

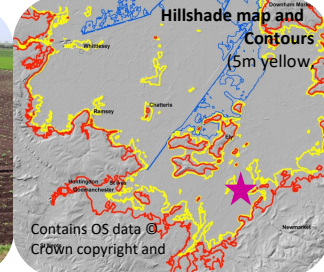
The Fen Edge Trail Burwell to Wicken via Upware

6.8 miles (10.9 km)

plus additional walk around National Trust
Wicken Fen National Nature Reserve

*'I love the contrast
here, from the Chalk
to the coral limestone
and then the deep
peat of Wicken Fen'*

Reg, Cambridgeshire
Geological Society Geosites
team



The route: 'From the chalky fen edge, over a coral reef and on to an ancient fen'

This walk begins on the outskirts of **Burwell** village on the edge of the fen and then passes through some of the lowest peatland in the area, found in **Wicken Fen National Nature Reserve**. Having followed **three of the famous fen lodes**, you climb onto the low ridge at **Upware**, known for its Jurassic 'coral reef' limestone. There is the chance to explore more of **Wicken Fen** and its **National Trust Visitor Centre** before ending in the village of **Wicken**. **Burwell** is at the base of the scarp of **Cretaceous Chalk**, here on the fen edge represented by the oldest of its strata, the West Melbury Marly Chalk. Its boundary with the Gault clay, approximately half way along Burwell Lode, can be seen in the soil of the fields which turns from whiteish to dark brown/grey. The route passes some relics of the local **coprolite mining and brick-clay quarrying** industries before crossing over **Burwell Lode** and to go through the famous area of **Wicken Fen** owned by the **National Trust**. A bird viewing hide gives you a chance to see Hobbies, Marsh harriers and many other birds that have been encouraged back to the fen. The path follows **Wicken Lode** leading to **Reach Lode** and then to the confluence with the **River Cam** at **Upware**. Heading north, the walk climbs onto a shallow rise of a **Jurassic** age ridge made of the famous Upware **Coralline** (reef) limestone. After leaving the ridge and returning to peat-covered fen, you follow the edge of Wicken Fen along the **Rothschild Way** before reaching the road to the Visitor Centre. **Wicken Fen** is one of the few areas of the Fens where the remaining peatland has been managed to enhance the wildlife. The end of the walk is up towards the eastern end of the **Upware-Wicken ridge**, in the village centre.



Photos: 2.7f Konik ponies from herds on Wicken Fen; 10c.1f Drainage mill in Sedge Fen (Wicken Fen); 1.3f Patchy peat covering WMM Chalk; 4.4f River Cam by the 5 Miles from Anywhere pub; 4.2f Boats moored along reach Lode; 1.6f Wicken Windmill; 1.2f Swans along Burwell Lode.

Practicalities As with all of the walks along the Fen Edge Trail, you can complete the full length of any walk or choose a short or long round trip option, or just visit some of the places on the route. The walk is divided into numbered parts as shown on the two maps. A shorter walk can be taken finishing (or starting) at Upware. Photos are shown in the order they are seen except for those on this front page (f). The walk links with the **Fen Rivers Way** and the **Rothschild Way**.

Length of walk (one way) approx. 6.8 miles (10.9 km). Guide time 3.5hrs plus stops. Grid ref for start TL 585677. Maps O.S. Explorer 226. Free, easy to use online geology map viewer on www.bgs.ac.uk/map-viewers/bgs-geology-viewer. For information on **Wicken Fen National Nature Reserve** see www.nationaltrust.org.uk/visit/cambridgeshire/wicken-fen-national-nature-reserve.

Transport and services There is no bus service directly between the two villages but there is a bus to Burwell from Cambridge and Newmarket (see www.burwell.co.uk/content/Transport.asp) and **Tiger On Demand** offers a service to Wicken from Ely and Newmarket (see www.transport.cambridgeshirepeterborough-ca.gov.uk/buses/tiger-on-demand/). Nearest **train services** are to Cambridge, Newmarket or Ely. Parking is available at both villages: the recreation ground in Burwell near the walk start and the National Trust car park at Wicken Fen (charges for non NT members). Please park only where permitted and in consideration of others. There is a pub (the Anchor) near the start plus shops in Burwell. There is a café at Wicken Fen NR and pubs in Wicken. **The 5 Miles from Anywhere** pub is half-way, at Upware (parking available).

Safety Be aware of risks you may encounter and take note of warnings by landowners or on paths. The terrain is generally flat, but can be muddy in places. Take particular care on uneven terrain and soft or slippery ground, near water, in the presence of livestock or walking along roads. There is deep water in the lodes along much of the route. There are kissing gates and **steps** up onto bridges. Ensure dogs are kept under control as needed (**only assistance dogs allowed in parts of Wicken Fen NNR**). All Fen Edge Trail walks are on publicly accessible routes. **Anyone undertaking Fen Edge Trail walks does so at their own risk, these notes are for general guidance only.**

The Fen Edge Trail Burwell to Wicken Directions map (6.8 miles /10.9 km)



- 1** Start at the **confluence** of the catch water drain around the edge of the village and **Burwell Lode**. Head north west along the side of Burwell Lode (signposted Wicken Fen) – heading out into the Fen for c.2.5 Km.
- 2** Pass the “**Cock Up**” bridge and head over the nearby footbridge across the Lode. Go back towards the Cock Up bridge, then take the left track away from the Lode passing an **NT car park** on your left. Turn next left and follow this track until you meet **Wicken Lode**. **Beware, this track can get very boggy in wet weather.**
- 2a** An alternative, less muddy, route is to follow the north bank of Burwell Lode by turning left after crossing the footbridge. This takes you to **Reach Lode**, where you continue on to point **4**.
- 3** Climb up onto the bank and turn left (west) along Wicken Lode. Follow path until **Wicken Lode joins Reach Lode**. Turn right over wooden **bridge** on your right.
- 4** From the bridge walk up **towpath** of Reach Lode to the lock. **Cross the road**, turn right and after a few metres, take the footpath on the left. Continue along the bank of the **Cam** and bear to the right through the **pub car park**, coming out on the access road.
- 5** Go right a few metres along the road and take the **footpath** off to the left through the hedge (5.5) and alongside Marina storage. Follow path left, then right, keeping to edge of field.
- 6** Follow the footpath taking a right turn to go alongside a wood and then a left turn up a bridleway to keep the wood on the left. On the left you will see an old limestone pit which is a geological **SSSI** called ‘**Commissioner’s Pit**’ (**NB no access**).
- 7** Once past the woods, there is a **T junction** (opposite a field gate on left): take the track on the right (on the **Rothschild’s Way**), across fields, until you meet the road.
- 8** At the **road**, cross and take the signposted footpath opposite and slightly to the right. Keep the fence/ hedge on your right. Follow the track as it takes a left turn, keeping the woods on your right.
- 9** You arrive at another **junction**: take the kissing gate on right, to walk along Breed Fen Drove, keeping the woods on your right. Go straight on until you meet the **road**.
- 10** As you reach the road, opposite, at the car park, turn left to walk uphill.
- 10a** To visit **Wicken Fen National Nature Reserve**, turn right along the road, past some cottages to reach the **National Trust** Visitor Centre and café (see NT website for opening times). There is an entry fee for non-members to walk around the reserve - several paths and boardwalks give access to the reedbeds and marshes.
- 10b** To see the remains of the **Wicken Fen Brick Kiln and (flooded) Clay Pit**, now a **Local Geological Site**, follow the boardwalk past the windmill. The site is at the start of the **Woodland Walk** near the **Roger Clarke Hide**.
- 10c** To see **Sedge Fen Local Geological Site**, walk left from the visitor centre along the edge of the lode.
- 11** Before reaching the main road, turn right along **Back Lane** and walk to the end (but **not** going further on through a gate that takes you to the windmill). Turn left on the path that leads up to main road.
- 12** Turn right at the main road to walk to the **village sign on a small green** on the right (opposite Butts Lane), the end of the walk, **13**.

Ages of the rocks

'Superficial'

Holocene less than 11,700 years:

River Alluvium
Shell Marl
Peat

Pleistocene:

River Terraces sands and gravels
c.20,000 years
Glacial Till
c.160,000 - c.450,000 years)

Bedrock (million years)

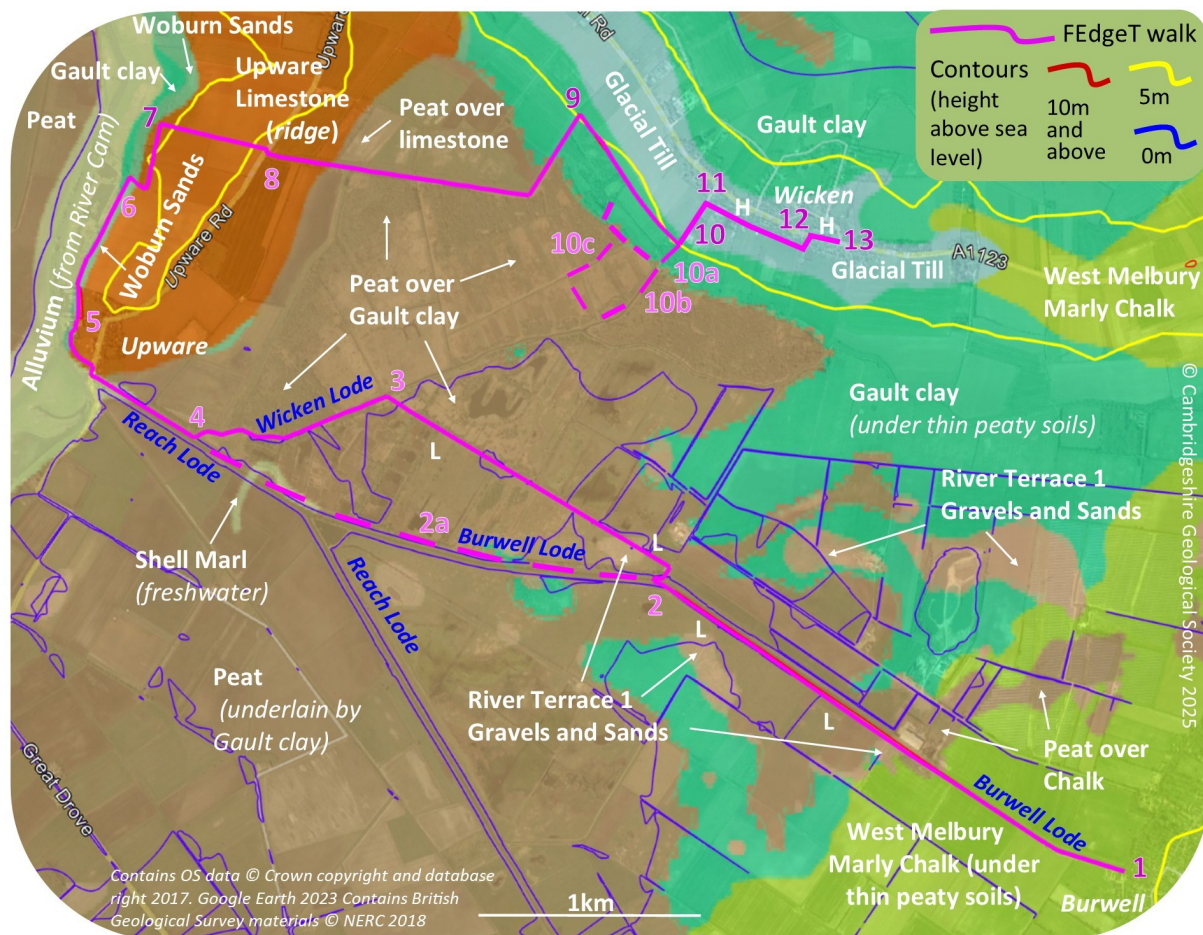
Cretaceous:

West Melbury Marly Chalk c.94 - c.101 my
Gault (clay)
c.101 to c.113 my
Woburn Sands
c.115 my

Jurassic:

Upware Limestone
c.161 my

Walk: Burwell to Wicken - geology and landscape map



The bedrock under this walk ranges in age from the **Jurassic West Walton Beds** (including the famous **Upware 'Corallian' Limestone**) up to the **Cretaceous West Melbury Marly Chalk**. Upware lies on the southernmost point of the spine of an anticline which is made up of pale beige (when oxidized), shelly reef limestones which has been used locally as building stone - a resource not usually found in the Fens. These **Upper Jurassic** limestones are fore reef, and back reef deposits of a warm very shallow sea: the land area would be further to the south east (part of the **Anglo - Brabant Massif**). After a period as dry land at the end of the Jurassic, coastal sands covered the eroded surface of the limestone forming the oldest of the **Cretaceous** rocks, the **Woburn Sands** sandstone (10-14ft thick in boreholes near Wicken) and then deep sea muds formed the much thicker **Gault clay**. The youngest bedrock on the walk is the oldest Formation of the Chalk, the **West Melbury Marly Chalk**. The 'superficial' deposits include, recent **fluvial alluvium**, a small sliver of **freshwater shell marl**, **peat**, **sand and gravel** from **Terrace 1** of the River Cam and **Glacial Till (boulder clay)**.

The first section along Burwell Lode lies on the **Cretaceous West Melbury Marly Chalk**, a clay-rich chalk that forms a gentle slope around the edge of the fenland in this area. Looking ahead, the flat fen stretches out with Wicken being on a slightly higher ridge. The soils become darker as you progress - much of the **Peat** that once covered the Chalk has been eroded away leaving just a thin peaty soil. Further along there is still some Peat over the **Gault clay**. This grey, calcareous clay has been exploited for brick-making nearby and scattered around this part of the fen are some flooded hollows, which were possibly **Coprolite** (phosphate) diggings into the Cambridge Greensand that lies in a band between the Gault and the Chalk. You also walk over or near small patches of river gravels (and some sand) from the youngest (1st) terrace of the Cam, deposited by a powerful, ice-age river. There is a small sliver of Shell Marl lying over the peat near Reach Lode, probably from an ancient freshwater lake, and at Upware the Cam has deposited some **Alluvium**.

Having crossed the tip of the limestone, the walk moves off onto a narrow patch of **Woburn Sands** north of Upware for a short way before returning to the limestone. Look out for lumps of limestone at the edges of fields along the path as you walk over the low Upware 'ridge'. Approaching Wicken, the **Gault clay** reappears but is overlain by **Glacial Till** ('boulder clay') in Wicken itself, forming a high ridge. The Till is material deposited by an ice sheet, during the **Anglian Glaciation** around c.425,000 (or possibly the **Wolstonian Glaciation** more recently). It is composed of fragments of a wide range of rocks, including clay and chalk local to the region but also other more exotic stones brought great distances by the ice. Starting at 4 metres above sea level, you descend to sea level in several places. After reaching 11 metres on the Wicken ridge, the walk finishes at 9 metres above sea level.



Places of interest along the Trail

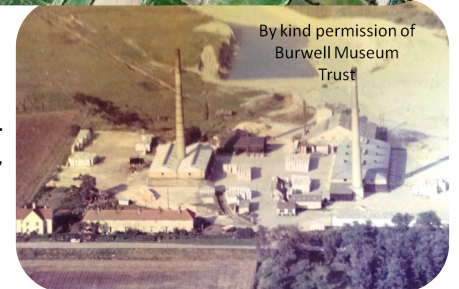
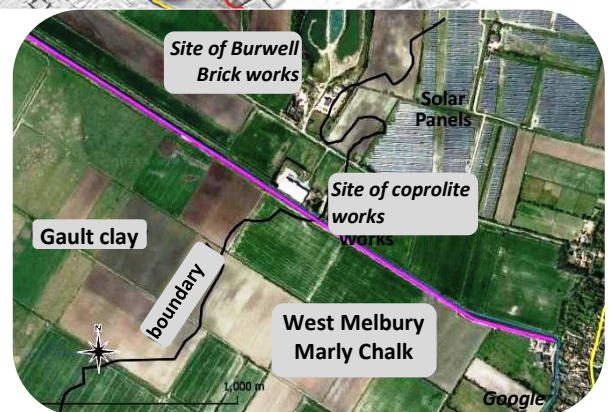
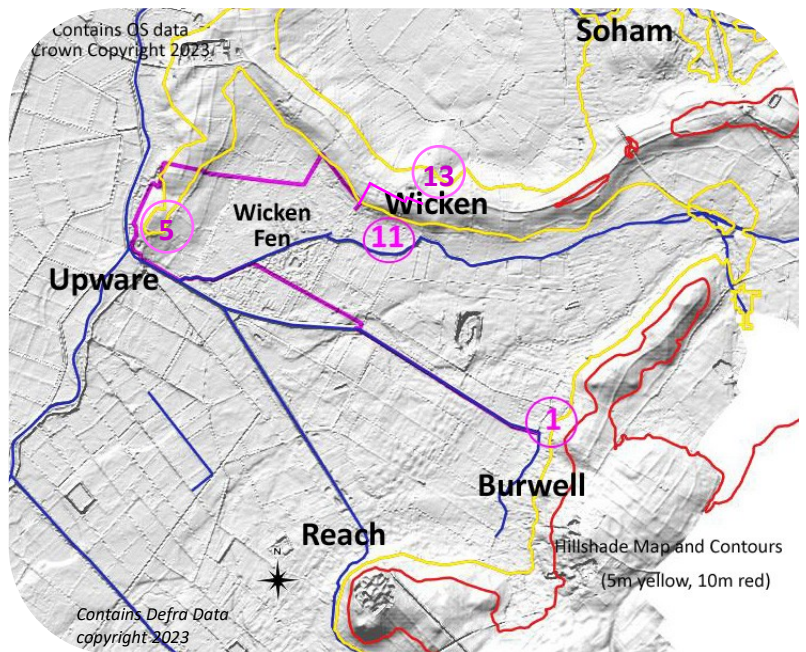
1 This route begins with a straight walk below the 5m contour (1.1) along the side of **Burwell Lode** (1.2f) where barges can sometimes be seen moored. After walking over **Chalk** with thin patches of peaty but pale soil (1.3f), about half way down, you pass onto the **Gault clay** that is mostly still covered by dark, thicker **Peat** - the boundary is shown by the change in soil colour (1.4). On the opposite bank of the lode may be the last remains of the '**Burwell Chemical Manure Co.**' where processing of the locally dug '**coprolites**' took place in the mid 19th century (1.4). Past the works in the distance, to the north, can be seen cottages that were part of the demised **Burwell Brick works** (1.5), which used the **Gault clay** immediately below. This calcium-rich clay produced the yellow bricks that are common in surrounding villages. To the north in the distance, you can see **Wicken windmill** (restored and working) near the end of the walk (1.6f).

Before you get to point 2, you enter **Wicken Fen**, owned by the **National Trust**. It is the Trust's **oldest nature reserve**; having started with 2 acres in 1899, it now covers over 2000 acres. A large area in the northern part of the reserve is a **National Nature Reserve**, an **SSSI**, a **Ramsar wetland site of international importance** and part of the **Fenland Special Area of Conservation**.

2 From the footbridge (2.1) you can see, to the west in the distance across **Burwell Fen** to **Reach Lode Bridge**. The area of the bridge is a **Local Geological Site** because it has a **fluvial palaeochannel** sequence that has been securely (radiocarbon) dated to give a record of changing vegetation and depositional environments over much of the Holocene (the period since the last glaciation). There are also views south to the '**Cock-up**' bridge (2.2) and north towards Upware (2.3). The bridge name comes from 'cock horse', after the many horses that were used in the fens, some to pull barges along the lodes. Crossing the lode, you continue through **Wicken Fen**. On the track (2.4), near a cattle/pony bridge take a few minutes in the bird hide, overlooking **Baker's Fen** to the north, where **Hobbies** and **Harriers** can be spotted hunting along with a variety of wildfowl. This area is part of '**Adventurers' Fen**' (2.5), named after the Adventurers who were allocated the land in 1637. Drainage took longer than expected but was mostly complete in the Burwell Fen area by 1720, along with 'enclosure' of the land. Parts of it are often grazed by **Konik ponies** (2.6, 2.7f).

2a An alternative route in wet weather takes you along the north bank of **Burwell Lode** and then along **Reach Lode**, rejoining the main route at the junction with **Wicken Lode** (point **4**). There are good views over the western part of Wicken Fen from the banks of the lodes (2a.1).

3 The next section follows **Wicken Lode** until it meets **Reach Lode**, which then joins the **River Cam** at **Upware**. The land on the opposite bank of **Wicken Lode** is also managed by the **Trust** to enhance the biodiversity of this unique landscape.



Photos: 1.1 Lidar map showing contours; 1.4 Demarcation between Chalk and Gault clay seen in soil colour, sites of coprolite workings and brick works; 1.5 Burwell Brick factory before demolition; 2.1 Footbridge over Burwell Lode; 2.2 'Cock-up' bridge; 2.3 Looking north along Burwell Lode; 2.4 Track north through Wicken Fen; 2.5 Adventurer's Fen board; 2.6 Konik ponies on Baker's Fen; 2a.1 Looking west from Burwell Lode.



4 Once you have crossed the wooden bridge (4.1), you have left the nature reserve. You now follow **Reach Lode** and pass a series of moorings (4.2f) before arriving at a complex of sluices (4.3) at **Upware** where the lode meets the **River Cam**. Here, the bedrock (Amphill Clay) is covered by **Alluvium**; this fine material also covers the extensive Cam Washes SSSI, which stretches to the south and further north along the river.

The building with the sloping roof, on the right as you reach the road, was once part of the **old pumping station** that had one of the characteristic, tall-chimneyed coal-fired pumps that were used to drain the Fens from the 1820s onwards. According to 'Vanishing Cambridgeshire (Mike Petty, 2010) 'a new engine was installed in 1850, to replace the original 1821 engine. It was demolished in 1939.' The current pumping station (of the Swaffham Internal Drainage Board, constituted in 1853) is on the opposite side of the lode, moving water from the **Commissioner's Drain** (fed by four lodes—Wicken, Burwell, Reach, Swaffham and Bottisham) and draining seven distinct and separate catchments, with a total pumped area 6070 ha.



Upware village lies on the southern point of the **Jurassic** limestone ridge running north from here. The ridge is an **inlier of older Jurassic rock, mostly reef oolitic limestones**, surrounded by younger Cretaceous rock. The geology of this 'spine' is complex; the younger layers of **Amphill Clay**, **Woburn Sands** and **Gault clay** are draped up onto the sides of the **Jurassic** limestone ridge which must have formed a raised topography at some stage after deposition, (see Kelly and Rolfe, 2020).

The "**5 Miles from Anywhere** No Hurry" pub has had a chequered history, being the haunt of various river pirates and bands of marauding Cambridge students. The 'Upware Republic', a society of up to 300 undergraduates met here to fish, boat, shoot and skate. The white thatched building was rebuilt in 1811, but closed by the 1950s and demolished following a fire of 1955/6. The present building dates from around 1980 and opened again as a pub in 1995. Despite being burnt down twice, today it is a welcome stopover point to view the **Cam** drifting by (4.4f). It is a popular spot along the **Fen Rivers Way**, which you now join for a short distance as it follows the **Cam** north towards Ely.

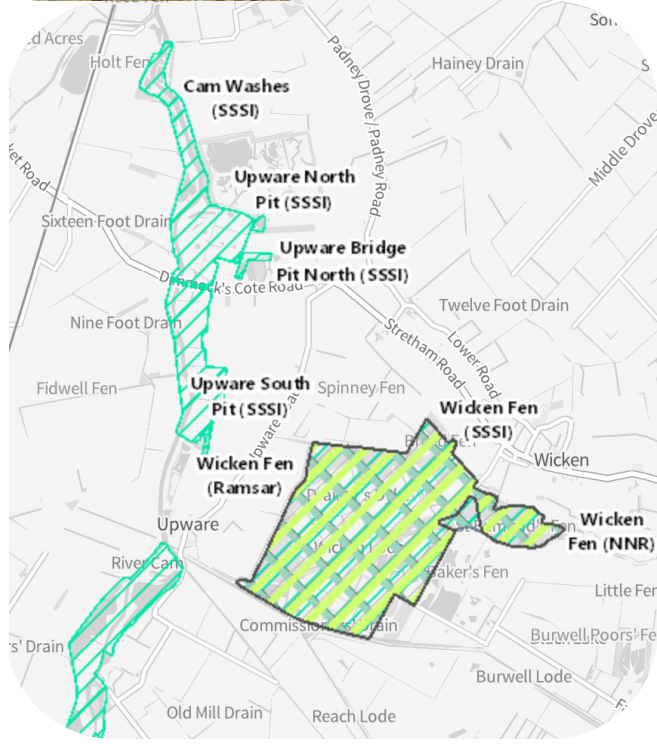
Upware has artefacts dating from **Roman** times and its name is thought to relate to a fishing weir on the river that existed from about the 10th century. Analysis of an earthwork near the river found a brick base surrounded by a moat and linked to a former wharf on the Cam. It is believed to be a Civil War fortification from the 1640s. A chain ferry that carried people across the river was still in use at Upware in 1910. The village is now part of the parish of Wicken.

5 After turning left at the end of the first field, you briefly move onto a narrow strip of **Cretaceous Woburn Sands** bedrock before returning onto the older Jurassic limestone at point 6.

6 To the left of the path as it turns left (north) is **Commissioner's Pit**, designated an SSSI (called Upware South Pit) for its local '**Corallian**' limestone' (6.1). Numerous fossils found in the pit have contributed to research on Jurassic palaeogeography: '*The fauna of the reef, as well as corals, includes more than sixty largely reef-dwelling bivalves and ammonites*'. It is now private land and the unstable sides are now

somewhat precarious: you should not attempt to descend into the pit. Lumps of the pale orange limestone rock can be seen in the fields next to the path (6.2); if you are lucky, pieces of **ammonites, corals and bivalves** can be found. The geology of this reef has been widely studied - a seminal work by **Dr Simon Kelly et al** (2000) gives a full account of the reef. The Bridleway that you are on is **Fodder Fen Drove**. Just before Point 7, in the field to your left, the undulating ground marks more **coprolite** works, here sourcing the nodules from the Woburn Sands. A horse-powered washing plant nearby prepared the phosphate prior to it being transported on the river. Research was carried out on this site by Kelly and Rolfe (2020) who dug a series of trenches, exposing the Jurassic-Cretaceous boundary and the sequence, from the limestone up through Late Jurassic clays and into the Woburn Sands and Gault Clay. There is another geological SSSI nearby, **Upware Bridge Pit North** (6.3), also designated for its Upware Limestone (a working quarry so no public access).

7 Between points 7 and 10, the route follows the long distance (39 miles) **Rothschild Way** which connects the two National Nature Reserves of **Wicken Fen** and **Woodwalton Fen** - commemorating the early wildlife conservation work of **Charles Rothschild** (see www.greatfen.org.uk/explore/walks-trails/rothschild-way). As you turn right off the bridleway onto the footpath, the land on the left between you and the river, is the southern edge of the northern part of the **Cam Washes SSSI**, which runs alongside the river on both sides for some distance (almost to the junction between the Cam and the River Great Ouse). This important SSSI is valued for its wintering populations of ducks such as wigeon. It has also been known in recent years to have breeding snipe and redshank.



8 Some of this section often has cattle grazing, so take care if you have a dog. Once across the road (8.1), after a couple of fields you walk off the older limestone of the ridge and the soil colour returns to the normal dark hue of the peat, here underlain by **Gault clay**. You are walking alongside **Wicken Fen National Nature Reserve** again on your right; this area is **Verrall's Fen**, named after George Verrall who was amongst a band of entomologists who bought land and donated it to the National Trust. The track is **Spinney Drove**, named after the 13th century priory of Augustinian Canons which once stood in or near **Spinney Fen**, just to the north.

9 After turning the corner, you are on **Breed Fen Drove** (9.1), once in Little Breed Common which was enclosed in 1666. There are records of peat cutting on the common and relict peat trenches still remain. The low ridge along which **Wicken** village lies is visible ahead. This ridge is built of **Pleistocene Oadby Till**, which is a glacial "boulder clay". Underlying the Till is **Cretaceous Gault Clay**. As you walk along, over to your right, within Wicken Fen NNR, there are the remains of a small brick kiln and clay pit (see 10c).

10 Even if not visiting more of **Wicken Fen NR**, you may wish to turn right to walk the short way down to the **National Trust Visitor Centre** to see information about the area (10a and 10b). If not, turning left towards the village, you walk up onto the eastern end of the **Upware-Wicken Ridge**. The NT car park is on the right as you walk up. Then see 11 below.

Optional visit to Wicken Fen National Nature Reserve

10a Turning right takes you past **Fen Cottage** (10a.1), a 'typical' abode of the fen workers (it is possible to visit the cottage at certain times, enquire at the NT Visitor Centre).

10b The **visitor Centre** (10b.1) is well worth a visit as it had some excellent displays of the work of the Trust in the Fen (there is also a tea room nearby). If you want to walk further (free for NT members, but a charge for non-members), there are marked trails into the Reserve. There are also boat rides along Wicken lode in the summer.

10c A boardwalk takes you into **Sedge Fen** (10c.1f), part of which is designated a **Local Geological Site** for its history of research on the deep peat and overlying lake (shell) marl of the **Fenland Formation**. Studies on pollen in the peat have revealed the environment here from Neolithic to Medieval times, changing from mixed-oak woodland with lime and elm through to woodland with birch, alder and hazel. It is famous as an early 20th century research site of Sir Harry Godwin. **Norman's Mill** (Grade II listed) can be seen here, having been moved from its original site further south in Adventurers' fen in 1955/56. It is a small smock wind pump, the last surviving drainage wind pump in the county. In recent years, however, rather than draining the fen, it has been used to raise water (c.1.2m) from the drainage channel to maintain the level in the reedbeds.

On the Woodland Walk from the boardwalk past the windmill, is the site of **Wicken Fen Brick Kiln and Clay Pits** (10c.2, 10c.3), a

Local Geological Site. The source of the clay for the bricks is the underlying **Gault Clay**, which was dug from pits at the site. The large pit nearby is now flooded (10c.4) providing a valuable wildlife habitat, with a birdwatching hide looking over it. **Note the restrictions on dogs in this area: 'only assistance dogs on the Sedge Fen this includes the Boardwalk, woodland walk and summer nature trail.'**



11 Along **Back Lane**, there are some Grade II listed, 17th century, **timber-framed cottages with reed thatch roofs** and Gault brick walls. As you turn left to the main road, you see **Wicken Windmill** (Grade II*) in front of you. This is a recently restored working smock mill that is still used to make flour; built in 1813, it drives two pairs of **French 'burr' stones** (quartzites), originating in the Paris Basin. It is open on one weekend each month.

12 **Wicken**, listed in the Domesday Book as **Wicha** (Old-English for 'dwelling' or trading settlement'), was a relatively isolated and poor village situated on the low ridge between the extensive fens near Burwell to the south and the basin of Soham Mere to the north (see the Walk Guide for Wicken to Soham for more details of the village).

13 The **village sign**, the end of the walk, is on **Cross Green**, which also has the remains of the 14th century **village cross** (Grade II listed), made of **Jurassic Barnack Limestone**.

Photos: 8.1 Footpath ahead once across road; 9.1 Looking back along Breed Fen Drove, on the Rothschild Way; 10a.1 Fen Cottage; 10b.1 Visitor centre; 10c.2 Remains of brick kiln; 10c.3 Board explaining brick pits and kilns; 10c.4 Flooded brick pit, now valuable wildlife habitat.



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