



## Background Information on the Lake District National Park

### 1) Geology

Most of the National Park comprises 3 broad bands of rock trending from SW to NE, the **Skiddaw Group** in the northwest, formed about 500 million years ago, is mainly metamorphosed mudstones. The **Borrowdale Volcanic Group**, outcrops in central Lake District, and is mainly lavas and ash flows erupted during a cataclysmic period of vulcanism, 450 million years ago. The **Windermere Group** which outcrops in the southeast of the National Park, includes slates, siltstones, sandstones and limestones formed in shallow tropical seas. All these rocks are underlain by a batholith of granite which led to their uplift into a central dome of mountains.<sup>3</sup>

### 2) Geomorphology

Central Lake District is occupied by a glaciated massif of mountains and ridges intersected by wide, steep-sided 'U' shaped valleys often occupied by ribbon lakes. The southern Lake District fringes are typified by limestone ridges flanked by wooded slopes and lake-filled valleys. On the mountain fringes the fells give way to more muted scenery; low hills and valleys often filled by drumlin suites. The coast is a mixture of sandstone cliffs and depositional dunes, which also occur in the south along the fringes of wide, silt- filled estuaries with large tidal ranges.

Striding Edge, Helvellyn



### 3) Glaciation

About 2 million years ago, the Lake District was a mountain massif broken by river valleys radiating outwards from the centre. A period of climatic oscillations led to a series of ice ages during which the ice flowed out from the central core, following the river valleys, deepening and widening them, and depositing streamlined till and other depositional features on the lower land. As a result, the Lake District is a text book example of glacial landforms.<sup>3</sup>

### 4) Soils<sup>4</sup>

The most important factor in the development of Lake District soils is the downward leaching of water as a result of high rainfall. Rainfall amounts vary considerably across the Lake District National Park. Seathwaite receives an average of 3300 mm per year while down the valley Keswick receives about 1470 mm per year. What makes the National Park especially wet and the rainfall more intense is the process of relief (orographic) rainfall caused by the upland area of fells. The young, characteristically shallow, acid, stony soils formed of glacial till found in the high fells are known as **rankers**. Excessive leaching led to the formation of **podsoils**: pale, sandy bands beneath the organic horizon, often underlain by an iron pans. **Brown Earths**, **loesses** and **rendzinas** occur over the foothills of the Lake District where drainage is improved, and marine sediments can be found around the shores of Morecambe Bay.

Podsol Profile

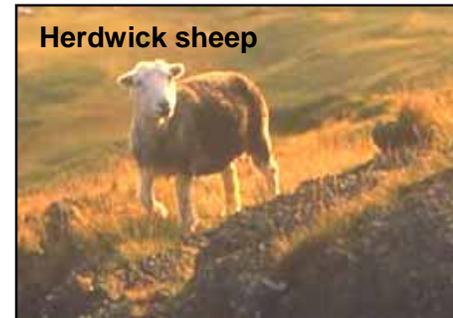
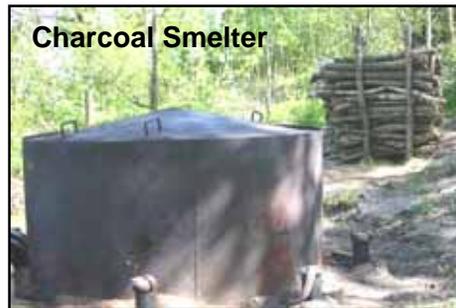


<sup>3</sup> <http://www.lake-district.gov.uk/index/understanding/geology.htm>

<sup>4</sup> <http://www.geographypages.co.uk/lakesoil.htm>

## 5) History<sup>5</sup>

The Lake District has been inhabited since the Stone Age. The first inhabitants were hunter-gatherers, but by Neolithic times, farming began, and land was cleared to make room for crops and grazing animals. By the 13<sup>th</sup> century, the wool trade had become firmly established together with charcoal burning for smelters and hydro power for mills. In post medieval times, the minerals and rocks of the Lake District were being exploited, leading to the development of new transport routes. The success of the woollen industry meant more and more of the open fells became enclosed for sheep grazing.<sup>6</sup> Woodland coppicing was practiced for bobbin manufacture, and charcoal was an important ingredient for gunpowder, manufactured on several sites in south Cumbria from 1764 onwards. The building of the railways during the Victorian period, and later motorways and private car ownership led to the development of tourism as the Lake District became more accessible. Tourism has developed as the area's major industry. To protect the area it became a National Park in 1951.

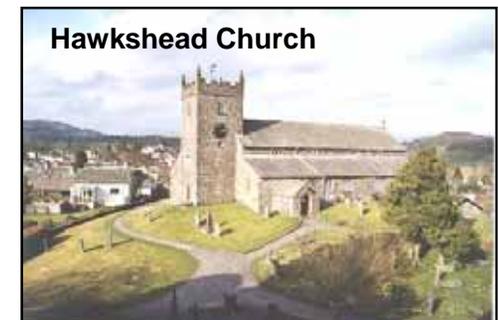


## 6) Mining and Quarrying<sup>7</sup>

There is evidence of mining and quarrying in Cumbria as early as the 12th Century, and possibly dating back to Roman times. Evidence of mining can be seen over a wide area, for minerals such as lead, copper, graphite, and coal. Slate mining and quarrying still take place, providing building material for dwellings.

## 7) Settlements

There are two major towns in the Lake District National Park, **Keswick** and **Bowness on Windermere**, both of which are urban honey pots. They are linked by the A591 and are both accessed from the M6. There are several tourist towns, such as **Ambleside**, mostly located on good access routes, and many smaller villages and hamlets with limited tourism outlets whose history is connected more with agriculture and mining.



<sup>5</sup> <http://www.lake-district.gov.uk/index/understanding/history.htm>

<sup>6</sup> [http://www.fellsanddales.org.uk/trails/woollen\\_ways.php](http://www.fellsanddales.org.uk/trails/woollen_ways.php)

<sup>7</sup> <http://www.visitcumbria.com/history.htm>

**Kendal**, which lies on the eastern fringe of the Lake District National Park and was the centre of the wool trade is now a tourist honey pot site and continues to be a market town. In the west, beyond the National Park boundary are **Workington**, a market and industrial town, and **Whitehaven**, a Georgian town, built on the shipping and mining industries.