

The 'Tour de Carse' or....

A landscape tour of Flanders Moss and the surrounding area

From polar conditions to Poldar Moss!

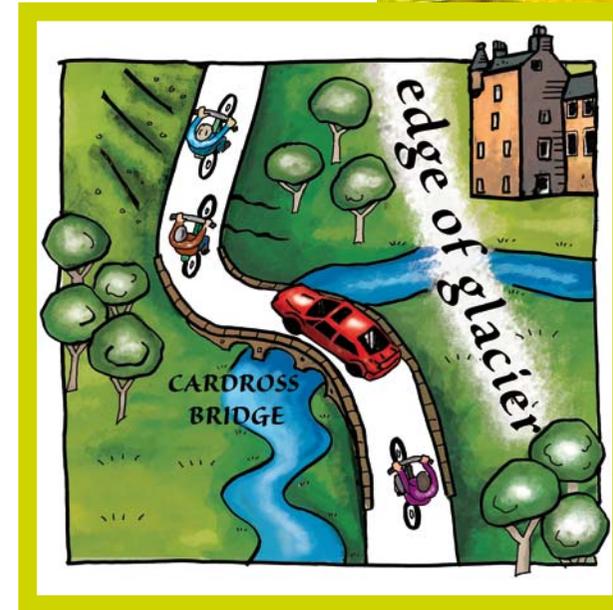
Follow our 32km (20.1 mile) tour to travel under metres of peat, through ancient seas, past the edge of a glacier and a collision between the Earth's tectonic plates! See how man has drastically altered this landscape, by hand! We begin at Flanders Moss car park (① on the map) and travel clockwise from the car park to Kippen, Arnprior, Port of Menteith, Thornhill and back to the car park, with numbered stopping points along the way.

Navigation is easy. We use north, south, east and west to help you locate points of interest. The highland mountains are always to the north, the lower Fintry Hills to the south, and there is a north point on the map. Travelling clockwise, the flat carselands with Flanders Moss at their centre will always be to your right. Take care when pulling in to and leaving stopping points. Refreshments are available at Thornhill, Kippen and the Port of Menteith, where there are views of the lake.

To begin, visit Flanders Moss National Nature Reserve. It will help set the scene for your tour, with lots of information for adults and children about this huge raised bog. Take a short walk around the boardwalk (900 metres) to experience the special, peaceful quality of this place.

A living landscape

There is much more to find out about Flanders Moss than is in this guide - it is a National Nature Reserve and a Site of Special Scientific Interest (SSSI). The bog is home to many rare species of plants, mosses and animals including the argent and sable moth, which has been adopted as the bog's emblem. More information about Flanders Moss and other NNRs is available online. You can download fact sheets to bring with you and use on site, or get more in-depth information at www.snh.gov.uk. Audio or large print copies of this leaflet and printed copies of on-line material are available from,

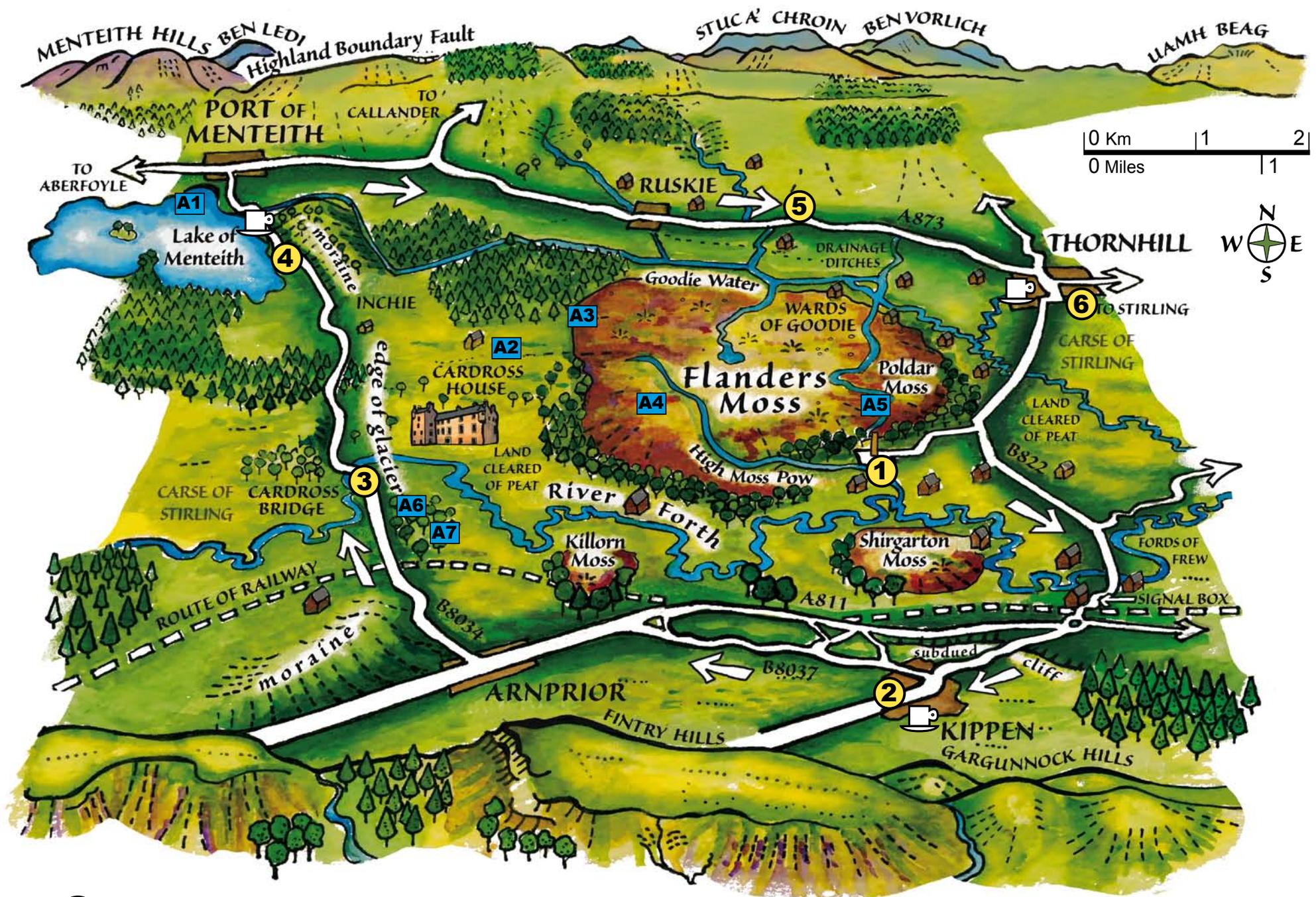


Flanders Moss National Nature Reserve

'Land of water'

Flanders Moss Reserve Manager,
Scottish Natural Heritage,
Beta Centre, Innovation Park,
University of Stirling, Stirling, FK9 4NF
Tel. 01786 450362





1 Stopping points

A2 Archaeological finds. Find out what they were on sheet **4**

 Refreshments and/or other facilities

2

Flanders Moss to Kippen

Flanders Moss car park ① is off the B822, past Poldar Moss. Imagine seven metres of peat above you, as it was before the 1700s. Then, people began to remove excess peat to create fertile soil, drastically reducing its size and depth. Tour the boardwalk and find out more! The River Forth enabled boats to travel through the Carse of Stirling. The fertile soil on the river bank was used for crops and animals. Peat was cut and floated out to sea. Downstream, the Fords of Frew was a crossing before bridges were built. Further on, look for the signal box on the old railway line at the bend, and then head up the hill to Kippen. Can you see the 'subdued' cliff? It overlooked the extended Forth Estuary when sea levels rose after the last Ice Age.

Kippen

Head up Main Street, to Fintry Road. Stop on Scott Brae ② (turnoff to the north, 4m/6.5km from start). This panorama takes in the flat Carse of Stirling, the distant Highland Boundary Fault and the Highland mountains beyond. Notice the colour change between the green fields and Flanders Moss. The Moss changes hue throughout the year, and is most beautiful in autumn and winter. Kippen residents once had peat cutting rights to the small bogs close to here - Killorn and Shirgarten Mosses. Peat was an important fuel and the rights belonged to the property, not the tenant. Head down to the A811 and west towards Arnprior.

Arnprior to the Forth Bridge

Turn north onto the B8034. To the west, hilly moraines (of clay, gravel, rocks and boulders) were left by the edge of the Loch Lomond Readvance glacier roughly 11,000 years ago. East of the road, meltwater formed tiny valleys as it ran out from the edge of the glacier. The old railway line 'floated' on logs, preserved by the acid bog. Pull in at the gates just before the bridge ③ (8.9m/14.3km). From Cardross Bridge (1744) over the River Forth, look west. The Carse of Stirling continues, and once so did the sea. It followed the valley as far west as Aberfoyle. After the last glaciers, sea levels were so high that only a 20km 'land bridge' linked the north and south of Scotland.

Lake of Menteith

Stop at the small layby west of the road, or further on at a signed picnic spot to the east ④ (11.3m/18.1km). The Lake of Menteith was formed as a glacier scraped out a hollow in the ground. This material was pushed forward by the glacier to form the hilly moraines on the east side of the road. This area has been lived in for many centuries. A Mesolithic hunting platform was found on the edge of Flanders Moss just south-east of here at Dam Cottage. Crannogs have been found in the lake, and Inchmahome Island has been the home of an Augustine priory since 1238.

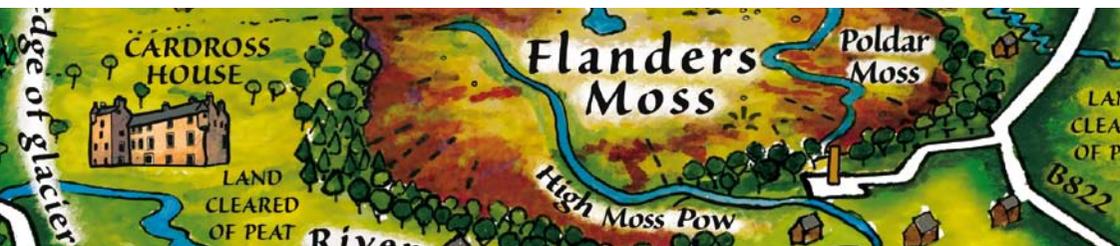
Port of Menteith to Thornhill

To the north the Menteith Hills become larger as you approach the Highland Boundary Fault. This very prominent landscape feature runs through Helensburgh, Aberfoyle and up to Stonehaven and was created by movements of the earth's tectonic plates. Turning east onto the A81, look at the Tollhouse windows - specially angled to see both ways!

Pull in at the layby to the north ⑤ (15.9m/25.6km). 250 years ago, all of the land to the south was bog. The Goodie Water was cut into a canal in an effort to drain this land. It was only partially successful, so it's easy to see where Flanders Moss begins. On the carse, drainage channels divide farmland, but to the north on the hills, stone walls and fences are used.

Thornhill and back

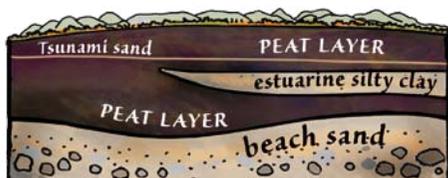
There are open views across the carse to Stirling Castle and the Wallace Monument as you head to Thornhill ⑥ (18m/28.9km). Follow the signs for the Community Centre and park. From here you can follow directions to a viewpoint and interpretation panel that tells you more about life on Flanders Moss. Downhill, on the carse, you return to land cleared of peat, by hand. East of the road, the ground becomes sandier - so it was some of the first to be settled on. It was only once settlements were established that peat clearing began, changing this landscape forever.



Layers in time

This landscape is old - and young! 460 million years ago the earth's tectonic plates caused the foundations of this valley and the rocks to the north to collide, creating mountains. The Fintry Hills to the south are 350 million years old. The boggy carse is less than 10,000 years old, but it tells the amazing story of this landscape since the last Ice Age ended.

During the last Ice Age, around 22,000 years ago, sea levels were lower than today. Vast ice sheets covered Scotland, pushing the land down. 15,000 years ago, the glaciers melted, and the sea rose faster than the land, flooding the Carse of Stirling. Slowly, the land rose and the sea retreated, leaving a layer of estuarine mud. Plants, then mosses colonised this, eventually forming a layer of peat. Then, around 12,000 years ago, the climate chilled again. Glaciers formed in the Highlands - an event known as the 'Loch Lomond Readvance'. The edge of one of these glaciers is marked on the map - look for its traces as you travel. 9,000 years ago rising sea levels again extended the Forth Estuary into the Carse of Stirling and new mudflats covered the land. When the sea finally retreated more peat formed, creating a network of bogs that stretched across the Carse of Stirling. 8,000 years ago a Tsunami originating in Norway left a stripe of fine sand in the bog. In the past 250 years, humans have considerably reduced the extent of these bogs. However, Flanders Moss is still the largest remaining intact raised (dome-shaped) bog in Britain.



Finds around Flanders Moss

Many artefacts have been found that show people made a living in and around the bleak landscape of Flanders Moss. People also invested time and effort to get onto the bog - there are remains of buildings, enclosures and floating log 'roads' and platforms. The Wards of Goodie Farm is recorded as far back as 1463, and is actually on the boggy carse - so early farmers must have made their living from the bog. Evidence for high sea levels after the Ice Age comes from finds in the bog - large whale carcasses have been found on the carse. The following finds are located on the map overleaf.

- A1** Four 2,000 year-old crannogs (wooden 'island' buildings on piers) lie in the Lake of Menteith.
- A2** The remains of a timber trackway that runs from south-east to north-west.
- A3** Two swords in a cross position were found in 1850 during digging for peat.
- A4** A glass armlet was found here in 1799.
- A5** A late Bronze Age sword was found in Poldar Moss (see illustration).
- A6** During peat clearance, a Mesolithic (7700BC) implement, made from red deer antler, was found in the clay under the peat. Nearby, on the Cardross Estate, a stone axe head was found.
- A7** A wooden platform, thought to have been Mesolithic (5500BC) was found behind Dam Farm. It's probably associated with hunting - a 'launching pad' or ceremonial structure.



A part in history

Stirling became a geographically strategic town because of this boggy landscape. Armies were forced to take the drier route to the east of the hills and bog. Picts and Romans are said to have fought over ground there. The Battle of Stirling Bridge in 1294, the Battle of Bannockburn in 1314 and the Battle of Sheriffmuir in 1716 were all fought close to Stirling. Although the carse was considered impassable, it seems that many people could find their way across it, including Rob Roy MacGregor - who is said to have hidden cattle on Flanders Moss, and as an outlaw escaped capture many times because of his knowledge of this ground.

Villages around the carse have varied histories. Thornhill was planned and founded by Archibald Napier in the late 1600s. Port of Menteith grew up around the lake and island priory. Arnprior gets its name from the Gaelic 'earrann' meaning a division of land - again from the priory. Kippen's church is recorded as far back as the 12th century, although now its earliest buildings are from the late 1600s. All are established on high ground, away from the bog.

Sodden peat bog was considered of low worth by landowners until the 1700s, when land values rose and labour was cheap. Agricultural techniques and roads were improving all the time, so it began to make sense to clear excess peat away to create fertile farmland. Large landowners leased portions of their land to highlanders made homeless during the clearances. The lease was rent-free, as long as the tenants cleared the peat away. They removed hundreds of hectares of peat from Flanders Moss by hand, changing this landscape forever.

A harsh life

While few people settled on the Carse of Stirling, a living could be made there. Peat bogs provided fuel and hunting. Grazing and crop growing could be done on the fertile strips of land that ran along the side of the Goodie Water and the River Forth. The rivers were also a means of transport.

The tenants who cleared peat to improve the ground for landowners were known as 'Moss Lairds'. The piece of bog they tenanted was a 'pendicle'. There were some at South Flanders, and look for a sign for the 'Pendicles of Collymoon' off the B8034. These were established in 1800, with 32-year leases.

Life on the carse was tough. Houses were dark, dank dwellings with peat walls and timber and turf roofs. Most of the work was done in winter and spring, when the ditches were flooded by rain. Peat was cut and put into the ditches that ran into the River Forth, so the peat was floated out to sea. Downstream, the water became polluted, causing much complaint from the local fishing industry and riverside communities. Peat clearance itself declined through the 1800s and stopped altogether by 1860, but the ragged edges of the pendicles can still be seen today.

