

## Ancient stone structures

Stone structures such as monuments, buildings and bridges are particularly useful for showing how rocks have been used as a construction material. For example, most of Bedfordshire's medieval churches are built of local sandstone and limestone and they offer an ideal opportunity to get acquainted with building stones without too much effort.

Interesting as they are, we do not generally designate stone structures as Local Geological Sites because they don't show the rock in situ, or how that rock relates to the landscape. However, an exception is made in the case of the fine stone bridge that spans the River Great Ouse at Bromham, near Bedford. This bridge (see photo on back cover) displays a wonderful variety of Jurassic limestones that are not seen currently in a natural outcrop or quarry anywhere in the county.

## Conserving our heritage ...

The Bedfordshire Geology Group monitors Local Geological Sites on a regular basis and helps to conserve them as appropriate. Volunteers often work to clear scrub, expose rock faces, construct pathways and erect

interpretation panels. We also organise trips to visit sites, particularly to active quarries where access is governed by operational considerations.



Much of our geoconservation work is directed at disused quarries where we can work with the landowner to create a safe and accessible site that retains plenty of geological interest. Transforming an overgrown wilderness into a visible rock face normally requires a very considerable initial effort, but thereafter most sites are maintained on an annual basis by our members or local residents who have offered to 'adopt' the site.

We recognise that some sites, particularly the active quarries, change over time and may no longer retain the scientific and educational features for which they were originally designated. Also, we add new ones periodically in an effort to achieve a fully representative suite of sites. For these reasons Bedfordshire's Local Geological Sites are under constant review and our website is the best place to visit for current information.

# BEDFORDSHIRE GEOLOGY GROUP

The Bedfordshire Geology Group was formed in 2004 by a group of enthusiastic amateur and professional geologists. We aim to encourage an understanding of the rocks and landforms of the county for the benefit of all. One of the main ways of doing this is by identifying and popularising Local Geological Sites which are of scientific and educational importance.

Members enjoy field trips, clearing overgrown sites, lectures, workshops and social events – all aimed at getting familiar with local rocks and fossils. We also arrange guided walks in order to share our interest in the varied scenery of Bedfordshire

We work closely with local companies, museums and county parks. Recently we have collaborated with The Wildlife Trust, The Greensand Trust, Natural England and English Heritage on different projects around the county.

Educational support for schools is arranged by request. This often involves classroom-based sessions that introduce pupils to exciting geological topics such as dinosaurs and volcanoes. Alternatively we can organise outdoor visits to help students learn more about their natural environment.



For more information, contact us through our website  
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This leaflet was funded by a Grassroots Grant from the Bedfordshire and Luton Community Foundation

[www.bedfordshiregeologygroup.org.uk](http://www.bedfordshiregeologygroup.org.uk)

# LOCAL GEOLOGICAL SITES



Encouraging an understanding of  
the rocks and landforms of the county

BEDFORDSHIRE  
GEOLOGY GROUP



This leaflet introduces you to a network of sites across Bedfordshire that is used to promote a wider understanding of the local rocks and landforms. The process of identifying, evaluating, designating and conserving these sites is one of the important roles of the Bedfordshire Geology Group.

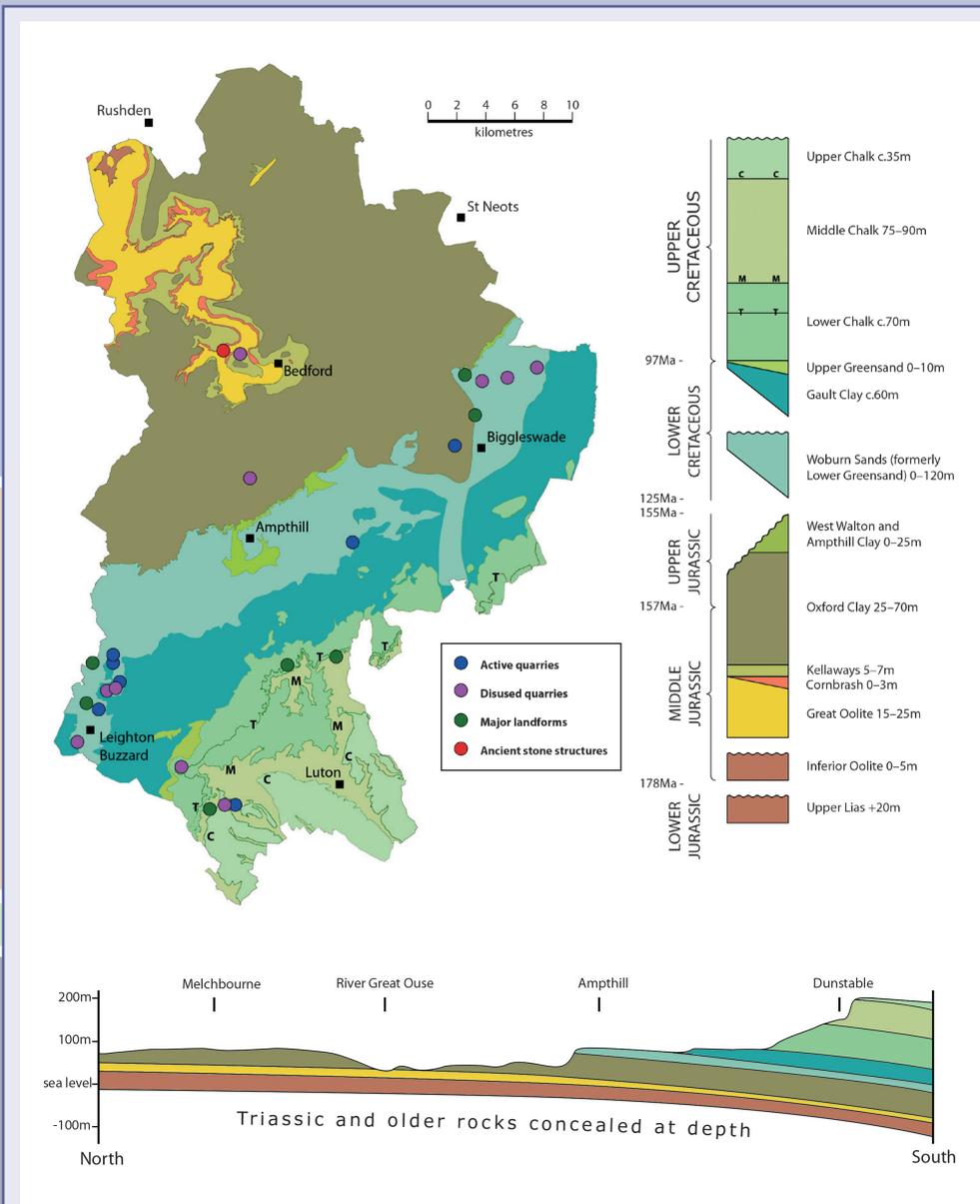
### Sites aplenty ...

There is far more to our geological heritage than is represented by the national inventory of Sites of Special Scientific Interest (SSSI). The Bedfordshire Geology Group has therefore identified places of local significance which are called Local Geological Sites. They are selected mainly for their scientific and educational importance and may also have considerable aesthetic value, as is the case with the Chalk downlands in south Bedfordshire. By bringing them to the attention of the public we aim to promote an awareness and interest in our local geological heritage.



Whilst Local Geological Sites do not enjoy the same level of statutory protection afforded to SSSIs, they are recognised by Local Authorities, the Forestry Commission and by Natural England (the statutory nature conservation body of England). The network of local sites is also used to inform planning policy, with the intention that they will be protected for the benefit of future generations. Those sites that are freely accessible to the public are particularly important.

Current sites include active and disused quarries, major landforms and an ancient stone structure. Their locations are shown on the leaflet map and specific information about each is available on our website (see back cover). The map also shows the distribution of solid rocks, known as bedrock, that are normally hidden beneath superficial deposits, soil and vegetation. Superficial deposits formed during the Ice Age and are often poorly consolidated and patchily preserved.



The map key shows the approximate age in millions of years (Ma) and range of thicknesses in metres (m) of the bedrock units. Rocks do not form continuously and often get worn away, so there are time gaps indicated by the uncoloured parts of the key. Several hard bands in the Chalk are recognised and they include the Totternhoe Stone (T), Melbourn Rock (M) and Chalk Rock (C). The cross-section beneath the map is vertically exaggerated to show how the bedrock relates to the land surface; in reality the rocks dip towards the south-east at angles less than 2–3 degrees.

### Active quarries

Seven sites are currently recognised in Bedfordshire, two of which are SSSIs and are included here for completeness. These sites provide the best opportunity to see freshly exposed rock faces on a large scale, but they change constantly as extraction continues. Most of the sites reveal the range of rock types that characterise the Greensand Ridge and they are clustered around Leighton Buzzard. However, Kensworth Chalk Pit and Broom Quarry are quite different as they exploit the Cretaceous Chalk and Quaternary gravels respectively. Visits to all these sites must be pre-arranged with the owner.



### Disused quarries

Most of our sites fall into this category because disused quarries often preserve large-scale exposures that are relatively easy and safe to access. That said, it is still necessary to gain permission to enter some of these sites, although Biddenham Pit, Kensworth Nature Reserve and Lodge Quarry (fee payable to the RSPB) are open to the public. The same range of rock types – Woburn Sands Formation, Chalk and Quaternary gravels – are accessible through this network of sites.



### Major landforms

Bedfordshire's finest scenery is produced by major landforms such as the Chalk hills, the Greensand Ridge and the lowland river valleys that meander through the countryside. We are spoilt for choice when designating Local Geological Sites to showcase these landforms, but Dunstable Downs, the River Ouzel valley and Stockgrove Country Park are amongst the best. All sites in this group are open to the public.

