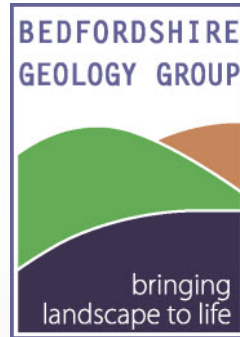


# Livelihoods from Chalk

## in the Bedfordshire Chilterns



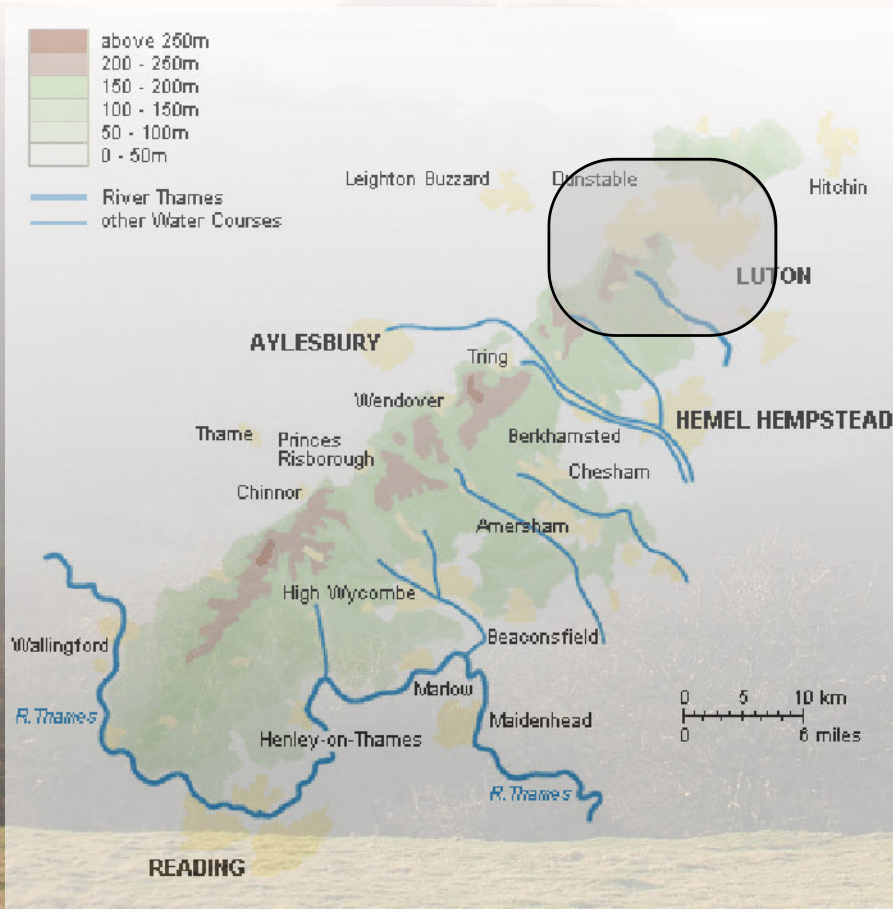
Stretching from Dagnall to Barton-le-Clay, the Chilterns Area of Outstanding Natural Beauty forms a meandering Chalk spine right across Bedfordshire. The striking Chiltern's landscape is rich in wildlife, history and archaeology; with rare glimpses of a once widespread industrial past.

For those wanting to get away from the roads and hustle and bustle of modern life, numerous green lanes, bridleways and footpaths cross the hills and valleys, or a more bracing route along the northern scarp on the Icknield Way path.

Today's diverse landscapes are the direct result of the underlying geology, and the use of both by people in ancient and modern times. Springs, Chalk streams, ancient woodland and Chalk downland represent some of the many diverse habitats based upon geology and land use. Traditional hilltop woodlands and heaths occupy poorer gravels and clay soils. Scented downlands and arable crops dominate the slopes and shallow valleys, with the most intensive agriculture on the richer valley bottom soils.

Historically, the pattern of towns and villages was closely related to the landscape and our use of it, as the local building resources are clearly evident in brick and flint buildings, timber framed barns and ornate churches.

This leaflet explores some of the livelihoods of the past, present and future Chiltern Hills.





## The Past.....

Since the Stone Age, Chalk has been used in Bedfordshire: flints for making stone tools; grazing near Bronze Age settlements such as Maiden Bower. The Chalk escarpment was used for defensive purposes during the Iron Age, whilst rabbit warrens were cultivated in the Medieval Period. The Industrial Era used Bedfordshire's Chalk as the main resource for numerous industries from which local people made a living.



Sharpenhoe Clappers, has a history dating back to the Iron Age but its name derives from the Medieval for rabbit warren.  
*Image courtesy of Jill Eyers*



Chalk marl lake at disused Houghton Regis quarry.  
*Image courtesy of Jan Munro.*

**Lime burning** ..... has been a large part of Bedfordshire's past for thousands of years. Records show that lime kilns were used during Roman times, and probably before. In the Bedfordshire Chilterns evidence for lime kilns is scarce, but with people inhabiting the area for 1000's of years lime must have been used in dwellings.

**Whiting** ..... is pure Chalk ground into a fine powder, washed and made into solid cakes or balls. Its many uses include: whitewash, cleaning agent, an absorbent in the major print industry of Dunstable, in the manufacture of paint, toothpaste, plastics, silver polish, vellum, indigestion tablets and carbonated drinks to name just a few! The whiting industry thrived in and around Dunstable and Luton. It began in the 18<sup>th</sup> Century and provided continuous employment for local people, until planning for a larger commercial factory was refused and stopped the industry in its tracks in the 1960's. In the whiting boom of the 1930's production was by five major manufacturers with influence on local Chalk extraction and quarries. Quarries used for whiting included Spoodell Quarry, now a housing estate in Dunstable; Meadway Chalk Pit and California Chalk Pit, both were situated either side of Whipsnade Road, Dunstable. California Chalk Pit became the California swimming pool in 1935 and later the California Ballroom, now Royce Close housing estate, Dunstable.

**Cement manufacture** ..... has its origins in Bedfordshire in the mid-19<sup>th</sup> Century. Houghton Regis lime works was built in 1891 and saw a jobs boom in this small village. The massive lime works with its huge chimneys dominated the skyline of the growing town. Small-scale quarrying for whiting became much larger with 8 quarries open for extraction of lime for the cement industry. Today, the only signs of this immense industry are the disused quarries around Houghton Regis and Dunstable. Houghton Regis quarry boasts the deepest Chalk marl lake in the UK but is too dangerous to open to the public.

**Agriculture** .... built upon the Chalk of the Chilterns and its surrounding fertile valleys include sheep grazing, prune orchards, wheat for straw-plaiting and the renowned hat industry of Dunstable and Luton.



1903 image of lime quarrying in Dunstable.  
*Image courtesy of Bedfordshire and Luton Records and Archive Service.*

*This leaflet was produced by Bedfordshire Geology Group with the support of  
The Chilterns Conservation Board.*

## Present .....

There are only three areas of industry in the Bedfordshire Chilterns left from those of the past: Chalk extraction from the biggest Chalk quarry in the UK at Kensworth; the only limestone extraction for building purposes at Totternhoe, and the leisure industry.

**Kensworth quarry .....** owned by CEMEX Group of Mexico, opened in 1964. This unique quarry extracts Chalk for the cement industry. The Chalk is piped, in suspension, along a 92.2 km underground pipeline to the company's processing plant in Rugby, Warwickshire. In 2007, Kensworth quarry produced 8000 tons of lime per day. It's 'green' credentials are good as they have little road traffic due to its unique method of moving the extracted Chalk.



Totternhoe Stone Pit, Site of Special Scientific Interest (SSSI).

*Image courtesy of Peter Lally*

**Totternhoe stone pit .....** continues to be the only producer of the distinctive Totternhoe Stone that is widely used as a decorative building stone. Many of Bedfordshire's historic and church buildings incorporate Totternhoe Stone in their architecture, both externally and internally. Due to its relative hardness, compared to 'normal' Chalk, Totternhoe Stone is ideal for building works and carvings. Totternhoe Stone can be worked easily in any direction giving it the stonemason's term of "freestone", and is ideal for sculpting. It has been used in buildings nationwide from Woburn Abbey here in Bedfordshire to Westminster Abbey in London.



View into Kensworth's working Chalk quarry.  
*Image courtesy of Bev Fowlston*

**Leisure Industry .....** Bedfordshire's Chiltern Hills are used mostly for leisure and activities today. Families and sports enthusiasts use the diverse landscape in a myriad of ways; from walking, kite flying and gliding. Local people are employed in providing facilities for the leisure industry and also in conservation of this entrancing landscape. Conservation activities are returning the Chilterns to their native Chalk downland.



A group of walkers enjoying the view from Sundon Hills with Sharpenhoe Clappers in the background.  
*Image courtesy of Bev Fowlston*

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## And the Future .....

Bedfordshire's Chilterns, today and into the future, are a haven for the leisure and tourist industry. The future for the Chilterns in Bedfordshire is in its use of the amazing landscape created from the Chalk beneath, which attracts visitors of all ages and abilities, with its gentle rolling hills, dramatic dry valleys and stunning flora and fauna.

This unique environment is exploited but at the same time preserved by people in and around South Bedfordshire and beyond. The importance of the unique Chalk flora and fauna is prominent in the conservation and preservation of habitats within and around the Chiltern Hills. Native butterflies, wild flowers and insect life flourish in this managed landscape which is being enriched by the return of sheep-grazing. Much of The Chilterns is covered by well-drained, chalk-based shallow soils containing low-levels of nutrients. These conditions favour the development of a rich variety of plants, including Birdsfoot trefoil and rare orchids.



Just two of the butterfly species that are now thriving in the re-vitalised Chalk downland in Bedfordshire, Duke of Burgundy (left) and Chalk Blue (right)  
*Images courtesy of Jan Munro*



Barton Hills National Nature Reserve managed by Natural England.  
*Image courtesy of Jill Eyers*

The damaging extractive industries of the past are diminishing, although still preserved in cuttings and disused quarries across Bedfordshire's Chilterns. Bedfordshire Geology Group is working with local partners to promote the correct use of the Chalk downland and the geological exposures visible throughout the Chiltern Hills of Bedfordshire. There are publicly accessible Local Geological Sites and National Trust venues, as well as numerous national Nature Reserves, maintained by volunteers and employees, allowing the general public access to appreciate the Bedfordshire Chilterns.

*Bedfordshire Geology Group aims to promote and look after the geological heritage of the Chilterns and, in doing so, promotes and looks after the many features and wildlife that rely on that geology. There are walks and geological sites accessible to the public and details of many may be found on the group's website: [www.bedfordshiregeologygroup.org.uk](http://www.bedfordshiregeologygroup.org.uk) Sites are maintained by volunteers and we are always looking for more helping hands, so please contact us for details. When visiting the countryside please remember to leave only footprints and take only photographs.*

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