Prehistoric routes through the Chilterns – our ancestors knew their geology!

The oldest routes, without doubt, are the river valleys. River valleys were the most likely pathways during the Palaeolithic period (possibly from as early as 170,000 years ago in warm periods of the Ice Age), as hunter-gatherer groups would need the easiest method to move through dense woodland and to re-find temporary encampments where the young, old and unwell could be left safely. Valleys naturally provide a memorable path, but they also provide the water resource which is essential for life. It was not until the Mesolithic period 10,000 years ago that we learnt how to fish from those rivers, and soon after this (probably in the Neolithic period for most areas of Britain) we learnt to make simple boat transport for ease of movement.

It was in the Neolithic period from 6500 to 4500 years ago that people settled down as farmers. They started to make pottery and monuments, and people traded surpluses. It was at this time, and for this reason, that footpath systems came into existence. We know of two major ancient footpaths that cross the Chilterns – the Ridgeway and the Icknield Way. However, there would have been many more minor routes between hamlets and from hamlet to resources such as rivers or fields.

Ridgeway

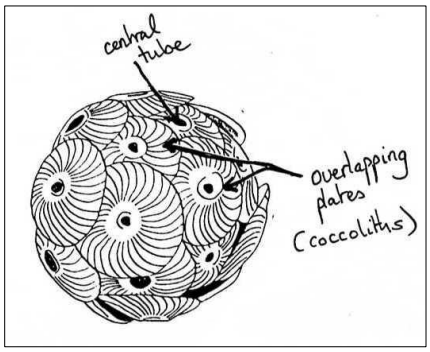
People have been using the Ridgeway path for at least 5000 years. It is 97 miles (139 km). Today the path runs from Overton Hill near Avebury to Ivinghoe Beacon. It would have connected Dorset with areas of the Wash in Norfolk, by joining up with other footpaths such as the Icknield Way. The whole length of these ancient paths can be seen to be in very close association with important ancient sites linked by this long, sinuous track.

The Ridgeway track was never metalled or reinforced in ancient times and hence it was always a very wide and 'moveable feast' if the way got muddy. It was not until the Inclosure Act during the mid-1800s that it was formalised with boundaries – and many parts of the way are now confined by fencing or hedges.

The Ridgeway path at Chinnor

The Ridgeway at Ivinghoe Beacon

For much of its length the Ridgeway path winds its way across the Chalk. This affords a higher and drier path which would have been very important during wet times of year in prehistoric times. The Chalk was formed over 30 million years from 95 until 65 million years ago and it is the result of a massive global warming. Temperatures became so high during this period that polar ice melted and sea level rose by more than 300 metres above the present level. Many land masses around the world, including Britain, became flooded by a warm sea. The plankton that thrived in this sea rained down onto the seabed and formed hundreds of metres of chalk. Chalk is a very porous rock and this is why it drains so easily.



A coccolith – a tiny alga of which many thousands would fit on a pin head. Hundreds of meters of Chalk are made from these tiny skeletons.

The Chilterns section of the Ridgeway includes (north to south):
Ivinghoe Beacon - Pitstone Hill – Wigginton– Wendover – Cadesden – Princes Risborough – Chinnor – Swyncombe Downs - Goring

The following description shows how important the geology was to this route. Did our ancient ancestors know about geology? Well they may not have understood this subject as we do today, but they most certainly understood the principles – how it produces landscape (both high and low, and dry and wet underfoot, at certain times of year). They also understood that it provides resources such as stone, soils and water. The routes of both the Ridgeway and the Icknield way are both designed to keep to the easiest path while remaining on well-drained soils. It is exceptionally poor quality soil, hence ancient people did not farm arable crops in these locations. It is too exposed and hence they were highly unlikely to live along this route. It was chosen purely for a connecting path to places they were living, trading, celebrating and a wealth of other things that people have always tended to do. It also closely follows a line where trees would be naturally at a minimum and hence the travelling would be easier by virtue of not being thickly wooded.

The Chalk is crucial to these long distance routes through the Chilterns, and as the paths venture out beyond this area, then other rock types were selected such as limestone or sandstone. There are several distinct beds making up hundreds of metres of Chalk. Some

are harder than others and the lowest level of 'chalk' is actually a calcareous clay, which does not make a firm pathway in winter. Therefore the path rarely touches it. In some maps and books the old names for the Chalk are still in use, whilst modern maps will use the new names for these units. Both are listed in the table below so that it is clear which rock the pathway is traversing.

Group	Subgroup	Formation	Member	Old Classification
Chalk Group	White Chalk Subgroup	Lewes Nodular Chalk Formation	Top Rock Member Chalk Rock Member at base	Upper Chalk
		New Pit Chalk Formation		Middle Chalk
		Holywell Nodular Chalk Formation	Melbourn Rock Member at base	
	Grey Chalk Subgroup	Zig Zag Chalk Formation	Totternhoe Stone Member at base	Lower Chalk
		West Melbury Marly Chalk Formation	Cambridge Greensand Member at base	

Names of the Chalk beds, both modern and old terms

For most of the route the Ridgeway follows what used to be called the Middle Chalk. For the most part the pathway weaves its way across the landscape staying on the eroded and sinuous outcrop of the New Pit and Holywell Nodular Chalk, sometimes traversing the hard bed of the Melbourn Rock to occasionally follow another hard bed - the Totternhoe Stone for short distances.

MAPS: To follow the route you will need the following maps: Ordnance survey Explorer sheets 171 and 181: *Henley-on-Thames* and *Aylesbury* respectively. The geology may be followed on British Geological Survey sheets 254 and 238: *Henley-on-Thames* and *Aylesbury* respectively. (Note that the British Geological Survey has a website where geology may be viewed by inputting the relevant grid reference and there is an app for download so you can take this information with you on iPhones or iPads).

ROUTE: Starting at **Ivinghoe Beacon** and working southwards towards Goring the Ridgeway follows the escarpment edge very closely from the Iron Age Hillfort and tumuli at the highest point of the beacon, and along past Grim's Ditch and more tumuli. This is a notable feature of the route – it constantly passes very closely to notable ancient archaeology. The tumuli are particularly numerous along the route and these are burials. The age is not known unless they have been excavated, but Neolithic and Bronze Age provide the most common tumuli (dating between about 6000 and 3000 years ago).

The Ridgeway veers off the escarpment shortly near **Tring** Station, but the geology is still well drained, being Holywell Chalk and Lewes Nodular Chalk at SP 948 120 to **Northill Wood**

SP 098 089, closely following the line of Grim's Ditch to **Wendover** and **Bacombe Hill** (SP 860 073) turning south to **Coombe Hill**. Again this route is on well drained Holywell Nodular Chalk and New Pit Chalk. The route carefully follows the same chalk outcrops onto **Pulpit Hill** (SP 832 050) and past **Whiteleaf Hill** with more tumuli and a Neolithic burial mound (SP 823 040).

The Neolithic burial mound surrounded by the fencing in 2006 before excavation work by Oxford Archaeology (above)

The route then crosses the dry valley and back up onto **Lodge Hill** (SP 794 001) and past the **Cop**, both sites with numerous tumuli and other ancient landscape features. Again, this route keeps the path exactly on the same horizon in the Chalk, despite the fact that it is very sinuous due to erosion.

Chinnor barrows – tumuli on the hill (left)

Southwards past **Chinnor, Lewknor** and onto the **Swyncombe Downs** where there is another mass of tumuli, Grim's Ditch and ancient earthworks (SP 683 915) the route takes us higher in the Chalk and onto the Lewes Nodular (or Upper Chalk). At **Nuffield Common** there is a very short stretch on Clay-with-flints covered with sands from the Reading Formation (at SU 672 875) before turning abruptly east following a very straight stretch of Grim's Ditch from SU 666 872 to SU 616 879 at **Mongewell**. This route maintains a well drained Upper Chalk to Middle Chalk, gradually reaching lower and lower layers of Chalk until finally resting on Totternhoe Stone close to the **River Thames**. The path turns abruptly south again here, following the river and the Totternhoe Stone precisely until it reaches **Goring** (SU 603 820).

The river bank at Goring rises steeply from the Totternhoe Stone at the base making a bench from which other chalk layers build up to form the overlying cliff, covered in trees.

Icknield way

This pathway shows a similar geological choice to the Ridgeway and in places, such as from Ivinghoe Beacon to Wendover, it weaves in and out of the landscape following the well drained beds of Chalk. It sometimes crosses the Ridgeway and the paths even join up for short sections. However, from **Ivinghoe Beacon** the Ridgeway stops abruptly and it is only the Icknield way to head north from this point. Again it does this by clinging to the high ground, close to the Chalk escarpment. It drops down for a short distance onto the Totternhoe Stone and West Melbury Chalk as it passes **Bidwell**. This would be the 'dodgy' section prone to mud. It shortly passes up to **Upper Sundon** with the **Sundon Hills** and **Sharpenhoe Clappers** being more typical of these ancient routeways – high, well drained and associated with lots of archaeology – again in the form of tumuli and ancient boundaries. Continuing the same high path to the **Barton Hills** and **Pegsdon Hills** it seems that earthworks, ancient gods, and 'devils' again feature as names on the route.

The Chalk Hills at Barton-le-Clay →

←Devil's Ditch near the Icknield Way, Lillyhoo

After **Pirton** with its river crossing where the path crosses some glacial deposits, it is back onto Totternhoe Stone and Melbourne Rock until past **Letchworth**. **Baldock** brings in something very different – a very flat area as it is underlain by a vast glacial lake which stood here during the Ice Age. This creates the need for a northwards detour back onto the New Pit Chalk at **Royston** – and again many more tumuli!

Conclusion

Without doubt these two long distance ancient paths show our ancestors to have learnt how to use their landscape to the best of their ability. It shows people beginning to connect for trade, meetings, marriage, religious, or other purposes from at least 6000 years ago. They were most certainly not the only pathways, and no doubt some of our modern roads, tracks or footpaths will follow some of these ancient routes. The age of the Icknield Way has been recently questioned (one proposal is that it may be as young as Roman), but this still gives these pathways considerable history. One thing is not in doubt though – that they will both continue to form important parts of our Chilterns landscape for many more millennia.