

Drumlin Field

Location

This sub type is found in a band running from Cowan Head south east past Kendal to near Kirkby Lonsdale, and in a band running from Lindal in Furness south to the coast around Roosebeck.

Key Characteristics

- Tracts of high drumlins
- Rounded tops with steep sides
- Distinct landform grain
- Hedges and stone walls form strong boundaries
- Streams and wet hollows are found in the valleys and dips between the drumlins
- Farms and development often nestle in intersecting valleys
- Narrow lanes with tall hedges and steep banks criss cross through the drumlins
- Drumlins are cut through by the M6 motorway, railways and power lines

Physical character

The drumlins lie on Carboniferous rocks and were formed in the Quaternary period. The tracts of rolling high drumlins form oval whaleback hills moulded from boulder clay by glacial processes. They range from 50 - 125m high, have broad rounded tops and are frequently steep-sided.

The drumlins provide evidence of glaciation. During the Pleistocene period these areas were glaciated several times and till (boulder clay) was deposited. The present topography resulted from the last glaciation when the ice sheet deposited the 'Lake District Drift' and moulded it into a striking drumlin pattern. The parallel alignment of these hills gives the landform a distinctive, uniform grain. The orientation of the drumlins is NW/SW around Kendal and NNW/SSE in Furness.

Land cover and land use

The drumlins are mainly covered in pastoral fields, usually divided by thick well managed hedges. Limestone walls can be found bounding fields in higher parts and around villages. The strong patchwork of fields forms a distinctive pattern that crosses up and down the drumlins.

Small broadleaved woods, orchards and hedgerow trees are abundant around Kendal but, perhaps due to exposure, these rarely occur in Furness where tree cover is restricted to sheltered valleys of farms and villages. Brooks and streams wind through the hills and occasional tarns occur in the hollows between them.

Many of the villages retain a strong historic structure responding to the shape of the landform either strongly linear along the side of hills or nucleated within hollows with houses grouped around greens or tarns. Modern housing expansion has weakened this intimate relationship and the vernacular identity of the villages.

The drumlin fields are crossed by power lines, main roads, railways and the M6 motorway. The Lancaster Canal, south of Kendal, is partly infilled but still retains its towpaths, bridges, tunnels and planting in many parts.

There are some urban fringe characteristics in the parts of the landscape closest to Barrow and Kendal which have weakened the distinctive pastoral drumlin and village scene.

Ecology

This is a landscape of improved pasture with species-rich hedgerows and occasional small woods. Small areas of rush pasture are occasionally present in hollows. The northern section of the Lancaster Canal supports a range of aquatic plants, whilst otters are present in small rivers.

Historic and cultural character

The landscape consisting of nestling farms within the drumlins is interesting and often painted by artists such as; William Collingwood, Arthur Tucker and Hubert Coutts. Particular features are kettle tarns, which were formed in basins by the melting ice age.

The settlement pattern is largely dispersed and the field pattern regular with a mix of field sizes reflecting former common arable and ancient enclosures. However, these are distinguished by the recent removal of many hedged boundaries. The traditional buildings are constructed of limestone. The most distinctive archaeological feature is the evidence from industrial activity such as paper making and gunpowder manufacture.

Perceptual character

This is a comfortable working landscape dominated by sleek, well managed pasture fields. Seasonal farming practices bring a dynamic nature to the area with summer mowing creating a bright patchwork of greens and yellows. The combination of drumlin landforms overlain by a geometric net of fields gives this landscape a strong identity. The hedgerows often seem to march over the drumlins, their curvature accentuating the relief of the hills. The landscape is punctuated by hedgerow trees, farms, woods, tarns and villages. The lack of tree cover in Furness creates a bare rolling landscape. A journey through it reveals a series of contrasts from enclosed sheltered hollows to exposed open hilltops affording long views. In some cases the views open across valleys where farmland and towns, such as Kendal, are framed in the landscape. A sense of intrigue and surprise can be created by the hilly winding lanes.

Sensitive characteristics or features

The distinctive grain and interlocking appearance of the drumlin forms are sensitive to development that would change their appearance in the landscape. The strong matrix of hedges and walls that criss cross and 'rollercoaster' up and down the drumlins are sensitive to changes in land management. The rivers and watercourses that intersect the drumlins reinforce a sense of tranquility and are sensitive to

farm intensification and changes to land management. Rural lanes that wind along the lower reaches of the drumlins are sensitive to highway improvements for safety or to support new development. The traditional vernacular village forms reflect the distinctive shape of the drumlins and are sensitive to village expansion. Open and expansive views to Morecambe Bay, the Lakeland Fells and Yorkshire Dales are sensitive to large scale infrastructure development.

Vision

This well composed landscape will be conserved and enhanced to retain its distinctive characteristics. Its unique topography will be maintained and enhanced as a striking asset. The intrusion of new farm buildings will be minimised, field patterns maintained and strengthened and natural features restored through careful conservation. Conservation and restoration of the small woods and hedgerow trees will complement the scale, relief and field patterning of the drumlins. Any small-scale development will be sited and aligned to complement the grain and form of the drumlins and a good network of paths and recreational routes will exist.

Changes in the Landscape

Over the next 10 – 20 years this landscape could be subject to the following changes or issues:

Climate Change

- There could be increased interest in the planting of energy crops to support renewable energy generation. Energy crops could include miscanthus, short rotation coppice (usually willow) or short rotation forestry of fast growing tree species to provide biomass for electricity production and heat. As arable and woodland planting is very limited in the landscape sub type this could change the character significantly.
- There could be an increase in localised flooding linked to increased rainfall and storm events which may need to be managed in the future.

Management Practices

- Agricultural change towards intensively managed grassland could reduce biodiversity and support more silage production.
- There continue to be localised examples of neglected hedges and walls.

Development

- Interest in residential, commercial and recreation development is likely to continue close to major towns and villages.
- Village expansion, barn conversions, and sporadic development that don't reflect the local vernacular or traditional siting of development at the foot of the drumlins could weaken local identity.
- Infrastructure developments including large scale wind energy developments, pylons, roads, motorway and railway improvements could cut across the grain of landscape and introduce vertical structures that dominate the drumlin characteristics.
- Development sited away from settlements could introduce buildings that are inappropriate in location, siting, and scale.
- Farm diversification could result in more recreational uses such as golf courses.
- The M6 corridor as an element in the landscape could have the potential to attract new large scale commercial development. Improvements to surfacing, lighting and information systems along the motorway could affect its appearance and people's awareness of it in the landscape.

Access and Recreation

- Public rights of way provide a network of routes that enable quiet appreciation and enjoyment of the countryside. Ongoing maintenance is needed to support this network in the future.
- Current farm stewardship grants provide the opportunity to develop more public access in the countryside. Future grant or other programmes may continue to support this.
- Visitor numbers could increase in areas adjacent to the Lake District and Yorkshire Dales National Parks and from programmes encouraging people to access the countryside around where they live.

Guidelines

Climate Change

- Encourage biomass planting in hollows and between the lower more open drumlins to help retain the distinctive form and pasture land cover of the drumlins.
- Encourage appropriate flood risk management measures to reflect the local character.

Natural Features

- Plant small pockets of indigenous woodland within hollows or on prominent hilltops and woodland belts between the lower more open drumlins.
- Manage existing woods by selective felling, natural regeneration, restocking and exclusion of stock.
- Establish new hedgerow trees using indigenous species or tagging selected saplings to replace maturing stock.
- Resist large scale planting that would obscure or swamp the pattern of drumlins.
- Protect and enhance tarns and wetlands through carefully controlling drainage schemes to safeguard water quality and levels and regenerating water margin vegetation by preventing overgrazing and poaching by stock and controlling scrub encroachment.
- Create new ponds, tarns and wetlands in hollows and by streams.
- Maximise floral diversity along road verges by adopting sensitive cutting cycles and restricting use of herbicides.

Cultural Features

- Conserve and maintain hedgerows in a traditional way where possible with hand laying and trimming.
- Discourage boundary removal and field enlargement.
- Maintain dry stone walls in the traditional manner.
- Restore dry stone walls and neglected hedgerows; the latter involving replanting of gaps and coppicing of overgrown plants.
- Conserve and enhance features such as remnant medieval 'town fields' and disused iron ore mines in Furness by positive management and discouraging damaging agricultural and other reclamation schemes.
- Conserve and enhance historic routes such as the Lancaster Canal and encourage public use by management of trees and scrub, carrying out structural repairs to bridges, walls etc. (with archaeological advice) and protection from stock.

Development

- Ensure that all developments are of high quality and well related to the distinctive grain and scale of this landscape. Avoid prominent hill tops or cutting across slopes, particularly with reference to tall structures such as pylons and large scale wind turbines and, take advantage of natural containment by landform and trees.
- Reduce the impact of new farm buildings by careful siting, breaking down mass, choice of sympathetic colours and non-reflective finishes and screen planting. Ensure any diversification from farming use does not disrupt the strong held pattern.
- Conserve and protect historic villages by ensuring new housing development respects their scale, traditional form and vernacular styles and does not overcrowd narrow lanes or infill open spaces such as orchards and gardens integral to the character. Encourage sensitive environmental improvements to village greens, ponds, tree plantings etc.
- Avoid siting large scale wind energy, other vertical structures such as telecommunications masts, pylons and overhead transmission lines in open and prominent areas where they could degrade the rural character of the area.
- Retain the rural character of the M6 corridor by resisting large scale commercial development and ensuring new motorway infrastructure such as information signs and necessary lighting is sited to minimise adverse effects on open parts of the landscape. Noise pollution should be mitigated against through careful selection of surface materials.

Access and Recreation

- Public rights of way should be well maintained and quiet recreational areas and facilities should be improved and developed to be compatible with the pastoral character of this sub type.
- Promote and enhance existing recreation routes by improving waymarking, appropriate surfacing, gates and gaps and interpretation.
- Encourage the development of footpath, bridleway and cycleway networks where appropriate combined with additional hedgerow and tree planting to provide interest.
- Seek opportunities to enhance access to farmland through farm stewardship or other schemes.