

LCT 3: Forest Landscape Character Type



Fig.59 A typical scene within the Forest Landscape Character Type: The view from scarp-top viewpoint in Wykeham Forest, looking north to Dalby Forest, and Langdale Forest beyond.

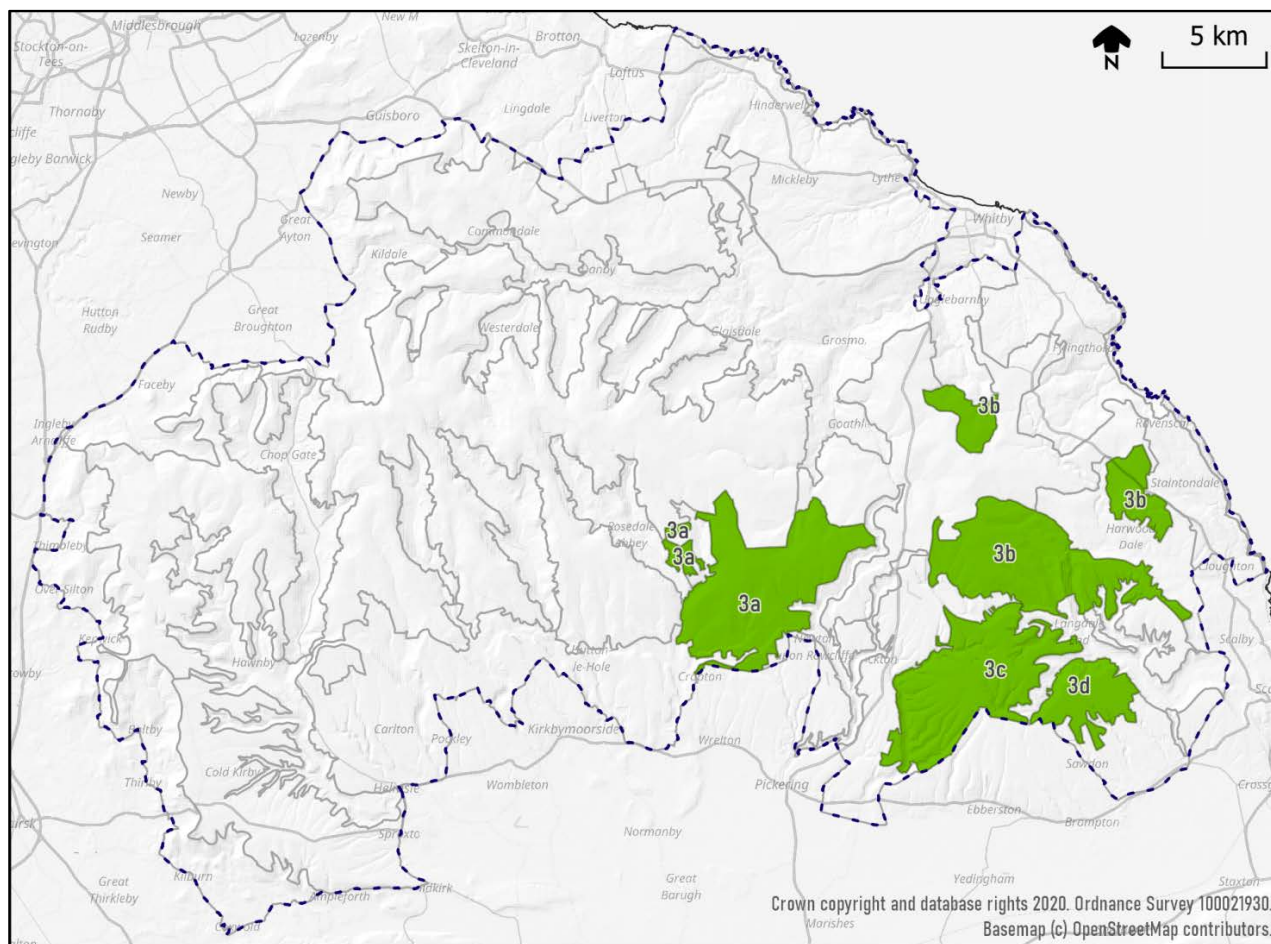
Location, Context and Setting

This Landscape Character Type (LCT) is located in the south-east of the North York Moors. It comprises the largely-forested land of Cropton Forest, Langdale Forest, Dalby Forest and Wykeham Forest, as well as the outliers of Harwood Dale Forest and Newton House Plantation. Settlement is limited to occasional isolated farms and hamlets in non-treed areas. The Forest LCT borders all the other LCTs except LCT 9 (Western Escarpment). However, its strongest topographic and visual relationships are with LCT 1 (Moorland), LCT 5 (Limestone Hills) and LCT 7 (Limestone Dales). It is also visible from the land beyond the southern boundary of the National Park, and in views across the Vale of Pickering from the Yorkshire Wolds.

Summary Description

This LCT is characterised by its extensive plantations, containing a range of tree species reflecting the diversity of the underlying geology and soils, and changing forestry practices from the early 20th Century to the present day. In many places, plantations of dark conifers add their unique colours and textures, dominating ridgelines and creating distinctive shapes in the landscape. Elsewhere, deciduous trees add seasonal colour and a softer texture. Patches of agricultural land, moorland, meadows and fens within the forest add diversity and contrast with the surrounding dense trees.

Parts of the landscape are popular for recreation, and many people visit to enjoy drives and various trails through this richly treed environment. Although the trees create a sense of enclosure, they occasionally open out to reveal sudden panoramic views. This LCT has exceptional levels of tranquillity and dark skies, which are celebrated, enjoyed and protected.



Location map for Forest Landscape Character Type (LCT)

3a = Cropton Forest; 3b = Langdale Forest; 3c = Dalby Forest; 3d = Wykeham Forest

Key Characteristics

- Underlying geology of Corallian limestones, deltaic sandstones, and clays creates diverse soils.
- Sloping topography cut through by dales, and with a prominent north-facing escarpment at the northern edge of the limestone.
- Spring-fed streams in steep-sided valleys, with some dry valleys in limestone areas.
- Land use almost entirely plantation, with isolated patches of agricultural land within forest.
- Semi-natural habitats include patches of moorland, grassland, streams, fens and open water.
- Very extensive tree cover, primarily coniferous, but with an increasing diversity of broadleaved species, particularly around the edges of plantations.
- Field patterns largely hidden by plantations. Surviving patches of fields are small and regular, bounded by hedges or walls.
- Very little settlement, which is limited to isolated farms and hamlets in open patches.
- Few roads, mainly small lanes with lots of dead ends, becoming forestry tracks for timber extraction/ management. Extensive network of trails, with much of the LCT Access Land.
- Many prehistoric archaeological sites within plantations, including numerous barrows and linear earthworks. Cawthorn Camp is an exceptional Roman site.
- Trees create distinctive colours, patterns and textures which contrast with surrounding LCTs.
- A general sense of enclosure, contrasting with sudden dramatic views revealed at viewpoints.
- Exceptional and celebrated dark skies, and a strong sense of tranquillity and remoteness.

Natural landscape features

The southern part of the Forest LCT is underlain by Corallian limestone from the upper Jurassic period. These are some of the youngest rocks in the National Park and would have been laid down in warm, shallow tropical seas. The northern edge of the limestone is marked by a steep north-facing escarpment, which forms a prominent feature within the forest landscape. To the north of the Corallian escarpment is an area of softer Oxford Clay, which would have been deposited in an ocean of moderate depth, and covers the older hard deltaic sandstones and mudstones which extend over much of the National Park, including the northern part of the LCT. The variations in geology within the LCT affect the soils, which in turn influence which trees can flourish and forest planting strategies. This in turn influences the character of different parts of the LCT.



Fig.60 The Adder Stone, a sandstone outcrop in Dalby Forest

The topography of the LCT rises gently towards the north where it abuts the moorland. The undulating limestone plateau under the southern part of the LCT falls gradually towards the south. The LCT is also punctuated by a series of steep dales running south into the Vale of Pickering, or east into the River Derwent. Narrow dales contain

spring-fed streams, although there are some dry valleys in limestone areas.



Fig.61 Thornton Dale is an example of a dale cutting through the LCT. Note the combination of coniferous and deciduous trees and open land in dale bottom.

The majority of the LCT is under plantation, but there are pockets of farmland, and also of semi-natural habitats including moorland, calcareous grassland, fen, streams and open water. Some of these are designated SSSI. There is also a wide variety of tree species, including both coniferous (mainly Sitka spruce, Scots pine, and larch) and broadleaved species. There are several areas of Plantation on Ancient Woodland Sites.

Designation	Sites
SSSI	Cawthorn Moor, Nabgate (grassland), Troutsdale, Rosekirkdale and Sievedale Fens, Cockrah Wood, Harwood Dale Moor
LNR	Part of Bridestones (National Trust)

Key designated nature conservation sites

Cultural landscape features

Beneath the plantations is a rich legacy of prehistoric boundary earthworks, barrows, cairnfields, field systems and cremation cemeteries. These features (many of which are Scheduled Monuments) are a continuation of the patterns seen in the surrounding farmed landscape.

The most well-known Roman military site in the National Park is Cawthorn Camps, in Cropton Forest. The well-preserved earthwork remains include two forts, one with an annexe, together with a temporary camp built to a very odd plan.



Fig.62 Earthworks of Cawthorn Roman Camp.

There are also examples of medieval (and later) rabbit warrens, where rabbits were farmed, and scattered historic farms and buildings in non-planted areas.

Roads are limited, and are often dead ends, although there are public footpaths and bridleways through the forests, including some recreational trails. There is also a dense network of tracks which are used for forestry operations. Much of the LCT is Access Land.

Occasional patches of agricultural fields appear as ‘cut outs’ from the forest. These are generally small and straight-edged, bounded by hedges or stone walls. Other land uses within the Forest LCT include a tree nursery, campsites and recreation.

Of course the most obvious man-made artefacts in the LCT are the plantations themselves, planted in stages throughout the 20th Century in response to a need for home-produced timber. The Forest LCT therefore illustrates the changing techniques and fashions of forestry, from the early

monoculture plantations with straight edges, through to more recent plantings of broadleaved trees, incorporating glades and rides. Recreation facilities have been added to enable public access and enjoyment, particularly at Dalby, which has a Visitor Centre, dark skies observatory, Forest Drive, cycling and footpath trails, a high ropes course and open recreation area. It also hosts motorsports events.



Fig.63 Sculpture trail at Dalby Forest, depicting WWII Lumber Jills taking a break from sawing a log.

Designation	Sites
Scheduled Monuments	Numerous prehistoric sites including boundary earthworks, barrows, cairnfields, field systems, cemetery complexes; Cawthorn Roman Camp; Rabbit warrens.
Listed Buildings	Occasional historic farms; Thornsby House

Key designated heritage conservation sites

Perceptual qualities and views

Extensive areas of forest change the colour and texture of the landscape, and have a significant effect on its character. They are dominated by the dark green of conifer plantations, but the lighter greens and softer outlines of deciduous trees provide contrast, particularly around the edges. Felling coupes also create variety within the forest, as do the presence of isolated farms and fields.

The abrupt straight edges of plantations create artificial, geometric lines in the landscape, particularly where forests abut moorland. The presence of straight rides and tracks can add to this impression.

There are very few buildings or roads within the Forest LCT, giving it exceptionally dark skies. Dalby, Langdale and Cropton Forests form the National Park's Dark Sky Core Area, and are celebrated at the dark sky observatory at Dalby Forest. The lack of buildings or roads also creates a strong sense of tranquillity and remoteness. Significant areas of the LCT are identified as remote land through their land cover, and/ or remote areas under NPA policy ENV 3. The sense of enclosure experienced within the forest contrasts with the more open landscapes which surround it.



Fig.64 Dark skies observatory, Dalby Forest Visitor Centre

The presence of trees means that in general, views are limited within the Forest LCT. However, there are also many elevated viewpoints (particularly at the top of the Corallian escarpment), where the forest opens out to reveal panoramic views. Some of these viewpoints are overgrown, but others are well-managed, with vegetation kept low, seating provided, and interpretation panels to explain views, geology and bird life.



Fig.65 Seating at viewpoint overlooking Troutsdale, Wykeham Forest

The wooded slopes and escarpment of the Forest LCT creates a distinctive backdrop for the Limestone Dales (LCT 7) and Limestone Hills (LCT 5), and also creates a distinctive character to the southern parts of the Moorland (LCT 1).



Fig.66 Forest skyline seen from Crosscliff Valley (LCT 5)

Ecosystem Services provided by the Forest LCT

Type of Ecosystem Service	Existing Contributions	Opportunities
Cultural Services	Access and recreation facilities enable people to appreciate the forest environment, wider landscapes, views, tranquillity, and dark skies. They support tourism as well as providing opportunities for local people to enhance their health and wellbeing through outdoor exercise.	There are further opportunities to increase recreational provision, particularly in parts of the LCT which currently have limited public access. There are also opportunities to enhance existing viewpoints and remove vegetation which is currently blocking views.
Provisioning Services	The LCT provides exceptional quantity and quality of timber of many types. These can be made into many wood-based products including timber, wood fibre and biomass. It also currently provides new trees through the tree nursery. Springs, streams and small reservoirs provide fresh water, and areas of agricultural land provide food and fibre (wool).	Changing climatic conditions may offer opportunities to experiment with growing different species of trees. Forest design principles are evolving to increase biodiversity and enhance fit into the landscape.
Regulating Services	Trees absorb carbon dioxide, sequestering carbon and helping to reduce climate change. They also trap pollutants, improving air quality. Tree roots and soils absorb and slow rainwater, helping to regulate downstream flooding. Plants provide habitats for pollinating insects.	New phases of forest planting can be designed to further contribute to Natural Flood Management and enhance biodiversity, including habitat for pollinating insects. Felling practices should minimise runoff of water and soils.
Supporting Services	Trees make a vital contribution to soil formation, through leaf decomposition and nutrient enrichment. They also support life through photosynthesis, which produces oxygen, and evapotranspiration which is an essential part of the water cycle. Trees (particularly deciduous) and other patches of semi-natural habitat support a very wide range of insect, plant, animal and bird species.	There are opportunities to further the range of woodland and other habitats within the LCT, for example by restoring areas of ancient woodland, creating glades, promoting woodland edges, and (where appropriate) allowing reversion to a more natural vegetation.

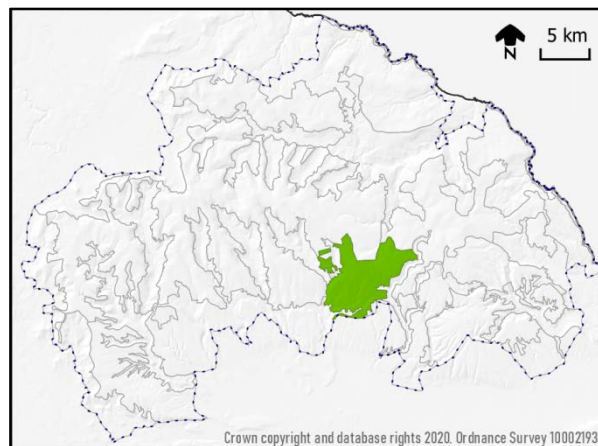
Landscape Character Area Descriptions

There are four distinctive Landscape Character Areas (LCAs) within the Forest LCT. These are described on the following pages.

Landscape Character Area 3a: Cropton Forest



Fig.67 A typical scene in LCA 3a, viewpoint overlooking Cropton Forest.



Map showing the location of LCA 3a within the National Park

This LCA is the most westerly of the LCAs, located between Newtondale and Hartoft. There are two small outliers of the LCA comprising forest blocks between Hartoft and Rosedale. The underlying soils are relatively nutrient-poor, and therefore require a mix of broadleaved trees (such as alder) to release nutrients. The overall mix of tree species is 36% Sitka spruce; 20% larch; 38% other evergreen conifers (mostly Scots pine) and 6% broadleaves. The forest contains trees at different stages of growth following open felling.

Cropton Forest is distinguished by the number of open areas within it, particularly around the hamlet of Stape. These contain farms, fields and estate influences around Thornsby House and Elleron Lodge which is surrounded by parkland and a lake. There are many becks within the forest, some with small waterfalls.

When planted, the forest had abrupt, straight boundaries where it borders the moorland, but recent 'fuzzy forest' management is resulting in a softer and more irregular outline. At the eastern edge it is contiguous with the forested part of Newtondale (LCA 6a).

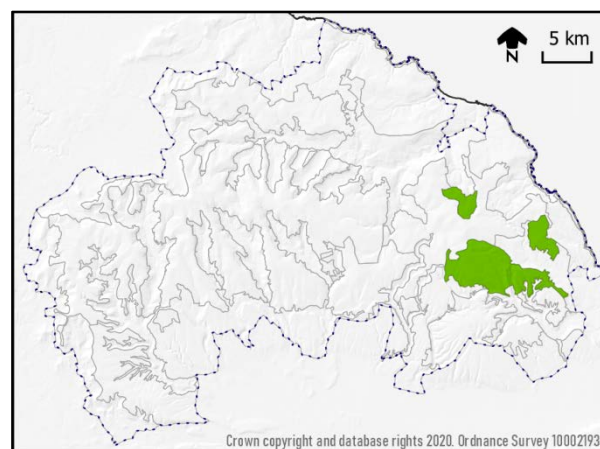
Cawthorn Roman camp is located in the south of the LCA, and there are short sections of Roman Road within the LCA on Flamborough Rigg and Pickering Moor. These are part of the Wheeldale Roman Road. Cawthorn Camp is open to the public, and has a car park, trails and a viewing platform. Public access to the forest via trails etc. is less evident, but visitor accommodation is available in forest cabins, and farmhouse accommodation.

Cawthorn Moor SSSI, in the centre of the LCA, is a complex of wet heath and flush habitats, and represents one of the most important examples of this habitat type within the National Park. It is exceptional in terms of its extent and species richness, and would have extended further prior to the planting of the forest.

Landscape Character Area 3b: Langdale Forest



Fig.68 A typical scene in LCA 3b, looking north over Langdale Forest. Bluebells are appearing in the cleared ground in the foreground.



Map showing the location of LCA 3b within the National Park. This LCA includes the outliers of Harwood Dale Forest and Newton House Plantation

This LCA is the most northerly within the LCT, and comprises the main block of Langdale and Broxa Forests, as well as the two outliers of Newton House Plantation (separated by LCA 1d) and Harwood Dale Forest (separated by LCA 7d). This LCA forms a key feature in views from LCA 1d, and also its wooded ridges form the skyline and backdrop to LCT 7.

Much of Langdale Forest is underlain by clay geology, between Corallian limestones in the south and deltaic sandstones to the north. Within the forest are a series of steep valleys containing becks, the largest and deepest of which (Lang Dale) contains the River Derwent. The eastern part of the LCA, including Lang Dale contains relatively large areas of Plantations on Ancient Woodland Sites. There are extensive Scheduled Monuments at Maw Rigg (a prehistoric cairnfield) and Thieves Dyke (prehistoric linear earthworks and associated features). Other Scheduled Monuments (primarily barrows) are scattered throughout the LCA, with concentrations on the ridge tops on either side of the valley of the River Derwent.

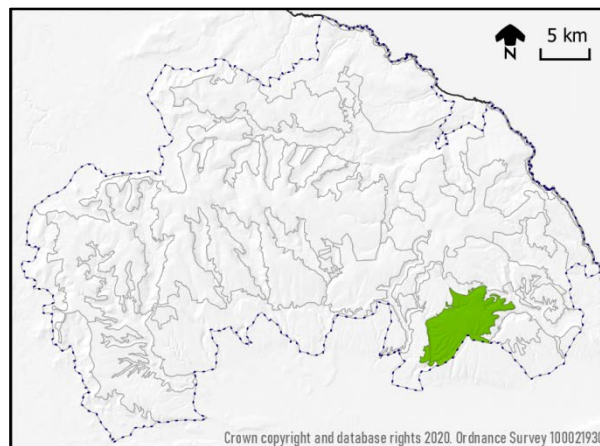
The LCA is predominantly productive conifer forest of spruce and pine. However, recent forestry management has seen a reduction in areas of these species, and an increase in the percentage of broadleaf species. The area of open land has also increased, including the creation of more irregular boundaries which respond better to landform when seen from a number of different viewpoints. There has also been a move away from the original 'gridiron' pattern of rides and felling coupes to reduce the impact of geometric boundaries. Peat restoration has taken place on areas where forest adjoins open moorland, such as May Moss (within LCT 1).

This LCA is one of the least accessible parts of the LCT, with very few public roads and few access points, although the busy A171 does run through Harwood Dale Forest. There are some rights of way through the forest (including the Moor to Sea Cycle Route) and much of the area is Access Land. Competitive motor rally events are occasionally held within the forest.

Landscape Character Area 3c: Dalby Forest



Fig.69 A typical scene in LCA 3c, at the entrance to Dalby Forest Drive, a popular location for forest recreation



Map showing the location of LCA 3c within the National Park

This LCA is situated towards the south of the LCT, north-east of Thornton-le-Dale. The hamlet of Low Dalby is on its western edge. The LCA is influenced by underlying limestone geology, giving it drier soils. Its topography comprises a plateau, riggs and dales running north-east to south-west, and deeper stream valleys, notably Thornton Dale, Stain Dale, Troutsdale and Deep Dale, which support fen habitats. Its northern boundary is marked by the prominent Corallian escarpment, which forms a landmark in views from the north and forms a natural break with Langdale Forest to the north. There are many prehistoric archaeological sites, including dykes and field systems.

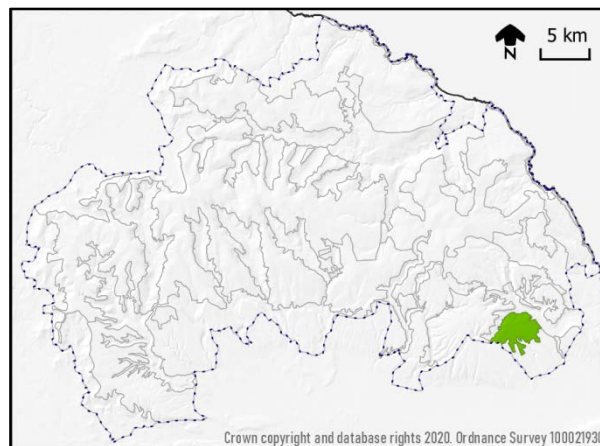
Dalby forest is a key centre for recreation provision, which was retro-fitted into an existing forest and forms a southern gateway into the National Park. There is a Visitor Centre and dark skies observatory at Low Dalby, as well as a GoApe course, technical mountain bike park, and large car parks. The Visitor Centre acts as a hub for a number of trails (bike trails, bridleways, footpaths and orienteering courses) which extend throughout much of the forest. The Tabular Hills Walk passes through the forest. Dalby Forest Drive is a toll road which allows motorists and cyclists to enjoy the forest, with frequent viewpoints, carparks, picnic areas, BBQ areas and trail access points. Motorsport events are also held in Dalby Forest, as the forest is relatively heavily roaded, with tracks along riggs and dales. The dry tracks and soils are less susceptible to erosion by vehicles. Adderstone Hill provides an open recreation area within the forest and hosts open-air events.

The concentration of visitor facilities, and the number of people visiting, gives the accessible parts of Dalby Forest a very different feel to other parts of the LCT. They have a more strongly managed and recreational atmosphere. Many of the roads and trails, and the peripheries of the forest, are planted with broadleaved trees, which cover 11% of the forest area and create a softer, more varied, and less forbidding feel. Nevertheless, this is still a working forest, with extensive areas of commercial conifer timber production. It contains some of the tallest Norway spruce trees in England, creating a cathedral-like character.

Landscape Character Area 3d: Wykeham Forest



Fig.70 Wykeham Forest (LCA 3d) from Broxa Lane. The tree-clothed limestone escarpment is clearly visible.



Map showing the location of LCA 3d within the National Park

This LCA is located in the south-east corner of the National Park. It is underlain by Corallian limestone geology, forming a sloping plateau with a south-easterly aspect. The Corallian escarpment runs close to the northern and eastern boundaries of the LCA.

Wykeham Forest is one of 12 UK forest-scale trial sites, established to improve knowledge and understanding of continuous cover forestry. Unique to Wykeham is the establishment of a forest nursery on the plateau within the forest, covering approx. 70 ha. The tree nursery forms compartments separated by shelter belts, and has a distinctive character.

Wykeham Forest has an exceptionally dense concentration of Scheduled Monuments, including clusters of prehistoric barrows, including rare Iron Age square barrows, dykes and field systems. An extensive network of 18th Century rabbit warrens covers the northern slope below the Corallian escarpment.

There is a relatively large proportion of Plantation on Ancient Woodland Sites, with opportunities for restoration, and a small area of SSSI at Cockrah Wood. Although the Ancient Woodland here was replanted, scarce plants including May lily remain. Overall, broadleaved trees account for 15% of tree cover within the forest (the largest proportion of any of the LCAs), primarily on the steeper northern slopes, but it is still dominated by commercial conifer plantations.

A relatively small proportion of the forest is Access Land, located in the west and the far east. There are however some rights of way through the forest, and the Tabular Hills Walk passes through the forest east-west. There are two car parks along Moor Road, both associated with viewpoints. The viewpoints are at the top of the Corallian escarpment, and offer dramatic views across the valley to the north over to Danby and Langdale Forests. Highwood Brow viewpoint is currently quite overgrown, but the one overlooking Troutdale has been cleared, and provided with new seating and interpretation boards.

Forces for Change acting on the Forest LCT

Issue/ Force for Change	Landscape sensitivities and potential impacts	LCAs affected
Changing forest management practices	This is a positive change enabling restoration of semi-natural habitats such as peat moorland and ancient woodland which were previously planted with non-native trees and resulted in biodiversity loss. The introduction of 'fuzzy forestry' creates softer, more gradual and naturalistic edges to plantations, reducing the geometric appearance of the original forest boundaries. Modern forestry management encourages creation of glades and rides, increasing diversity of woodland habitats and promoting insects (particularly butterflies) and birds. Felling coupes are becoming smaller, reducing their visual impact, and straight edges and rides are being altered to fit better with the landform. Forest management is also influenced by timber price and demand, and by availability and emphasis of grant schemes.	All
Infrastructure and communications	This LCT is likely to see particular pressure to accommodate telecommunications masts, due to its relative elevation, and its proximity to LCTs which are particularly sensitive to the construction of vertical features.	All
Tree disease	Pathogens currently pose risks to many different trees within the UK. For example, larch is susceptible to phytophthora (with sanitation felling underway), and Ash Dieback is already prevalent in the area.	All
Climate change	Increased temperatures, higher concentrations of nitrogen and longer growing seasons may enable more vigorous tree growth, and the opportunity to grow alternative species of trees. However, some species susceptible to heat or drought (such as beech and fir) may no longer thrive in a changing climate. New pests and diseases thrive in warmer temperatures. More frequent and intense storms make trees vulnerable to wind throw, particularly mature planted trees growing in shallow soils. Heavy rain erodes soil exposed after tree felling.	All
Erosion and soil loss	Felling of trees on steep slopes can result in increased erosion of soils and run-off of water, increasing downstream flood risk and pollution. Erosion and water channelling can also occur along tracks, particularly if they have been churned up or compacted by vehicles.	All
Loss of / damage to archaeology	Tree/ scrub roots can physically damage earthworks & buried archaeology, and remains that are not recognised are vulnerable to forestry management operations. It is also vulnerable to physical and chemical attack by bracken in areas cleared of trees, and to damage by burrowing animals.	All
Illegal vehicle use	Unauthorised use of vehicles such as 4x4s and trail bikes can damage track surfaces, making them more vulnerable to erosion, and creating scars within the landscape. They can also damage habitats.	All
Overgrowing of viewpoints	Some viewpoints have not been maintained, with interpretation boards and benches in poor repair, and views blocked by vegetation.	All
Loss of tranquillity, remoteness and dark skies	The area's outstanding dark skies are at risk from lightspill from traffic, structures within the vicinity of the forest LCT (e.g. RAF Fylingdales, and new large agricultural buildings), and skyglow from further afield, including settlements outside the National Park. Vehicles and people impact on tranquillity (noise and movement) and remoteness.	All

Landscape Guidelines for the Forest LCT

Note- for the area around Stape, and other pockets of agricultural land, please also refer to the Guidelines for LCT 5: Limestone Hills.

Protect

- Protect the distinctive skylines of the Corallian escarpment, avoiding siting vertical structures in prominent locations.
- Protect dark night skies, particularly in the Dark Sky Core and Buffer Areas.
- Protect archaeology (earthworks and buried archaeology) from damage by tree roots, scrub and bracken. Keep Scheduled Monuments and known significant archaeological sites clear of damaging vegetation.

Manage

- Continue efforts to increase the biodiversity of forests, and the range of habitats within them. Seek opportunities to restore ancient woodland sites with native broadleaved species, including through natural regeneration.
- Continue to improve the fit of forests into the landscape, including through the replacement of abrupt edges with more gradual boundaries (particularly at the junctions of forest and moorland), and by allowing forest edges to reflect the underlying landform.
- Manage visitor facilities, expanding opportunities for sustainable public access. Seek to minimise unauthorised vehicular access, particularly where it is causing problems with erosion or damage to habitats.
- Manage viewpoints, maintaining facilities, and cut vegetation to keep views open.
- Manage SSSIs according to their Management Plans, and expand rare habitats such as fen and wet heathland where possible. Seek opportunities to link similar habitats to create networks.

Plan

- Seek opportunities for LiDAR survey of forested areas to identify currently unknown archaeological sites / landscape features, and improve understanding of the existing resource.
- Promote Natural Flood Management Techniques where appropriate.
- Ensure that change to heritage assets is informed by an understanding of their importance, and can retain and where possible enhance their significance. Provision should be made for management plans, and research into materials, where appropriate.
- Where communications masts or other vertical features are unavoidable, site them within treed areas or close to existing buildings. Site them on plateaus rather than ridges, and avoid prominent ridgelines such as the Corallian scarp. Consider using non-standard designs and finishes to minimise their visual impact. Lighting of structures should be avoided if at all possible in the Dark Skies core and buffer areas.
- Work with appropriate Government agencies to ensure that forestry and woodland grant schemes address timber needs; promote management to enhance landscape, biodiversity and heritage, and help to mitigate climate change.
- Retain strict controls on light pollution within the Dark Skies core and buffer areas, and consider the light pollution impacts of development proposals outside the LCT/ National Park.