



Little Chalfont Nature Park Geography & Geology

1. Introduction

The Nature Park can be better understood in the wider context of its geography and underlying geology:

- Physical Geography and Geology – landscape and climate,
- Human and Urban Geography

2. Physical Geography

The Chilterns are part of a system of chalk downlands throughout eastern and southern England, formed between 65 and 95 million years ago and comprising rocks of the Chalk Group. The chalk strata are interspersed with layers of flint nodules which have replaced chalk and in-filled pore spaces. There are also pockets of clay associated with the chalk. The chalk has been modified by erosion, by plant growth and by major climate change in the past, as the escarpment of the Chiltern Hills, a steep slope that lies in the north west of the hills and which coincides with the southernmost extent of the glacial ice sheet during the last ice age.

The Park is situated in gently sloping country – the dip slope – to the south-east of the Chiltern escarpment. The chalk is often overlain with sedimentary materials laid down in recent geological history.

Landscape and Geology

The underlying geology of the Park is chalk overlain by a significant depth of surface material. The soil has the texture of fine sand with some clay and a pH range of 5.5 to 6.2 sampled across the Park. This is a moderately acid soil – a pH of 7.0 is neutral. The land has been classified as Mesotrophic Grassland MG5. Sometimes referred to as “Old Meadow”, it is characteristic of traditionally grazed hay meadows without agricultural improvement and is distributed in lowland areas on brown soils. The pH range is typical of this classification and grassland like this is rare in the south of England and is soon lost when agricultural improvement is applied.

The MG5 classification of the vegetation was a clear conclusion from the scientific analysis of the data collected, using the University of Lancaster MATCH program, with reference to Rodwell’s “British Plant Communities – Vol. 4 - grasslands and montane communities” and placing the vegetation in a National Vegetation Classification (NVC) category.

Watercourses

The Park is in the river catchment for the River Misbourne - classified as a chalk stream. That is rain falling on the Park that is not absorbed will tend to flow south towards the



river. Chalk streams are characteristic of the Chilterns, a rare habitat confined to North West Europe. Of the 200 chalk streams in the world, over 160 are found in England. The Park is close to the watershed – just to the north is the river catchment for the River Chess. As part of the catchment area for the Misbourne, the Park provides a source of unpolluted water, no fertilizers, pesticides or industrial pollution, providing pure water vital for the health of the river. Chalk streams are important habitats for wildlife and support a wide range of flora and fauna. Like the Park, they are home to rare and threatened plants and animals, such as the water vole and brown trout. They also have a fascinating history and supported many thriving industries that used the water supply and water power from mills along the river. Purity of the water continues to be vitally important for our drinking water and was vital for the water cress industry.

The Chilterns' chalk streams are under pressure from a variety of causes - over abstraction for consumption, flood control and pollution. It is so important a special partnership project has been created to conserve them. Uniting all the organisations with an interest in the streams, the 'Chilterns Chalk Streams Project' works with local people across the Chilterns to improve river habitats, improve access and enjoyment and promote the sustainable use of water.

Climate

The Chilterns have a temperate maritime climate with typically warm rather than hot summers and cool to cold winters. The Park rarely experiences very extreme weather and can be visited throughout the year. On average the hottest month is August in summer and the coldest is January in winter. Rainfall on average falls fairly evenly throughout the year, March the driest month and September the wettest month. The weather is unpredictable as with the rest of the UK and it is possible to see elements of all four seasons in one day. The impact of climate change cannot be ignored with changing seasons and the incidence of more severe weather. The Park may experience some snowfall in the winter although heavy and sustained snowfall in this area is rare. The nearest official Meteorological Office Weather Station is High Wycombe and the main data for the area shows:

- Average Maximum Temperature: 13.2°C
- Average Minimum Temperature: 6.3°C
- Average Annual Rainfall: 815 mm.

Winter

With days are at their shortest and temperatures at the coolest, the daytime can be crisp and clear and there is still much to see and hear. If visitors do not mind the cold, it is possible to enjoy visiting the Park in winter. There is the possibility of snowfall during this time and it can get very cold and visitors are advised to bring warm winter clothing. From December to February the average daytime temperatures are between 7°C and 8°C.



Spring

The climate is milder in spring making it a good time to visit. There can be some great sunny days mixed with cooler and wet weather. Spring is a good time to visit the Park if visitors prefer the weather mild to warm and offers an alternative to visiting in peak summer. From March to May the average daytime temperatures are between 11°C and 17°C.

Summer

The summer is a good time to explore the Park. Most days in summer range from mild to warm with the possibility of some infrequent hotter days, the days are at their longest in the summer. There may be overcast and humid conditions in the summer. From June to August the average daytime temperatures are between 19°C and 23°C.

Autumn

The climate can vary from some pleasantly mild days particularly at the start of September to cooler and colder days in October and November. Autumn is a good time to visit the Park whilst still having milder temperatures and longer hours of daylight particularly at the start of September. The woodland means Visitors can see some wonderful autumn colours. From September to November the average daytime temperatures are between 10°C and 19°C.

3. Human and Urban Geography

Little Chalfont is a 20th century community. For hundreds of years, the local population would have been small, scattered and isolated. There were few houses, not enough even to form a hamlet or village, with narrow roads and a wooded landscape with farms like Snell's farm spread out in the woodland and some areas of common land (like Amersham Common) where local people would have had rights to graze their cattle or collect turf for fuel.

Snell's Farm was a small clearing in the natural woodland, but the prevailing agricultural system locally particularly to the west of Amersham and Chesham and in England generally at that time, communities organised their agriculture around a three field system, where large open fields were divided into long strips for each family to work, the strip being convenient for ploughing. Each large field would have had crop rotation to ensure fertility with one field left fallow each year to allow the soil to recover. As agriculture developed with better animal husbandry and better machinery, this system came to an end with a series of enclosures, Acts of Parliament that permitted the fencing and enclosure of the land under one owner or one tenant, created the farms and fields we are familiar with today.



Communications were very difficult for the residents of Snell's Farm. Rural paths and lanes were often full of ruts and holes and very hard to travel on. Many of the local main roads were created before recorded history or were developed during the Roman occupation of Britain from AD43-410. The main road nearest to the Park was developed much later as a Turnpike – a road built in 1768 by a Turnpike Trust set up by an Act of Parliament with powers to collect tolls to pay for the maintenance of the road. This turnpike road, today's A404, ran across the estate of the Duke of Bedford and connected Henley to Hatfield via Amersham and Chenies. Developed and managed by the Reading and Hatfield Trust until 1881, the Turnpike was the only proper road in Little Chalfont and only given a modern surface in 1914 allegedly to provide easier transit for the Marquis of Salisbury from his home at Hatfield House to the Spa in Bath. It was then referred to as the 'Gout Road'! The lodge at the entrance to Beel House close to the North West corner of the park was next to a set of toll gates and it is possible but unproven it was used as a toll cottage to shelter the collector of tolls, charges for using the road to pay for its upkeep.

The major change for local land use around Snell's Farm was the coming of the Metropolitan Railway. A station called Chalfont Road was opened on the line to Amersham in 1889 and housing development took place very quickly afterwards. The 'Metroland' concept was simple: use the faster and more comfortable rail communications to encourage developers including the railway company itself to buy land alongside the railway and build houses offering ready access to the City of London. These homes cost less than in the city and commuters, so-called because they commuted the daily fare by purchasing a weekly, monthly or annual ticket that offered a lower day rate, travelled to work on the train each day. Metroland was freer of the air pollution from coal fires in the centre of London and offered a high quality lifestyle in the open countryside. Commuters judged where to live by the cost of housing and travelling taken together and the time spent travelling rather than the distance from London.

Initially development near to the farm was ribbon development – with housing along the main roads built by developers including the railway company itself. Soon estates were built and then shops, a garage, public house, post office, telephone exchange in 1907, factories and schools. This development was cut out of the same kind of woodland, farmland and grassland as Snell's Farm. The new community grew and Chalfont Road station was renamed Chalfont & Latimer in 1915. The residents of Chalfont Road Village adopted the name Little Chalfont in 1925, an invented name because there was no existing community name to adopt. Industry began to be developed and expanded during the 2nd World War 1939-1945, principally the Radiochemical Centre that made luminous paints and Statter's who made electrical switchgear.

This all meant that by the middle of the 20th century, Snell's Farm was surrounded by development, creating pressure for this land to be developed too. It survived because



the owners preferred to keep the orchard and arable land as it was and sell off only the areas for the brickworks. The land that now forms the Nature Park was purchased and the land saved from development. In a way this became more important. Development continues, with infill between existing development and redevelopment of brown-field sites. The Park will become even more important as more and more land locally is given over to housing development that continues within the planning rules set out to protect the green belt and prevent development in an area of outstanding natural beauty.

Population growth continues into the 21st century and a desire for more control over local issues meant that the residents voted in 2007 for the creation of a separate community. The Park now lies within the new Little Chalfont Parish with its population drawn from parts of the parishes of Chalfont St Giles and Amersham Common.

4. Area of Outstanding Natural Beauty (AONB)



The Chilterns has been granted the status of an Area of Outstanding National Beauty (AONB) and in this landscape, enclosed fields account for almost 66% of the surface area, the next most important, and archetypal, landscape form is woodland, covering 21% of the Chilterns, which is one of the most heavily wooded areas in England. Built-up areas (settlements and industry) make up over 5% of the land area; parks and gardens nearly 4%, open land (common land and heath land) is 2%, and the remaining 2% includes a variety of uses, including communications, military, open land, recreation, utilities and water.



ANOBs were created to protect the UK natural environment and the Chilterns as an ANOB enjoys special protection from major developments, which are not permitted except in exceptional circumstances. This protection applies to major development proposals that raise issues of national significance. Housing development continues within these constraints. The Chilterns Conservation Board was established in 2004 to conserve and enhance the natural beauty of the AONB, increase the understanding and enjoyment by the public of the special qualities of the AONB, foster economic and social wellbeing of local communities and to publish and promote the implementation of a management plan for the AONB. The creation and management of the Little Chalfont Nature Park fits very well with these goals. As the population of Little Chalfont grows, it is a vital place to experience what remains of the natural world.