



West Pennine Moors SSSI
Lancashire, Bolton, Bury, Blackburn with Darwen

*Notification under section 28C of the Wildlife
and Countryside Act 1981*

Issued by Natural England's Cheshire, Greater Manchester, Merseyside &
Lancashire Area Team on **17 November 2016**

Contact points and further information

This notification document is issued by Natural England's Cheshire, Greater Manchester, Merseyside & Lancashire Area Team.

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Your contact point for enquiries relating to this notification is: the West Pennine Moors SSSI Team consisting of Rosemary Budd, Karen Rogers, Ben Hibbins and Amy Cowburn.

A second document (*West Pennine Moors - supporting information*) is available on request from the address above. This contains information and extracts from relevant documents that have been used in the decision to notify this SSSI under Section 28C.

The date of notification of the West Pennine Moors SSSI is **17 November 2016**

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1. Summary

- 1.1. This document explains why the West Pennine Moors is notified by Natural England as a Site of Special Scientific Interest (SSSI).
- 1.2. The West Pennine Moors rise above Manchester and the Lancashire plain and function as one landscape for wildlife, water and approximately 1 million people who live nearby. The area of highest importance for its upland habitat, rare plants and breeding birds is notified as a SSSI. The SSSI covers over 7,600ha but this is less than 20% of the wider West Pennines area.
- 1.3. This SSSI notification will stimulate sustainable conservation within the upland landscape and encourage the widest possible collective commitment to safeguard the function and services provided by the West Pennine Moors. In particular, wildlife and water provision along with recreational and economic interests. Notification provides formal recognition of the site's national importance which will help all those with an interest to realise the landscape's potential for people and wildlife.
- 1.4. The West Pennine Moors SSSI is notified under section 28C of the Wildlife and Countryside Act 1981. Three SSSIs have been notified previously in the West Pennine Moors area: White Coppice Flush SSSI (0.56ha, notified in 1985), Oak Field SSSI (21.01ha, notified in 1985) and Longworth Clough SSSI (24.18ha, notified in 1994). The West Pennine Moors SSSI rationalises and clarifies the special interests of the area within a single designation, combining and linking the three previously notified SSSIs with substantial extensions totalling 7,616.72 ha (total SSSI area: 7,662.40 ha).
- 1.5. The annexes to this document are the legal papers that detail the scientific interest of the West Pennine Moors SSSI and the management required to maintain this interest, as well as maps of the site. You have a right to make representations or objections about the notification of this SSSI. Part 3 of this document explains how to do this.
- 1.6. Additionally, Natural England's consent is required by owners and occupiers before the operations listed in Annex 3 can be carried out. We will work closely with owners and managers, as well as other bodies, to ensure that existing operations and new works that are not likely to damage the special features of the SSSI can be carried out as usual.

2. The legal background

- 2.1 White Coppice Flush SSSI is enlarged under section 28C of the Wildlife and Countryside Act 1981 (as amended) and is now known as the West Pennine Moors SSSI. With effect from the date of this notification under section 28C, the previous notification of White Coppice Flush SSSI ceases to have effect (section 28C(5)). The previous notifications of Oak Field SSSI and Longworth Clough SSSI do not cease to have effect from the date of this notification but, subject to the confirmation of this notification under Section 28(5) of the Wildlife and Countryside Act 1981, Natural England will treat those notifications as though they cease to have effect.
- 2.2 Part 8 of this notification document contains the following legal papers required by section 28C the Wildlife and Countryside Act 1981:
 - a citation detailing the reasons for notification under section 28C (*Annex 1*);
 - a statement of Natural England's views on the management of the SSSI (*Annex 2*);
 - a list of operations requiring Natural England's consent (*Annex 3*); and
 - maps identifying the land subject to this notification under section 28C (*Annex 4*).

- 2.3 This notification has several effects. The key ones can be summarised as follows:
- owners and occupiers must give Natural England notice before carrying out, causing or permitting to be carried out any of the activities in the list of operations at *Annex 3*;
 - owners of land included in the SSSI have a legal obligation to notify Natural England within 28 days if the ownership or occupancy of the land changes;
 - it is an offence for any person intentionally or recklessly to destroy or damage the special features of the SSSI or to disturb any of the fauna; and
 - other public bodies must consult Natural England before carrying out or authorising any works that may damage the SSSI.
- 2.4 If you require any further information or advice on how this notification affects you, please do not hesitate to contact Natural England at the address shown at the beginning of this notification document.

3. Making representations

- 3.1 You have a legal right to make objections and representations about this notification. Any representations, including those supporting the notification, or objections should be made in writing to Natural England's Cheshire, Greater Manchester, Merseyside & Lancashire Area Team by **17 March 2017**. Representations can be sent by post, e-mail or online to the addresses shown on page 2. You may wish to seek legal or independent advice and your representative may wish to write to us on your behalf.
- 3.2 Natural England's Cheshire, Greater Manchester, Merseyside & Lancashire Area Team will consider your objections or representations and will try to resolve them. If there are no unresolved objections, approval to confirm the notification will be considered by an appropriate Natural England Director within nine months of this notification.
- 3.3 Any unresolved objections or representations will be considered by the Board of Natural England within nine months of this notification. If there are unresolved objections, confirmation of this notification is likely to be considered at the Board meeting provisionally scheduled for July 2017. Please note the desirability of the notification (for instance, for socio-economic reasons) will not form part of the Board's decision. Following consideration of objections and representations, the Board of Natural England may confirm or withdraw all or part of this notification. In reaching its decision the Board will consider whether, in light of the objections and representations received, Natural England remains of the opinion that the site is of special scientific interest. If you wish to emphasise any of your objections or representations to the Board in person, you should tell us when you write to us. You will then be advised of the date and location of the Board meeting.
- 3.4 Natural England will accept correspondence relating to unresolved objections up to seven days prior to the Board meeting at which the confirmation is due to be considered. Correspondence received after this date will only be presented to the Board in very exceptional circumstances and you will be expected to provide justification as to why there has been a delay in providing the information. The decision whether this information will be submitted to the Board is entirely at Natural England's discretion. The reason that there is a seven day cut off is to allow Board members sufficient opportunity to consider all of the issues and read all the relevant paperwork before they meet to take their decision.
- 3.5 Natural England has a policy of openness, which reflects our obligations under the Environmental Information Regulations 2004 and the Freedom of Information Act 2000. This legislation provides a legal right of access to information held by public bodies. This means that we will provide information on how we make our decisions on SSSIs to any person on request. This includes details of objections and representations received. We will assume, therefore, that your representation or objection can be made publicly available unless you indicate with clear and valid reasons which (if any) part(s) of these you wish to be excluded from this arrangement. However, you should be aware that the requirements of the legislation may mean that we cannot comply with your request that this information

be withheld. We do, however, respect people's privacy and will take all reasonable steps to consult you before reaching a decision on disclosure of the information.

- 3.6 As an individual or organisation with an interest in the West Pennine Moors SSSI your information will be stored and processed on a computer database that will be operated within the Data Protection Act 1998. This Act gives individuals the right to know what data we hold on them, how we use it and to which third parties it is disclosed. For the purposes of the Data Protection Act, the data controller is Natural England, Foss House, Kings Pool, 1-2 Peasholme Green, York, YO1 7PX.

4. Reasons for notification

- 4.1 The West Pennine Moors SSSI is a diverse mosaic of semi-natural upland habitats centred on three large expanses of blanket bog, with associated heathlands, flushes, woodlands and grasslands. These habitats support breeding birds that depend on upland, in-bye/moorland-fringe and woodland habitats, and a number of Nationally Rare and Scarce plant species. The site is of special interest for the following nationally important features that occur within and are supported by the wider habitat mosaic:

- **Blanket bog**

The principal vegetation of the blanket bogs is a community of hare's-tail cottongrass *Eriophorum vaginatum* with heather *Calluna vulgaris*, common cottongrass *Eriophorum angustifolium* and purple moor-grass *Molinia caerulea*. In areas where the water table is close to the bog surface, bog-mosses *Sphagnum* species are commonly found. More species-rich blanket bog vegetation occurs in patches with bilberry *Vaccinium myrtillus*, crowberry *Empetrum nigrum*, cranberry *Vaccinium oxycoccos*, bog-rosemary *Andromeda polifolia* and, very locally, royal fern *Osmunda regalis*.

As a result of previous management and/or wildfire, some areas are dominated by purple moor-grass. This community often contains dense patches of bog mosses (including the peat-forming papillose bog-moss *Sphagnum papillosum*) below the grass canopy.

- **Upland heathland**

On the shallower soils of the lower slopes lie small distinctive patches of wet heath, containing cross-leaved heath *Erica tetralix* and bog-mosses, and larger expanses of dry heath. As a result of previous grazing and burning management, the dominant species of the dry heath communities is heather, although more species-rich areas also support bilberry, tormentil *Potentilla erecta*, heath bedstraw *Galium saxatile* and wavy hair-grass *Deschampsia flexuosa*.

- **Flushes**

Acid flushes are an important component of the blanket mire landscape. Many support species such as round-leaved sundew *Drosera rotundifolia*, sedges including common sedge *Carex nigra* and mosses which may otherwise be scarce across the peatlands.

Of greater rarity is the suite of lime-rich flushes, such as those occurring on the Anglezarke/Withnell Moor complex and at White Coppice Flush, where the spring water is so rich in lime that it forms calcareous deposits. The springs contain carpets of lime-loving mosses and the insectivorous plants round-leaved sundew and common butterwort *Pinguicula vulgaris* grow around them.

- **Moorland fringe grasslands**

Throughout the lower slopes of the moorland blocks and the enclosed in-bye land are areas of rush pasture and mire grassland. The more species-rich stands are dominated by blue-green sedges such as star sedge *Carex echinata* and common sedge, with sweet vernal-grass *Anthoxanthum odoratum*, red fescue *Festuca rubra*, cuckooflower *Cardamine pratensis* and a thick carpet of brown mosses.

Most of the meadows and pastures of the in-bye on the lower slopes are acid in nature, with some of these communities extending on to the lower slopes of the moorland blocks. The dominant grass is common bent *Agrostis capillaris*, with mat-grass *Nardus stricta*, sheep's-fescue *Festuca ovina* and heath-grass *Danthonia decumbens* present at lower frequencies, along with tormentil, heath bedstraw, selfheal *Prunella vulgaris*, cat's-ear *Hypochaeris radicata* and autumn hawkbit *Scorzoneroides autumnalis*.

The more limited number of unimproved neutral hay meadows are equally significant. These traditionally managed grasslands support frequent sweet vernal-grass and red fescue, with pignut *Conopodium majus*, common mouse-ear *Cerastium fontanum*, meadow vetchling *Lathyrus pratensis*, yellow-rattle *Rhinanthus minor* and red clover *Trifolium pratense*. One particular example supports an outstanding population of globeflower *Trollius europaeus*.

- **Woodland**

Upland woodlands, some ancient, are found along steep-sided cloughs and water courses. Typically, these are oak woods with a species-poor heathy understorey in a mosaic with other, generally wet woodland and scrub. Of greatest diversity is Longworth Clough where, amongst the many flushes, is an area of an uncommon wet woodland type with alder *Alnus glutinosa* and greater tussock-sedge *Carex paniculata*.

Smaller stands of trees are scattered across the upland massifs, many of which are unfenced and grazed with the wider moorland habitats. These woodlands have thinner canopies than the dense woodland blocks and can support a richer ground flora.

- **Breeding birds**

The open moorland and adjacent moorland fringe or in-bye support a diverse assemblage of upland breeding birds including teal *Anas crecca*, red grouse *Lagopus lagopus*, merlin *Falco columbarius*, peregrine *F. peregrinus*, golden plover *Pluvialis apricaria*, lapwing *Vanellus vanellus*, dunlin *Calidris alpina*, curlew *Numenius arquata*, short-eared owl *Asio flammeus*, wheatear *Oenanthe oenanthe*, raven *Corvus corax* and twite *Linaria flavirostris*.

The SSSI also supports a diverse assemblage of woodland breeding birds, including scarce and/or rapidly declining species such as tree pipit *Anthus trivialis*, wood warbler *Phylloscopus sibilatrix*, spotted flycatcher *Muscicapa striata*, pied flycatcher *Ficedula ficedula* and willow tit *Poecile montana*.

Belmont Reservoir and the surrounding area support nationally important numbers of breeding black-headed gulls *Chroicocephalus ridibundus* and Mediterranean gulls *Larus melanocephalus*. An important colony of grey herons *Ardea cinerea* nests in plantation woodland on the banks of Turton and Entwistle Reservoir.

- **Flowering plants**

The unimproved neutral hay meadows at Sunnyhurst in the north-west of the site support important populations of two Nationally Rare species: starry lady's-mantle *Alchemilla acutiloba* and large-toothed lady's-mantle *A. subcrenata*. One of the water-bodies within Troy Quarry is home to an important population of the Nationally Scarce floating water-plantain *Luronium natans*.

5. Site boundaries

- 5.1 The SSSI boundary has been drawn to encompass land supporting the features of special interest, including areas required to ensure the viability and long-term sustainability of these features. The site boundary centres on the three large moorland blocks of the West Pennine Moors which are the most intact peatlands. Radiating out from these stretches of blanket bog, the boundary incorporates areas of heathland on steeper slopes and upland flushes, grading into moorland fringe grasslands at lower levels. All areas within the

boundary are deemed to be key nesting and foraging habitat for breeding birds, particularly as many of the upland, in-bye and woodland birds nest in one habitat and forage in others.

- 5.2 As a general principle, the boundary encompasses moorland hydrological units and is aligned with management units, such as enclosure and property boundaries. The boundary of the SSSI has been drawn to follow the nearest physical feature on the ground where possible. This usually follows existing walls, fence lines, hedgerows, ditches, drains, drove roads and metalled roads. Where the boundary follows a road, the inner edge of the road has been used and the road has therefore been excluded from the site. Conversely, where the boundary is drawn to a stream, ditch or drain, the outer bank has been used therefore including the stream, ditch or drain in the site.
- 5.3 Further clarification on the location of the SSSI boundary can be found in the Supporting Information document referenced in part 7. Alternatively, if you have queries in relation to specific areas of land, please contact Natural England's Cheshire, Greater Manchester, Merseyside & Lancashire Area Team at the address on page 2 of this document.

6. Management of the SSSI

- 6.1 Landowners and managers are critical to the ongoing management of the SSSI. Natural England aims to foster the best possible relationship with those managing the land so that its biodiversity can be conserved whilst also securing wider benefits. This notification includes a statement (*Annex 2*) of the management that Natural England considers is needed to conserve and enhance the features of special interest. Different management may be appropriate in different parts of the site and this statement is not intended to detail the exact requirements at specific locations. It provides a guide for discussions with owners and managers on action to achieve positive management of the SSSI.
- 6.2 Owners and occupiers will require consent before undertaking some operations in the SSSI. This notification includes a list of operations requiring Natural England's consent in *Annex 3*. The basis for the selection of these operations is set out in the Supporting Information document. Some operations may already be taking place and where they do not cause any damage they will be given consent. We will work with landowners and managers to agree lists of such existing and planned operations which can be approved.
- 6.3 Where an operation has been granted a consent, licence or permission from another public body a separate consent will not generally be required from Natural England; other public bodies are required to consult Natural England before such consents, licences or permissions are issued.

7. Supporting information

- 7.1 The detailed information which has been used to assess the importance of this SSSI (*West Pennine Moors SSSI – supporting information*) is available on request from the address on page 2.

8. Legal documents

- 8.1 Attached at *Annexes 1-4* that are the legal documents required by section 28C of the Wildlife and Countryside Act 1981.

Annex 1

Citation

This is a legal document on which you have a right to make objections or representations, as explained in part 3 of this notification document.

Site Name: West Pennine Moors **Unitary Authority/County:** Lancashire; Blackburn with Darwen; Bolton; Bury

District: Chorley; Hyndburn; Rossendale

Status: Site of Special Scientific Interest (SSSI) notified under section 28C of the Wildlife and Countryside Act 1981

Local Planning Authority: Lancashire County Council; Greater Manchester Combined Authority; Blackburn with Darwen Borough Council; Bolton Council; Bury Council; Chorley Council; Hyndburn Borough Council; Rossendale Borough Council

Ordnance Survey 1:50,000 sheets: 103, 109 **National Grid reference:** SD687183

Notification date: 17 November 2016 **Area:** 7,662.40 ha

Reasons for notification

The West Pennine Moors SSSI supports an extensive mosaic of upland and upland-fringe habitats. It is of special interest for the following nationally important features that occur within and are supported by the wider habitat mosaic:

- blanket bogs;
- wet and dry heathlands;
- acid and lime-rich flushes;
- rush pastures and mire grasslands;
- acid grasslands;
- neutral hay meadows and pastures;
- wet and dry broadleaved woodlands and scrub;
- diverse assemblages of upland moorland, in-bye and woodland breeding birds;
- breeding black-headed gulls *Chroicocephalus ridibundus*, Mediterranean gulls *Larus melanocephalus* and grey herons *Ardea cinerea*; and
- populations of starry lady's-mantle *Alchemilla acutiloba*, large-toothed lady's-mantle *A. subcrenata* and floating water-plantain *Luronium natans*.

General description

The West Pennine Moors comprise three distinct areas of moorland bordered by major roads to the west and east, stretching from Horwich and Bolton in the south to Darwen in the north and to Haslingden and Ramsbottom in the east. Whilst geologically a continuation of the Millstone Grit series of the main Pennine range of uplands, it is physically separated from the South Pennines by the Irwell Valley. The area still retains the traditional Pennine character of open moorlands, from which streams descend into wooded cloughs, pastures and meadows, whilst being distinctive in character as a result of its western-oceanic influence and lower altitudes.

Once the major source of income, agriculture is now fragmented by the built environment, industry and housing. This is a landscape of upland livestock farming and traditional field boundaries on large estates set against the strong urban character of many densely-populated nearby towns. The high rainfall and numerous streams running from the uplands made the area important as a supply of drinking water to the nearby conurbation of Greater Manchester. The many rivers and streams also led to the area's prominence in the industrial revolution, with the valleys supporting many textile and other mill industries, as well as mining and quarrying. Industrialisation has left its mark on the West Pennine Moors, most noticeably the chain of reservoirs nestling between the moorland blocks, which now provide key habitat for birds, and the legacy of historic air pollution that has left many of the upland habitats lacking in species diversity.

Upland habitats

The Millstone Grit geology of the region is a hard rock which impedes drainage and has given rise to the development of large flat-topped plateaus covered with deep peat above 400m altitude. The blanket bogs occur over almost 4,000 ha of the West Pennine Moors on Withnell, Anglezarke and Rivington Moors in the west, and Darwen and Turton Moors, Haslingden, Oswaldtwistle and Holcombe Moors further east.

The principal vegetation of the blanket bogs is a community of hare's-tail cottongrass *Eriophorum vaginatum* with heather *Calluna vulgaris*, common cottongrass *E. angustifolium* and purple moor-grass *Molinia caerulea*. Where the water table is close to the bog surface, bog-mosses, including flat-topped bog-moss *Sphagnum fallax*, fringed bog-moss *S. fimbriatum*, red bog-moss *S. capillifolium* and lustrous bog-moss *S. subnitens*, are commonly found in the understorey. Less commonly encountered species have a patchier distribution, such as the population of lesser cow-horn bog-moss *Sphagnum inundatum* on the southern flanks of Winter Hill. The blanket bog on Withnell Moor is typical of lower elevations within the West Pennine Moors.

More species-rich blanket bog occurs in patches but is more prevalent on Turton Moor. Flowering plants associated with these communities are bilberry *Vaccinium myrtillus*, crowberry *Empetrum nigrum*, cranberry *Vaccinium oxycoccos*, bog-rosemary *Andromeda polifolia* and, very locally, royal fern *Osmunda regalis*. As a result of previous management and/or wildfire, some areas are dominated by purple moor-grass. This community can contain dense patches of bog-mosses (including the peat-forming papillose bog-moss *Sphagnum papillosum*) below the thick grass canopy.

On the shallower soils of the lower slopes there are small distinctive patches of wet heath containing cross-leaved heath *Erica tetralix* and bog-mosses. Larger expanses of dry heath are often found in association with disused mine workings where, as a result of previous grazing and burning management, the dominant species is heather. More species-rich areas also support bilberry, tormentil *Potentilla erecta*, heath bedstraw *Galium saxatile* and wavy hair-grass *Deschampsia flexuosa*. The heathland at Haslingden Grane is particularly important for its small population of adders *Vipera berus*.

Blanket bog and heath are less common in the Ramsbottom to Ogden Reservoir area where very species-poor acid grassland dominated by mat-grass *Nardus stricta* is more frequently recorded, often related to the steeper sloping topography of this moorland area.

Acid flushes are an important component of the blanket mire landscape. Many support species such as round-leaved sundew *Drosera rotundifolia*, sedges, including common sedge *Carex nigra*, and mosses which may otherwise be scarce across the peatland areas. Oak Field provides the best example of the area's acid flushes, including species infrequently encountered elsewhere, such as bog asphodel *Narthecium ossifragum*, white sedge *Carex canescens*, marsh arrowgrass *Triglochin palustris* and marsh violet *Viola palustris*.

Of greater rarity is the suite of lime-rich flushes, such as those occurring on the Anglezarke/Withnell Moor complex and that at White Coppice Flush, where the spring water is so rich in lime that calcareous deposits are forming. The springs contain carpets of lime-loving bryophytes in which curled hook-moss *Palustriella commutata* is characteristic and conspicuous. Around the springs are the insectivorous plants round-leaved sundew and common butterwort *Pinguicula vulgaris*, as well as other lime-rich flush vegetation, such as greater tussock-sedge *Carex paniculata*, long-stalked yellow-sedge *C. lepidocarpa* and tawny sedge *C. hostiana*.

The open moorland and adjacent moorland fringe or in-bye support a diverse assemblage of upland breeding birds including teal *Anas crecca*, red grouse *Lagopus lagopus*, merlin *Falco columbarius*, peregrine *F. peregrinus*, curlew *Numenius arquata*, short-eared owl *Asio flammeus*, wheatear *Oenanthe oenanthe*, raven *Corvus corax* and twite *Linaria flavirostris*. The higher areas of blanket bog with shorter vegetation and pools are important for nesting golden plover *Pluvialis apricaria* and dunlin *Calidris alpina*. Other species require a mosaic of extensive habitats for successful nesting and foraging, nesting on the unenclosed moorland whilst often foraging elsewhere, including wet grassland and rush pastures in the in-bye fields below the moorland line. Breeding lapwing *Vanellus vanellus* nest and forage on the in-bye areas of the SSSI.

Moorland fringe grasslands

Throughout the lower slopes of the moorland blocks and the enclosed in-bye land are areas of rush pasture and mire grassland. While the majority of these communities tend to be species-poor, the more species-rich stands are dominated by blue-green sedges such as star sedge *Carex echinata* and common sedge, with sweet vernal-grass *Anthoxanthum odoratum*, red fescue *Festuca rubra*, cuckooflower *Cardamine pratensis* and a thick carpet of brown mosses.

Although small in area, the meadows and pastures of the in-bye are some of the most species rich areas within the West Pennine Moors. The majority of these grasslands on the lower slopes are acid in nature, with some of these communities extending on to the lower slopes of the moorland blocks. Of special note are the grasslands, both traditional hay meadows and pastures, of Bradley's Farm. The dominant grass of these communities is common bent *Agrostis capillaris*, with mat-grass, sheep's-fescue *Festuca ovina* and heath-grass *Danthonia decumbens* in frequent association with tormentil, heath bedstraw, selfheal *Prunella vulgaris*, cat's-ear *Hypochaeris radicata* and autumn hawkbit *Scorzoneroides autumnalis*. These fields also support a population of the locally rare grass purple small-reed *Calamagrostis canescens*.

The more limited number of unimproved neutral hay meadows are equally significant, especially those at Sunnyhurst in the north-west of the site where populations of the Nationally Rare starry lady's-mantle *Alchemilla acutiloba* and large-toothed lady's-mantle *A. subcrenata* occur within the traditionally managed grasslands. Among other species, these grasslands support frequent sweet vernal-grass and red fescue, with pignut *Conopodium majus*, common mouse-ear *Cerastium fontanum*, meadow vetchling *Lathyrus pratensis*, yellow-rattle *Rhinanthus minor* and red clover *Trifolium pratense*. Additionally, a remnant pasture in the Belmont area supports an outstanding population of globeflower *Trollius europaeus*. In addition to their flowering plants, traditionally managed grassland fields in the West Pennine Moors also support a rich diversity of fungi, the area being good for waxcaps in particular. Of significance is the pink waxcap *Hygrocybe calyptriformis* var. *calyptriformis* which is found at three locations within the site.

Woodland

The West Pennines Moors include a number of woodlands along steep-sided cloughs and some water courses. Typically, these are upland oak woods with a species-poor heathy understorey interspersed with a mosaic of other, generally wet woodland and scrub types, which often provide a transition to more open moorland habitats.

Stronsey Bank, Lead Mine's Clough, Dean Wood, Tiger's Clough, Hall Wood and Longworth Clough are ancient woodlands, with a predominance of sessile oak *Quercus petraea* or pedunculate oak *Q. robur* in the canopy, alongside abundant downy birch *Betula pubescens*, silver birch *B. pendula* and rowan *Sorbus aucuparia*. Holly *Ilex aquifolium* and hazel *Corylus avellana* are common in the understorey. On the ground, wavy hair-grass is interspersed with ferns, such as hard-fern *Blechnum spicant* or lemon-scented fern *Oreopteris limbosperma*, bilberry and wood-sorrel *Oxalis acetosella*.

The woodland within Longworth Clough is the most diverse, with a mosaic of woodland, scrub, heathland and grasslands. There is a well-developed shrub layer in places, including bird cherry *Prunus padus*, hawthorn *Crataegus monogyna* and guelder-rose *Viburnum opulus* on the wet, lime-rich ground. Within the many flushes of this woodland is also an area of an uncommon wet woodland type with alder *Alnus glutinosa* and greater tussock-sedge.

Smaller stands of trees are scattered across the upland massifs, many of which are unfenced and grazed with the wider moorland habitats. These woodlands have thinner canopies than the dense woodland blocks and, as a result, support a richer ground flora. For example, the wet woodland at Owshaw Clough, interspersed with numerous species-rich flushes, has frequent marsh hawk's-beard *Crepis paludosa*, greater bird's-foot-trefoil *Lotus pedunculatus* and meadow vetchling, as well as marsh valerian *Valeriana dioica* and many blue-green sedges.

The woodlands are also important because they support a diverse assemblage of woodland breeding birds, including scarce and/or rapidly declining species such as tree pipit *Anthus trivialis*, wood warbler *Phylloscopus sibilatrix*, spotted flycatcher *Muscicapa striata*, pied flycatcher *Ficedula hypoleuca* and willow tit *Poecile montana*. Some species, including buzzards *Buteo buteo* and

ravens, nest in the woodlands and hunt for food over the adjacent moorland and in-by. Tree pipits require more open areas, particularly in the transition from woodland to moorland and grassland.

Flowering plants

In addition to the lady's-mantles in the meadows mentioned above, one of the water-bodies within Troy Quarry is home to an important population of the Nationally Scarce floating water-plantain *Luronium natans*.

Breeding birds

As well as the upland moorland, in-by and woodland breeding bird assemblages described above, the SSSI supports important breeding populations of gulls and herons. Belmont Reservoir and the surrounding area supports nationally important numbers of breeding black-headed gulls *Chroicocephalus ridibundus* and Mediterranean gulls *Larus melanocephalus*, which nest together throughout the spring and early summer. Upland breeding birds also use the open water and nearby pasture-land for foraging, including large numbers of lapwing and curlew. In addition to its breeding birds, Belmont Reservoir supports an exceptional population of common toad *Bufo bufo*.

Other bird species also benefit from the man-made water bodies within the area, including grey heron *Ardea cinerea* which nests in a large heronry in plantation woodland on the banks of Turton and Entwistle Reservoir.

Annex 2

Views about Management

This is a legal document on which you have a right to make objections or representations, as explained in part 3 of this notification document.

Views About Management

Wildlife and Countryside Act 1981 Section 28(4) as inserted by
Schedule 9 to the Countryside and Rights of Way Act 2000

Natural England has a duty to inform the owners and occupiers of land within the **West Pennine Moors Site of Special Scientific Interest (SSSI)** of its views on how to manage the habitats and species of interest for nature conservation. This statement sets out our views on how the SSSI's special conservation interest can be conserved and enhanced.

Please be aware not all of the management principles outlined in this statement will be equally appropriate to all parts of the SSSI. There may also be other management activities, not outlined here, which could be beneficial to the conservation and enhancement of the features of interest.

Also be aware that this statement does not provide consent for any of the 'operations requiring Natural England's consent'. You need to have written consent from Natural England if you want to carry out any of those operations. Natural England welcomes discussion with owners, occupiers and users of the SSSI to ensure that the management of this site conserves and enhances the habitats and species of interest, and to ensure that all necessary prior consents are obtained.

Background

The West Pennine Moors SSSI has a wide range of upland habitats including large expanses of blanket bog interspersed with a mosaic of dry and wet upland heath, wet flushes, grasslands and clough woodlands. These habitats support significant populations of breeding birds and flowering plants. Many habitat, bird and plant features of interest rely on similar management but others have more specific requirements to keep them in good condition.

Blanket bog is a peatland habitat that is confined to cool, wet climates. Peat forms where certain plants decompose very slowly under waterlogged conditions. In ideal circumstances, the peat develops over large expanses of uplands, effectively 'blanketing' them. The wet, nutrient-poor growth conditions provided by peat means that the bogs and their associated pools support unique communities of specialised plants and animals. Upland heaths develop where thinner soils are nutrient-poor and acidic and are dominated by dwarf shrubs, especially heather. Rarer wet heath occurs on similar soils but in water-logged conditions, giving rise to a different community of plants including cross-leaved heath, bog asphodel and bog-mosses.

Within the blanket bog and upland heath areas, groundwater sometimes rises to the surface, giving rise to slowly seeping flushes and faster-flowing springs. Mosses, liverworts, sedges and rushes typically dominate upland flush vegetation. The open moorland habitats support a distinctive breeding bird community including many scarce and declining breeding species largely or completely confined to upland areas such as merlin, curlew, whinchat and twite. The mosaic of upland habitats described above should be maintained and managed to safeguard the diversity of the assemblage.

Clough woodlands are remnants of a more widely wooded landscape, surviving due to their inaccessibility on steep and often wet slopes. Oak, birch and rowan woodland is typical of upland cloughs, with an understorey of heath-like vegetation and a dense moss layer. Wet woodland, found in the clough bottoms and valleys, is usually dominated by alder and willow species and often supports important insects. Many woodland birds inhabiting the West Pennine Moors woodlands are scarce and/or rapidly declining species, such as cuckoo, tree pipit, wood warbler, spotted and pied flycatchers and willow tit. It is important to ensure that woodland management benefits these species in particular.

The West Pennine Moors SSSI also consists of ground lying below the moorland line, some of which is enclosed in-by farmland. Fen meadows and rush pastures form in a similar way to upland flushes, where the resulting habitats depend on the nature of the groundwater surfacing in

the area. As with their upland counterparts, these habitats also support a diverse range of plants and insects, including substantial sedge-based communities. Small areas of acid and neutral in-bye grassland have also been retained under traditional management. These are species-rich communities, benefitting from years of careful management with low or no nutrient inputs, a hay cut and grazing, or simply low intensity grazing. These grasslands support populations of Nationally Rare lady's-mantles.

The standing open water habitats of the area, including drinking-water reservoirs and quarry pools, provide additional diversity of habitat within the wider upland mosaic. These areas support nationally important numbers of breeding black-headed and Mediterranean gulls, a large heronry and a population of the Nationally Scarce floating water-plantain.

Upland habitats

The views about management in this section relate to: blanket bog, dry and wet heath, acid and lime-rich flushes, rush pastures and mire grasslands and all additional upland breeding bird habitat.

Where bogs, wet heath and flushes occur, very little management is required due to the impoverished ecological conditions. These sensitive wet habitats require careful grazing to maintain their interest, ordinarily to maintain structural diversity in the habitat (plants of different ages and sizes) and to prevent the area becoming invaded by trees and shrubs. Cattle or sheep are the preferred stock for these situations but hardy ponies can also be used. Grazing is also the preferred management for dry heath. The most important management factors are the timing and intensity of grazing and, in general, light summer grazing is the preferred regime. Winter grazing can often lead to stock preferentially eating dwarf shrub species, while over-grazing at any time of the year can damage the ground and promote the dominance of grasses. Both can lead to a decline in the botanical interest of the site. Extensive grazing regimes are also key to creating appropriate habitats for and minimising disturbance to a range of ground-nesting birds such as snipe, redshank, lapwing and curlew.

The use of burning as a management tool is damaging to blanket bog, wet heath and flush communities and should be avoided. Where grazing is not possible on dry heath habitat, careful periodic burning may be a useful tool for maintaining structural diversity but it is not advisable to introduce burning to areas that have not been burned before or have no recent history of burning. Burning should only be undertaken during the winter and should follow a burning rotation that promotes maximum biodiversity – ideally small patches on a long rotation. Larger areas of mature and over-mature heather should always be available for breeding birds, particularly nesting merlin, short-eared owl, curlew and twite. All management by burning should follow the guidance set out in the 'Heather and Grass Burning Code'.

Cutting is a possible alternative to burning on areas of dry heath and may be favoured. If cutting is used, care must be taken to remove the resultant litter or germination of seedlings will be inhibited. Cutting can be usefully employed to create firebreaks. However, care must be taken when using the machinery required for cutting as this can be damaging to the fragile upland peat soils. Cutting should be avoided where possible on wet habitats, for example where dry heath grades to wet heath, blanket bog or an upland flush.

No new drainage should be introduced to blanket bogs, wet heaths, flushes or their catchment areas, and deepening of any existing surface drainage should be avoided. Where water levels are controlled in bogs the water table should be maintained at or around the surface of the peat. It may be appropriate in some cases to block existing drains to prevent further lowering of the water table where this appears damaging. On bogs that have been disturbed, it may be beneficial to create new pools to allow moss re-colonisation and provide additional habitat for waders such as dunlin. Equally, in upland flushes, management must maintain or restore the natural hydrological process particularly in quantity and quality of water supply. Nutrient enrichment from stock feeding and other sources is damaging to all bog, wet heath and flush habitats and should be avoided. Care should also be taken to avoid any nutrient enrichment from adjoining water courses.

Sympathetic and extensive management as described above will also benefit the species comprising the upland and in-bye breeding bird assemblage that need a mosaic of habitats with

vegetation of varying ages and structures. Of particular importance is the retention of taller heather in places, such as on slopes or along watercourses, that may provide suitable nest sites for merlin, hen harrier, short-eared owl and twite. Conversely, shorter vegetation particularly on flatter, gently sloping land provides nesting and feeding sites for birds such as golden plover, lapwing and curlew. It is also particularly important to maintain the open nature of the land surrounding Belmont Reservoir and in other in-bye areas. Predator control may also be beneficial to protect the breeding sites of ground nesting birds. Equally, in some locations it may be beneficial to retain and develop local cover of native scrub, scattered trees and woodland where this is consistent with management objectives for upland and in-bye breeding birds.

As the unenclosed moorland habitats within this site are highly sensitive to inorganic fertilisers and pesticides, application should be avoided. Bracken control may be desirable where uniform single species stands are demonstrated to be invading habitats of importance. However, some sporadic patchy bracken areas within the heathland mosaic provide nest sites for whinchat, twite, ring ouzel and linnet.

Moorland fringe grasslands

Mire grassland and rush pasture

The views about management in this section relate to rush pasture and mire grassland habitats.

Rush pasture and mire grassland requires active management if it is to retain its conservation interest. Light summer grazing is the traditional method of achieving this, although the timing and intensity depends on local conditions, such as the need to avoid disturbing ground-nesting birds. Light trampling can be beneficial in breaking down leaf litter and providing areas for seed germination but heavy poaching should be avoided. Cattle are often the preferred stock because they produce an uneven, structurally diverse sward, are more tolerant of wet conditions and are able to better control tall grasses and rank vegetation. Where cattle are not available, ponies or hill sheep may be suitable livestock. An element of managed scrub, both within and around a field can be of importance to birds and insects, as can a surrounding hedge. Cultivation, increased drainage or the application of pesticides, herbicides or fertilizer is likely to be damaging and should be avoided.

Acid and neutral grasslands

The views about management in this section relate to: acid grassland, neutral hay meadows and pastures, including those with restoration potential and those supporting the Nationally Rare lady's-mantles.

Unimproved grasslands tend to be species rich and rely on regular removal of the grass sward and dead plant material to maintain their diversity. Management should keep a relatively open sward without causing excessive poaching. In hay meadows, this is traditionally achieved by closing the fields to stock, cutting the spring and early summer growth as hay, and grazing the aftermath in the late summer/early autumn. On pasture land this management is achieved by grazing alone. In both cases, the precise timing of management and intensity of grazing depends on local factors, including soil type, past management, altitude and current weather conditions, but only light grazing should take place until after ground-nesting birds have fledged and any short-lived, characteristic plants have set seed. Heavy poaching is damaging to all lowland grasslands and must be avoided.

The application of pesticides including herbicides would be damaging and should be avoided, although the targeted application of weed-killer may sometimes be appropriate to control invasive plants such as creeping thistle or ragwort. Fertilisers should also be avoided but periodic application of well-rotted farmyard manure may be acceptable on fields managed as hay meadows, particularly if there is a proven history of use with no harmful effect on the nature conservation interest. Occasional applications of lime may also be acceptable on neutral grasslands where this is a long-established practice. In addition, occasional management of invasive scrub and bracken may be necessary.

Starry and large-toothed lady's-mantles are herbaceous perennials of traditionally-managed upland hay meadows which have not been improved by re-seeding or the heavy application of fertilisers,

and whose cutting is delayed until after the plants have set seed. The slightly smaller and more delicate large-toothed lady's-mantle can survive in pasture as long as summer grazing is light enough to allow the plants to flower and set seed, although it does equally well in hay meadows, which is where this species is mostly found in the UK. Starry lady's-mantle is larger and bulkier, and able to compete in quite tall grassland, where management with a late hay cut is important for it to thrive. Neither species will survive in intensively managed grass fields, especially those cut for silage. There may be circumstances when specific management measures are needed to ensure the well-being of these currently small populations. In these situations the management will be discussed and agreed on a case-by-case basis.

Woodland

The views about management in this section relate to: upland oak woodland, wet woodland and scrub, habitat supporting woodland breeding birds and conifer plantation supporting grey herons.

A diverse woodland structure with some open space, some areas of dense understorey and a canopy of more mature trees is important. A range of tree ages and species within and between blocks of trees is desirable. Some dead and decaying wood such as fallen logs, old hollow trees or old coppice stools is essential for providing habitats for fungi, dead wood invertebrates and nesting areas for breeding birds. In this type of upland woodland, there is a graded edge to open habitat features, with scrub features including bracken and bramble vegetation providing transitional habitat.

Deer management and protection from rabbits, squirrels or livestock are often necessary. Pheasant and other game rearing is not recommended because the feeding leads to increased nutrients and the birds' foraging behaviour causes damage to the ground flora. In the case of upland woodlands, it can be beneficial to permit moderate to low levels of grazing to develop a patchy shrub layer and maintain ground layer vegetation structure. This creates conditions suitable for wood warblers and pied flycatchers. Heavy browsing should be avoided because it damages the ground flora and prevents successful regeneration.

Felling, thinning or coppicing may be used to create or maintain variation in the structure of the wood. For example, it may be appropriate to thin areas of dense, closed canopy to create more dappled shade and to encourage development of the shrub layer. Where they are a threat to the interest of the wood, non-native trees, shrubs and other plants, especially invasive plants such as *Rhododendron ponticum* or Himalayan balsam, should be targeted and removed. Natural regeneration from seed or stump regrowth (as in coppice) is preferable to planting.

Open space, either temporary gaps created by felling, coppicing or wind-throw, and more permanent areas such as rides and glades, benefits insects such as butterflies. Open spaces should be of sufficient size to ensure that sunny conditions prevail for most of the day. A more open woodland structure with large glades and rides will benefit tree pipits. Rides and glades may require cutting to keep them open.

Areas of wet woodland usually benefit from minimum intervention and are often best left undisturbed to limit damage to the fragile soils associated with them and their natural hydrology - a diverse woodland structure can be achieved and maintained primarily by natural factors. Such conditions favour scrubby willow, alder and birch stands and promote abundant deadwood, benefitting the willow tit in particular.

Whilst breeding in woodlands, some woodland bird species need a variety of other habitats nearby, including open in-by-land, wet grasslands and flushes, and scrub. It is important that this mosaic of supporting habitats is maintained throughout the SSSI.

In locations supporting heronries, management should maintain areas of woodland or plantation with a high proportion of tall mature trees (typically between 15-30m high) to provide suitable roosting and nesting sites for grey herons. In particular, disturbance of the woodland block during the breeding season (late February to early August) should be kept to a minimum. Recreational use of the woodland should be discouraged, whilst shooting for game should be avoided completely in areas where the birds are nesting. Grey herons search for food over extensive areas

away from their nesting sites so open water and wetland habitats present within the wider West Pennine Moors site should be retained to maintain foraging habitat.

Other features including open water bodies

The views about management in this section relate to: the Nationally Scarce floating water-plantain and breeding black-headed and Mediterranean gulls.

Floating water-plantain is an aquatic plant that requires slightly acidic, nutrient-poor to moderately nutrient-rich lakes, where it grows in water up to 2 metres deep. Although it can occupy a variety of aquatic habitats, in the West Pennine Moors it is growing in a disused quarry pool. Management should maintain water supply, quality and clarity. Neither fish nor other species, particularly water plants, should be introduced. While the species is tolerant of a small amount of disturbance, excessive disturbance should be avoided. The plant needs high levels of light so overhanging trees and other vegetation may require control. Given the importance of the species, consideration should be given to transplanting (with Natural England's permission) to other suitable water bodies nearby in order to build the resilience of the local population.

Where breeding black-headed and Mediterranean gulls are present, particularly in and around Belmont Reservoir, the lake shores and the neighbouring wet grassland, management should maintain shorter vegetation and keep shrub cover to a minimum to provide suitable nesting sites. Disturbance in the immediate vicinity of nesting birds should be kept to a minimum during the breeding season (April-August). Management should also ensure nesting areas are inaccessible to mammalian predators such as foxes.

Date Notified: 17 November 2016

Annex 3

List of operations requiring Natural England's consent

This is a legal document on which you have a right to make objections or representations, as explained in part 3 of this notification document.

Operations requiring Natural England's consent

Wildlife and Countryside Act 1981 Section 28 (4)(b) as substituted by Schedule 9 to the Countryside and Rights of Way Act 2000

The operations listed below may damage the features of interest of the **West Pennine Moors SSSI**. Before any of these operations are undertaken you must consult Natural England, and may require our consent.

It is usually possible to carry out many of these operations in certain ways, or at specific times of year, or on certain parts of the SSSI, without damaging the features of interest. If you wish to carry out any of these activities, please contact your Natural England Area Team who will give you advice and, where appropriate, issue consent. Please help us by using the 'notice form' (provided at notification and available on request) to ask for consent to carry out these operations.

In certain circumstances it will not be possible to consent these operations, because they would damage the features of interest. Where possible the Area Team will suggest alternative ways in which you may proceed, thereby enabling consent to be issued. To proceed without Natural England's consent may constitute an offence. If consent is refused, or conditions attached to it which are not acceptable to you, you will be provided with details of how you may appeal to the Secretary of State.

Standard reference number	Type of operation
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- | | |
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| 1. | Cultivation, including ploughing, rotovating, harrowing and re-seeding. |
| 2. | Grazing and alterations to the grazing regime (including type of stock, intensity or seasonal pattern of grazing). |
| 3. | Stock feeding and alterations to stock feeding practice. |
| 4. | Mowing or cutting vegetation and alterations to the mowing or cutting regime (such as from haymaking to silage). |
| 5. | Application of manure, slurry, silage liquor, fertilisers and lime. |
| 6. | Application of pesticides, including herbicides (weedkillers) whether terrestrial or aquatic, and veterinary products. |
| 7. | Dumping, spreading or discharging of any materials. |
| 8. | Burning and alterations to the pattern or frequency of burning. |
| 9. | Release into the site of any wild, feral, captive-bred or domestic animal, plant, seed or micro-organism (including genetically modified organisms). |
| 10. | Killing, injuring, taking or removal of any wild animal (including dead animals or parts thereof), or their eggs and nests, including pest control and disturbing them in their places of shelter. |
| 11. | Destruction, displacement, removal or cutting of any plant, fungus or plant remains, including tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungal fruiting body, leaf-mould, turf or peat. |
| 12. | Tree and/or woodland management and alterations to tree and/or woodland management (including planting, felling, pruning and tree surgery, thinning, coppicing, changes in species composition, removal of fallen timber). |
| 13a. | Draining (including moor-gripping, the use of mole, tile, tunnel or other artificial drains). |

Standard reference number	Type of operation
13b.	Modification to the structure of water courses (streams, springs, ditches, dykes, drains), including their banks and beds, as by re-alignment, regrading, infilling, damming or dredging.
13c.	Management of aquatic and bank vegetation for drainage purposes.
14.	Alterations to water levels, water tables and water utilisation (including irrigation, storage and abstraction from existing water bodies and through boreholes). Also the modification of current drainage operations such as through the installation of new pumps.
15.	Infilling or digging of ditches, dykes, drains, ponds, pools, marshes or pits.
16a.	Freshwater fishery production and/or management, including sporting fishing and angling, and alterations to freshwater fishery production and/or management.
20.	Extraction of minerals including peat, shingle, hard rock, sand and gravel, topsoil, subsoil, and spoil.
21.	Destruction, construction, removal, rerouting, or regrading of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, including soil and soft rock exposures or the laying, maintenance or removal of pipelines and cables, above or below ground.
22.	Storage of materials on blanket bog, heathland, flushes, rush pastures, mire grasslands, species-rich meadows or pastures or in woodlands.
23.	Erection of permanent or temporary structures or the undertaking of engineering works, including drilling.
24a.	Modification of natural or man-made features (including cave entrances) and clearance of boulders, large stones, loose rock or scree.
24b.	Battering, buttressing or grading of geological exposures and cuttings (rock and soil) and infilling of pits and quarries.
26.	Use of vehicles or craft other than on made-up roads or tracks.
27.	Recreational or other activities likely to damage or disturb the features of special interest.
28a.	Game and waterfowl management and hunting practices and alterations to game and waterfowl management and hunting practice.
28b.	Use of lead shot.

Notes

- i. This is a list of operations appearing to Natural England to be likely to damage the special features of the SSSI, as required under section 28 (4) (b) of the Wildlife and Countryside Act 1981 (as amended).
- ii. Where an operation has been granted a consent, licence or permission from another authority, separate consent will not be required from Natural England. However, other authorities are required to consult Natural England before such consents, licences or permissions are issued.
- iii. Any reference to 'animal' in this list shall be taken to include any mammal, reptile, amphibian, bird, fish, or invertebrate.

Date notified: 17 November 2016

National Grid reference: SD687183

Annex 4

Map(s) showing the land notified

This is a legal document on which you have a legal right to make objections or representations, as explained in part 3 of this notification document.

