Geological Information

This geotrail is on the dip-slope of the Greensand Ridge where the 115-million-year-old rocks of the Woburn Sands Formation dip gently towards the SSE. Known locally as Greensand, the sands and sandstones are usually brown, but it was originally confused with another rock of similar composition. In this locality, many areas are covered by a thin layer of much younger superficial or 'drift' deposits of till, head and alluvium formed in the Quaternary and Recent periods.

During the Anglian Ice Age (about 450,000 years ago), glaciers advanced from the N and E containing sticky clay and fragments of stone including volcanic rocks from Scandinavia and flint from East Anglia. When the climate warmed, the ice melted leaving behind till (boulder clay) which caps the top of the ridge. The stones are called 'erratics' because they have moved from their original sites and they can be found in abundance in local fields.

However, there were long periods when the climate remained cold and this area was tundra, with conditions comparable to arctic Siberia today. The ground was frozen for much of the year but in summer, winter snow and the upper soil layer thawed out, producing a muddy mixture which flowed downhill, a process called solifluction, cutting valleys that are now dry. Where soil movement ceased, the resulting sediment is known as 'head'. In this area, head appears along the small dip-slope valleys and at the foot of the slope where it meets the River Flit valley floor. The resulting soils are mainly loams, a mixture of sand and clay easily worked and good for farming and horticulture.

More recently, in the Flit valley, soil eroded from the hills has been deposited as alluvium on the flood plain and in the wettest areas, the remains of plants have accumulated to form peat. The fertile 'brown earth' soils once supported native deciduous woodland, but much was cleared, and drainage improved to make productive farmland.

Upon the slopes of the Greensand Ridge where the Woburn Sands are just under the surface, the sandy soils are well-drained, acidic, leached of nutrients and known as 'podsols'. These support acid-loving heathland plants like heather and birch trees. Since the late 19th century, conifers have been planted and areas reclaimed for farming destroying much of the distinct vegetation.

Bedfordshire Geology Group

Formed in 2004 by a group of amateur and professional geologists aiming to encourage an understanding of the rocks and landforms of the county for the benefit of all.

For more information, contact us through our website www.bedfordshiregeologygroup.org.uk or by email to secretary@bedfordshiregeologygroup.org.uk

Greensand Country

Defined by the Greensand Ridge, a band of higher ground stretching from Leighton Buzzard to Gamlingay, which rises out of the surrounding clay vales, Greensand Country contains all of Bedfordshire's remaining heathland, more than half of its woodland and more historic parkland than anywhere else in the country. It is rich in wildlife and cultural heritage, with miles of footpaths and bridleways. Greensand Country is recognised as a highly attractive landscape with a unique history, wildlife and culture encouraging people to visit, enjoy, understand, value and look after for the long term. Greensand Country Landscape Partnership is led by Bedfordshire Rural Communities Charity and local environment charity, The Greensand Trust, and is funded by National Lottery Heritage Fund. It is made possible by National Lottery players; without them we couldn't fund the project.

For more information on the Greensand Country Landscape Partnership email team@greensandcountry.com or telephone 01234 838774.

The information here is believed to be correct at the time of publication (2019)

HERITAGE FUND

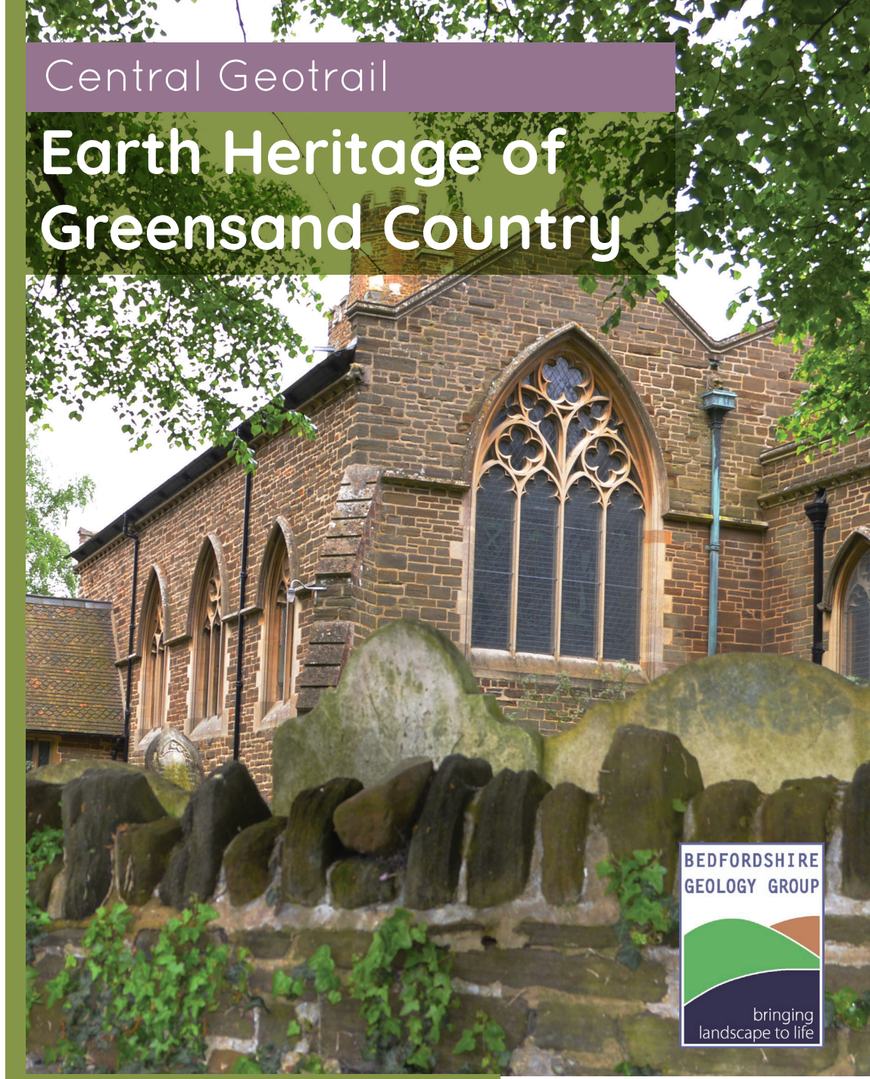
Greensand Country

GEOLOGISTS' ASSOCIATION 1858 THE CURRY FUND www.geologistsassociation.org.uk

BEDFORDSHIRE GEOLOGY GROUP bringing landscape to life

Central Geotrail

Earth Heritage of Greensand Country



This leaflet has been developed by Bedfordshire Geology Group in partnership with Greensand Country Landscape Partnership to bring our landscape and heritage alive.

Greensand Country

Introduction

This trail uses public footpaths and pavements. It explores the landscape, geology and land uses surrounding the Central area of Greensand Country. The trail is a steady circular walk of approximately 3 miles (5 km) beginning and ending at St Mary the Virgin Church in Maulden, map reference TL058380.

1 Church Meadow Nature Reserve pond.

2 Deciduous trees on left and conifers on right.

At the top of the church car park, go through a kissing gate following the Greensand Ridge Walk (GRW) across Church Meadow Nature Reserve 1 with the Greensand Ridge crossing the horizon ahead. In the meadow, where boulder clay covers the Woburn Sands formation, seasonal ponds form in depressions. After passing a pond and before reaching the far end of the meadow, turn right and continue along the GRW through a narrow belt of trees.

The trail crosses three small dip slope dry valleys and as you climb out of the first at the SW corner of Maulden Wood, the irregular ground surface 2 on both sides of the path are all that remains of a long disused Greensand quarry.

Beyond here on the left, Maulden Wood is ancient woodland and except where replanted with conifers, native deciduous trees grow on Boulder Clay. Beyond the second dry valley, they contrast with a conifer plantation on the right on sandy soil, demonstrating how the geology changes beneath the path. Part of Maulden Heath Nature Reserve occupies the third dry valley on the right 3 where the efforts of volunteers and sheep grazing maintain the range of distinctive plants of acid grassland and heath.
Where you see a quaint hexagonal, thatched cottage (Maulden Wood Lodge, c1820) on the left 4, leave the GRW by turning right along a surfaced track with more of the Nature Reserve on the left.

Follow the track downhill through more conifers. Greensand rock is used in many old buildings and may be concealed by whitewash on the gable end or in the chimney of the first cottage (Grade II listed) at Green End 5. Follow the narrow road right and uphill. Greensand also appears in retaining walls at entrances and is exposed under tree roots 6.

3 Ice Age dry valley.

4 Maulden Wood Lodge.

6 Exposed Woburn Sands sandstone beneath tree.

Taking care, cross Clophill Road and turn right along the pavement for about 100m. On the far side of Redhills Close, follow the signed footpath along a farm track. At the metal kissing gate 7, look to the south across the valley of the River Flit which flows eastwards (from right to left). Peat accumulated on parts of the valley floor and was once extracted at what is now Flitwick Moor Nature Reserve (under trees, far right). The valley begins to cut obliquely through the Greensand Ridge leaving an area of Greensand isolated on its southern side from around Flitton village (its church tower visible, half right) across to the trees of Simpsonshill Plantation hiding a large disused sand quarry (far left). The chalk hills of the Chilterns line the horizon. Cross the small pasture into a wooded area. Where the path heads downhilll, note how the passage of feet has worn it down below the surrounding land surface.

At Silsoe Rd, turn right onto the pavement. After Russell Crescent and just before housing begins again on the left, take care as you cross the road to join a footpath along a field edge 8 where water in the ditch is stained brown by iron deposits leached from sand.

Soon after the path veers left, look for a gap in the bushes on the right and cross a small footbridge to join another path through fields and into a large area of allotments 9. These take advantage of south-facing, well-drained, easily-worked, fertile soils over head and peat deposits. Nearby springs once facilitated irrigation when required.

Meet the road by the first house and immediately, turn sharp right and uphill. Take care emerging onto Ampthill Rd and cross to the pavement on the far side and turn right. Locally-sourced Greensand is used in some garden walls and buildings such as 31 Ampthill Rd. Turn left on the path past 14 Ampthill Rd towards The George pub 10 which is almost surrounded by Greensand barns and walls. Taking care, cross George St and take the footpath uphill to return to the church 11, another splendid greensand structure. A greensand wall borders part of the graveyard which contains a large greensand mausoleum and gravestones of great variety.

9 Allotments on the nutrient-rich head deposits.

10 Buildings in George Street constructed of local sandstone.

11 St. Mary's Church