Witney U3A Nature Group

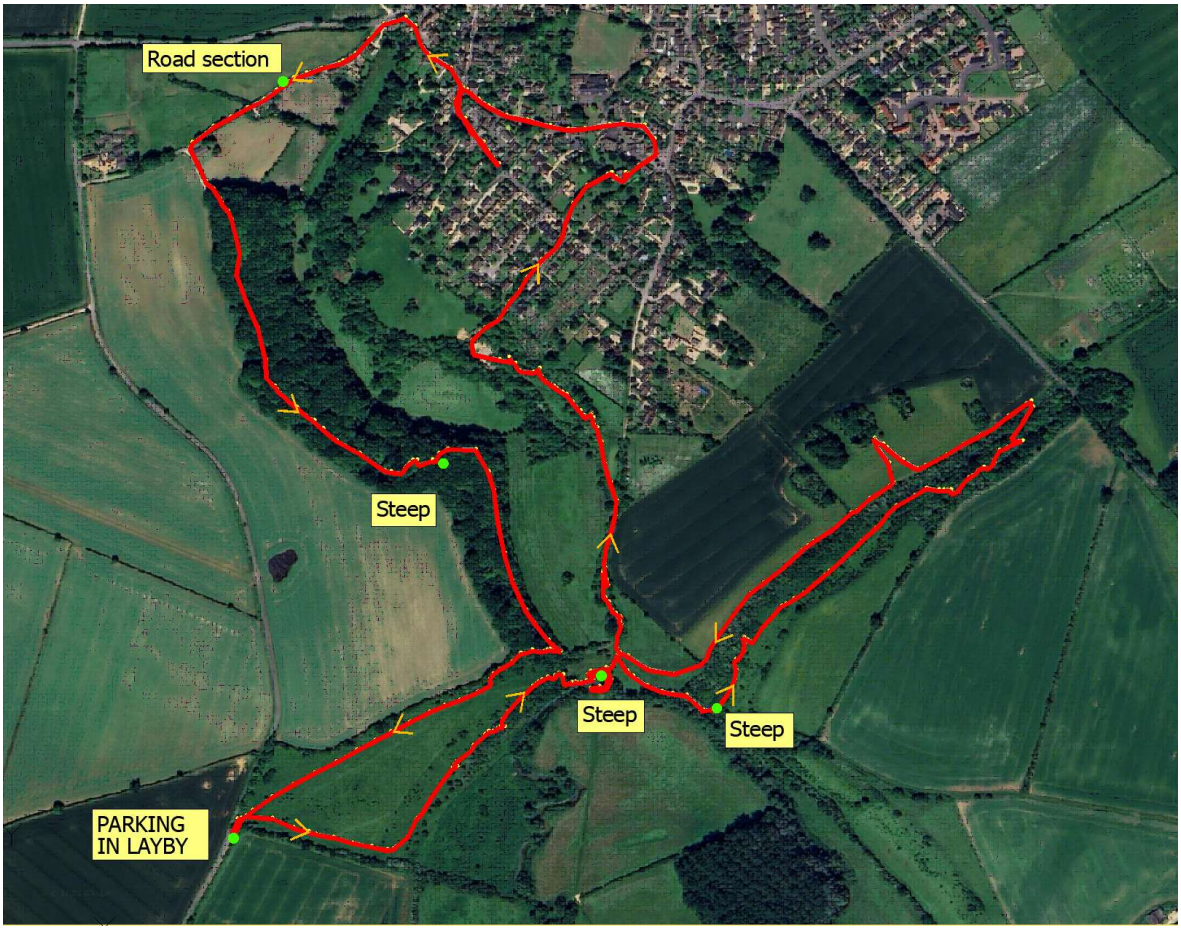
Visit to look at the surface remains of the Stonesfield Slate Mines and slate production. August 20th 2025

Led by Dr Alan Cobb (GWP Consultants, Charlbury)

The Nature Group were fortunate to have local geological and mining expert Dr Alan Cobb to lead a walk around the lanes and paths of Stonesfield to look at the surface evidence for the historic Stonesfield Slate Mining which provided much of the roofing slate on older buildings in the area.

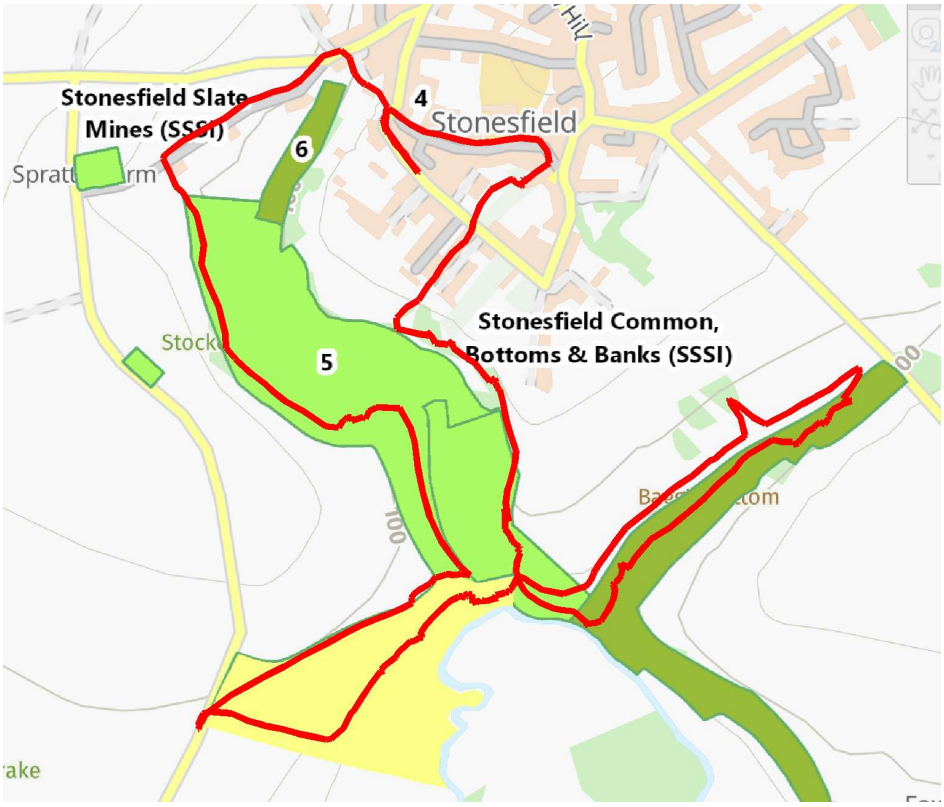
The walk was approximately 5 ½ km long but took us the best part of 3 hours with frequent stops to examine spoil tips and listen to Alan's explanations of the geology and mining history.

Our route started at the layby and followed the red line on the google image below in an anticlockwise direction.



The walk passed through most sections of the Stonesfield Common, Bottoms & Banks biological SSSI. This is somewhere we need to come back to earlier in the years for the rich variety of plant species.

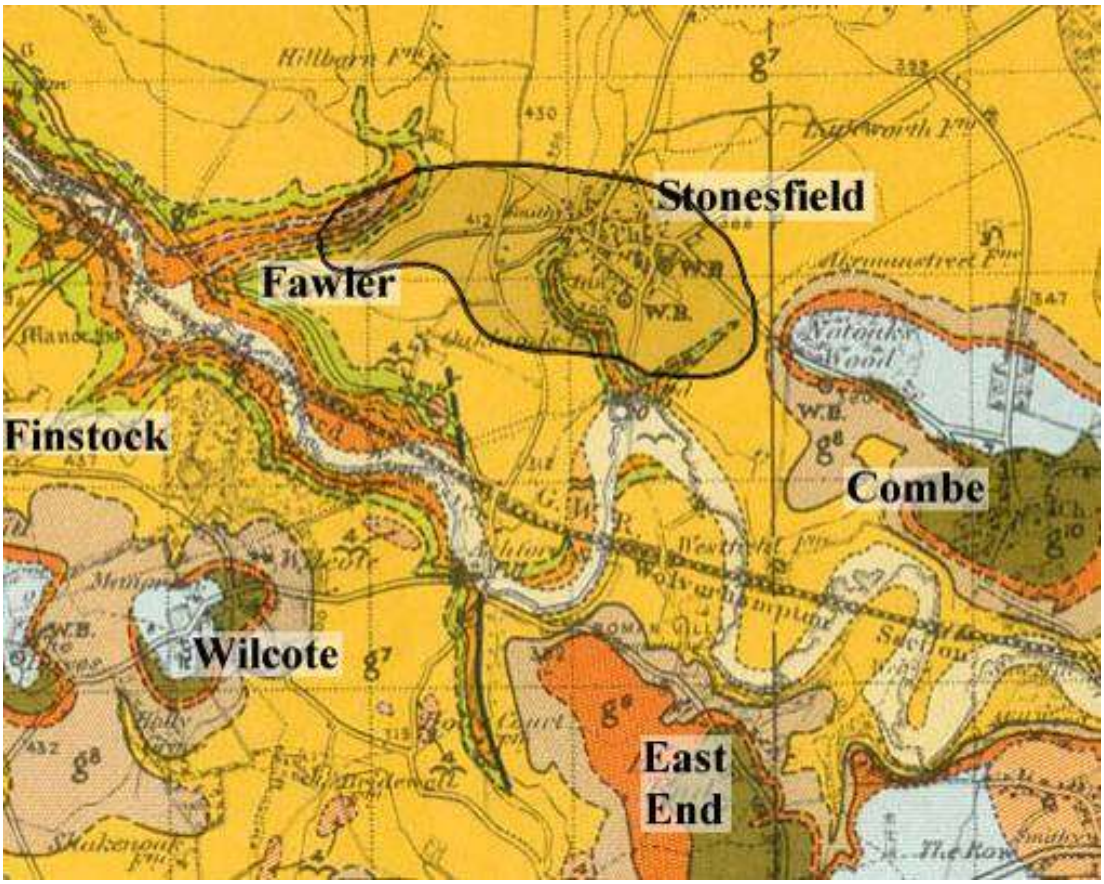
The 1989 Citation states: *This site a series of steep sided valleys and banks with unimproved limestone grassland and scrub habitats. Such grassland was formerly widespread on the Oolitic limestone of western Oxfordshire and this site forms one of the largest remnants of this grassland type in the county. Other features of interest on the site include a semi-natural beech-wych elm.*



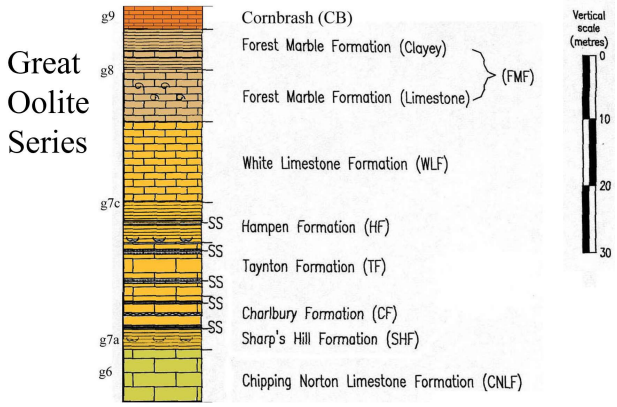
The landscape is broadly a limestone plateau deeply incised by the Evenlode River and tributary spring-fed streams. This makes for some fairly strenuous walking conditions on a warm day.

The valley sides cut through a geological sequence of Jurassic limestone and clay which includes horizons of siliceous limestone which break into flat slabs along planes of weakness. These slabs were used to make the traditional local roofing material 'Stonesfield Slate' which roof most of the older buildings in West Oxfordshire and have been used further afield in Oxford and elsewhere. They are not strictly slates (eg Grey Welsh Slate) but are Tilestones - thin, flaggy fine grained calcareous sandstone that

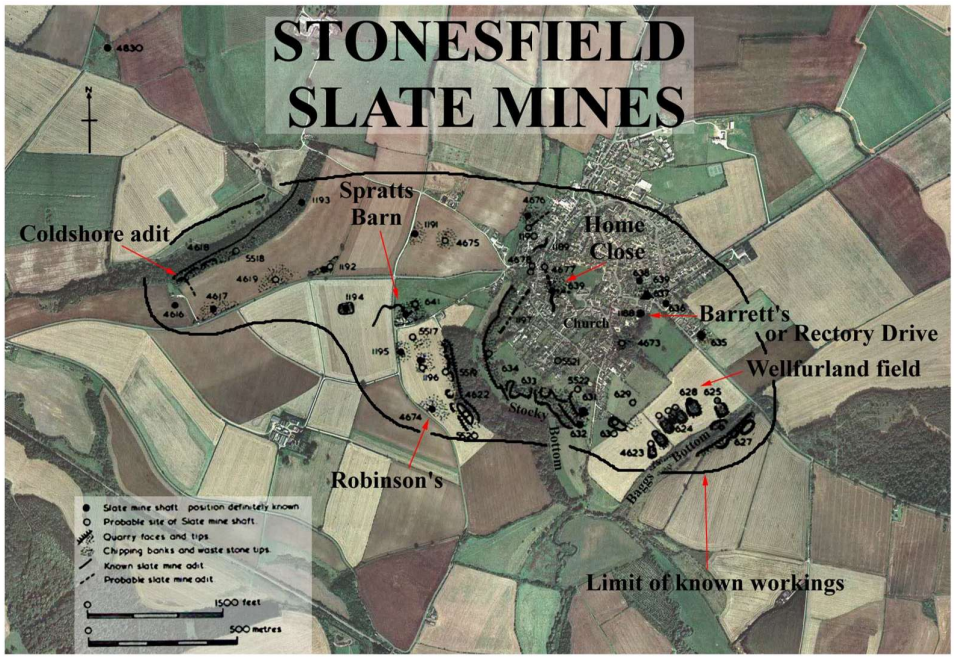
splits - with the help of frost action - along bedding planes into thin slabs. What set the slate from this location apart from other roofing slate from the Cotswolds was the fine quality which were only found in a very small area – this is outlined on the geological map.



Strata column at Stonesfield



The mines were entered either by adits going into the side of the slopes or by vertical shafts. The location of the most well-known mines is shown below. The exact extent of mining is uncertain because detailed records were not kept. The voids created were largely backfilled with mining waste.



Extent of working

There is abundant evidence for the mining industry including extensive spoil tips of waste limestone that did not meet the specification required giving us the opportunity to have a good poke around. Stonesfield is a very important fossil locality, particularly for reptiles. Miners made additional money from selling their finds to academics and museums – unfortunately we came away with no dinosaur specimens and only found a few shell fragments.

Stonesfield is a fascinating area for the biological and geological diversity and for the mining history. We will certainly program another visit in the near future.