

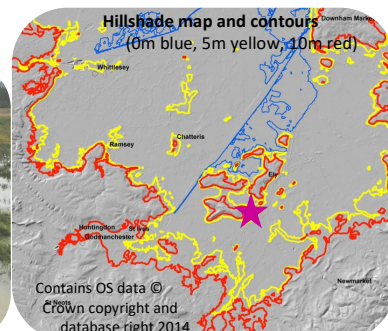
The Fen Edge Trail

Wilburton to Stretham

Plus walk to **Stretham Old Engine**
3.6 miles (5.8 km)
6.3 miles (10.1 km) including the Engine

*'Grunty Fen, who
would have thought,
what an interesting
place!'*

*Jeff, Cambridgeshire
Geological Society
Geosites team*



The route: 'Along the edge of the 'bay' of Grunty Fen down to the iconic old pumping engine on the river'

This walk is part of the **Fen Edge Trail** around the **Isle of Ely**. It links the villages of **Wilburton** and **Stretham**, which lie on the southern edge of the **Isle**, along a ridge of **Jurassic** and **Cretaceous** bedrock that reaches a maximum height of some 40m (133 feet) above sea level (on the western end near Haddenham). The bedrock includes the famous **Woburn Sands**, known for underlying the 'Greensand Ridge' in the south west of the county and also for forming the hill on which **Ely Cathedral** sits. The ridges of the Isle are capped, in places, by **Glacial** deposits, mostly 'Till', which adds to their height. Prior to the major draining of the fens in the 17th century, the Isle was surrounded by freshwater marshes and meres and during earlier times, in the Bronze Age, our ancestors could have looked out from the ridge across **tidal marshes** to the north west. This walk follows ancient **droves** and **ways** linking the historic villages. We start on the high ground at **St Peter's Church** and head north out of the village down into the natural '**fen bay**' in the middle of the Isle of Ely, otherwise known as **Grunty Fen**. Having skirted the southern edge of **Grunty Fen** along its **Catchwater**, we once again climb onto the ridge to reach the centre of **Stretham**. From here, there is an (optional) extension loop out to **Stretham Old Engine**, on the banks of the **Old West (Great Ouse) River** and back.



Photos: 9b.1f View from bridge along the Old West River to Stretham Old Engine; 3.1f Grunty Fen Catchwater; 1.3f St Peter's Church, Wilburton; 9c.5f Beam Engine at Stretham Old Engine; 9.4f Woburn Sands sandstone in St James Church, Stretham; 8.1f Windmill at Stretham.

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. Photos are shown in the order they are seen except for those on this front page (f). The walk links with the **Ouse Valley Way** and the **Rothschild Way** along the river. Opening times at **Stretham Old Engine** can be found strethamoldengine.com.

Length of walk (one way) approx. 3.6 miles (5.8 km), guide time 2 hours (plus stops) or, with the addition to Stretham Old Engine 6.3 miles (10.1 km), 3 hours. The additional walk is approximately 2.7 miles (4.3 km) return. Grid ref for start TL479750. A circular walk could be made from Wilburton by using the main road between the two villages to return. Maps O.S. Explorer 226. Free, easy to use online geology map viewer on www.bgs.ac.uk/map-viewers/bgs-geology-viewer.

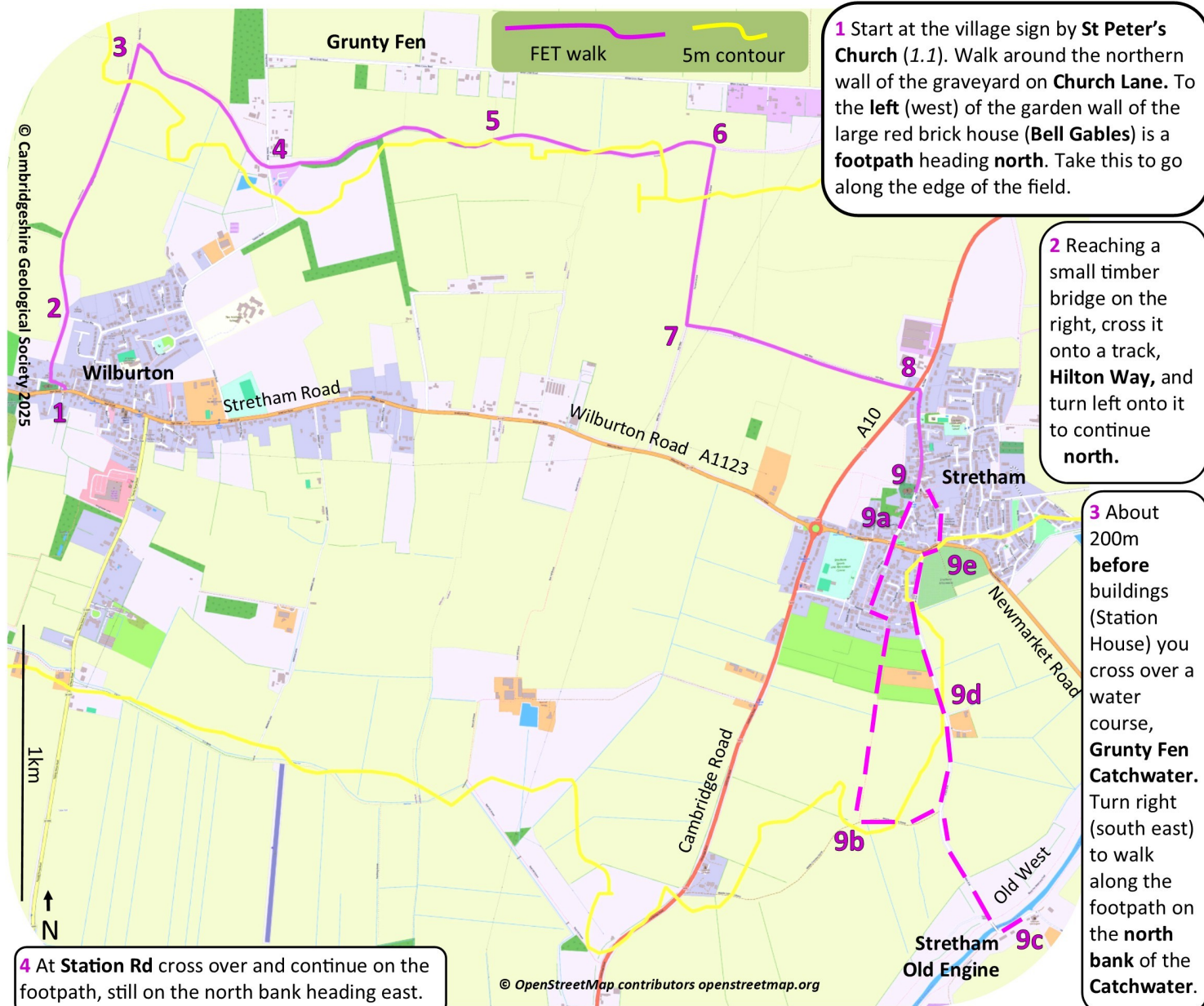
Transport and services **Buses** run between Wilburton and Stretham (not Sunday) and to both (check days) from Ely www.dew-coaches.com, and to Stretham from Cambridge (not Sundays). There are **train services** to Ely and Cambridge. Street parking is available in both villages. Please park only where permitted and in consideration of others. There is a shop and pub in Stretham (none in Wilburton).

Safety Be aware of risks you may encounter and take note of warnings by landowners or on paths. The terrain is generally flat, but with some slopes such as those found on the drop down to Grunty Fen and again on the rise to the ridge leading to Stretham. Take particular care on uneven terrain and soft or slippery ground, near water, in the presence of livestock or walking along roads. Ensure dogs are kept under control as needed. 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

Wilburton to Stretham & Stretham Engine

Directions (3.6 miles / 5.8 km) (including extension 6.3 miles / 10.1 km)



Additional walk to Stretham Engine 2.7 m (4.3km) round trip

9a Continue south along **High Street** crossing the **Newmarket Road** into **Cage Lane**. At the end of the lane turn left on to **Fieldside**. At the end of **Fieldside** take the **footpath straight ahead, soon turning right** at footpath sign into Wakefields Way. Continue south on footpath, crossing footbridges before emerging onto a wide track (Middle Common Drove).

9b At **Middle Common Drove** (track) turn left (east) and then right at **Green End** (road) to head south. Cross the bridge and turn left.

9c **Stretham Old Engine** is on the right a short way along.

9d To return to **Stretham**, go back along **Green Lane** and continue on this relatively quiet road, passing allotments on the right as you reach the village.

9e At end of Green Lane, turn right onto **Newmarket Road** and then, shortly, turn left along **Chapel St** to walk back to the church **9**.

Walk: Wilburton to Stretham - geology and landscape map

Ages of the rocks

'Superficial'

Holocene: Less than 11,700 years:

Alluvium - the last few hundred years

Peat - the last few thousand years

Pleistocene:

River (1st) Terrace

Sands & Gravels

c.20,000 years

Glacial Till

c.300,000 (but poss

c.160,000 - 425,000)

Bedrock in millions

of years (my)

Cretaceous:

Gault (clay)

c.101 to c.113 my

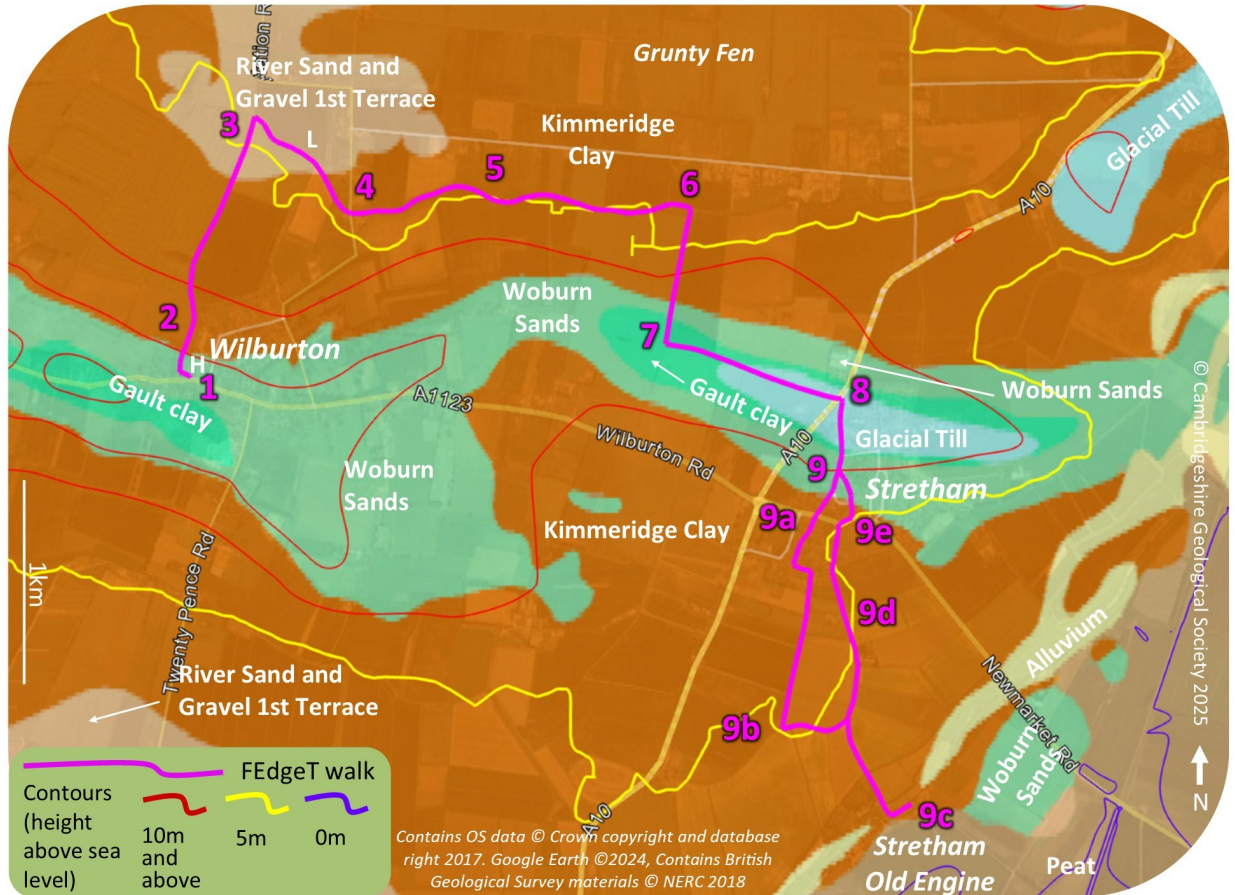
Woburn Sands

c.115 my

Jurassic:

Kimmeridge Clay

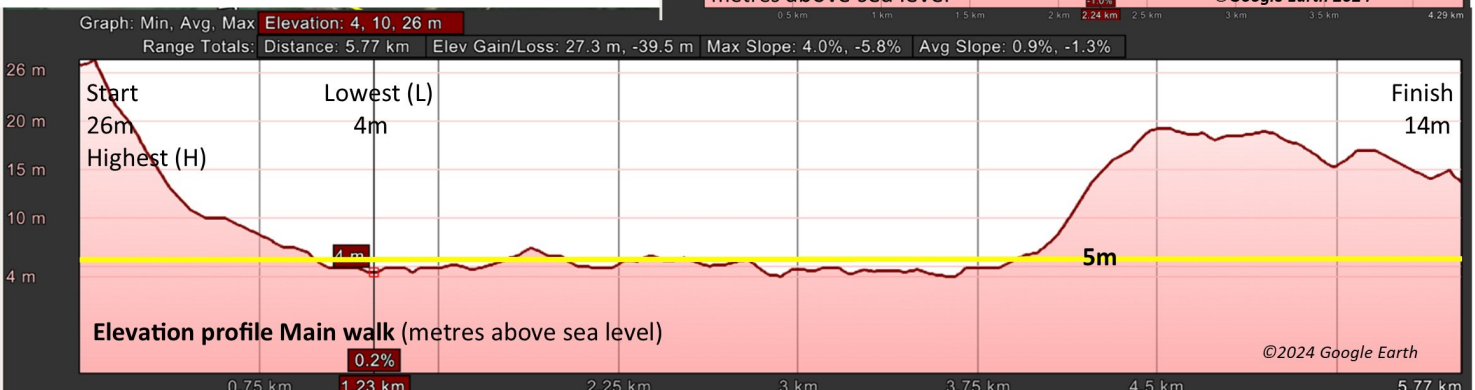
c.152 to c.157 my



On this walk you pass over three different types of bedrock. The oldest is **Kimmeridge Clay** (Jurassic age). An extensive sea covered this part of Britain with the clay forming from material deposited on the sea floor. Now, however, this clay forms a **series of roughly east-west ridges making up the Isle of Ely**, having been less affected by erosion than the surrounding, less resistant, bedrock. The **Kimmeridge Clay** (named after the village on the south coast of Dorset) is famous for fossils of marine reptiles such as **Plesiosaurs**. Younger (Cretaceous age) **Woburn Sands** (Lower Greensand group), a **sandstone** formed in shallow seas, lies over the clay and covers the higher parts of the ridge. The youngest is the **Gault clay**, formed in deeper seas, which occurs in a narrow band along the ridge top.

The 'Superficial' deposits are much younger and, here, only cover the bedrock in the river valley or low fen or on top of the hills. They consist of **Glacial Till**, **River Terrace Sands and Gravels** plus **Peat** and **Alluvium**. The Till (old name Boulder Clay) was deposited by an ice sheet (probably during the Wolstonian glaciation but possibly older) and consists of a **mix of material including chalk**. During cold periods of the 'Ice Age', the Ouse was a much larger river than today, depositing **sand and gravel in a series of Terraces**. Small patches are all that remain in this area, dating from towards the end of the last (Devensian) glaciation, c.20,000 years ago (1st Terrace). **Peat**, formed from decaying vegetation in freshwater 'swamps', remains in the low land south of the river but any once present in Grunty Fen has now disappeared. **Alluvium**, fine material deposited by the river during floods, is found along the Old West.

The walk starts at its highest point, c.25-26m above sea level, on the northern slopes of the **ridge, underlain by the Woburn Sands**. You walk down onto the **Kimmeridge Clay** and then over a patch of river gravels before being on clay again. Along this stretch, the land is at c.5m but drops to 4m at times. Climbing back onto the sandstone of the ridge, the walk east to the road takes you over Gault clay and then Glacial Till, which forms land over 15m. Most of the village is slightly lower, back down on the **Woburn Sands** and **Kimmeridge Clay**. There was probably once **Peat** and **Alluvium** all along the river but it has been eroded from the area on the walk; only bedrock clay remains. The riverside is the lowest point on the walk, at 2m.



Places of interest along the Trail

This southern part of the **Isle of Ely** has a great deal of landscape and historical interest. The ridge of sandstone, clay and glacial deposits provided higher and dryer land than the surrounding wet fens and this no doubt contributed to the rich history of the area. Local finds have included **Neolithic burial chambers**, the oldest about 6,000 years old – one of the oldest in **Europe** – attesting to very early occupation. Wilburton lies on the ridge along which ran the important east-west **Medieval route** between **Earith** and **Stretham** and has a long history of settlement. The **Wilburton-Wallington Phase** is the name given by archaeologists to a metalworking stage of the **Bronze Age** following local findings. Listed as **Wilburhtun** in 970 and **Wilbertone** in the **Domesday Book**, the word Wilburton means 'Farmstead or village of woman called Wilburh', after **Princess Wilburh** daughter of **King Penda** of the **Mercians**. The village boasts some fine buildings including the **Burystead** (a former manor house, built c.1600) and the **New Old Manor House** (now **The Harbour School**), which was designed by **Pugin** following his 'pinwheel plan' concept (he went on to design the 'Houses of Parliament').



1 The walk starts at the **village sign** (1.1) which includes an oak leaf from a local (now gone) 500 year old oak reportedly planted by Henry VII. Next to the sign is the churchyard (1.2) of the Grade I listed **St Peter's** (1.3f). The church, near the start of the walk, stands close to the highest point in the village on **Cretaceous Woburn Sands (Lower Greensand)**. This east-west ridge of **sandstone** sits on top of Jurassic **Kimmeridge Clay**. With its 13th century chancel arch and tower, the church has seen many changes – there was extensive rebuilding in the 15th century and additions in the 19th Century (with **Pugin's** input). Built of **rubble** and **fieldstone** (the latter found locally in the Glacial Till) with **Clunch** (Chalk) and **limestone** dressings, it is worth a visit before the walk.



Along **Church Lane**, just before the footpath, is **Bell Gables** (1.4), a Grade II listed, late 17th century brick farmhouse with curved gables. Before taking the footpath, continue on to the north west of the church, to see **The Grange** at 8 Church Lane (1.5). Erected around 1500, this timber framed (Grade II listed) house has old bricks at ground stage and would originally have had reed and clay filling at the upper stage. Once you move into the open field (1.6) you will be on the **Kimmeridge Clay**, which underlies most of this walk.



2 Crossing the small bridge on the right, you walk along **Hilton Way** (2.1). Following this lane north out onto **Grunty Fen** you are walking downhill on an old route (known historically as **Clarkes Lane**).



3 As you start to walk along the north bank of **Grunty Fen Catchwater** (3.1f), a close look at the field here may reveal that you have crossed over onto a small area of **gravel** and sand remaining from the **1st Terrace of the River Great Ouse**. **Grunty Fen** is a large, shallow, basin



within the **Isle of Ely** with just a narrow outlet between **Ely** and **Witchford** (see page 6) through which its water now drains, towards the north, discharging into the New Bedford River at Oxlode. The basin is likely to have originated as an **embayment** extending from the west, between Sutton and Haddenham, with a **glacial lake** forming after a build up of material blocked the narrow western edge. Under periglacial (freeze-thaw) conditions, a **strong-flowing water channel** from the lake, **carved the narrow, relatively deep valley through the ridge** near Witchford. Grunty Fen was one of the last fens to be drained, this being achieved after the **Grunty Fen Catchwater** was dug in 1838, some considerable time after the major drainage works of the 17th century. It now lies below the 5 metre contour as much of its **Peat** disappeared with shrinkage and the rest had been worked out by the 2nd World War, after which it was largely uncultivated once again. The introduction of modern, heavier, more powerful agricultural machinery has resulted in the ability to farm the heavy clay and has produced the landscape seen today, with the **Kimmeridge Clay** Jurassic bedrock now at the surface.

4 You soon cross **Station Road**. Despite being a civil parish in its own right between 1858 and 1933 (with a population of less than 100), Grunty Fen once contained the **railway stations** (which were less than two miles apart) for **Wilburton** and **Stretham** – the locals referred to this stretch of the line as the '**Grunty Fen Express**'. The railway here linked St Ives, Soham and Ely. A group of pollarded willows on the edge of the Fen, to the north, are an important wildlife habitat.

5 Grunty Fen is well known for its hoards of **Bronze Age metalwork**. Turf diggers in Grunty Fen discovered the first in 1844, at about a metre depth in the Peat; amongst the items was a **gold torc**. In 1882 **163 pieces** were discovered in shallower **Peat**, including **115 spearheads**, two socketed axes, swords and scabbard ends. To the south you see the land rise to the ridge you will soon be walking back up onto. To the north of Grunty Fen, lies the other main ridge on the Isle of Ely, running east-west between **Sutton** and **Witchford**. It too, has a covering of **Glacial Till** over **Woburn Sands**.

6 When the fields are clear of crops a clear ripple can be seen running along the contours of the slope possibly indicating the change in bedrock from clay to harder sandstone as the land rises (6.1). Heading due south we now climb the ridge to **Mill Way**, on route crossing over a narrow band of **Woburn Sands**, to arrive on the **Gault clay** cap. It is worth looking back to appreciate the shallow 'bowl' that forms **Grunty Fen**. Where soil is exposed, you may see '**Devils Toenail**' (**Gryphaea**) **fossils** an extinct species of shallow water oyster, that have been eroded from the nearby **Jurassic Kimmeridge Clay**. They can occur here alongside **flints** and well **rounded pebbles** originating from the **Glacial Till** (deposited by melting glaciers), typically found on the ridges of the **Isle of Ely** (6.2).

Photos: 1.1 Wilburton Village sign by church; 1.2 St Peter's Churchyard; 1.4 Bell Gable House; 1.5 The Grange; 1.6 Kimmeridge Clay underlies the field; 2.1 Hilton Way; 6.1 Change in bedrock from clay to sandstone as land rises on ridge



7 Mill Way once boasted two windmills perfectly placed on this 'high' fen ridge, one remains at the north end of the village of **Stretham**. Walking east we rise a little more onto the highest point of the walk **atop** a small area of **Pleistocene Glacial Till**, upon which most of the village of **Stretham** sits. There are excellent views in all directions but particularly to the north, and the **City of Ely**.

8 Having carefully crossed the main road, head south down the **High Street** taking a closer look at the **windmill** (8.1f), now a Grade II listed, private residence. Dating from 1881, it is a four story building of tarred brick with metal 'ogee' cap and fan tail that was used as an **aircraft observation post** from 1936 by the **Royal Observer Corp** who were based next to it from 1962 to 1968. Walking down to the village centre you once again leave the **Glacial Till**, cross a narrow band of **Gault clay** and arrive on the **Woburn Sands**.

9 At the village centre, in the street to the east of the church, stands a **15th century, Grade II* listed limestone cross** (9.1) believed to be the most perfect surviving example in the county. Adjacent to the cross stands the **The Red Lion** pub, formally a coaching inn, which has been in operation since 1763. The **Domesday Book** records the village as '**Stradham: Abbot of Ely Fisheries**'. Stretham means 'homestead or village 'on the street' – possibly of Roman origin, though the route of the Roman road from Cambridge north is uncertain beyond Waterbeach. Although the route past the village is now one of the primary ways to access **Ely**, in the **Middle Ages** it was of little importance compared to the **Aldreth Causeway**. This had changed towards the end of the 17th century; in 1763 the task of bringing the road up to contemporary standards began.



St James' Church (9.2), the end of the main walk, is mainly early 14th century although there are portions of 12th-century work in the east chancel walls. The church (Grade II* listed) was substantially restored in 1876. The church is '**mainly rag and Barnack Stone**' but close inspection reveals the usual mix of 'fieldstones', re-used stones and worked stone (9.3), as well as local Woburn Sands sandstone (9.4f) and **Barnack limestone** ashlar (9.5). It is also thought to have some **Upware Limestone**, a local but less abundant building stone, Late Jurassic in age and younger than the more common Lincolnshire Limestones. A look (from the graveyard) at the adjacent, mainly 17th-century **Rectory** (Grade II listed) reveals an interesting mix of stone: **clunch** (Chalk), reused **limestone**, **red brick** and '**gault brick**' (pale coloured brick probably from the local Gault clay) all on one repaired and altered façade (9.6).



9a Taking the extension loop will lead you south along the High Street - note the two houses (44 and 46) which were formerly the **White Lion** pub, built around 1600. The **village sign** is on the small green by the crossroads. By now, you have crossed again from the Cretaceous Woburn Sands onto the Jurassic **Kimmeridge Clay**. In 1952 the fossilised remains of a 'giant' (7m long) **Jurassic Pliosaurus** were found 5ft down in a **Kimmeridge Clay** borrow pit to the south west of in the village, near the river. This huge, marine reptile, dating from about c.155 million years ago, could probably grow to about 12m long. It was thought to belong to a new genus and named **Streptosaurus** after the village but is now believed to be a **Pliosaurus** (see page 6).



9b Walking along **Middle Common Drove**, you descend below 5m into the river valley; with views back to the village (9b.1). This area, **Middle Common**, was dug from around 1875 to 1883 for **coprolites (phosphate nodules)** found in the **Woburn Sands**, which covered the Kimmeridge Clay here; having mostly been removed by the workings, it is now only found on the other side of the river.

You cross the **Old West River** (9b.1f), part of the **River Great Ouse**, over what was, until the 1990s, the '**Wooden Bridge**', the only access to Stretham Old Engine for many years before the modern bridge was built. From **Earith**, where the river valley meets the fenland, the Great Ouse once **flowed north**, to the **west of Chatteris** and on to the **Wash**. This river channel is known as the '**West Water**' and can be traced as a significant band of Alluvium that still covers the Peat and River Gravels **to the east of Somersham**. At some time (probably post-Roman, possibly during the middle ages), the river was diverted east when the **Old West River** was dug out (along an existing, smaller channel) taking the flow south of the Isle to join the **River Cam** just to the north of Stretham Mere. Today most water flowing down the **River Great Ouse** is diverted along the **Bedford Rivers**, and onto the **Ouse Washes** at times of flood. The river here at Stretham is part of the **River Great Ouse County Wildlife Site**. The land along either side of the **Old West** was part of a project called '**New Life on the Old West**' which created small scale habitat improvements along this **wildlife corridor** (see page 6).

9c Stretham Old Engine (9c.1) was a major pumping station and is designated a Scheduled Monument (see page 6). Behind it was **Stretham Mere**, which was drained by the pump. The Engine is open to visit on certain days of the year thanks to a dedicated group of volunteers. It not only has the engines and working scoop wheel but there are many interesting artefacts from fenland life, together with old maps and photographs. There are views across to Ely Cathedral from the front windows (9c.2).

9d The ditch alongside the road was probably once large enough to be a **lode**; transport by water was often more important in the fenland than that across land.

9e Not far along **Chapel St**, you will see the Baptist Chapel on the right, a red brick building dating from 1935. It is near here that you walk back up above the 5m contour, not reaching 10m until you arrive back near the church, **9**.



Photos: 6.2 Flint and pebbles and a fossil *Gryphaea* (at bottom); 9.1 15th century cross; 9.2 St James' Church, Stretham; 9.5 Barnack Stone ashlar on the church; 9.6 Clunch and other stone in the wall of the Rectory; 9b.1 Views back to the village; 9c.1 Stretham Old Engine; 9c.2 Views to Ely.

Stretham Old Engine and Stretham Mere

Stretham Old Engine is one of only three surviving drainage engines in East Anglia and is the **only one remaining with its steam engines (9c.3), its diesel engine and its working wheel**. Built in 1831, replacing four nearby windmills, its scoop wheel (9c.4), lifted water into the **Old West River (Great Ouse)** for over a century. It drained the **Waterbeach Level** of the Fens which lies **between the Old West and the Cam rivers**; this included the area of **Stretham Mere**. Powered by coal, producing steam, the rotative beam engine (9c.5f) and fly wheel operated a gradually enlarged scoop wheel, which was lifting 120-150 tons of water a day by 1896. In 1925 the installation of a Mirrlees diesel engine driving a Gwynnes centrifugal pump saw the steam engine put on 'standby'. The wheel finally stopped turning in 1947. The **Engine House**, built of **gault bricks** from the local clay (with the occasional limestone block - possibly Upware Limestone), is now a Grade II listed building, as is Greenways next door, once the **stoker's cottage (and now owned by the Landmark Trust)**. After drainage, the **lake marl**, originally deposited on the bed of the mere, over the peat, would have covered the whole area of the mere, raising it above the surrounding, shrunken peat. This **changed the drainage, directing it towards the Cam** and meant that the Stretham engine had to pump water 'over a hill'. Once this was realised, in 1945, the diesel engine was also just put on standby, although it was used again in the 1947 and 1953 floods. In 1969, the Waterbeach Level started to be drained (pumped) into the Cam via a **new electric engine at Bottisham Lock**. The **Stretham Engine Preservation Trust** was set up in 1959 (now the **Stretham Engine Trust**) and its volunteers raise funds, work to maintain the building and its engines and hold open days so that it can be visited. See www.strethamoldengine.com.



Stretham Mere (9c.6) existed for about **2,000 years**; after sea-level rose towards the end of the **Iron age**, backing up freshwater in the southern fenland resulted in the formation of a number of fen edge meres. The area between the River Cam and, what is now, the Old West River had probably not been solid land since the **Mesolithic**, a few thousand years after the end of the last glaciation.



9c.4 Scoop wheel



9c.5 View from Engine house towards the area of the mere

Before the mere, **Peat** would have formed and at least 1.5m has been found where the mere once was.

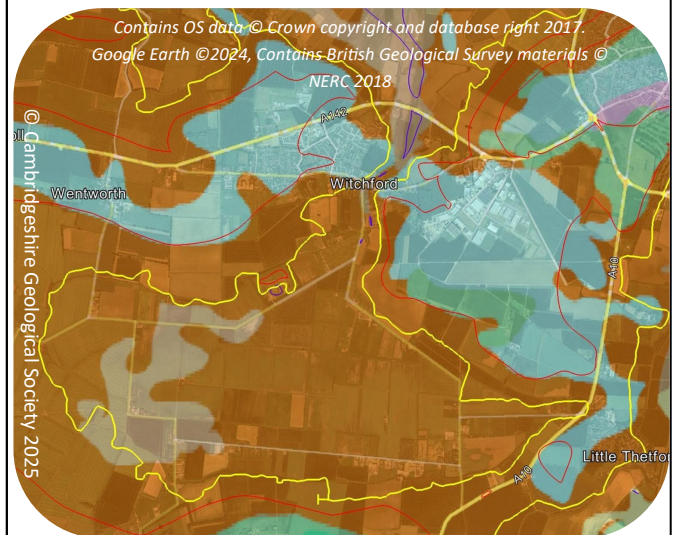


The Stretham Pliosaur! A remarkable find, it included most of the 'post-cranial' bones. After 69 bones had gone to the **Sedgwick Museum in Cambridge**, the **Great Ouse River Board**, whose workers had made the find when carrying out the clay digging, allowed the rest to be distributed to local schools and private collectors. In 1956, when the importance of the find was realised, the Board was helped by the local press to recover as much as possible. Although the first naming of the fossil (in 1958) allocated it to the known *Pliosaurus macromerus*, it was described in 1959 as being sufficiently distinct, due to the shape of the 'pectoral girdle', to be a new species - given the name *Stretosaurus*, after the village. Recently, it has been reassigned to the species *Pliosaurus cf. kevani*, after another specimen found in Dorset. The near complete 2 metre-long hind paddle is now on display at the **Sedgwick Museum of Earth Science (9a.1)**.



9a.1 Pliosaur hind paddle at the Sedgwick Museum

Grunty Fen map showing the Grunty Fen 'basin' below the 5m contour and the narrow channel to the north.



The River Great Ouse valley formed the central axis of the **New Life on the Old West** project managed by **Cambs Acre**. This created a habitat corridor linking **Ouse Fen Nature Reserve** and **Wicken Fen**. The project also worked in partnership to develop nature walks in the area. For information on achievements of the project (now ended) see www.newlifeoldwest.org.uk.



Cambridgeshire
Geological Society
www.cambsgeology.org

www.fenedgetrail.org
info@cambsgeology.org

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