory of land which drops off sharply to the north down to Clayton Vale, south to Shibden Dale, and west to Strines Beck. The gorge-like quality of Shibden Dale in the south of the area is unusual within the Bradford District, and is more characteristic of the landscapes to the south in Calderdale.
- The underlying geology results in low-fertility acidic soils across the LCA, with some local variation. In the lower lying area around Wilsden the loamy and clayey soils are deep and slow draining, while at higher elevations around Thornton and Queensbury the loamy soils are shallow and free draining.

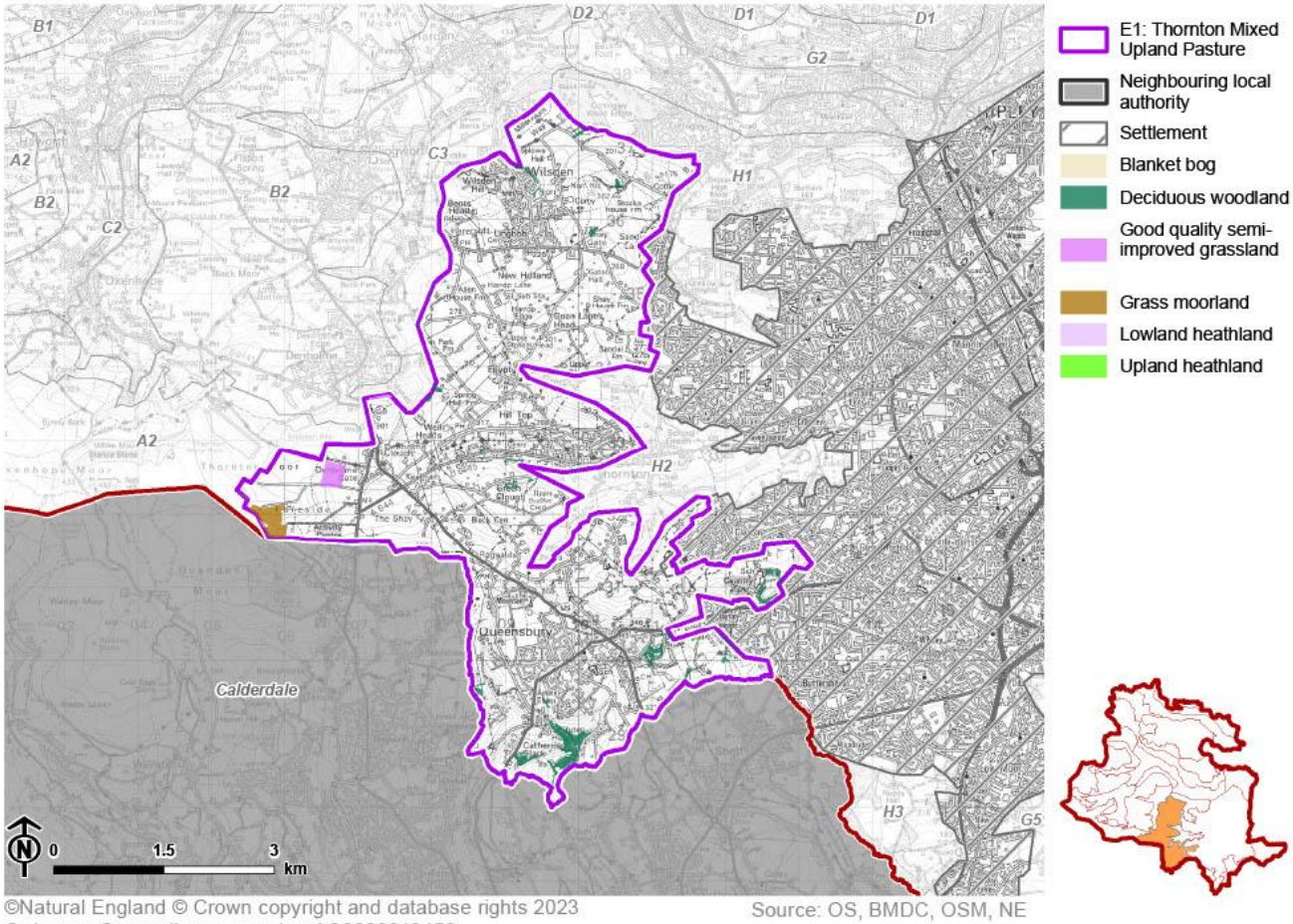
Figure 3.105: Natural heritage of LCA E1



Semi-natural Habitats and Tree Cover

- The LCA is dominated by pasture. Due to the acidic, poor quality soils most of the grasslands within the area have been agriculturally improved and are often heavily grazed, with little species diversity.
- The area is exposed and as a result tree cover is fragmented and limited to linear bands along field boundaries and occasional small blocks. Some hedgerows occur but most are in need of management and restoration and have limited ecological value. At the higher elevations (for example around Mountain) there is very little to no tree cover.
- A notable larger area of tree cover is found in the steep-sided valley of Shibden Head where oak-birch remnants of ancient woodland transition to heathland, with gorse in some areas. Providing a secluded habitat for a variety of wildlife such as roe deer, Shibden Head is one of four local wildlife sites across the LCA. The others are located at Horton Bank Country Park, Denholme Gate and Silverdale.

Figure 3.106: Priority habitat inventory of LCA E1



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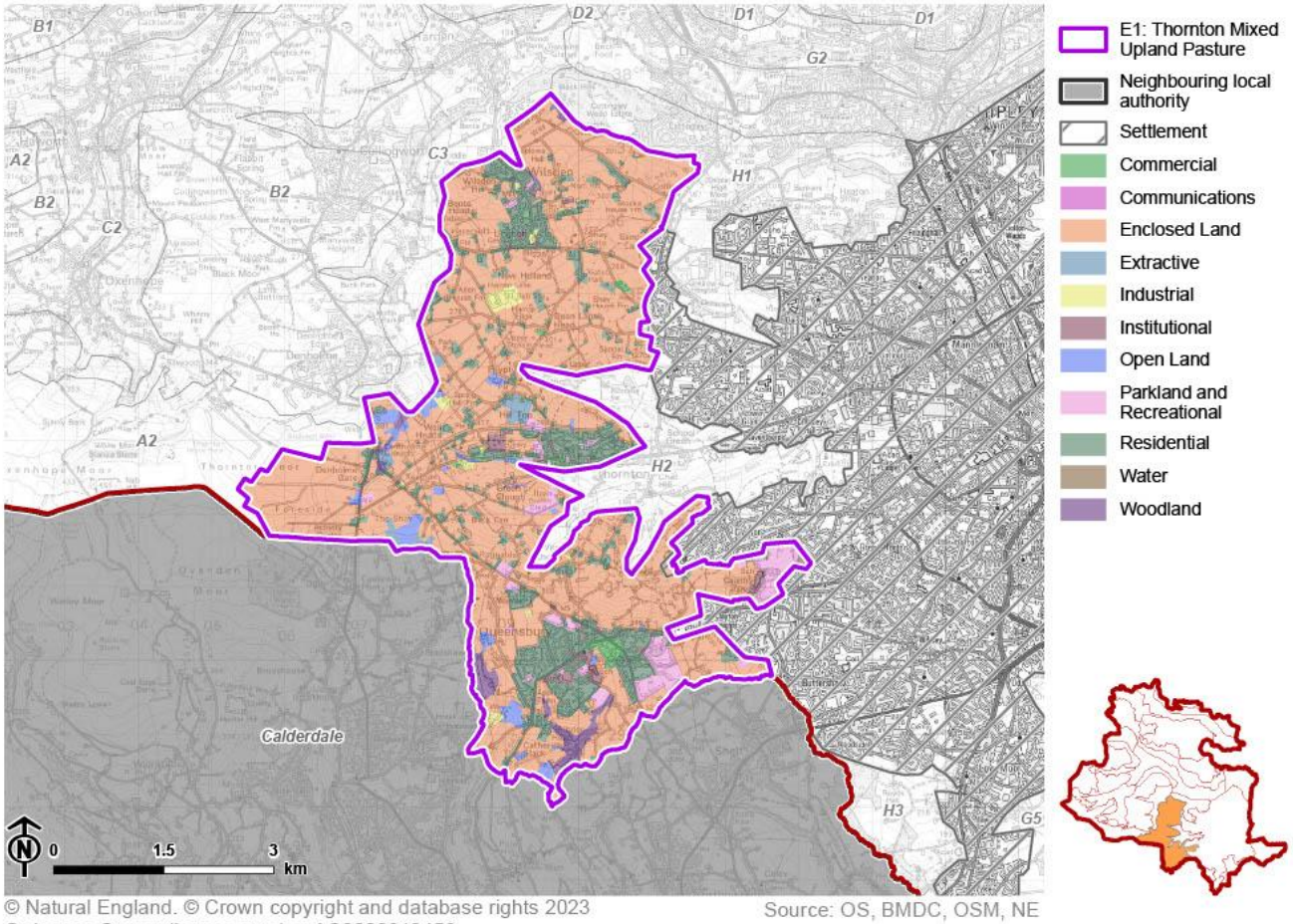
Source: OS, BMDC, OSM, NE

Land Use and Field Patterns

- Land use across the area is predominantly agricultural, consisting of improved pasture and grasslands enclosed by drystone walls. The farm units are often supported by the dual economy system, whereby the marginal agricultural infrastructure is supplemented by other land uses such as haulage, storage of materials, riding stables and small-scale renewable energy. Horse pasture is common, particularly across the east of the area and adjacent to settlements.
- Field patterns are small to medium scale and variable in shape from irregular to rectangular depending on piecemeal, surveyed and strip enclosure. Areas of strip enclosure are associated with the settlements of Thornton and Wilsden and the edge of the adjacent river valleys (LCA H2. Clayton Urban Edge Wooded Valleys and Slopes and C3. Harden Upland Wooded River Valley). Piecemeal enclosure is found to a greater extent in the east on the lower ground, while at the higher elevations to the west, the strict grid pattern of surveyed enclosure dominates. Drystone walls define the majority of field boundaries, but their condition differs considerably across the LCA.
- Land across the LCA is also utilised for electricity infrastructure. Several large overhead electricity lines traverse the area and the large Bradford West Substation is located south of Wilsden. A cluster of commercial wind turbines are located on high ground to the west of Thornton.

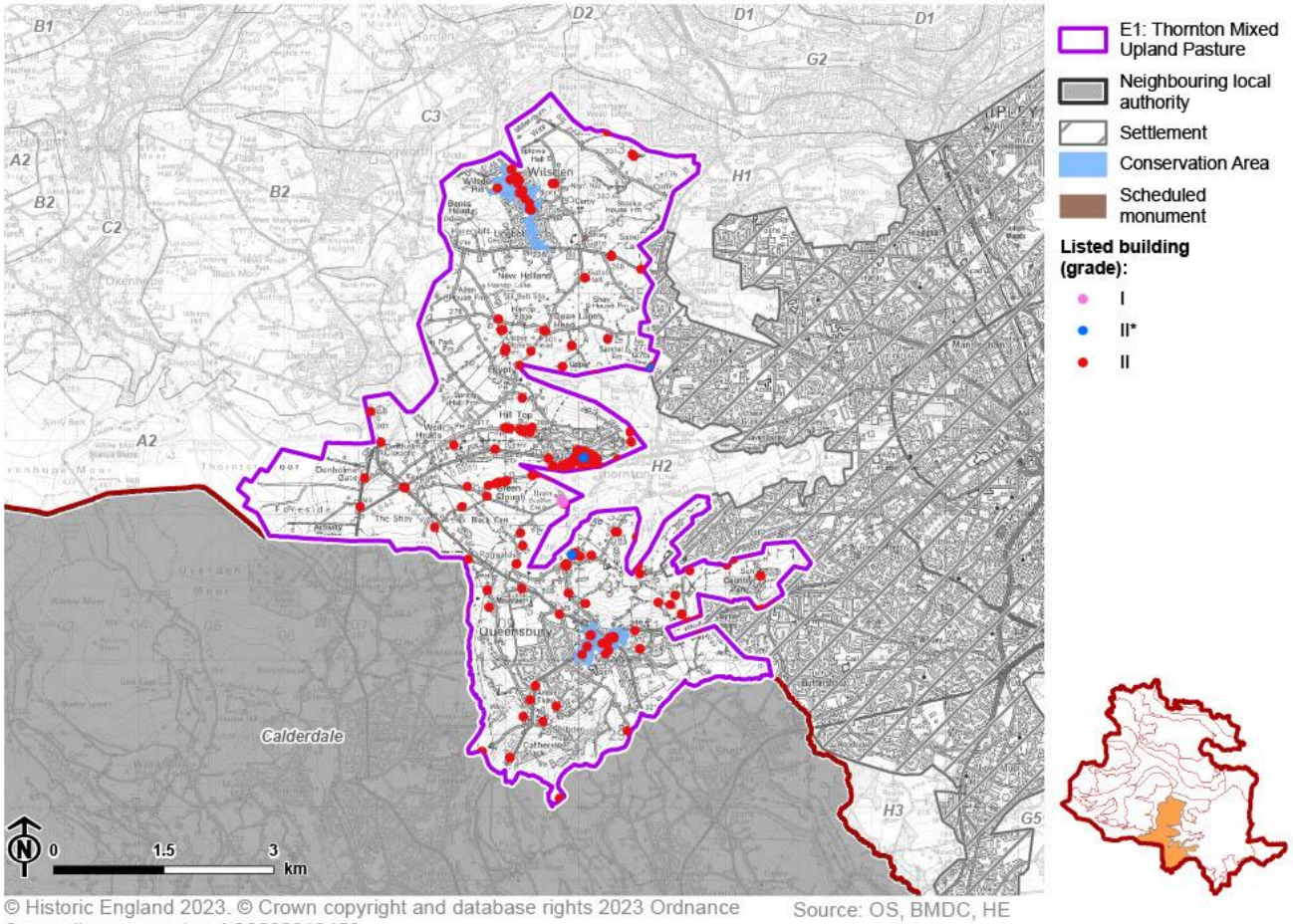
Figure 3.107: Historic landscape classification and cultural heritage of LCA E1



Cultural and Historic Landscape Character

- The rural parts of the LCA have a moderate sense of historic character due to the presence of vernacular stone farmsteads and extensive historic field patterns defined by traditional drystone walls. However, there are significant amounts of neglected or marginal pasture land, and some walls are in need of repair.
- The primary settlements in the area are valued for their historic character, as evidenced by their designation as conservation areas. This includes Wilsden, Thornton and Queensbury. There are a wealth of listed buildings associated with each settlement, including the prominent local landmark the Grade II Listed Church of St James in Thornton.
- Remnants of the closely linked relationship between the physical environment and the development of industry is still evident in the landscape. Mill buildings (such as the Grade II Listed Black Dyke Mill in Queensbury, which the well-known brass band The Black Dyke Band is named for) and terraced textile workers' housing are found in the main settlements, and architectural and material traces of coal mining and quarrying are common across the LCA.
- The Great Northern Railway was built in the second half of the 19th century, connecting mill towns in the Halifax, Bradford and Keighley triangle. A number of viaducts and tunnels were constructed to negotiate the Pennine landscape, including the striking Thornton Viaduct.
- Thornton has literary associations as the birthplace of the Brontë sisters, whose father, Reverend Patrick Brontë became the incumbent of Thornton Chapel in 1815. The 71km long Brontë Way long-distance footpath passes through Thornton.

Figure 3.108: Cultural heritage of LCA E1

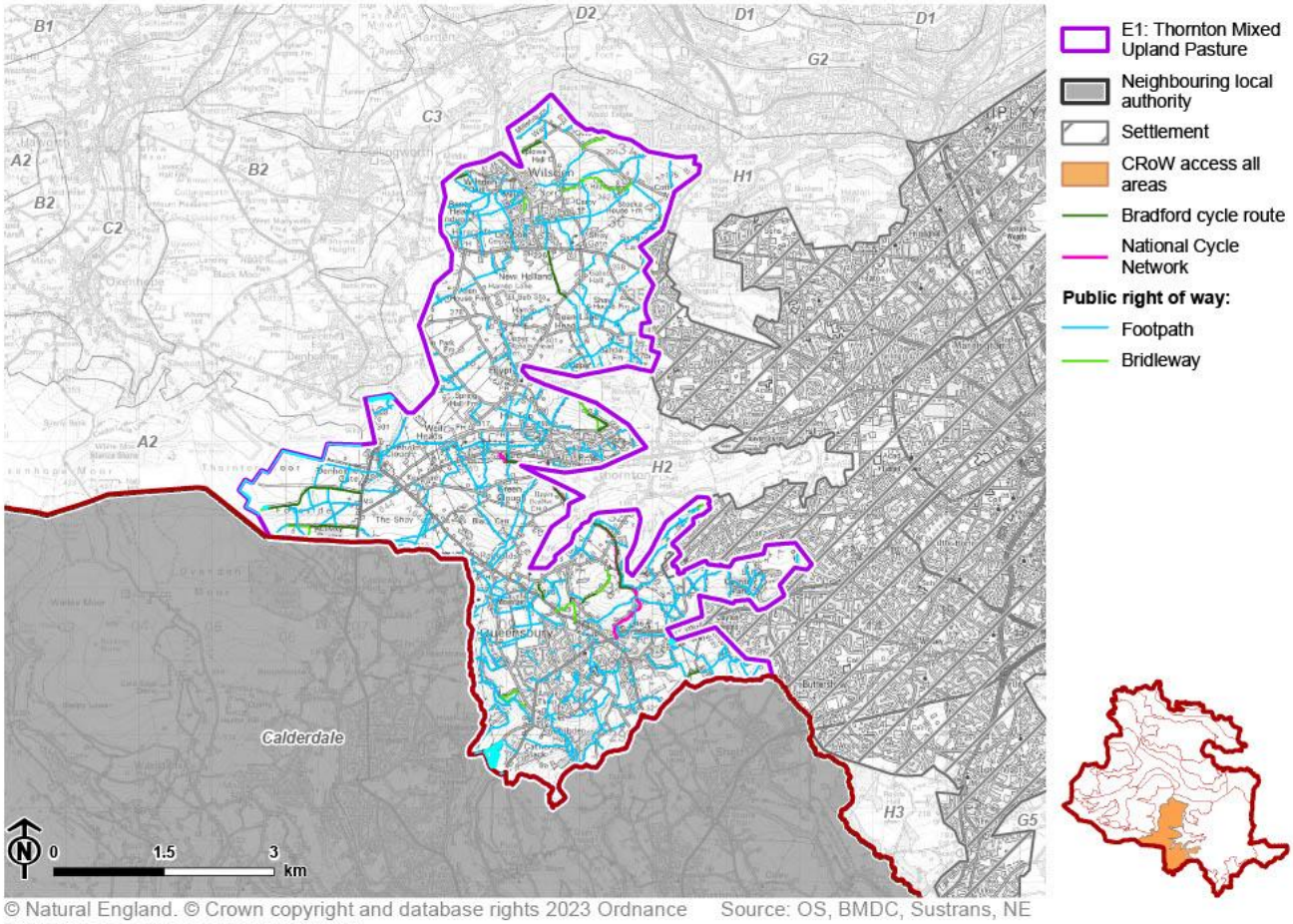


Source: OS, BMDC, HE

Settlement and Transport Pattern

- Settlement is relatively evenly distributed throughout the LCA. Thornton occupies the centre, roughly equidistant between Queensbury in the south and Wilsden in the north. Between these larger settlements are numerous scattered farmsteads, and occasional small hamlets such as Egypt and West Scholes nestled in the undulations of the plateau.
- Thornton, Queensbury and Wilsden are all located close to the boundary of the LCA, at the edges of the plateau. The lower, eastern end of Thornton is located within LCA H2. Clayton Urban Edge Wooded Valleys and Slopes.
- Wilsden sits in a bowl-shaped depression in the plateau and appears nestled into the landscape, while Thornton and Queensbury sit more prominently on the skyline of the plateau.
- Settlement in the area reflects the local landform. Wilsden and Thornton are both relatively linear, occupying a shallow river valley and a high ridge respectively, while Queensbury has developed in a more radial fashion onto the surrounding plateau table.
- There is an extensive minor road network criss-crossing the plateau, linking the farmsteads and small hamlets of the pasture lands to the main settlements. The B6144 and B6145 provide access to Wilsden and Thornton respectively and the A644 connects Queensbury and Brighouse in neighbouring Calderdale. The A647 travels south from Queensbury to Halifax, and east to Bradford.

Figure 3.109: Access and recreation of LCA E1



Source: OS, BMDC, Sustrans, NE

Access and Recreation

- There is a dense network of well-used public rights of way that traverses the pasture lands, with the higher ground often affording long-distance views in many directions. The Millennium Way and the Brontë Way pass through the northern and central extents of the LCA respectively.
- Two separate sections of the Great Northern Railway Trail cycleway and footpath run along the 8km long Cullingworth to Queensbury disused railway track, forming part of National Cycle Route 69. When completed, the Great Northern Railway Trail will extend 10km between Cullingworth and Queensbury.
- There are many riding stables throughout the area and golf courses at Clayton and Queensbury.
- Horton Bank Country Park, once a quarry and then a reservoir, now provides a site for walking. The pond is used as a site for wild swimming.

Views and Perceptual Qualities

- Due to the area's elevation, views are generally open in nature, though there is a high degree of variability. Long-distance views are available from higher points on the plateau in the vicinity of Mountain and Queensbury and from the upper slopes north of Thornton, whereas in the more rural folds of the landscape, views tend to be shorter distance and more enclosed within the undulating pasture land.
- Related to these visual qualities, perception fluctuates across the LCA from a sense of elevation and exposure on higher ground, to one of shelter between undulations and in the small valleys.

- North east of Queensbury above Brow Lane there is a bowl-shaped valley with farmsteads, small holdings and a quarry set into the folds of the landscape. Tree groups are clumped around and in between these features creating a more enclosed, small-scale character which is distinct from the nearby settlements of Thornton, Queensbury, and Bradford.
- The undulating landform and extensive field patterns of traditional pasture across the LCA lend it notable rural qualities. However, these rural qualities are weakened by significant modern infrastructure, in particular a number of overhead power lines, supported by large electricity pylons, that converge on Bradford West Substation. These feature prominently on the skyline throughout the LCA, and are seen alongside wind turbines and solar panels.
- From the south of the area there is a sense of sitting on a high shelf of land raised above Bradford, and in places the area benefits from very expansive views. The eastern extent of the area has a sense of being on the urban edge and littering and fly tipping is not uncommon in this area.

Pressures and Forces for Change – LCT E: Mixed Upland Pasture

Climate Change

- Climate change leading to increased periods of drought could reduce the widespread presence of springs in E1, and decrease the waterflows in the beck heads (such as at Denholme Beck) which then flow into different LCTs.
- Drier and warmer conditions increase the risk of wildfires in neighbouring moorland which may spread to E1.
- Climate change may also result in periods of very sudden and significant rainfall which has the potential to cause localised flooding and increasing the risk of erosion and landslides. Wet field conditions could increase poaching from livestock, already an issue in parts of the LCT due to intensive horse grazing.

Agricultural Change

- Diversification of upland farms leading to renovations and extensions to agricultural holdings may detract from rural character in places. As an area close to the urban edge, there may be greater demand for the conversion of agricultural holdings.
- Characteristic drystone walls are falling into disrepair in places, often on the urban edge. Changes in agricultural subsidies could further exacerbate this trend.
- Uncertainty over changes to agricultural funding may lead to increases or decreases in grazing pressure and subsequent impacts on grassland character.
- Intensive horse grazing has caused poaching and the compaction of soil, particularly in locations in the east on the urban edge. Horse grazing can also have a detrimental impact on riparian vegetation on small scale becks, and associated buildings and fencing can affect rural character.

Development

- Settlements within the LCT are under increased pressure for development due to their convenient distance from Bradford.
- The key settlements within E1 have a strong relationship with their surrounding landform. Development pressure may cause the expansion of settlements past their traditional topographic boundaries, eroding their relationship to their setting.
  - Thornton is characterised by its location on an elevated spur and development spilling down onto the valley floor to the north and south could detract from this.
  - Wilsden sits within the gentle valley bowl surrounding the Wilsden Beck, development up the valley sides could alter the character of the settlement.
  - Queensbury is located on the plateau top, development to the north and to the south crossing into Shibden Dale could have a detrimental impact on wider landscape character.
- The LCT has a substantial degree of existing energy infrastructure, including wind turbines, overhead electricity lines, and substations. Pressure for additional energy infrastructure, particularly from wind energy and battery storage facilities, could have a cumulative and increasingly negative impact.
- Development in the neighbouring Calderdale District south of E1 may alter the rural character in the south of the LCA.

Habitat Management and Environmental Initiatives

- Uncertainty over new Environmental Land Managements Schemes (ELMS) and the impact this will have on habitat management for upland farming.
- Introduction of a Local Nature Recovery Strategy (LNRS) and habitat banking related to Biodiversity Net Gain could alter the existing character through landscape-scale habitat creation and enhancements including management changes in some areas. Such changes should take into consideration the key characteristics of the landscape and seek to build upon and enhance character.

- Pressure for additional tree planting which would contrast starkly with the very open exposed landscape character in parts of E1, particularly in the south west and south.
- Flooding in the Calderdale District may require upper catchment water retention initiatives in the upper valleys in the south of the area in order to minimise flooding.

Heritage at Risk

- Thornton Conservation Area is on the Historic England Heritage at Risk Register and is assessed as having 'Very bad' condition and a 'deteriorating' trend.
- Drystone walls play an important role in defining historic field patterns and a deteriorating trend in condition is damaging to historic continuity.
- The Queensbury Tunnel is in a state of disrepair and may be infilled, though there is a campaign to reopen it and repurpose it as part of a cycle network.

Tourism, Recreation and Access Pressure

- Increased development on the edge of Bradford may increase pressure on the network of public rights of way.
- The completion of the Great Northern Railway Trail cycle route may draw more people to the area.

Pollution, Littering and Anti-social Behaviour

- Fly tipping and litter is common in some locations on the urban-rural transition in the east of E1.

Guidance

- Encourage diverse grasslands within agricultural land to create a mosaic of habitats within the grazed pasture. This should include drought tolerant species.
- Sensitively manage potential flood prevention schemes at beck heads and use them as an opportunity to increase biodiversity as well as retain water.
- Manage the degree of horse grazing in the landscape and seek to reduce poaching and negative impacts on riparian vegetation.
- Aim to increase tree cover in LCT but concentrate tree planting within valleys, at the heads of streams and around settlements where tree cover is an existing characteristic. Avoid tree planting on the exposed and elevated plateau tops in the south and west and where it will alter skylines.
- Conserve and enhance the area's rich industrial heritage supporting the schemes and strategies most likely to ensure the long term positive condition of industrial built form. Ensure use of traditional building materials and methods in repair and restoration. Views to prominent industrial features, such as the Thornton Viaduct, should be maintained.
- Thornton's connection with the Brontës should be conserved and promoted. In particular, the setting of the Old Bell Chapel should be preserved and negative impacts on users of the Brontë Way minimised.
- Conserve the characteristic geometric field pattern. Maintain the drystone walls, repair where necessary ensuring that restoration is carried out sensitively and with due regard to local style and construction.
- Strive to respect the relationships between settlements and the landform they are associated with.
- Seek to integrate new development into the landscape through tree planting, where appropriate within the landscape, for example tree planting may help to integrate development on the edge of low lying Wilsden, but may be less appropriate around the more elevated Queensbury.
- Seek to maintain separation between distinct settlements and to respect settlement settings where they contribute to settlement character.

- Carefully consider the capacity of the landscape to accommodate additional energy infrastructure development, taking into account potential for cumulative impacts. Landscape and Visual Impact Assessments/ Landscape and Visual Appraisals are an important part of the iterative design and assessment process and can help inform the potential for cumulative impacts.
- Where additional residential development is proposed, seek to strengthen the existing public right of way network to mitigate against increased use and to benefit existing and new residents.