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## The Management Plan for Flanders Moss 2026-2026



**For further information on Flanders Moss NNR please contact:**

The Reserve Manager  
Scottish Natural Heritage  
Strathallan House  
Castle Business Park  
Stirling  
FK9 4TZ

Tel: 01786 450362  
Email: [nnr@snh.gov.uk](mailto:nnr@snh.gov.uk)



# The Management Plan for Flanders Moss NNR

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## **1 Site description**

Flanders Moss is one of the last fragile remnants of the great bogs that once covered much of Scotland. Lying 15 kilometres (km) west of Stirling, it is one of the largest lowland raised bog in Britain and one of the most intact raised bogs in Europe. Flanders Moss displays many of the classical raised bog features. Its distinctive domes shaped by the water within, support a rich, colourful carpet of bog mosses with large areas of the bog still accumulating peat. A whole host of specialist plants and nationally rare invertebrates make their home on this floating habitat. The underlying geology tells a fascinating story of ancient sea level changes and within the peat itself, pollen records changes that have taken place in the surrounding landscape over the years. Flanders became an NNR in 1982, it has since been recognised as internationally important and is now one of the sites in the Natura 2000 network of protected areas in Europe.

Flanders Moss is a delicate, easily damaged site with many deep water filled ditches so a boardwalk and viewing tower has been constructed to allow an estimated 10 000 visitors a year to sample the site comfortably and safely without damaging the bog habitat.

# Flanders Moss NNR Map



## **2 Our Vision for Flanders Moss NNR**

Our vision for Flanders Moss NNR in 2041

Flanders Moss is recognised internationally as one of the largest and best examples of a lowland raised bog in the UK.

After many decades of active management Flanders Moss is now a healthy, restored peatland system and has regained its natural structure and function. Over the majority of the reserve, the water table is stable, close to the surface, with sphagnum mosses carpeting much of the surface area and laying down new peatland layers.

Lagg fen has been restored around the edges of the moss helping to hold the water table high within the peat body and forming a wetland habitat for fen plants and waterbirds. The whole site soaks up water and releases it slowly into the surrounding landscape so contributing to natural flood management on the Carse of Stirling.

Trees and scrub form a sparse semi natural tree cover kept in check by the high water table and grazing from sheep and deer. The tree cover also provides ideal habitat for peatland insects including the moths, Rannoch brindled beauty, argent and sable.

The viewing tower, boardwalks and interpretative material, both on and offsite, encourage more people to visit and enjoy the reserve than ever before. Visitors leave the reserve knowing more about this important habitat and the species that depend on it. They appreciate how a well-managed peatland brings benefits to us all and by keeping carbon "locked up" in our peatlands we are helping to offset the effects of climate change.

The reserve is recognised widely amongst land managers, conservationists and students as a place demonstrating specialist peatland management and monitoring techniques; somewhere to learn and share knowledge from practical experiences. Schools are encouraged and welcomed to the reserve and make full use of the learning opportunities it provides.

Neighbouring landowners, communities and volunteers are actively involved with the management of the reserve and value it as a special place to visit, enjoy and benefit from.

### 3 Natural Heritage Management

#### Protected Areas and special features

Flanders Moss was first declared a NNR in 1982. Since then, we have entered into agreements with other landowners and purchased other parts. The reserve now covers an area of approximately 821 hectares (ha), 95% of the whole Flanders Moss peat body.

Flanders Moss NNR forms part of the Flanders Moss Site of Special Scientific Interest (SSSI) and the Flanders Mosses Special Area of Conservation (SAC). The SAC is a European designation; the active and degraded lowland raised bog features of Flanders Moss being the qualifying interests.

Whilst managing Flanders Moss NNR we have to take account of our legal obligations and Government policy to manage the features that are listed as important in a European or international context. Where a project is likely to have a significant effect on one or more of the qualifying interests of the SAC, we will carry out an 'appropriate assessment'. This includes all projects, whether they are direct habitat management or providing a new visitor facility on the reserve. We will only proceed with projects that do not adversely affect the site integrity. Likewise, we will also take account of obligations to manage features that are valued as important in a British context, as well as features that are locally important.

<b>Feature</b>	<b>Protected Area</b>
Quaternary of Scotland	<u>Flanders Moss SSSI</u>
Moth assemblage	<u>Flanders Moss SSSI</u>
Spider ( <i>Heliophanus dampfi</i> )	<u>Flanders Moss SSSI</u>
Active raised bog	<u>Flanders Mosses SAC</u>
Degraded raised bog	<u>Flanders Mosses SAC</u>
Raised bog	<u>Flanders Moss SSSI</u>

**Objective NH1:** Restore and maintain the water table of the peat body of Flanders moss

Past ditching and peat clearing at Flanders Moss has damaged the peat mass by dropping the water table below the surface. This drying out of the bog means that the specialized bog vegetation finds it harder to survive. Over the last 20 years extensive work has been done to repair this damage by damming ditches.

For the period of this plan further damming work will be carried out along the edges of some of the natural water courses that flow off the moss and any remaining man made ditches on the peat body. This mostly involves using either peat itself or plastic piling for dams but the new technique of deep trench bunding is being more frequently used. This involves sealing the edges of a peat area by building a compressed layer of peat under the surface to slow the flow of water off the moss. So that we can see if this restoration work is successful we will be monitoring the water table across the site using electronic data loggers.

**Projects planned to deliver Objective NH1 during life of plan:**

NH1.1	Carry out ditch blocking on East Moss side and by Poldar Moss
NH1.2	Carry out damming and bunding along the Northern and Moss-side Pow and their peripheral ditches
NH1.3	Carry out damming and bunding along the central and peripheral ditches in the High Moss Pow
NH1.4	Carry out Site Condition Monitoring as per national programme for raised bog ( SSSI) feature ,active raised and degraded bog ( SAC)features.
NH1.5	Assess water levels through maintenance of water loggers and associated telemetry system

**Objective NH2:** Restore the natural surface bog vegetation by grazing, tree and scrub removal of Flanders Moss

Past human management has modified the vegetation across the moss. Trees are invading the drier areas so accelerating the lowering water table and invasive non-native species such as rhododendron and Labrador tea-plant have spread across parts of the moss. As part of a long-term project trees will continue to be cleared from areas where they are spreading quickly while on wetter areas they will be left. Work to remove the invasive non-native species will also continue. Very low level grazing (principally sheep) will be continued or introduced across the moss as a sustainable way of minimizing the spread of trees species.

**Projects planned to deliver Objective NH2 during life of plan:**

NH2.1	Produce a tree management strategy by dividing the reserve into zones based on peat topography, tree species, density and age class and set priorities for tree management.
NH2.2	Continue scrub management programme
NH2.3	Continue rhododendron management programme by controlling regrowth and seedlings.
NH2.4	Facilitate the grazing of Ballangrew meadow, former SWT Reserve and the former plantation.
NH2.5	Identify areas to extend grazing on moss and facilitate to enable a natural and sustainable scrub and vegetation management

**Objective NH3:** Maintain existing and create new areas of lagg fen around Flanders Moss and other fen habitats along the High Moss Pow.

In many places around Flanders Moss the natural marshy area around the edge of the peat (lagg fen) has been lost, replaced by a drainage ditch mostly. We are therefore trying to recreate lagg fen where opportunities present as part of the restoration of a fully functioning peatland. This would involve damming any edge ditches and creating a wet edge to the peat. This has already been trialled at West Moss-side farm and we are looking to extend this area.

**Projects planned to deliver Objective NH3 during life of plan:**

NH3.1	Manage new area of lagg fen at West Moss-side through water level management, grazing and scrub control.
NH3.2	Work with neighbouring landowners to identify suitable areas for lagg fen creation
NH3.3	Assess the possibilities for lagg fen creation along the High Moss Pow

**Objective NH4:** Maintain, enhance and monitor biodiversity on Flanders Moss

Flanders Moss is rich in rare, specialized bog wildlife and also species that are declining nationally. The moss is exceptionally good for moths with a raft of rare and declining species found there. To improve our understanding of these we will continue monitoring across a range of habitats on the site. We will also train up volunteers to do further monitoring across Flanders and surrounding bog sites. We are keen to find out more about the reptile population of Flanders. Volunteers and staff will survey the site to map adder hibernaculum (over-wintering sites) and work out ways of checking the lizard population. The bird population will be monitored through national surveys such as WEBS counts, barn owl nesting box monitoring and any other national schemes running. The dragonfly population is extensive and we aim to train up volunteers to monitor it as the site gets wetter through the restoration works.

**Projects planned to deliver Objective NH4 during life of plan:**

NH4.1	Undertake research to determine the specific habitat requirements for Rannoch brindled beauty, argent and sable moths.
NH4.2	Carry out Site Condition Monitoring as per national programme for Quaternary of Scotland SSSI feature, moth assemblage SSSI feature and the spider <i>Heliophanus dampfi</i> .
NH4.3	Monitor the breeding success of barn owls and ring fledglings
NH4.4	Contribute to national and local monitoring schemes and surveys such as WEBS counts and BTO atlas surveys.
NH4.5	Monitor populations of adders, dragonflies and bats.

## 4 Management for People

**Objective VM1:** Provide a high quality visitor experience for a range of audiences ensuring that >80% rate their experience as good or above.

With a new reserve plan for Flanders Moss it seems an appropriate time to review the facilities and interpretation laid on for visitors. To feed into this we will carry out surveys of visitors using the site to take into account their views. We will then be able to improve the experience for people coming to Flanders Moss. We would like them to have a fulfilling and educational visit.

### **Projects planned to deliver Objective VM1 during life of plan:**

VM1.1	Develop a communication plan for all onsite and offsite interpretation reflecting new messages of climate change and carbon capture.
VM1.2	Review all interpretation in light of communication plan and identify if new or replacement material is required.
VM1.3	Carry out visitor perception surveys and counts as per national programme
VM1.4	Flanders Moss Big Bog Gallery

**Objective VM2:** Encourage a wide range of people to visit Flanders Moss

We will continue to develop ways of people hearing about and learning about Flanders Moss away from the reserve. To achieve this we aim to : - improve and update the information we have on the SNH website, - provide regular good quality social media updates about Flanders Moss, - provide good information for tourists visiting the local area, including at viewpoints in the surrounding area, - continue to write about Flanders Moss in local newsletters, local newspapers, journals and magazines, - put on a range of events on or near to the reserve to appeal to different audiences,

**Projects planned to deliver Objective VM2 during life of plan:**

VM2.1	Review and update information on Flanders Moss through Scotland's NNR website.
VM2.2	Provide regular updates on Flanders Moss for SNH's Facebook, twitter and Nature of Scotland blog.
VM2.3	Promote Flanders Moss by providing information in appropriate tourist/ visitor outlets.
VM2.4	Promote Flanders Moss by providing information and interpretation at appropriate locations within the landscape setting
VM2.5	Promote Flanders Moss by producing articles for local newsletters, magazines, journals and press releases.
VM2.6	Develop an annual programme of events on Flanders Moss
VM2.7	Investigate the feasibility of creating new access routes across or around the Moss from the existing NNR carpark and/ or linking with Thornhill.

**Objective VM3:** Engage with local communities and support volunteering

The moss is surrounding by the 4 small villages of Thornhill, Kippen, Port of Mentieth and Arnprior and we are keen to build stronger links with these communities that look out over Flanders everyday. This includes working with the Carse of Stirling landscape partnership project and attending community events. Volunteers are now essential to maintaining the quality of habitats across the reserve. We will continue to provide opportunities for volunteers to come and work on a special site that not many people get to see while ensuring that the experience is as rewarding as possible. We will also offer a 12 month student placement to a student from Scotland's Rural College (SRUC) each year as a way for them to gain valuable experience for their career development.

**Projects planned to deliver Objective VM3 during life of plan:**

VM3.1	Contribute to the Carse of Stirling landscape partnership project
VM3.2	Provide opportunities for volunteering through a programme of work parties
VM3.3	Run an annual student placement scheme offering at least one placement position.
VM3.4	Contribute to local community events where they provide opportunities to promote the Reserve.

**Objective VM4:** Provide a range of opportunities for research, education and demonstration.

In recent years we have worked with Thornhill Primary School on some excellent projects and we aim to continue this. This will include developing material that will be exhibited in the gallery frames around the boardwalk. Where resources permit we will make connections with the other local schools. We will also continue to work with the local University of Stirling and SRUC in presenting Flanders as an excellent learning location. This might be hosting groups for walks and activities and also facilitating student projects that contribute to the knowledge of Flanders. At Flanders we have trialled many peatland restoration techniques, ones that have worked and ones that haven't. We will present Flanders as a demonstration site to other peatland managers so that they may learn from our successes and mistakes.

**Projects planned to deliver Objective VM4 during life of plan:**

VM4.1	Work with local schools to encourage and support visits to Flanders Moss
VM4.2	Provide a series of demonstration events for various audiences from landowners, contractors and staff on bog management techniques and bog ecology
VM4.3	Provide tailored guided tours for college and university groups wishing to visit Flanders Moss.
VM4.4	Provide help and support for students wishing to carry out research projects on Flanders Moss

## 5 Property Management

**Objective PM1:** Property: To manage the Reserve property responsibly following best practice.

We aim to manage Flanders Moss responsibly following best practice and this means: - carrying out checks and maintaining the visitor infrastructure in a safe and good condition. - manage the deer according to targets set in the Flanders Moss deer management plan, - work with surrounding landowners to develop a Flanders Moss deer management plan, - produce a Property Asset Plan, - comply with Health and Safety legislation .

**Projects planned to deliver Objective PM1 during life of plan:**

PM1.1	Maintain all visitor infrastructure (trails, car park, tracks, fences, bridges, boardwalks and viewpoint) in good condition.
PM1.2	Carry out annual inspection of viewing tower.
PM1.3	Carry out quarterly safety and condition assessments of all visitor infrastructure and keep accurate records.
PM1.4	Ensure the property is maintained and conforms with Health & Safety Regulations including risk assessment and fire plan reviews
PM1.5	Ensure payments made for Nature Reserve Agreement and other annual payments.
PM1.6	Work with neighbouring landowners to produce a Deer management plan for Flanders Moss
PM1.7	Manage deer on SNH owned land in accordance with targets set by DMP for Flanders Moss once produced.
PM1.8	To complete landscaping car park project
PM1.9	Maintain all NNR equipment to a safe standard through an annual servicing programme.
PM1.10	Produce a property asset plan

## **6 Summary**

During this plan we will focus on restoring and improving the condition of Flanders Moss NNR. Through managing water levels, removing trees and scrub and managing the lagg fenn we aim to improve and extend the area of peatland in good condition. Through managing habitats and targeted works we hope to create better conditions for the many species that Flanders supports.

Our focus for visitors will be to continue with our work to improve awareness and understanding of peatlands; why they are important to people and the role they play. We will look to engage with visitors, providing opportunities on site but also using social media to share stories and information with a wider audience.

We will continue to offer opportunities for students, including a regular student placement. We will encourage volunteering and work with the local community and schools.

## 7 Document properties

**Photography:** Scottish Natural Heritage

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**Author:** David Pickett, Reserve Manager

**Editor:** David Miller, Operations Officer – NNRs

**Signed off by:** Andy Dorin, Area Manager – Forth

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### Links

For information about Scotland's National Nature Reserves and further information about Flanders Moss NNR please go to [www.nature.scot](http://www.nature.scot)

Other useful links:

Scottish Natural Heritage [www.nature.scot](http://www.nature.scot)

Joint Nature Conservation Committee [www.jncc.gov.uk](http://www.jncc.gov.uk)