



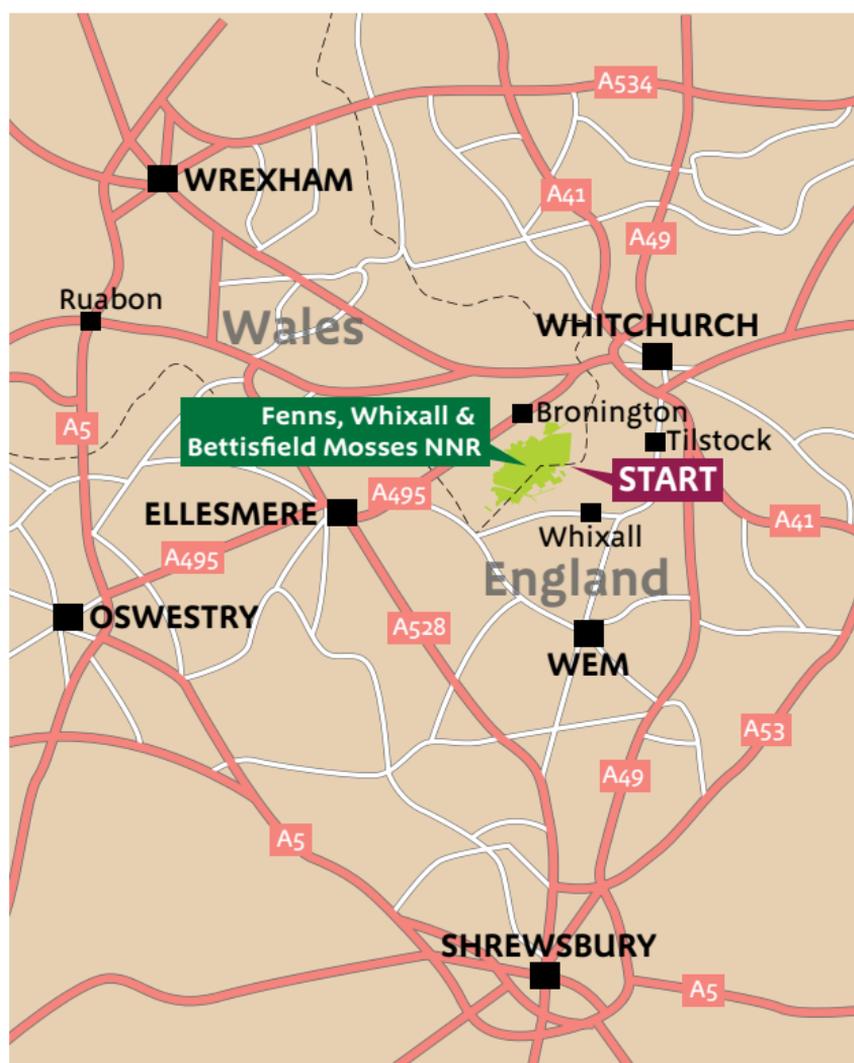
Fenn's & Whixall Mosses History Trail



How to find the History Trail

The trail starts from the Manor House NNR Base car park in Whixall (SJ 505366, SY13 2PD) *see map*, but can also be accessed from the Shed Yard car park (SJ50353681, SY13 2PD), (continue past the NNR Base entrance, turn right at the Moss Cottages, go through the gate, closing it after use, and turn left by the NNR signs).

The trail is 4.6km (2.9 miles) long, and takes about two hours to walk. The route is marked by a series of arrowed posts, and is level and easy to walk but often wet so wear wellingtons or stout footwear.



The Fenn's & Whixall Mosses History Trail

Travel through time, starting from prehistory with its preserved bog bodies and record of past landscapes in the peat. Discover the history of drainage for agriculture, peat cutting and forestry, which nearly destroyed this internationally important mossland. Follow the journey from local medieval hand cutting through to modern industrial peat mining. Explore the military use of the Moss, its rifle and bombing ranges and WWII Strategic Starfish Site.

A brief background to the Mosses

After the last glaciation, a large melt-water lake formed here between two moraines, ca 9,000 year ago. Swamp and fen plants filled in this wetland then *Sphagnum* bog moss invaded, acidifying the groundwater and rain water and stopping the decay of plant remains. These built up to form a large dome of peat, Britain's third largest **lowland raised bog**, now a Site of Special Scientific Interest, a European Special Area of Conservation, and a Ramsar Wetland of International Importance.

The bog collapsed when drains were installed during the building of the canal in 1807 and the railway in 1863, and to mark the land allocations of the 1777 Bronington and 1823 Whixall Enclosure Awards. The well-drained outer areas of the Mosses were then converted into



Bogmoss and cranberry

farmland and the centre cut for peat. Fenn's Moss in Wales has been cut commercially since the 1850s, and Whixall Moss in England for domestic peat. Little remained uncut, dry abandoned areas were colonised by woodland and, there was extensive military use, moss gathering and afforestation. By the 1990 the Mosses were very badly damaged.

A large increase in the rate of commercial peat cutting in 1989 led to a campaign to save this site for its internationally important wildlife. In 1990 Natural England and Natural Resources Wales acquired the centre of the Mosses as a National Nature Reserve (NNR), to restore it back to bog, and have continued to buy more of the site since. Forests and woodlands are cleared and ditches dammed to restore bog water tables to the peat surface. Now the irreplaceable record of the past stored in the peat has been preserved again, rare boggy bio-diversity is thriving once more and the vast store of peat carbon has been re-pickled to counteract climate change.

The History Trail

START – from the Manor House NNR Base, walk back down the drive to the road and turn right.

START – from the Shed Yard car park, walk back down the access track, pass Fenn's Cottage and the Moss Cottages and turn right at the T-junction. Read the last two paragraphs of the trail en route.

Pass the **Moss Cottages** which were built in 1897 for the workers of the English Peat Moss Litter Company. Just past them, originally you would have walked 10 metres up onto the level dome of the raised bog, but now the Mosses have sunk because centuries of drainage.

Walk straight ahead down the stoned track, past Farm Five, leaving gates as you find them, to Trail Post ①.

① This shed was the Battery store for the World War Two (WW2) Strategic Starfish Site, set up to simulate a burning town to decoy German bombers. Here, 65 fire baskets nearly a kilometre away (see post ⑭) were to be lit remotely via wires leading from this battery shed, by airmen who waited in the adjoining Nissen hut.



Starfish Battery Shed



Whixall Hand-cutting tools with pattens

Continue on up the track. On the left pass the Smallholders' Allotments, an area of small peat "banks", allocated in 1823 to tenants of English Lord of Manor for domestic peat cutting, and now part of the NNR.

MTb "Black" fen peat was hand-cut here for domestic fuel (burning-turf). The

Whixall peat-cutting tools comprised a fayer for stripping off the surface vegetation, a sticker for marking out the peat blocks, a nicker-out for cutting the sides of the peat blocks and an uplifter or bat for lifting the peat blocks out onto the bog surface to dry. Pattens stopped the peat cutter from sinking into the wet peat.

Turn left here, or for a shorter walk turn right to post 8

MT6 40m ahead on the left are fields converted from the Moss. The area on the right was an abandoned field, now restored to mossland. *Turn right.*

MT7 Since Mediaeval times locals cut around the margins of the Mosses, paying taxes to the English and Welsh Lords of the Manor, the Wardle and Hanmer families, at annual Manorial courts. The Welsh 1777 Bronington and English 1823 Whixall Moss Enclosure Awards extinguished these common rights and specific blocks of land were allocated to individuals, marked out by drains which linked together to drain right to the centre of the bog, and allow more intensive peat cutting.



Alfred Heath with feyer and Whixall bible cutter

The centre of Whixall Moss, ahead on the right, kept by the Wardles, Lord Kenyons smaller block on the left and small amounts of the Hanmer's Fenn's Moss were rented out to local people, acre by acre, for domestic peat cutting. In 1956, the Wardles sold Whixall Moss to Tom Allmark of the L.S.Beckett hand-cutting peat business, based at Manor House.

Once peat "banks" were abandoned, drains clogged up and bog wildlife returned in the base of the peat cuttings, making Whixall Moss a sanctuary for rare bog wildlife while intensive commercial cutting was carried out on Fenn's Moss.

Turn right. On the left pass old linear style "Dutch" hand-cuttings, restored in 1995, and now a haven for rare white-faced darter dragonflies.

2 In 1990, when large-scale mechanised cutting stopped, there were 4 small hand-peat cutting businesses on Whixall Moss and 10 on Fenn's Moss. Albert Allmark's peat mill, near Morris's Bridge car park, has a list of all the Whixall Moss hand-cutters. Rather than wheel-



Bob Price cutting peat for Frank Seywell in 1993

barrowing cut peat off the “Dutch” linear peat baulks, Tom Baileys’ business cut back the edges of old cuttings to collect the peat using a tractor. Restoration in 2003 created this large pool, now very good for waders and wildfowl. In past centuries, such natural bog pools were important for hunting wildfowl in the hungry winter months. *Turn left.*

3 The Quob alder carr (wet woodland) along the Llangollen Canal, cut through two miles of Whixall Moss in 1807 is visible to the left in the distance. The Batters, one of the Mosses’ two pre-1909 rifle ranges lies two thirds of the way there. Boer War troops came by rail to Bettisfield station then marched along the canal towpath and up a cinder-reinforced track to train on the Batters. In World War One (WW1), three “300 yard” ranges were constructed there.

Continue straight on. Notice on the left how the linear “Dutch” peat cutting pattern reflects as stripes in the restored bog.

Much bogmoss was gathered from this area for making holly wreaths for sale at the markets of Liverpool and Manchester.

4 10 metres ahead is a high virtually uncut area of peat on the English/ Welsh border, near which Whixall's three **bog bodies** were found, more than, and one of the earliest, from any other bog in Britain.

Peat cutters found the body of an Iron Age/ Romano-British young man, partly covered by a leather apron, near a three-legged stool in c.1867, that of a similarly dated woman in c.1877 and an Early Bronze Age man in 1889, all within 500 "yards" of each other. The acidic 'pickling' bog water had dissolved their bones but preserved their hair and their skin like tanned leather. Once re-buried in local churchyards, they quickly would have disintegrated.

In the past, bogs have been regarded as sacred places to make votive offerings and possibly human sacrifices at times of climate change. Their treacherous pools were thought in Celtic times to be the entry to the worlds of the gods in the Underworld. Their location near the English/ Welsh border may be significant as sacrifices are often interred at the territorial boundary of the tribe.



Tollund man bog body

Turn right to the peat cutting full of pine stumps.

5 As the peat builds up layer on layer, pollen from surrounding landscape is pickled in situ, making the bog a 10,000 year old story book of the past, recording past climates and vegetation change. The peat cutters named the different layers in the bog, with the lower "coal" or lake peat being succeeded by the "black" swamp and fen peat then the well-humified Bronze Age "grey" bogmoss and cotton sedge peat being topped by the less humified "white" peat which has formed in the cooler wetter climate since the Iron Age.



© Shropshire Council

3,400 years ago a narrow belt of pine grew across the Moss for 250 years, probably when the bog dome had grown too high in a drying climate. In 1927, a Middle Bronze-Age looped axe or 'palstave' was found in this pine layer.

Once drained, this ancient irreplaceable record of the past in the peat disintegrates, making the restoration of the Moss urgent. *Follow the track round.*

Bronze-aged palstave

6 This ditch is the 1826 Oaf's Orchard Drain, running north then west, where it marked out the English/ Welsh border.

Turn right.

7 *Turn left* Pollution and nutrient-rich water was channelled up this drain to try to dry out the peat workers gardens and surrounding farmland at the Moss Cottages. The enrichment has made

the peat disintegrate, allowing fen, swamp and willow and alder carr with alder buckthorn develop. This water was only able to be diverted back round the edge of the bog, where it would naturally have run, in 2011.



Fen plants growing in enriched water

8 Turn left This area was cut for domestic peat by peat workers from the Moss Cottages, even until the early 1990s, and was restored four years ago.

9 This 1826 ditch marked out the English/Welsh border. The 1877 Bronington Award map showed much of this corner of Whixall Moss as Welsh! Until Enclosure Award drainage allowed



Willow and alder carr

increased exploitation

of the bog, it didn't matter where the Border was on the sloppy "useless" quagmire – grazing the Moss was unsafe, and it was just used for gathering heather thatch, bracken for animal bedding, for hunting game using stone slingshots which are sometimes found in the peat, and for wildfowling. *Turn left.*

10 Cross onto Fenn's Moss in Wales at the "Dog leg" in the Border. On the left are restored heather-clad old commercial cuttings. Since 1851 the first successful commercial peat firm

The natural environment can be hazardous.

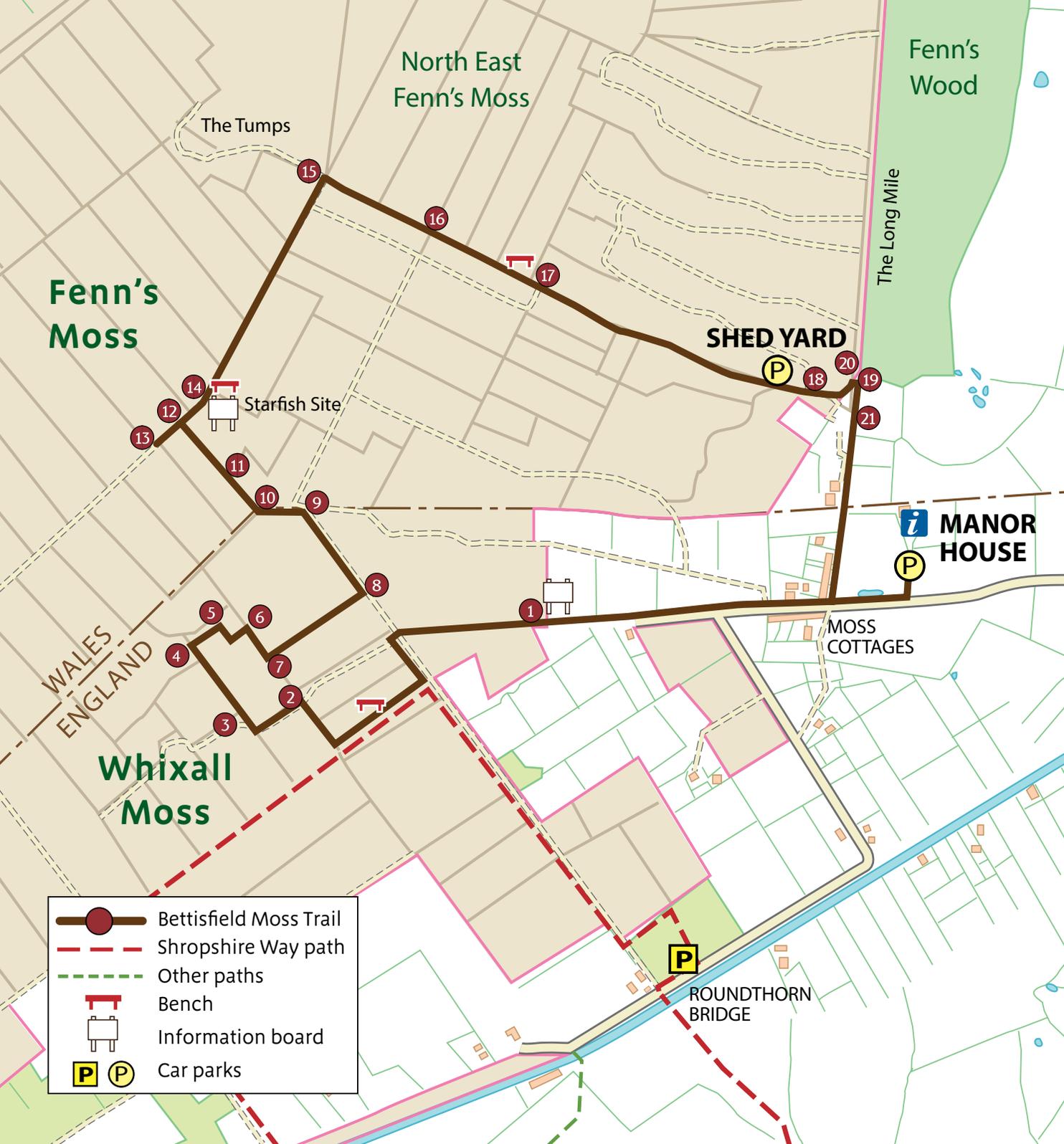
Please:

- Keep to the way-marked routes. The Mosses are riddled with deep, flooded and partly-vegetated ditches.
- Do not smoke on the Mosses at any time of the year. Even small fires can cause extensive damage.
- Watch out for adders. If bitten keep calm and seek medical attention.
- Do not collect plants or animals.
- Keep dogs on a lead from March to July, and otherwise at heel.
- Watch out for metalwork, projecting roots and branches, tree stumps, holes and tussocks.
- Horse riding and cycling are not safe on the peaty tracks.

For more information For more information on the other trails, our events programme, volunteering opportunities or to find out how to obtain a long term permit to explore deeper into the Reserve, contact us on 01948 880362 or visit www.naturalengland.org.uk.



Adder



North East Fenn's Moss

Fenn's Wood

The Tumps

The Long Mile

Fenn's Moss

SHED YARD

Starfish Site

MANOR HOUSE

MOSS COTTAGES

WALES
ENGLAND

Whixall Moss

ROUNDTORN BRIDGE

-  Bettisfield Moss Trail
-  Shropshire Way path
-  Other paths
-  Bench
-  Information board
-  Car parks

on Fenn's Moss was the English Peat Moss Litter Company operating from 1888, removing the peat on trams (horse drawn wagons on rails) to the first peat factory in the Shed Yard (see post 18). In 1915 the War Department took over, building a new factory on the Cambrian railway. Peat was used as bedding for cavalry horses, as at the remounting unit at Bettisfield Park Camp, and as a smokeless fuel in the trenches. The antiseptic sterile bogmoss was also used in wound dressings.

Midland Moss Litter Company workers



After WW1, the Bettisfield Trust Company began to cut the "black" peat for fuel and distillation, and in 1923 the Midlands Moss Litter Company processed the upper "white" and "grey" peat for packing, molasses-based cattle feed and livestock bedding. In 1926 their "Dutch" workers – the Decker family, Mr Suerin and Lodewyck Engelen, marked out the present system of 88-yard wide "flats" with marginal and central drains, separated by 11-yard wide tracks, all linked to a big new main drain through Fenn's Moss. They bought the Military's peat mills and built a new factory next door on the site of the current Fenn's Old Works, rebuilt in 1938 after a fire. The Old Works can just be seen across the bog. Intensive peat cutting then began.

Walk straight ahead.

11 The weather station is part of an international network, monitoring climate change. The world's bogs hold vast amounts of carbon in their peat.

Since the industrial revolution, greenhouse gas emissions have soared to levels unprecedented in any previous glacial or interglacial period, causing dramatic effects on our climate.

Peat is a huge carbon store





Mechanised peat cutting in 1991

Once cut, carbon in peat is quickly released, accelerating climate change. Re-pickling the world's bogs, like here, is urgent, to keep the carbon in bogs, rather than rotting in gardens. *Continue straight on.*

12 The area of restored peat cuttings ahead is the last commercially cut. In WW2 peat cutting was a reserved occupation, peat being used both for fuel and for manufacturing aluminium for aircraft. Later, the advent of coal and agricultural mechanisation reduced the demand for peat and commercial activity stopped. Local handcutter, Len Beckett, started a small peat business from Manor House for the growing horticultural market. In 1956, he bought Whixall and Bettisfield Mosses and in 1962 rented the 400ha Fenn's Moss, initially cutting 10 ha a year by hand. After a peat cutting machine was bought in 1968, the rate increased to 30ha/year. However in the mid 1980s, the Hanmer family increased the rent on Fenn's Moss fourfold to meet death duties and in 1988, Herb Allmark, the L.S. Becket firm's owner, sold out to Croxdens' Horticultural Products. Immediately they cut 140 ha/ year and opened ditches to drain the rest of Fenn's Moss.



Fenn's Old Works

The Moss stood black and bare, stacked with rows of drying peat, until the site was saved in 1991 by Natural England and Natural Resources Wales. The last Moss foreman, Bill Allmark, has been the source of most of the recent peatland history recounted here.

Take a short detour to the left. This track was the route of the Midland Moss Litter Company's two foot-wide narrow-gauge railway, on which a 1919 munitions engine and a 1939 quarry engine hauled trams of peat to the Fenn's Old Work from 1927 until 1963, to be milled, bailed and sent to market on the Cambrian Railway.

13 In WW2, before the construction of the more complex Strategic Starfish site, in 1940, portable fire baskets were set up at the Fenn's Wicket on "4 feet square 4 inch" thick concrete slabs, one of which remains here, and also on NE Fenn's Moss. Filled with flammable materials they were to have been ignited by electrical incendiary devices.

In the distance the line of trees marks the disused Cambrian railway line, floated across the Moss by the Oswestry, Ellesmere and Whitchurch Railway Company by sinking

heather bales into the peat, topped by birch logs, then sand ballast and capped by flagstones. *Return and pass post 12.*

14 *Turn right to the Strategic Starfish site.*

In the early years of WW2 Britain was under heavy attack from the Luftwaffe. German navigators dropped incendiary bombs on their targets. The following waves of aircraft dropped their bombs on the fires created by these pathfinders. To counteract this, Colonel Turner's top-secret department came up with the idea of decoy fires. When the incendiaries were dropped on a target, they were extinguished as soon as possible and, at the same time, all local Starfish Sites were instructed to light their decoy basket fires. From 10,000 feet these would look like burning streets and factories to decoy German bombers.

On this site the 65 Strategic Starfish fire baskets were lit remotely from a Nissen hut nearly a kilometre away (post **1**). This is one of a chain

[Strategic starfish site](#)



of three sites designed to protect Manchester, Merseyside and Crewe. The other two were at Llandegla and Llanasa.

Return to post 14 and turn right. Notice the bulrushes and willows indicating the upwelling of mineral-rich groundwater where the peat seal on the base of the Moss has been broken, either by peat cutters or by stray bombs from the NE Fenn's Moss bombing range.

15 Ahead and to the left is the higher ground of the NE Fenn's Moss, colonised by peat only about 2000 years ago. A circular area 100m on the left, the "Tumps", may have been a Bronze Aged tumulus, then on the edge of the bog, but now subsumed into the peat.

Turn right. This pre-WW1 Tramway was used by the horse-drawn trams taking peat to the English Peat Moss Litter Company's Shed Yard factory (post 18). Sand, together with clinker from the steam engine powering the peat mills, put down to stabilise the rails, has caused enrichment, reflected now in the growth of gorse bushes.

The pre-1940s Mezzina, where the 'Black Firm' cut peat briquettes for fuel lies on the left. North of that, in WW2, as a decoy, drums of paraffin were lit on the Lundt's cuttings trackways to simulate an airfield landing strip.

16 900m on the left, is the NE Fenn's Moss pre-1909 "1100 yard" rifle range and three 600m and one 300m WW1 ranges. Their earthworks are now partly buried under the 1960s pine forests in the distance.

In 1916, 1000 men from the Fenn's Bank tented camp trained on these ranges, as did soldiers from Bettisfield Park, Park Hall, Oswestry and



WW1 Rifle ranges

Prees Heath camps. In WW2, machine gun targets were set up on the rifle ranges for gunnery practice by fighter aircraft.

Continue along the track to the seat. The large pool on the right formed when the cuttings of the last hand cutters Abbie Austin and his son Duncan were dammed up in 2011. Because any cutting destroys the Moss, the 14 small hand-cutting businesses working on the Mosses in 1991 when the large-scale mechanised peat extraction stopped, have been bought out. Now bog wildlife is rapidly returning.

Abbie Austin cutting peat



17 In WW2 the Mosses were close to 3 Service Flying Training Schools (SFTS) at Shawbury, Sealand and Tern Hill and to 2 fighter and bomber Operational Training Units (OTUs) at Tilstock and Sleaf. In 1941 a “700-yard” radius bombing range was set up on NE Fenn’s Moss 600m left of this track. Spitfires and Wellingtons tore over the Moss. Titanium smoke flares from practice bombs were monitored by triangulation from 2 observation quadrant towers at either end of the “Long Mile” (post 20).



WW2 incendiary bombs

Continue along the track. On the right is an area of domestic “Whixall Bible” cuttings where the local men cut when evicted from the area of the N E Fenn’s Moss bombing range.

18 From 1886 to 1914, here in the “Shed Yard”, the English Peat Moss Litter Co.’s peat factory comprised a store, a stable for the tram horses and a workshop. Peat brought off the Moss on trams, was ground up and baled by machinery powered by a steam-driven engine. The bales and blocks of “burning turf” (peat for fuel) were transported on trams up the “Long Mile” to the



Whixall bible and Dutch potting blocks

O, E & W railway. *Turn left through the trees.* Notice the tram lines in the peat and the old bogie near the main track.

19 The 1826 Long Mile ditch on the right of the tramway was installed to drain the outer areas of the bog and surrounding mineral land, canalising and lowering the “lagg” stream that naturally ran around the edge of the bog, at the back of the trees. This allowed the area of the bog ahead to be converted for agriculture. The pine forest was planted on the drained bog in the 1960s. *Make a short detour to the left.*

20 A flagstaff here marked the south-east corner of the WW2 bombing range. The south-west corner flagstaff was at post 15 and the north-east one at the other end of the Long Mile. One of the two timber quadrant towers located at either end of the Long Mile, 1330 yards apart, stood on this concrete base. A 50 foot-long painted wooden arrow indicated the direction of the target. Observation tower staff triangulated the location of flares from the dropped bombs. Results were telephoned



Aunt Sally and husband Jo Allmark at Fenn's Cottage

to RAF Tilstock, who sent them on to relevant airfields. Machine-gunnery practise was also carried out on a dummy train towed on the tramway on the Long Mile.

The trees would not have been present then, giving clear visibility. Now dammed, willow carr (wet woodland), which naturally occurred around the edge of the bog, is returning.

Return and continue past post 19 and post 21 to the white cottage.

Fenn's Cottage was the office for the first peat factory. The large oak, opposite marks the English/Welsh border. Rents for the Wardle's and Hammers domestic peat cutting "banks" were paid to their agent Jo Allmark, and his wife Sarah, "Aunt Sally", who lived here.

The earliest commercially-cut peat from the Mosses was sent along a tramway from the Shed Yard and turned near the oak tree, to run down to a Quay on the 1807 Shropshire Union canal. After 1863, peat was sent up the Long Mile tramway to the railway for speedier distribution.

If parked at Manor House turn left.

In 1990, the **Manor House NNR Base** was the last peat factory. In 1933 Herbert Beckett purchased the house and land from the Wardle family, to run a market garden. His son-in-law Tom Allmark of the L.S.Beckett business, bought it in 1957 to expand peat processing.

After the closure of the railway in 1963, peat was brought off the Moss to here using Dexta tractors, processed into horticultural compost and taken away by road. The 15th century timber framed house, was knocked down in the 1970s to make way for the erection of the large green sheds and peat mills were brought across from the redundant Fenn's Old Works.

In 1988 Croxden's took over the factory, but since 1991, it has been Natural England's Base for the restoration of the Mosses. The peat auger, Dexta tractors and narrow-gauge railway engines and other artefacts are all stored here.

If parked in the Shed Yard, return to post 21 and turn left. Please close the gate after passing through.

Alfred Heath on Whixall Moss, carting peat cut for domestic fuel



This leaflet has been funded by the Meres & Mosses Landscape Partnership Scheme, which is managing a Government funded Nature Improvement Area and a Heritage Lottery Funded Landscape Partnership. It is working with land managers and the community to restore, conserve and enhance the natural & historic environment of the Meres & Mosses, whose distinctive features were formed during the last Ice Age, and to engage local people in understanding and caring for this landscape.

This programme has been supported by Defra, DCLG, Environment Agency, Forestry Commission, and Natural England

Natural England is here to secure a healthy natural environment for people to enjoy, where wildlife is protected and England's traditional landscapes are safeguarded for future generations.

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