





# **Twin peaks**

What are these striking wooded hills here in an otherwise flat landscape?

Distance: 1 ¼ miles

Landscape: rural

Standing at over 300 feet tall and topped with a crown of trees, the two hills of Wittenham Clumps are local landmarks in this otherwise flat part of the Thames Valley.

Locals enjoy the interest they add to the landscape and taking in the views from the tops. They also make fantastic sledge runs in winter.

But it is not just the shape of the hills that makes them so popular; the plants, wildlife and historical remains found here also make it a special place.

All of these different features are a result of what's under your feet. This trail explores how a simple white rock has shaped a much-loved landscape that's become the most visited outdoor spot in the whole of Oxfordshire.

### Location:

Wittenham Clumps, Little Wittenham, Oxfordshire

Start: Sires Hill car park, Oxfordshire, OX10 8NB

Finish: Sires Hill car park, Oxfordshire, OX10 8NB

**Grid reference:** SU 56747 92515

Keep an eye out for: The poem tree between stops 6 and 7



From the car park go through the wooden gate and walk to a large information board and wooden totem pole ahead of you.



## Route and stopping points

The Nursery			Little Wittenham Wood
	3 Wittenham Clumps	5	
	2	6 Wittenham Clumps Castle Hill	
			Partner

- 01 Wittenham Clumps totem pole and information board
- 02 Halfway up Round Hill
- 03 Hill top beeches
- 04 View across the Thames Valley
- 05 Bottom of steps
- 06 Castle Hill
- 07 Near the car park looking back to the clumps

### 01 Wittenham Clumps totem pole and information board

Look at the footpath leading up between the two hills ahead of us and notice its grey-white colour. The white tells us a rock called chalk is present and the grey indicates a type of sandstone called greensand (it sometimes has a green hue hence the name). These are the two main rocks that make up Wittenham Clumps.

The chalk in particular has had a big impact on the environment here. Perhaps the most striking is in shaping the hills we are looking at today. The chalk and greensand were formed between 65 and 145 million years ago during a period when warm seas covered Northern Europe.

Fast forward to between 40 and 60 million years ago and two tectonic plates collided together pushing the rocks together and up out of the sea. Here it formed a chain of hills called the Berkshire Downs.

But Wittenham Clumps do not look like they are part of a chain of hills; they appear to stand on their own. They actually make up part of a chalk ridge called the Sinodun Hills, which are themselves a branch of the Berkshire Downs. Further movements of the earth millions of years ago caused the land to tilt and change shape so not all of the ridges run in perfect lines.

Chalk and greensand are fairly soft rocks. Over time wind and rain have shaped them, washing and scouring some parts of them away and leaving other parts standing. Wittenham Clumps are where areas of the rock have withstood these processes and remained; they may have been protected by other rocks, or been more sheltered from the wind, rain and rivers. As a result these two hills sit as outliers in an otherwise relatively flat landscape.

As you set off on the trail and climb Round Hill, look back over your shoulder and to the horizon beyond the car park and you will be able to see the Berkshire Downs in the distance, a reminder of the bigger landform that Wittenham Clumps were once part of and an indication of how the land has changed over time.

#### **Directions**

The chalky footpath is clearly visible leading straight ahead between the two hills but do not take this path. To the left of it you will see two grassy tracks leading off up Round Hill. Take the left-most track through the grass that leads you up the hill towards the clump of trees on its crown. Pause for a breather half way up.

### 02 Halfway up Round Hill

You are now walking through grassland, and if it is spring or summer you will also have noticed a profusion of wildflowers. See if you can spot yellow buttercups and cowslips, and if you are lucky, a snake's head fritillary, one of the UK's rarest native meadow flowers.

These grasses and flowers grow here because they are well adapted to the local soils. Chalk and sandstone produce thin and stony soils, which are often fairly dry. This is because both types of rock are porous, meaning water can soak through them and drain away easily.

The rocks have not only affected the shape of the Wittenham Clumps, but also the soils and plants that are found here. Chalk grasslands, such as these, are a natural part of the English landscape, but they are now considered special because many have been developed for housing, converted to agricultural land or have become overgrown with shrubs and woodland.

The Earth Trust manages Wittenham Clumps and the surrounding farmland and has worked hard to restore the grass and wildflower meadows. They use haymaking and grazing to keep the vegetation down and encourage the plants to reseed. See if you can spot evidence of this as you walk around (particularly the four-legged variety).

#### Directions

Continue up the hill to the trees and then walk along the edge of the wood around the top of the hill to the left (heading away from Castle Hill). If you look into the wood you may see that most of the trees are fenced off. As you walk around the top of Round Hill, Castle Hill will start to disappear from sight.

Keep a look out for a metal gate in the fence to your right with a footpath leading into the centre of the woods. When a sign setting out the view becomes visible ahead the gate will be off to your right. Go through the gate and have a little explore inside the wood. Keep track of your route as you will need to find your way back to the metal gate and exit the way you came in.

# 03 Hill top beeches

Many of the trees in this woodland are beech trees – their bark is smooth and grey and their leaves are lime green when young and become a deeper green as they age. The trees grow to over 40m high (almost as tall as the Statue of Liberty) and develop a huge domed crown, which also help give Wittenham Clumps their distinctive appearance.

Beech trees are regularly found in chalk areas because they also favour the well-drained soils. There have been beeches on top of Wittenham Clumps since the 18<sup>th</sup> Century, making some of these trees over 300 years old. They are the oldest known planted hilltop beeches in England.

Like the grassland the trees are highly valued and managed for conservation. Look around and see what evidence you can find for this. The fencing around the wood protects the trees from deer who like to eat the bark and young trees. See if you can spot tree stumps, or stumps that are now sprouting tall, straight branches. This tells us coppicing is taking place here, a form of woodland management that helps the wood regenerate and also provides a variety of habitats for other plants, insects and animals.

#### **Directions**

Leave the beech woods by the gate you came in, turn right and walk over to the sign displaying information on the view (it is also a memorial to Andy Buttle). Use the sign to find out what is around you.

### 04 View across the Thames Valley

From here you get a real sense of how these chalk and sandstone hills stand alone in the flat valley. You have great sweeping views from this point across the Thames Valley from Didcot Power Station on your left (west) round to Dorchester on your right (east). You can pick out Dorchester because of the abbey with the large red roof.

One of the most distinctive features of the valley is the meandering River Thames. See too if you can spot a series of lakes straight ahead and slightly to the right. We already know that Wittenham Clumps are fairly dry, having looked at the soil and the types of vegetation growing here.

However, down in the valley the main rock type is clay which is **impermeable** - meaning water cannot easily pass through. As a result, water collects on top the clay, which is why we find rivers and lakes in the valley.

#### **Directions**

Continue around the crown of the hill following the edge of the woodland. Castle Hill will begin to come back into view. As you round the hill top towards Castle Hill you will see a chalky footpath ahead of you that cuts between the two hills. The footpath leads to a metal gate off to the left, which opens into Little Wittenham Wood. Go through the gate.

Follow the chalky footpath for about 200 metres - you will have a hedgerow on your left and the main bulk of the woods on your right. After about 200m there is an entrance into the wood on your right. Go into the wood and you will see the ground drop away quite steeply in front of you. There are a set of steps built into the slope which you should follow down, taking care as you go.

As you go downhill you get a good view of the path ahead, which cuts between two stands of conifers. The steps finish as you reach lower ground but continue on the same path straight ahead through the conifers until it reaches a point where the footpath looks like it goes both left and right. To the right it leads to a small pond, to the left is the path we will take. Stop here for now and look back up the path you have come down.

### 05 Bottom of steps

Did the two types of woodland you just experienced feel different? Perhaps it seemed darker and more atmospheric in amongst the conifers? Did you notice that more greenery grows between the beech trees higher up the hill? (If it is spring you may have seen bluebells too).

The different trees create very different environments, and as we learned earlier, beech trees grow naturally in chalky soils. The conifers, on the other hand, were planted for their timber and are not traditionally found here. Whilst the conifers were once valued for the timber they provided, today it is the natural woodland that people value more highly.

For this reason the Earth Trust is thinning out the conifer trees and reverting the woodland back to beech and other broadleaved trees. See if you can spot evidence of this management (tree stumps, coppicing). You may also have spotted hides or dens that have been built in the woods. These have been created by local school and youth groups.

The pond off to your right is another reason that Wittenham Clumps and their beech woods are highly valued today. They provide a habitat for the rare great crested newt. Does it feel damper here compared to up on the hill. The pond is a good clue. This is because we've now moved from the dry chalk to the damp clay.

#### **Directions**

Leave the pond (keeping it on your right-hand side) and follow the path to where it meets a more defined track, then turn right to follow this track. This will take you past the back of the pond you just stopped to look at.

As you pass the pond the main track you are on bends off to the left, staying in the woodlands. However, there is a grassy path straight ahead which takes you on a short scramble uphill to a hedgerow with a metal gate in it. Go through the gate and you emerge onto the edge of a crop field. Turn right and follow the edge of the field uphill keeping the wood on your right.

As you approach the brow of the hill you will see a little footpath off to the right leading back into the hedgerow and woods. The track has some exposed tree roots, so be careful. Follow it off up to the right and through another metal gate onto the edge of Castle Hill. As you go through the gate look off to your left and you will see another distinctive hill with a clump of trees on top. This is Brightwell Barrow – another chalk and sandstone outlier like Castle and Round Hill and sometimes considered a third Clump.

The path diverges on Castle Hill but as you come through the gate follow the track that bends tightly up to your right. As you walk up the track it crosses a ditch and some distinctive earthworks.

### 06 Castle Hill

The bumpy land you've just crossed are the earthwork ramparts of an old hill fort. Hill forts were built both for defence and prestige. Ditches and ramparts (fortified by wooden stockades) were dug into the existing hill to provide defence. But the hilltop location also acted as a symbol of the tribes status.

The earliest parts of Castle Hill date from the late Bronze Age, but more banks and ditches were added in the Iron Age when it marked the territories of the local Catuvellauni and the Atrebati tribes. The Romans later occupied the fort.

In this relatively flat area of Oxfordshire, Wittenham Clumps were an obvious choice with its excellent view across the valley. If you have time it is worth walking around the ramparts to get a real sense for this site and how well a castle could be defended up here.

#### Directions

Continue up the path towards the top of Castle Hill. (If you look back you can see Dorchester Abbey with its red roof. If you look up you may also see birds of prey such as red kites). As you approach the treeline you will see a standing stone with a large plaque on it. From the Poem Tree continue around the edge of the wood on the hilltop heading in the direction of Round Hill. When you round the top of Castle Hill you have a good view of Didcot Power Station ahead.

As you draw level with crown of Round Hill you will see a path which leads down across the ramparts and ditch of Castle Hill (there are steps cut into the bank to help you down) and then takes you back up to Round Hill via a small gate. Follow this footpath and after you have gone through the gate you will see a chalky footpath ahead with the large metal gate that you went through earlier to enter the woodland

Walk to the chalky track and turn left when you join it and follow it away from the gate and wood as it gently rises over the saddle between Castle and Round Hill. Continue to follow this footpath as it drops gently downhill and leads all the way back to the wooden information board and gate by the car park where you started. As you near the car park look back over your shoulder for one last look at the two Clumps to appreciate the gently rolling hillsides.

# 07 Near the car park looking back to the clumps

Geological processes that took place here over millions of years left these wooded hills as sentinels in an otherwise flat landscape.

We hope you've enjoyed this trail around Wittenham Clumps. Hopefully understanding what's beneath our feet has enhanced your enjoyment of this popular place.

From the Iron Age tribes who defended their site and boasted of their power to poets and painters inspired by it, from conservationists who strive to preserve its rare habitats to walkers, photographers and anyone who enjoys the outdoors it's a place that offers wonderful views, stretches our legs and minds and stirs our imagination.

