# Assessment of plans and projects under regulations 21 and 63 of the Conservation of Habitats and Species Regulations 2017 as amended ('Habitats Regulations Assessment')

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|---|---|---|---|
| **Casework Tracker/ Application reference** | Not applicable | | |
| **Case/Application title** | Walshaw Moor Estate Catchment Restoration Plan | | |
| **Assessment made by** | | **Date:** | November 2017 |

**European Site(s):** **South Pennine Moors SAC (UK0030280)**
**South Pennines Moors SPA (UK9007021)**

**Component SSSI(s):** **South Pennine Moors SSSI**

**Assessment Contents:**

**3. Bird survey data – map extract**
**4. Location of areas of *Molinia* previously treated**
**5. R Howson File note: proposed stone road**
**6. Wildfire map**
**7. Causes of wildfires**
**8. Track construction map**

# Assessment of plans and projects under regulations 21 and 63 of the Conservation of Habitats and Species Regulations 2017 as amended ('Habitats Regulations Assessment')

## Assessment Summary

- The Walshaw Estates Ltd Catchment Restoration Plan (2017 – 2042) (the Plan) sets out a shared vision and multiple outcomes for grouse moor management, farming, biodiversity and the natural environment. It also includes a programme of moorland infrastructure and management/restoration works across the Estate.

  Those elements of the Plan that are not deemed to be necessary for the conservation management of the site has been subject to Appropriate Assessment. This is consistent with our assessment of similar upland long term plans. Natural England carried out an Appropriate Assessment as required by regulation 63 of the Conservation of Habitats and Species Regulations 2017 to ascertain whether or not it is possible to conclude that there would be no adverse effect on the integrity of a European Site. Natural England has concluded that it can be ascertained that the plan or project will not have an adverse effect on the integrity of the Moors SAC and SPA either alone or in combination and the Plan may be approved subject to conditions.

- On the basis of these assessments the operations in the Catchment Restoration Plan may be agreed.

# Assessment of plans and projects under regulations 21 and 63 of the Conservation of Habitats and Species Regulations 2017 as amended ('Habitats Regulations Assessment')

## PART A:
## Introduction and Information about the plan or project and an initial assessment of credible risk to European Sites

### A1. Introduction

This is a record of the Habitats Regulations Assessment ('HRA') undertaken by Natural England in its role of competent authority and in accordance with the assessment and review provisions of the Conservation of Habitats and Species Regulations 2017 ('the Habitats Regulations').

As a competent authority, Natural England may only give its consent, permission, assent or authorisation to a plan or project where it is able to ascertain *either*:

a) that it will not have a likely significant effect on a European site (either alone or in-combination with other plans and projects), or;
b) that it will have no adverse effect on the integrity of a European Site following an appropriate assessment.

If such effects cannot be ruled out, the proposal cannot proceed unless the further tests given in Regulations 64 and 68 of the Habitats Regulations can be satisfied (NE staff should see Natural England's HRA Operational Standard for further details on how to proceed further).

## A2. Details of the plan or project

**Location (including grid references):** Walshaw and Lancashire Moors – South Pennine Moors SSSI units 35 – 37, 40 - 51, 55 - 57, 79 - 84, 90, and 166, central grid reference SD941346.

**Name of applicant*:*** Walshaw Moor Estate (Mr R Bannister)

**Description of the plan or project and its constituent elements:**

The Plan that is the subject of this HRA is the version dated 13th December 2017.

Section 1 of the Catchment Restoration Plan sets out a shared vision and outcomes for the Estate over a 25 year period from 2017 – 2042.

The Agreement between Natural England and the Estate provides for the modification of existing consents for rotational burning issued in 2012.

In addition the Plan includes a programme of both moorland infrastructure works (to deliver rural economy objectives of the Plan) and conservation management/restoration works across the Estate. Most of the proposed operations are specified in the SSSI notification as requiring Natural England's prior consent, as laid out in Section 2 of the document and itemised in the list below:

**2.1 Grip blocking**

The grips identified in the grip blocking survey undertaken in 2013 will be blocked, as secured under the existing Management Scheme notice dated 5 July 2011. This will be delivered under an accelerated timescale. The purpose of the grip blocking is to restore the hydrological function of the blanket bog. It can also slow the flow of water, attenuating peak flows, reduce fire risk, and promote carbon storage. A detailed methodology which forms part of the Plan is given on p8-11.

**2.2 Gulley reprofiling**

Reprofiling will be applied to wider peat gullies where there is an eroding face, to reduce losses of peat and contribute to habitat restoration. Detailed methods forming part of the Plan are given on p11-13 of the Plan.

**2.3 Restoration of Molinia-dominated areas.**

The proposal involves application of seed or other propagules to approximately 90 ha of *Molinia*-dominated vegetation treated with herbicide in 2012 (Figure 9 in the

Plan) and herbicide treatment and seeding of additional grass-dominated areas with monitoring to assess results. Up to 1,000 ha will be restored at a rate of approximately 100 ha per year with follow up treatment and seeding if required. In combination with the grip blocking the aim here is to restore 1,000ha of wet heath/blanket bog phased over 10 years. Further details on methodology which forms part of the Plan is given in section 2.3 (p. 14).

**2.4 Habitat management of blanket bog, wet and dry heath**

These habitats will be managed to encourage restoration of peatland habitats to functional condition and to maintain heath in favourable condition in accordance with a 'traffic light' approach set out in the Plan. As an exception areas within a 50 m radius around shooting butts will be managed to maintain a shorter sward. .

SSSI unit 41 (468.3 Ha) will be used as a habitat management trial demonstrating cutting versus burning throughout the term of this Plan.

Section 2.4 of the Plan (p 16 – 20) provides further details.

This replaces consents for rotational burning. The Agreement between Natural England and the Estate provides for the modification of existing consents for rotational burning issued in 2012.

**2.5 Heather beetle management**

Where heather has been affected by heather beetle and shows no sign of recovery it may be managed by cutting or burning as an exception to the Habitat Management provisions detailed in section 2 .3 and 2.4 of the Plan.

Burning to control heather beetle will be undertaken in line with the dates specified in Heather and Grass Burning (England) Regulations 2007 (1 October to 15 April) or any relevant revision.

Cutting may be carried out between 1st July and 15th April, subject to a prior assessment of potential impact on breeding birds. Heather seed may be applied to assist the recovery in areas where beetle attack has killed the heather.

**2.6 Invasive vegetation management**

Bracken and soft rush dominated vegetation will be treated by herbicide application in accordance with relevant authorisations and manufacturers' instructions and subject to prior agreement with Natural England and other relevant interested parties.

The Plan states at 2.3 and 9.1 that any cutting of rush and treatment of bracken will avoid the breeding bird season (defined as the period 15 April – 1 July)

**2.7 Access infrastructure and habitat manipulation for wildfire management**

There is a history of wildfire at the Estate. Risk of ignition will be reduced by habitat restoration of grass dominated areas and risk of spread of wildfire will be reduced through grip blocking and by other elements of habitat management and restoration, which will restore water tables in the peat and reduce fuel loads.

In addition, an access route will be created so that Estate staff and Fire and Rescue Service personnel and vehicles are able to gain access and, particularly, to transport water to the area for firefighting purposes.

The risk of wildfire has been assessed by an independent and internationally recognised wildfire expert (Gibson. S., 2016) who has concluded that there is a significant risk of wildfire in the future and of spread of wildfire into areas of the Estate supporting priority habitat:

*There are a number of locations that present a significant risk of unlawful or accidental ignitions that can potentially cause fires that will penetrate into the interior of the estates landscape.*

*I have also considered the limitations imposed by the poor access onto some parts of the estate and believe this to be a major factor that will inevitably result in fires being larger and more damaging than they should be.*

*Considering all of the information I have been able to gather. My judgment is that the estates values and assets are at significant risk from damaging and significant wildfire events. I cannot of course predict when these events will occur, but would suggest that the level of wildfire risk will be significant at any time the weather conditions might support high intensity fires. Over the next 20 years I would suggest these conditions will occur many times. Therefore I believe that currently and in the future the estate is at risk from significant and potentially high impact wildfire events."*

Fire breaks will be cut around ignition sources identified in the Catchment Restoration Plan. These fire breaks will not exceed six metres in width and be cut in irregular patterns to reduce visual impact. Monitoring of rates of regrowth will determine frequency of cutting.

Areas of high fuel load close to ignition hotspots will be cut to create firebreaks. Exact locations will be agreed on site with Natural England and other interested parties.

Further details about the method of track construction, which form part of the Plan, are given on p24-30 of the Plan.

**2.8 Other infrastructure**

**Shooting butts**

Throughout the term of this Plan it may be necessary for the estate to repair existing shooting butts. In addition to this, two existing rows of screens have been identified for replacement, each with a row of 10 sunken/semi-sunken wooden butts. A detailed methodology is provided at p34 of the Plan.

**Lunch huts**

Existing lunch huts will be maintained or replaced as required including access and parking provisions.

**3. Research and Monitoring**

A cutting versus burning trial on unit 41 will also be monitored for the duration of the Plan.

Bird assemblage monitoring will take place annually in July by the keepers as part of their grouse monitoring activity.

The floating timber rail road will be subject to annual inspection and a programme of vegetation monitoring to assess whether there are impacts on the surrounding vegetation which may indicate hydrological changes as a consequence of its installation.

**Has the plan or project, or any aspect of it, already been subject to assessment under the Habitats Regulations by Natural England or another competent authority?**

Some aspects of the track were assessed in 2014, however, the route and construction techniques were different to the track contained in the Catchment Restoration Plan.

## A.3 Initial assessment of risks to European Sites

This section sets out the potential ways in which the plan or project might credibly affect the qualifying features of European Site(s) based on an assessment of location, proximity, type, scale, extent, duration, frequency and timing of the operations/activities which might take place if implemented.

The available advice provided by Natural England's Impact Risk Zones for terrestrial sites and /or statutory Advice on Operations for European Marine Sites should be considered as appropriate to inform this risk assessment.

These proposals directly affect the South Pennine Moors SAC and SPA. They are all proposed to take place within the designated boundary of both sites.

The location and the nature of the proposals included in the Catchment Restoration Plan are therefore deemed capable of affecting some or all of the qualifying features of each site; the proposals include the direct management of vegetation each year and the physical installation and use of moorland infrastructure which have the potential to directly or indirectly interact with and impact on SAC and/or SPA features.

An annual review of the Catchment Restoration Plan will take place to allow any unforeseen negative impacts to be identified and addressed in the course of its implementation.

With reference to the information above and before undertaking a more detailed screening assessment, **on the basis of professional judgment;** Natural England has concluded;

~~☐ It is clear, without needing to gather further information, that the whole of the plan or project, throughout all of its life stages, could not possibly have any adverse effect upon a European Site at all and is eliminated from further Habitats Regulations assessment. Consent/permission/authorisation/assent may be given ***[delete Parts B, C and D, go to Part E***]~~

☐ There is or may be a credible risk that the plan or project subject to an assessment might undermine the conservation objectives of a European Site and so further Habitats Regulations assessment is therefore necessary (**go to Part B**).

# PART B:
# Information about the European Site(s) which could be affected

## B1. Brief description of the European Sites(s) and their Qualifying Features

There is or may be a credible risk that the plan or project subject to an assessment might undermine the conservation objectives of the following European Sites:

- **South Pennine Moors Special Area of Conservation (SAC)**

  The SAC has been designated due to the presence of the following habitats;

  - Blanket bogs (priority feature if active bog)
  - European dry heaths
  - Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles.
  - Transition mires and quaking bogs
  - North Atlantic wet heaths with *Erica tetralix*

  The SAC features Blanket bog, European dry heaths and North Atlantic wet heaths are those present in parts of the site affected by these proposals.

  The other SAC features (Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles and Transition mires and quaking bogs) are not present within those parts of the SAC affected by these proposals. **These two features have therefore been eliminated from further assessment.**

- **South Pennine Moors Phase 2 Special Protection Area (SPA)**

  This SPA has been classified due to the presence of;

  - Breeding Merlin *Falco columbarius*
  - Breeding Golden plover *Pluvialis apricaria*
  - An assemblage of birds during the breeding season **(**including lapwing, dunlin, snipe, curlew, redshank, common sandpiper, short-eared owl, whinchat, wheatear, ring ouzel and twite)

Each of the SPA bird species and dunlin, snipe, curlew, ring ouzel, short eared owl and twite from the important assemblage of breeding birds occupy habitats affected by these proposals.

## B2. European Site Conservation Objectives (including supplementary advice)

Natural England provides advice about the Conservation Objectives for European Sites in England in its role as the statutory nature conservation body in England. These Objectives (including any Supplementary Advice which may be available) are the necessary context for all HRAs. Where Conservation Objectives Supplementary Advice is available from Natural England, which provides further detail about the features' structure, function and supporting processes mentioned above, the implications of the plan or project on the specific attributes and targets listed in the advice will be taken into account in this assessment.

In light of the European Sites which could be affected by the plan or project, this assessment will be informed by the following site-specific Conservation Objectives;

**South Pennine Moors SAC**
*With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;*

***Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;***
- ***The extent and distribution of the qualifying natural habitats***
- ***The structure and function (including typical species) of the qualifying natural habitats, and,***
- ***The supporting processes on which the qualifying natural habitats rely***

[Available at http://publications.naturalengland.org.uk/publication/4973604919836672]

**South Pennine Moors (Phase 2) SPA**
*With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;*

***Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;***
- ***The extent and distribution of the habitats of the qualifying features***
- ***The structure and function of the habitats of the qualifying features***
- ***The supporting processes on which the habitats of the qualifying features rely***
- ***The population of each of the qualifying features, and,***
- ***The distribution of the qualifying features within the site.***

[Available at http://publications.naturalengland.org.uk/publication/4885083764817920]

## PART C:
## Screening of the plan or project

To check whether a detailed appropriate assessment is necessary, there are two screening tests required by the assessment provisions of the Habitats Regulations;

**C1. Is the plan or project either directly connected with or necessary to the (conservation) management (of the European Site's qualifying features)?**

Although a number of the works in the Plan are considered to be either directly connected with or necessary for the conservation/restoration of some of the SAC and SPA moorland features to favourable conservation status, there are a number of elements of the Plan which cannot be screened out as specifically or exclusively for these purposes.

The proposals include measures to significantly improve habitat condition through restoration of habitat, primarily through restoration of the hydrological function of blanket bog areas through grip blocking; and restoration of SAC features on grass dominated areas. These and other measures also aim to mitigate the risk of wildfire starting or propagating across the site and act to reduce risk, as set out in Gibson, (2016), to address potential loss or damage to habitat or species.

These proposals include the development of a track which will provide access to tackle wildfire. This is supported by an opinion that the track infrastructure is necessary for the management of wildfires on the site should they occur, as part of an integrated plan to restore habitat and reduce the risk of wildfire. This is set out in detail in Gibson, (2016), Gibson, (2017) and the statement provided by the Estate in Appendix 5.

Table C1 provides a summary of decisions in respect of each constituent element of the Plan.

**Table C1.**

**European Sites: South Pennine Moors SAC and SPA**

| Proposed activity/element of the project | European site qualifying feature | Connected with or necessary for conservation management? | Reasons for decision | Carry forward activity to LSE test? |
|---|---|---|---|---|
| Grip blocking and gulley reprofiling | Blanket bog and wet heath | Yes | Grip blocking and reprofiling will contribute to restoration of water tables and hydrological function in peat. Higher water tables will contribute to resilience against wildfire. The grip blocking proposals are included in an existing Management Scheme. | No |
| | Dry heath | Yes | Higher water tables will contribute to resilience against wildfire. | No |
| | Merlin; Golden Plover; assemblage of species | Yes | Grip blocking and reprofiling will contribute to restoration of water tables and hydrological function in peat. Higher water tables will contribute to resilience against wildfire. The grip blocking proposals are included in an existing Management Scheme. Works will be carried out outside the bird breeding season. | No |

| Proposed activity/element of the project | European site qualifying feature | Connected with or necessary for conservation management? | Reasons for decision | Carry forward activity to LSE test? |
|---|---|---|---|---|
| Habitat restoration | Blanket bog and wet heath. | Yes | Grass dominated vegetation occupies generally shallow peat soils which should be restored to support wet heath or blanket bog communities (dependent on local conditions). This management aims to increase the extent of priority habitat. Works will reduce fire risk and improve habitat quality and suitability for some breeding birds but there are concerns about short term impacts on run-off and water quality that will need to be managed. | No |
| | Breeding populations of SPA birds – | No | Grass dominated vegetation can provide suitable breeding habitat for golden plover. It also supports small mammals – populations may be lower in restored vegetation affecting prey availability for predatory birds. This possibility is an acknowledged consequence of management change.<br><br>Works will reduce fire risk and improve habitat quality and suitability for breeding birds but there may be short term impacts on birds and ecosystem integrity, affecting run-off and water quality. | Yes |

| Proposed activity/element of the project | European site qualifying feature | Connected with or necessary for conservation management? | Reasons for decision | Carry forward activity to LSE test? |
|---|---|---|---|---|
| Habitat management of blanket bog, wet and dry heath (cutting of vegetation, cool burning of vegetation) | Dry heath<br>Blanket bog, wet heath | Yes<br>Partially | Vegetation management is necessary for maintaining and improving condition of dry heath and for reduction of fire risk. The management proposed will benefit dry heath.<br><br>Management to maintain short vegetation around shooting butts is specifically for grouse moor management and is not necessary for the management of the site. It is already consented through the existing HLS agreement to 2022.<br><br>Cutting/burning of vegetation to restore degraded and active blanket bog with subsequent inoculation or seeding of *Sphagnum*/cottongrass, may be considered necessary for the conservation management of these features. | No<br>Yes – for management around shooting butts post 2022 |
| | Breeding populations of SPA birds | No | As above.<br><br>The habitat management proposed may impact on the availability of small mammal prey eg for breeding short eared owl. It may also reduce nesting habitat for other SPA features. | Yes |
| Heather beetle | Blanket bog, | No | Proposed to prevent | Yes |

| Proposed activity/element of the project | European site qualifying feature | Connected with or necessary for conservation management? | Reasons for decision | Carry forward activity to LSE test? |
|---|---|---|---|---|
| management on blanket bog (by cutting, burning, re-seeding with heather) | wet heath, dry heath | | heather damage with red grouse management in mind. Not specifically required for restoration/conservation of SAC habitats. | |
| | Breeding populations of SPA birds. | No | Proposed to prevent heather damage with red grouse management in mind. Not specifically required for restoration/conservation of SPA supporting habitats or maintenance of breeding SPA bird populations. | Yes |
| Invasive vegetation management (soft rush, bracken) using application of herbicide | Blanket bog and wet heath and dry heath | Yes | Control of dense rush in wet heath may be needed to improve the condition of these features.<br><br>Control of dense bracken may improve the condition and/or extent of dry heath. | No |
| | Breeding populations of SPA birds | No | Control of rush may affect breeding birds through changes in habitat structure. This may benefit wader species if it creates vegetation with a diversity of sward height.<br><br>Bracken control is not necessary for some breeding bird species such as twite and whinchat (part of the SPA breeding bird assemblage). | Yes |
| Habitat manipulation for wildfire management | Blanket bog and wet heath and dry heath | Yes | Use of fire breaks will reduce the likelihood of damaging wildfire. See Habitat Restoration above. | No |

| Proposed activity/element of the project | European site qualifying feature | Connected with or necessary for conservation management? | Reasons for decision | Carry forward activity to LSE test? |
|---|---|---|---|---|
| | | | Cutting will be targetted mainly in areas of high fire risk which are predominantly grass-dominated vegetation and will be limited to 6m widths. Monitoring of rates of regrowth will determine frequency of cutting and will be considered at Annual Reviews. | |
| Habitat manipulation for wildfire management | Breeding populations of SPA birds | Yes | Use of fire breaks will reduce the likelihood of damaging wildfire. Management will be carried out outside the bird breeding season. See above. | No |
| Shooting Butts: Replacement of existing screens with semi sunken and/or sunken shooting butts (2 lines) | Blanket bog<br><br>Breeding populations of SPA birds | No | Not required for restoration/conservation of SAC features or SPA supporting habitat or SPA breeding bird populations. | Yes |
| Construction and use of new access track Walshaw Dean Reservoir to Robin's Ditch and turning circle ***Section A*** | Blanket bog, wet heath, dry heath | No | Track will be used to facilitate access to tackle wildfire but will also be used for other Estate management purposes so unclear that track is necessary for the management of the site. | Yes |
| | SPA features | No | Track will be used to facilitate access to tackle wildfire but will also be used for other Estate management purposes so unclear that track is necessary for the management of the site. | Yes |
| Construction and | Blanket bog, | No | Track will be used to | Yes |

| Proposed activity/element of the project | European site qualifying feature | Connected with or necessary for conservation management? | Reasons for decision | Carry forward activity to LSE test? |
|---|---|---|---|---|
| use of new access track Walshaw North Drive to Crow Hill and turning circle ***Section B*** | dry heath | | facilitate access to tackle wildfire but will also be used for other Estate management purposes so unclear that track is necessary for the management of the site. | |
| | SPA features | No | As above | Yes |
| Construction and use of new access track Robin's Ditch to Crow Hill ***Section C*** | Blanket bog, wet heath, SPA features | No | Track will be used to facilitate access to tackle wildfire but will also be used for other Estate management purposes so unclear that track is necessary for the management of the site. | Yes |
| | SPA features | No | As above | Yes |
| Construction and use of new access track Steeple Stones to Crow Hill ***Section D*** | Blanket bog, dry heath, | No | Track will be used to facilitate access to tackle wildfire but will also be used for other Estate management purposes so unclear that track is necessary for the management of the site. | Yes |
| | SPA features | No | As above | Yes |
| Construction and use of turning circles and passing places | Wet heath, dry heath, | No | Track will be used to facilitate access to tackle wildfire but will also be used for other Estate management purposes so unclear that track is necessary for the management of the site. | Yes |
| | SPA features | No | As above | Yes |

**Conclusions:**

☐ ~~As the plan or project is either directly connected with or necessary to the management of all of the European site(s)'s qualifying features. These are considered to be exempt from further Habitats Regulations assessment [**go to C3]**~~

☐ As the plan or project is either not directly connected with or necessary to the management of all of the European sites' qualifying features, and/or contains non-conservation elements, further Habitats Regulations assessment is required (go to C2)

**C2. Is there a likelihood [or risk] of significant [adverse] effects ('LSE')?**

This section details whether those constituent elements of the plan or project which are (a) not directly connected with or necessary to the management of the European Site(s) features and (b) could conceivably adversely affect a European site, would have a **likely significant effect,** either alone or in combination with other plans and projects, upon the European sites.

In accordance with European case law, this HRA has considered an effect to be 'likely' if it '*cannot be excluded on the basis of objective information'* and is 'significant' if it *'undermines the conservation objectives'*. In accordance with Defra guidance on the approach to be taken to this decision, in plain English, the test asks whether the plan or project '*may'* have a significant effect (i.e. there is a risk or possibility of such an effect).

Each of the project elements has been tested against each of the relevant European site qualifying features. An assessment of potential effects using best available evidence and information has been made in the following sections below.

Measures that would avoid or reduce the risk or likelihood of significant effects arising and which are already integral to the nature of the plan or project as submitted have been taken into account at this stage.

**C2.1 Risk of Significant Effects Alone**

The first step is to consider whether any elements of the project are likely to have a significant effect upon a European site 'alone' (that is when considered in the context of the prevailing environmental conditions at the site but in isolation of the combined effects of any other 'plans and projects').

Such effects do *not* include those deemed to be so insignificant as to be trivial or inconsequential.

The results of this assessment for each SAC and SPA qualifying feature are shown in Table C2.1.

**Table C2.1 Likelihood of Likely Significant Effects (LSE) alone**

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| Habitat restoration, specifically restoration of grass dominated moorland to bog and heath (by application of herbicide, surface scarification, seeding from the air, temporary exclusion fencing) | Breeding populations of SPA birds – golden plover, and short eared owl | Reduction in extent of suitable breeding habitat for golden plover and feeding habitat for raptor species. | Grass dominated vegetation can provide suitable breeding habitat for golden plover. Whilst this proposed treatment and shift from grass to bog/heath may have a temporary effect on the availability of nesting habitat for golden plover, the re-wetting of bog by grip-blocking can be expected to provide some additional habitat.<br><br>Grassland also supports high densities of small mammals, whose populations may be lower in restored bog/heath vegetation affecting prey availability for predatory birds which form part of the SPA assemblage. However, the phased approach to habitat restoration of grass dominated areas (100ha p.a.) will ensure that a proportion of grassland habitat will be available and any localised change in prey density is considered unlikely to present a significant risk | Yes<br><br>Staff with local knowledge of the land will ensure that timing of herbicide application is undertaken when conditions are right. The aim is to restore in the region of 1,000 ha of ground to wet heath or bog over the term of this Plan. Up to 100 ha per annum will be restored subject to weather conditions and availability of seed. In some areas temporary fencing will be required to restrict access for livestock to allow adequate establishment. | No |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | to the overall assemblage of breeding birds. | It is agreed that fencing around these restored areas to prevent grazing by livestock would be temporary only and be limited to a period of up to ten years. | |
| Habitat management of blanket bog, wet and dry heath | Blanket bog, wet heath, dry heath | Extent of features, function of features | Areas within a 50 metre radius of a grouse butt may be burnt or cut where accessible for the purpose when the heather in these areas reaches a height of 10cm, regardless of underlying peat depth.<br>This is not considered an appropriate frequency for management of dry heath and wet heath over large areas. However, in areas of heathland habitat feature, cutting or burning of small areas in this manner is unlikely to affect overall habitat condition as it is consistent with overall targets for habitat structure and is | Yes<br>Cutting in preference to burning avoids some of the known impacts associated with burning. Cutting is unlikely to affect species composition though it will affect relative abundance. It is likely to promote species diversity and will produce areas of short sward favoured as feeding | No |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | unlikely to result in changes in species composition that cause the habitat feature to become unfavourable.<br><br>The area of wet heath habitat subject to this management is likely to be small and overall condition status of the habitat is unlikely to be affected.<br><br>There is strong evidence that frequent burning results in negative changes to the species composition of blanket bog and upland wet heath vegetation, promoting fire-resistant species at the expense of typical bog species (e.g. Glaves *et al*, 2013; IUCN, 2014). However, removal of surface vegetation such as ericoid shrubs or cottongrasses can result in short term increases in Sphagnum and may increase species diversity in the short term (eg Lee *et al* 2013). Changes in habitat structure and in | areas by some moorland birds. | |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | species composition at this scale are unlikely to affect the condition status of the habitat feature at the site scale.<br><br>There is some risk of compaction or rutting caused by machinery but these effects are likely to be temporary – cutting is unlikely to be so frequent that natural recovery between operations is impossible. The DEFRA BD5104 study has demonstrated that compaction effects of vehicles on peatland habitat are temporary and that compressed surfaces recover over short timescales. | | |
| | Breeding SPA birds | Extent of supporting habitat for breeding birds; Population | Cutting of bog and heath vegetation whilst SPA birds are nesting may cause disturbance and affect the reproductive success of the population. | Cutting of heather should take place between 1 July and 15 April, providing that there are no nesting birds in the location of the works. Operators will | No |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | abundance | Cutting will affect vegetation structure and may affect extent of suitable nesting habitat for some species. | check before work starts.<br>Moorland birds have different requirements for breeding habitat, Some species require tall vegetation so it is essential that there should be patches of degenerate heather left uncut/unburnt in traditional merlin nest zones and across the site to achieve a mosaic of heather structure. It is unlikely that the extent of cutting around butts will limit nesting opportunities for merlin or other raptors. Species such as golden plover nest in short vegetation and may favour cut areas. | |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| Heather beetle management (burning; cutting of affected heather plants between July-April) | Blanket bog, wet heath, dry heath | Structure and function of blanket bog | Burning in particular on deep peat has a variety of environmental impacts and as such is not supported by the Heather Beetle Management Evidence Review (Gillingham *et al.*, 2016) as a means of controlling outbreaks, though there may be some effect in encouraging heather regeneration. The proposed methods of management may incidentally impact on the vegetation structure and composition of areas of blanket bog.<br><br>There is some risk of compaction or rutting caused by machinery but these effects are likely to be temporary – cutting is unlikely to be so frequent that natural recovery between operations is impossible. The DEFRA BD5104 study has demonstrated that compaction effects of vehicles on peat land habitat are temporary and that compressed surfaces recover over | No.<br><br>Burning will be undertaken in line with the dates specified in Heather and Grass Burning Code 2007, or any relevant revision. Out of season burning will be considered by Natural England where an outbreak is deemed extensive and it is decided this is the best course of action. Cutting will be permitted from 1st July to 15th April where heather has been affected by beetle.<br><br>These measures do not address the potential effects of heather beetle management on blanket bog. | Yes |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | short timescales. | Note, loss of heather is not considered a concern for the condition of blanket bog. | |
| | Breeding populations of SPA birds | Loss and/or degradation of supporting nesting habitat at heather beetle management sites. | Potential direct loss of habitat available for nesting birds. | Yes.<br>Any burning must be undertaken in line with the dates specified in Heather and Grass Burning Code 2007 (1 October to 15 April), or any relevant revision. This largely avoids the breeding bird season.<br>Out of season burning will be considered by Natural England where an outbreak is deemed extensive and is decided this is the best course of action. This | No |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | | will be subject to a Licence application.<br><br>Cutting will be permitted from 1st July to 15th April where heather has been affected by beetle. This largely avoids the breeding bird season. | |
| Invasive vegetation management (soft rush, bracken) | Breeding populations of SPA birds | Disturbance; Population abundance | Herbicides being applied to sensitive habitats leading to loss of important species and vegetation cover. | Yes.<br><br>The Plan states at 9.1 that any cutting of rush and treatment of bracken will generally avoid the breeding bird season (defined as the period 15 April – 1 July). Known raptor and twite nesting and roosting areas will be avoided. | No |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | | Areas requiring invasive vegetation management will be agreed between Walshaw Moor Estate limited and Natural England, statutory consultees will be contacted where required before works are undertaken, with exception of spot spraying. The Estate has the equipment and necessary experience to undertake the spraying and cutting of invasive vegetation such as bracken and soft rush. This is done utilizing a soft track which plots all of the works undertaken on GPS to ensure accurate spraying of | |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | | target areas is undertaken.<br><br>Post spraying, these areas will be seeded as appropriate to restore the area to an appropriate habitat to support the favourable condition of the SSSI, SAC and SPA features, with blanket bog being the chosen habitat wherever the conditions of that area allow.<br><br>The annual review of the Management Plan will allow treatment to be targeted at areas where the greatest benefit in terms of habitat restoration may be achieved and avoid areas likely to have | |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | | significant impact on breeding birds. | |
| New semi sunken and/or sunken shooting butts | Blanket bog | Extent of feature | Construction of the butt footprint will cause permanent loss of habitat:<br><br>Area of habitat Affected is:<br><br>1.8 x 1.8 = 3.24 m2<br>2 lines of butts with 10 butts each Total area of habitat affected = 65 square metres. | No.<br><br>These impacts should be considered in relation to the large scale of the site. Butt dimensions totalling an area of 65 square metres for the two lines of butts within a site of 6475 Ha. Area of habitat across the site is shown in Appendix 2. This is considered inconsequential. | No |
| | | Function of | Drainage of the butts may result in disruption of hydrological processes within the peat leading to | Yes, avoidance measures and\or mitigation included in | No |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | feature | degradation of habitat | sustainable infrastructure specifications. The Plan states that all butts to be drained with a buried pipe (up to 25 m long for each butt but usually shorter than this) fitted with a plastic collar to promote seepage of water into the local peat rather than promote water flow. The pipes will be discharged only into a natural hollow or grip (not a water course) to avoid net export of water from the bog.<br><br>Butts will be lined with impermeable membrane to prevent ingress and a local draw-down effect. | |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | | Works will be subject to compliance checks by Natural England and remedial measures implemented if required. See Section 2.8 of Catchment Restoration Plan for details. | |
| | | Function of feature | Pipe installation may result in disruption of hydrological processes within the peat leading to degradation of habitat.<br><br>Length of drainage pipe given as a maximum of 25 m, but generally will be much shorter.<br><br>Assuming average length of 12.5 m and a 1 m width: 12.5 x 1 = 12.5 m2 | Yes, avoidance measures and\or mitigation included in sustainable infrastructure specifications. The CRP states that all butts to be drained with a buried pipe (up to 25 m long for each butt but usually shorter than this) fitted with a plastic collar to promote seepage of water into the local peat rather than promote water | No |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | Twenty butts: 20 x 12.5 = 250 m2 | flow. The pipes will be discharged only into a natural hollow or grip (not a water course) to avoid net export of water from the bog.<br><br>The Plan states that the original peat will be backfilled and topped with original turves.<br><br>Works will be subject to compliance checks by Natural England and remedial measures implemented if required.<br>See Section 2.8 of Catchment Restoration Plan for details. | |
| | | Extent of feature; function | Access routes to the butts (from pedestrians and vehicles accessing the butts) may cause loss of | Yes. Access will be on foot from established track | No |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | of feature | or degradation of habitat | infrastructure. | |
| | | Hydrological processes | Access routes to the butts (from pedestrians and vehicles accessing the butts) may cause loss of or degradation of habitat by disrupting hydrology | Yes. Access will be on foot from established track infrastructure. | No |
| | | Extent of feature; function of feature | Loss of or degradation of habitat by access to butts from vehicles used during construction of the butts. Access to the butts from vehicles used to install the butts may cause loss of or degradation of habitat,<br>It is considered most likely that effects will be small and localised. | Yes,<br>All machinery to be used in butt construction on deep peat will be low ground pressure vehicles.<br>These impacts should be considered in relation to the large scale of the site.<br>Small temporary areas of rutting within a site of 6475 Ha is considered inconsequential. | No |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | | Area of habitat across the site is shown in Appendix 2. | |
| | | Extent of feature; function of feature hydrological processes. | Loss and/or degradation from damage from vehicles used during construction of the butts disrupting hydrological processes. | Yes, All machinery to be used in the butt construction on deep peat will be low ground pressure vehicles. | No |
| | Breeding populations of SPA birds | Population size | Loss and/or degradation of nesting habitat at butt locations. Potential direct loss of habitat available for nesting or breeding birds. | No<br><br>These impacts should be considered in relation to the large scale of the site. Butt dimensions totalling an area of 65 square metres for the two lines of butts within a site of 6475 Ha. Area of habitat | No |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | | across the site is shown in Appendix 2. This is considered inconsequential. | |
| | | | Disturbance to breeding birds from access to butts. | Yes.<br><br>Shooting activities occur from August to December and therefore avoid disturbance impacts to SPA bird assemblage. | No |
| | | Disturbance to breeding birds during construction of the butts. | Disturbance; population abundance<br><br>Construction works and vehicle use could disturb or displace breeding birds. | Yes,<br><br>To avoid disturbance or damaging impacts on breeding birds or their nests all construction works will take place between 1 July and 15 April and providing that there | No |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | | are no nesting birds in the location of the works. | |
| Construction and use of new access track in 4 sections | Dry heath, blanket bog, wet heath. | Extent of SAC feature | Walshaw Dene to Robin's Ditch – ***Section A***<br>Approximately 90 m will cross dry heath. The track will be 3.5 m wide, therefore this equates to a predicted loss of 0.0315 Ha of feature.<br>Approximately 137 m will cross blanket bog. The track will be 3.5 m wide, therefore this equates to a predicted loss of feature of 0.04795 Ha.<br>Approximately 673 m will cross wet heath. The track will be 3.5 m wide, therefore this equates to 0.2356 Ha.<br>Walshaw North Drive to Crow Hill ***Section B***<br>Approximately 90 m will cross blanket bog. The track will be 3.5 m wide, therefore this equates to 0.0315 Ha.<br>Approximately 1300 m will cross wet heath. The | Direct habitat loss. No.<br>Indirect loss and habitat degradation – Yes. Monitoring will allow identification of any unforeseen habitat change as a result of track installation that would be a warning sign of significant effect. Remedial measures can then be put in place before damage occurs (see Plan 3.3).<br>The section of track across deep peat between Robin's Ditch to Crow Hill ***Section C*** will be of floating rail | Yes. Total direct habitat loss of:<br>5200 $m^2$ blanket bog<br>300 $m^2$ dry heath<br>9400 $m^2$ wet heath<br>Plus any indirect loss and habitat degradation. |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | track will be 3.5 m wide, therefore this equates to 0.455 Ha.<br><br>Robin's Ditch to Crow Hill ***Section C***<br><br>Approximately 680 m will cross blanket bog. The track will be 3.5 m wide, therefore this equates to 0.238 Ha.<br><br>Steeple Stones to Crow Hill<br>***Section D***<br><br>Approximately 400 m will cross blanket bog. The track will be 3.5 m wide, therefore this equates to 0.14 Ha.<br><br>Approximately 680 m will cross wet heath. The track will be 3.5 m wide, therefore this equates to 0.238 Ha. | construction designed to float on the peat surface and allow partial vegetation growth. | |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | **Indirect loss and habitat degradation:**<br>The hydrology of peat can be affected by new track construction. Tracks directly alter the structural integrity and hydrological system of blanket peat, both at the surface and sub-surface levels (Grace *et al*., 2013).<br>The track is on sloping ground, therefore the effect on the hydrological function of the peat of the track itself and any drainage associated with it is likely to be seen both up and downslope of the track. Where the track is on a slope, there may therefore be drainage and interruption to the hydrology of peat on a wider area than just the track footprint.<br>Drainage and interruption of hydrology leads to erosion and once this erosion is set in train, there is some evidence that it is ongoing. Grace *et al.* (2013) conclude in *The impacts of tracks* | | |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | *on the integrity and hydrological function of blanket peat (NEER002)* that "The disruption of peat by tracks at either a surface or sub-surface initiates continuous erosion". However, the current available evidence of the effects of wooden rail road tracks on peat is inconclusive. | | |
| | Breeding populations of SPA birds | Extent of supporting SPA habitat; supporting processes (lack of disturbance) | | Construction will be undertaken outside of the bird nesting season.<br><br>Vehicle usage along the route will be restricted throughout the bird nesting season, other than in case of emergency.<br><br>Gated access at tracks ends | No |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | | | will be locked to reduce unauthorised vehicle use and notices will be posted to advise pedestrian users to take care to avoid disturbance to ground nesting birds. | |
| Turning circles and passing places | Blanket bog, wet heath | **Extent of habitat**<br>Route A turning circle diameter 16 m, on blanket bog area 0.063 Ha.<br>Passing place on wet heath area 0.0135 Ha.<br>Loss and/or | Direct habitat loss through installation of stone turning circles and passing places and drainage.<br>Degradation of notified features as a result of the access track installation | The Plan says at 8.1.7 that no turning circles and passing places will be constructed on deep peat >40cm (p42) | Yes (direct habitat loss and indirect loss and habitat degradation) |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | | degradation of nesting habitat.<br><br>**Indirect loss and habitat degradation:**<br><br>The hydrology of peat can be affected by new track construction. (Grace *et al,* 2013). | | | |
| | Breeding populations of | **Disturbance; population** | Disturbance to breeding birds from ongoing use of the route, disturbance to breeding birds during | Yes: | No |

| Proposed activity \ element of the project | Qualifying feature likely to be affected | Conservation Objective attribute(s) likely to be affected | The mechanism / pathway of effect | Does the project include measures which would mitigate the potential effects? (Y/N) If yes provide details | Likely Significant Effect (LSE?) (Yes /No /Uncertain ) |
|---|---|---|---|---|---|
| | SPA birds | **abundance** | construction. | Construction will be undertaken outside of the bird nesting season.<br>Vehicle usage along the route will be restricted throughout the bird nesting season, other than in case of emergency.<br>Gated access at tracks ends will be locked to reduce unauthorised vehicle use and notices will be posted to advise pedestrian users to take care to avoid disturbance to ground nesting birds. | |

**Conclusion:**
☐ The plan or project alone is likely to have a significant effect (or *may* have a significant effect) on the following qualifying features of the European Site; *[List Features and then **go to C.3**]*

**South Pennine Moors SAC and SPA qualifying features**
4010 North Atlantic wet heaths with *Erica tetralix*
4030 European dry heaths
7130 Blanket bogs*
Merlin *Falco columbarius*
Golden plover *Pluvialis apricaria*
Internationally important assemblage of birds during the breeding season

Priority habitats or species are denoted by an asterisk (*)

☐ ~~The plan or project alone is unlikely to have a significant effect on the following qualifying features of the European Site(s); [*List features and then **go to C2.2** if appropriate*]~~

**C2.2 Risk of Significant Effects in-combination with effects from other plans and projects**

Not applicable.

**C3. Overall Screening Decision for the Plan/Project**
On the basis of the details submitted, Natural England has considered the plan or project under Regulation 63 of the Habitats Regulations and made an assessment of whether it will have a likely significant effect on a European site, either alone or in combination with other plans and projects.

**In light of sections C1 and C2 of this assessment above, Natural England has concluded:**

☐ ~~As the plan or project is directly connected with or necessary to the management of all the qualifying features of the European Site(s), no further Habitats Regulations assessment is required [**delete Part D and go to Part E**]~~

~~OR~~

☐ ~~As the plan or project is unlikely to have significant effects (either alone or in~~

~~combination with other plans or projects) on any Qualifying Features of the European Site(s), no further Habitats Regulations assessment is required~~ **[*~~delete Part D and go to Part E~~*]**

☐ As the plan or project is likely to have significant effects (or *may* have significant effects) on some or all of the Qualifying Features of the European Site(s) 'alone', further Habitats Regulations assessment of the project 'alone' is required **[*go to Part D*]**.

# PART D:

## Appropriate assessment and conclusions on site integrity

### D1. Scope of Appropriate Assessment

In light of the screening decision above in section C3, this section contains the appropriate assessment of the implications of the plan or project in view of the conservation objectives for the European Site(s) at risk.

The Sites and the Qualifying Features for which significant effects (whether 'alone' or 'in combination') are likely or cannot be ruled out and which are initially relevant to this appropriate assessment are;

**South Pennine Moors SAC and SPA**

4010 North Atlantic wet heaths with *Erica tetralix*
4030 European dry heaths
7130 Blanket bogs*
Golden plover *Pluvialis apricaria*
Internationally important assemblage of birds during the breeding season

Priority habitats or species are denoted by an asterisk (*)

Where likely significant effects have been identified 'alone' the appropriate assessment will initially be undertaken 'alone' (**Go to D.2**). Any residual effects might *subsequently* need to be considered in combination.

Where the screening decision relates to effects 'in combination', the appropriate assessment should consider in combination effects from the beginning (**Go to D.3**).

#### D.1.1 Contextual statement on the current status, influences, management and condition of the European Site and those Qualifying features affected by the plan or project

The South Pennine Moors Special Area of Conservation (SAC) and Special Protection Area (SPA) includes the major moorland blocks of the South Pennines from Ilkley in the North to Leek and Matlock in the South. It covers extensive tracts of semi-natural moorland habitats including upland heath and blanket mire. The diverse mosaic of habitats contributes greatly

to the ornithological interests, which comprise birds of prey and waders. There are a range of land uses, although grazing and driven grouse shoots are the predominant types.

The Plan includes the South Pennine Moors SSSI units 35-37, 40-51, 55-57, 79-84, 90 and 166, which are in unfavourable recovering condition with the exception of units 48, 49 and 51 which are unfavourable no change.

The Site Improvement Plan for the South Pennine Moors SAC and SPA lists a suite of pressures and threats on the qualifying features, including hydrological changes, managed rotational burning, low breeding success of raptors, inappropriate management practices, public access/disturbance, air pollution, wildfire and vehicles. Recommended measures to address these include changes to land management including development of landscape scale plans, restoration of hydrology, changes to land management including less intensive burning programmes; and development and implementation of management plans for disturbance, wildfire and grazing.

The 3rd UK habitats directive report (Article 17 reporting) 2013 conclusions for the SAC features relevant to this HRA are as follows:

- 4010 Northern Atlantic wet heaths with *Erica tetralix* – favourable for both range and area, specific structures and functions bad and declining, future prospects bad but improving, overall conclusion bad and stable.
- 4030 European dry heaths – favourable for both range and area, specific structures and functions bad and declining, future prospects bad but improving, overall conclusion bad and stable.
- 7130 Blanket bogs – range is favourable, but area is inadequate and declining. Specific structures and functions, future prospects and overall conclusion is bad and declining.

## D2 Assessment of potential adverse effects considering the plan or project 'alone'

### D2.1 Assessment of potentially adverse effects without additional mitigation measures

The results of this assessment are shown in Table D2.1

**Table D2.1 Appropriate Assessment**

**Summary**

| Qualifying features | Potential effect | Magnitude of impact / residual effect | Can 'no adverse effect' on the feature be ascertained? (Y/N) Give reasons | Degree of uncertainty | Additional avoidance and/or reduction measures (mitigation) to ascertain no adverse effects |
|---|---|---|---|---|---|
| | | | | | |
| Blanket bog | Heather beetle management on blanket bog | High, there is no restriction on the area that could be impacted or the frequency of cutting or burning though there is a requirement that treatment does not take place for a year to allow for natural recovery. | No | High, as this could take place anywhere on the site during the burning season (1st October – 15th April for burning management or 1st July – 15th April for cutting. | An additional requirement in the Plan that states that heather beetle management will not take place until 1 year from any outbreak has passed, as |

| Qualifying features | Potential effect | Magnitude of impact / residual effect | Can 'no adverse effect' on the feature be ascertained? (Y/N) Give reasons | Degree of uncertainty | Additional avoidance and/or reduction measures (mitigation) to ascertain no adverse effects |
|---|---|---|---|---|---|
| | | | | | recommended in Gillingham *et al.*, 2016.<br><br>Annual reviews will be used to discuss and agree appropriate heather beetle management work to take into account new information and advice and to avoid impacts |

| Qualifying features | Potential effect | Magnitude of impact / residual effect | Can 'no adverse effect' on the feature be ascertained? (Y/N) Give reasons | Degree of uncertainty | Additional avoidance and/or reduction measures (mitigation) to ascertain no adverse effects |
|---|---|---|---|---|---|
| | | | | | on blanket bog. |
| Blanket bog | Direct loss through construction of track.<br>Indirect loss and habitat degradation: Through impact on the hydrology and structural integrity of the peat. | Loss of 0.52 Ha through the track footprint. Floating timber 'rail road' technology will be used in areas of deep peat, shown in Appendix 8. The proposal includes laying plastic mesh through which vegetation will grow. The 'rail road' laid on the mesh will consist of wooden bearers 150mm wide spaced at 150mm linked by steel plates. Therefore, though some vegetation will persist between the wooden bearers, direct impact of the track structure will prevent vegetation growth on 50% of the route length covered by the wooden bearers with more of surface | Yes<br>The loss and degradation of blanket bog beneath the track due to direct contact with track forming materials will be in excess of 0.26 Ha with other effects on the remainder of the 52 Ha under the track footprint.<br>The extent of habitat affected by impacts on hydrology, through compaction and changes to peat physical properties adjacent to the track is unknown. | Medium<br>Direct habitat loss is known. Indirect effects on blanket bog structure and function are not anticipated as difficult to predict. | Yes. The track will be subject to active monitoring to detect unforeseen effects as agreed by Natural England and the Land Owner and is detailed in the Catchment Restoration Plan |

| Qualifying features | Potential effect | Magnitude of impact / residual effect | Can 'no adverse effect' on the feature be ascertained? (Y/N) Give reasons | Degree of uncertainty | Additional avoidance and/or reduction measures (mitigation) to ascertain no adverse effects |
|---|---|---|---|---|---|
| | | covered by steel links between the bearers. (See Photograph at Appendix 9). Direct loss will therefore be in excess of 0.26 Ha – approximating to 60% of the area covered by the track. It is reasonable to assume that normal growth of vegetation between the bearers is prejudiced.<br><br>The floating track will be anchored by securing it to wooden posts driven into the ground at each end and 'intermittently as required'. The area of bog affected by the posts themselves is likely to be trivial but there are potential effects on hydrology and driving the posts may require | This is a significant loss when considering the total resource across the site and the importance of this habitat in the national and international context.<br><br>Effects on the bog surface due to vehicle access for driving the track-fixing posts cannot be ruled out.<br><br>Long term effects on hydrology arising from the posts cannot be ruled out. Posts driven though the peat may result in drainage | | under the section entitled 3.3 Floating Timber Rail Road.<br><br>Remedial measures have been anticipated as far as possible and are detailed alongside the monitoring specification. Any works |

| Qualifying features | Potential effect | Magnitude of impact / residual effect | Can 'no adverse effect' on the feature be ascertained? (Y/N) Give reasons | Degree of uncertainty | Additional avoidance and/or reduction measures (mitigation) to ascertain no adverse effects |
|---|---|---|---|---|---|
| | | additional vehicle access.<br><br>There will also be an indirect loss and degradation to surrounding vegetation. The scale and impact of this is very difficult to predict. Area of habitat across the site is shown in Appendix 2.<br><br>The route has been designed to traverse around areas of deep peat and other interest features as far as is possible.<br><br>The Plan states that no new open drains or culverts will be installed parallel or under the rail road.<br><br>Materials will be delivered using small tracked dumpers running along the line of | effects. | | outside agreed remedial measures will be agreed in advance between Natural England and the land owner before remedial works commence.<br><br>As the track is of wooden / steel materials it could be |

| Qualifying features | Potential effect | Magnitude of impact / residual effect | Can 'no adverse effect' on the feature be ascertained? (Y/N) Give reasons | Degree of uncertainty | Additional avoidance and/or reduction measures (mitigation) to ascertain no adverse effects |
|---|---|---|---|---|---|
| | | the finished track avoiding traversing directly on the surface vegetation. . | | | removed relatively easily or left in situ if monitoring determines that its use is incompatible with maintaining site integrity. |
| Dry heath | Direct loss through construction of track. | Loss of 0.03 Ha through the track footprint. Area of habitat across the site is shown in Appendix 2.<br>Stone will be delivered using small tracked dumpers running along the line of | Yes.<br>The area of loss of dry heath is small when considering the total resource on the site and the national and international | Low | N/A |

| Qualifying features | Potential effect | Magnitude of impact / residual effect | Can 'no adverse effect' on the feature be ascertained? (Y/N) Give reasons | Degree of uncertainty | Additional avoidance and/or reduction measures (mitigation) to ascertain no adverse effects |
|---|---|---|---|---|---|
| | | the finished track on the laid aggregate; and once at the far end these will then work back tidying up the track surface ready for crushing later. | context. | | |
| Wet heath | Direct loss through construction of track and passing place. | Loss of 0.94 Ha through the track footprint plus any indirect loss and degradation through disruption of the hydrology and impacts on the structure (the scale and impact of this is very difficult to predict).<br>Lateral movement of water through wet heath means that the impact will be greater than the track footprint.<br>Stone will be delivered using small tracked dumpers running along the line of | No<br>At least 0.94 Ha of loss and degradation of habitat. | Medium<br>Direct habitat loss is known, but the indirect effects on wet heath structure and function are difficult to predict. | The Plan includes recreation of wet heath habitat in units 48, 46 and 49 in excess of the habitat lost from the track construction. This is via the |

| Qualifying features | Potential effect | Magnitude of impact / residual effect | Can 'no adverse effect' on the feature be ascertained? (Y/N) Give reasons | Degree of uncertainty | Additional avoidance and/or reduction measures (mitigation) to ascertain no adverse effects |
|---|---|---|---|---|---|
| | | the finished track on the laid aggregate; and once at the far end these will then work back tidying up the track surface ready for crushing later. | | | habitat restoration section of the Plan at section 2.3. |
| | | | | | |

**D2.2 Where necessary, assessment of potentially adverse effects with additional mitigation measures underpinned by legally enforceable conditions/restrictions**

N/A

Following D.2.1 - D.2.2, where a conclusion of no adverse effect on integrity 'alone' can be ascertained either with or without additional mitigation, any **residual effects** from the project (those which still remain but which are not 'significant' alone) will need to be considered 'in combination' with other plans and projects (**Go to D.3**).

Where it is not possible to ascertain no adverse effect on the integrity 'alone', either with or without additional mitigation, **go to D.4** to record the conclusion on site integrity. Section **D3** is not applicable.

**D4. Conclusions on site integrity**

Because the plan/project is not wholly directly connected with or necessary to the management of the European site and is likely to have a significant effect on that site (either alone or in combination with other plans or projects), Natural England carried out an Appropriate Assessment as required under regulation 63 of the Conservation of Habitats and Species Regulations 2017 to ascertain whether or not it is possible to conclude that there would be no adverse effect on the integrity of a European Site(s).

Natural England has concluded that:

☐ ~~It **can be ascertained** that the plan or project will not have an adverse effect on the integrity of the following site(s), either alone or in combination with other plans and projects; *a permission can be given without conditions*~~

~~[*Adviser to insert site(s) as appropriate*]~~

☐ ~~It~~ **can be ascertained** that the plan or project will not have an adverse effect on the integrity of the following site(s), either alone or in combination with other plans and projects, subject to restrictions and/or conditions *a permission can be given with conditions*

~~[*Adviser to insert site(s) as appropriate*]~~

☐ ~~It **cannot be ascertained** that the plan or project will not have an adverse effect on the integrity of the following site(s) for the following reasons; *a permission cannot be given at this stage*~~

South Pennine Moors SAC and SPA

## PART E:

## Permission decision with respect to European Sites

As the relevant competent authority, Natural England has carried out a HRA of the submitted plan as required by Regulation 63 of the Conservation of Habitats and Species Regulations 2017 and has decided that, with regard to European Sites and their qualifying features;

~~☐ Consent/Permission/Assent/Authorisation may be given*~~

☐ **Consent/Permission/Assent/Authorisation may be given but only subject to the strict implementation of the following conditions or restrictions*:**

**1. Management of the Land**

1.1 The Land Owner will obtain any necessary consents and/or permissions needed in order for its obligations to be carried out under the Catchment Restoration Plan, and ensure that such permissions are maintained and complied with as necessary.

1.2 This Agreement will not take effect until planning permission for the access track referred to in clause 8 has been granted.

1.3 Natural England and the Land Owner agree to collaborate with each other for the benefit of the Land, and provide each other with regular information and communication on all aspects of the management of the Land.

**2. Disposals**

2.1 Should a disposal of all or part of the Land be proposed the Land Owner will notify Natural England in writing as soon as possible, and at least one month before the proposed Disposal is to take place, giving full details of the proposed Disposal. The significance of the Disposal will be discussed and the Agreement altered accordingly, by agreement, if necessary.

**3. Management Reviews**

3.1 The Land Owner and Natural England will consult each other regularly about the management of the Land and will have an annual review meeting in July each

year (or as otherwise agreed).

3.2 At any meeting, the Land Owner and Natural England must:

3.2.1 review this Agreement and its operation, including progress on management activities specified in the Agreement;

3.2.2 consider the future management of the Land, including the work programme for the following year; and

3.2.3 consider whether, in the light of the proposed future management of the Land, the Shared Outcomes as defined in section 1.1 and the flow diagram on page 6 could more appropriately and/or effectively be achieved, without them being compromised in any way, by the continuation of this Agreement and or any modification of it.

3.3 If either the Land Owner or Natural England considers it is no longer possible or desirable to achieve the Shared Outcomes, both parties will use their best endeavours to agree modifications of the Agreement, as appropriate whilst fulfilling the statutory obligations under the Wildlife & Countryside Act 1981.

**4. Duration of Agreement**

4.1 This Agreement shall remain in existence until the expiry of 25 years from its date.

**5 Land Owner's Confirmations**

5.1 By signing this Agreement, the Land Owner confirms to Natural England that it has full power to enter into the Agreement on the terms set out in it and without needing to obtain anyone else's consent.

5.2 The Land Owner further confirms that it has taken and will continue to take all necessary steps to ensure that all persons who have any right of management control in relation to the Land and/or any rights (including rights of access) to the Land and/or any interest in the Land will not breach the provisions of the Agreement over the entire period of the Agreement.

**6. Information**

6.1 The Land Owner consents to the disclosure by Natural England to the public of any information about the Agreement to the extent necessary to enable Natural England to comply with its statutory obligations under the Freedom of Information Act 2000 and/or the Environmental Information Regulations 2004. Details disclosed on request or proactively on the internet or in publications may include,

but are not limited to, applications, agreements, the Land Owner's name and address, the name and address of the farm or business, grid references, the location of parcels, details of the environmental features and details of inspections and/or monitoring.

**7. Disputes**

7.1 The Land Owner and Natural England commit to resolving any disputes or differences between them in relation to the Agreement or the ending of the Agreement by amicable means. All reasonable efforts shall be made to reach agreement, but should that not be possible, then the dispute will be referred to mediation.

**8. Track construction conditions**

8.1 The track shown in pink and blue at Figure 20 will be installed subject to the conditions below. The full specification for this track is detailed from page 26 to 30 of the Catchment Restoration Plan:

8.1.1. the section of the track shown in blue crosses will be in the form of a wooden floating track as shown in photos / diagrams between points SD9666 3491 and SD9612 3595 where it crosses deep peat..

8.1.2 The track across deep peat (>40cm) will not be constructed with side drains but will rely wholly on the 'floating' track construction methodology but side drains can be installed as and when required on all sections of peat depth <40cm. These will however only be installed where absolutely necessary.

8.1.3 Vehicular use of the track shall be limited to Estate use, emergency use or support emergency services including mountain rescue and for emergencies only between 15th April and 1st July. Outside of this period the track may be used for any purpose in connection with the Estates business.

8.1.4 Gates at the ends of the tracks will be locked to reduce unauthorised vehicle use. Stiles will be installed and maintained to allow pedestrian use subject to CRoW Act 2000 provisions and notices posted to advise users to take care to avoid disturbance to ground nesting birds.

8.1.5 The track will be subject to active monitoring as agreed by Natural England and the Land Owner and is detailed in the Catchment Restoration Plan at page 36 under the section 3.3 entitled Floating Timber Rail Road. Remedial measures have been anticipated as far as possible and are detailed alongside the monitoring specification. Any works outside agreed remedial measures will be

agreed in advance between Natural England and the land owner before remedial works commence.

8.1.6 Aggregate used on tracks will be inert materials.

8.1.7 No turning circles or passing places will be constructed on deep peat (>40cm).

**9. Vegetation restoration/management**

9.1 Works to treat *Molinia*, cut firebreaks, treat or cut rush or bracken or install infrastructure will not be carried out during the bird breeding season 15th April to 1st July.

9.2 Works to treat *Molinia*, cut firebreaks, treat or cut rush or bracken or install infrastructure will avoid known raptor and twite nesting and roosting areas.

9.3 All works must be conducted to avoid damage to vegetation by rutting or exposure of bare peat, where possible.

9.4 On deep peat (>40cm) vegetation restoration works should only be applied when there is a dominance of a single species (ling heather or *Molinia*) and the canopy is closed preventing light getting to desirable peat building species such as *Sphagnum*

9.5 Vegetation will not be cut or burnt unless it is more than 30cm in height. With the exception of areas within a 50 metre radius of a grouse butt, which may be cut or burnt when the vegetation reaches a height of 10cm. Cutting is the preferred management technique for managing vegetation within 50 metres of grouse butts and will be used where conditions allow.

9.6 Where *Sphagnum* is absent cutting / burning management will be followed by transplantation of *Sphagnum* material or spreading of propagules in proprietary medium or attached to clay pellets. However it is accepted that opportunity for natural regeneration should be allowed post cutting and burning, for up to three years. The exception to this condition is when cutting fire breaks.

9.7 A maximum of 100 hectares of virgin ground per annum will be reseeded; subject to suitable weather conditions and availability of appropriate seed (the agreed seed mix shall contain heather, cotton grass and sphagnum). Follow up treatment shall be unlimited in area with suitable areas targeted accordingly.

9.8 All burning management will be carried out according to the Heather and Grass Burning Code (2007) or subsequent revisions, unless otherwise consented by

Natural England.

**10. Burning Consent**

10.1 Natural England will issue a notice modifying the Consent granted to the Land Owner on 1st March 2012 ('the 2012 Consent') in so far as it relates to rotational burning.

10.2 The Land Owner hereby confirms that they waive their right of appeal and compensation in relation to the modification of the 2012 Consent.

10.3 The Plan will not become active until such time as the period for appealing the revocation notice has expired or planning permission has been granted in accordance with clause 1.2, whichever is the later.

**11. General**

11.1 Sunken grouse butts constructed in deep peat areas will be lined with impermeable membrane to prevent water ingress from the surrounding peat. Drains to clear surface water from butts will be piped to natural fall.

11.2 All works will be completed according to the Work Programme in section 2 of the Plan, other than where weather conditions or force majeure have prevented such.

11.3 On the termination of the existing HLS (AG00410821) it is mutually agreed that best endeavours by both parties will be made to enter into a new scheme, should one be available, to complement and aid the delivery of this agreement.

**12. Meaning of certain words**

12.1 'the Land' means the whole or any part of the land included in Higher Level Stewardship Agreement AG00410821 (which expires on 31 May 2022) and shown edged in black on *Figure 24* (including all buildings, fixtures and fittings on the Land and all water on or covering the Land, whether now or at any time after the date of the Agreement);

12.2 'Disposal' means the disposal of the Land or any part of it by way of sale, exchange or lease, or by way of the creation of any easement, right or privilege, or by giving someone other than the Land Owner the right to use the Land, or in any other way, except by way of mortgage or charge; However, 'Disposal' excludes family transfers and any arrangement by which the Land Owner retains the possession and/or control of the Land or by which the Land remains at its

disposal: for example, most contract farming agreements and seasonal grazing and mowing licences will not amount to a 'Disposal'. As per clause 2 the severity of the disposal and its implications on delivering this agreement will need to be assessed in advance by both parties;

12.3 'Map' means the map or maps attached to the Agreement

**13. Interpretation**

13.1 In the Agreement:

13.1.1 the headings are used for guidance only;

13.1.2 words suggesting the singular include the plural and vice versa;

13.1.3 words suggesting any gender include both other genders;

13.1.4 save where stated to the contrary, any reference to the Agreement or to any other document includes any permitted variation, amendment or supplement to such document;

13.1.5 words preceding 'include', 'includes', 'including' and 'included' shall be construed without limitation by the words which follow those words;

13.1.6 any reference to any enactment, order, regulation or other similar instrument shall be construed as a reference to the enactment, order, regulation or instrument as amended, replaced, consolidated or re-enacted; and

131.7 a reference to a person includes firms, partnerships and corporations and their successors and permitted assignees or transferees.

13.2 It is not intended that any third party should have the right to enforce a provision of the Agreement by virtue of the Contracts (Rights of Third Parties) Act 1999.

13.3 The Agreement shall be governed by and construed in all respects in accordance with the laws of England and Wales. Subject to clause 7 (Disputes), the English courts have exclusive jurisdiction to settle any disputes which may arise out of or in connection with the Agreement.

~~*[Adviser to insert text*~~]

☐ **~~Consent/Permission/Assent/Authorisation may~~ not ~~be given~~** ~~(subject to~~

~~regulation 62 ('consideration of imperative reasons of overriding public interest')~~

**The reasons for this decision are as follows:**

All practicable steps have been taken to avoid sensitive habitats but where it hasn't been possible to do so, active monitoring will indicate changes that will enable steps to be taken to avoid damage before it occurs. Therefore, it is concluded that any small losses in habitat will be inconsequential to the integrity of the site overall.

Management to address effects of heather beetle can be agreed between the parties to the agreement through the Annual Reviews to ensure that management does not impact on site integrity.

* Where it has been concluded that a permission may be given, the Habitats Regulations Assessment of the implications of this plan or project on European Sites has been completed.

**Written permission should not be issued by Natural England until there has been a separate and additional consideration of the plan or project's likely impacts on those features of special interest for which the relevant SSSI(s) has been notified.**

## References to Evidence

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GILLINGHAM, P., DIAZ, A., STILLMAN, R. & PINDER, A.C. 2016. *Desk review of burning and other management options for the control for heather beetle*. Natural England Evidence Review, Number 009. http://publications.naturalengland.org.uk/file/6209851428962304

GLAVES, D.J., MORECROFT, M., FITZGIBBON, C., LEPITT, P., OWEN, M. & PHILLIPS, S. 2013. *Natural England Review of Upland Evidence 2012 - The effects of managed burning on upland peatland biodiversity, carbon and water.* Natural England Evidence Review, Number 004
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*http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030280*

JNCC 2013. 3rd UK Habitats Directive Reporting 2013
http://jncc.defra.gov.uk/article17

LEE, H., ALDAY, J.G., ROSE, R.J., O'REILLY, J., MARRS, R.H. 2013. Long-term effects of rotational prescribed-burning and low-intensity sheep-grazing on blanket-bog plant communities. Journal of Applied Ecology, 50, 625-635

NATURAL ENGLAND 2005 South Pennine Moors SAC Citation,
*http//publications.naturalengland.org.uk/publication/4973604919836672*

NATURAL ENGLAND 2014 Site Improvement Plan South Pennine Moors (SIP225) http://publications.naturalengland.org.uk/publication/5412834661892096

NATURAL ENGLAND 2014 South Pennine Bird Survey HPRM F100/010/045/027/007/0004

O'HARA, D 2015 *Molinia* management and birds. Conference Proceedings - Managing *Molinia*? - 4-16 September 2015, Huddersfield, 97-102

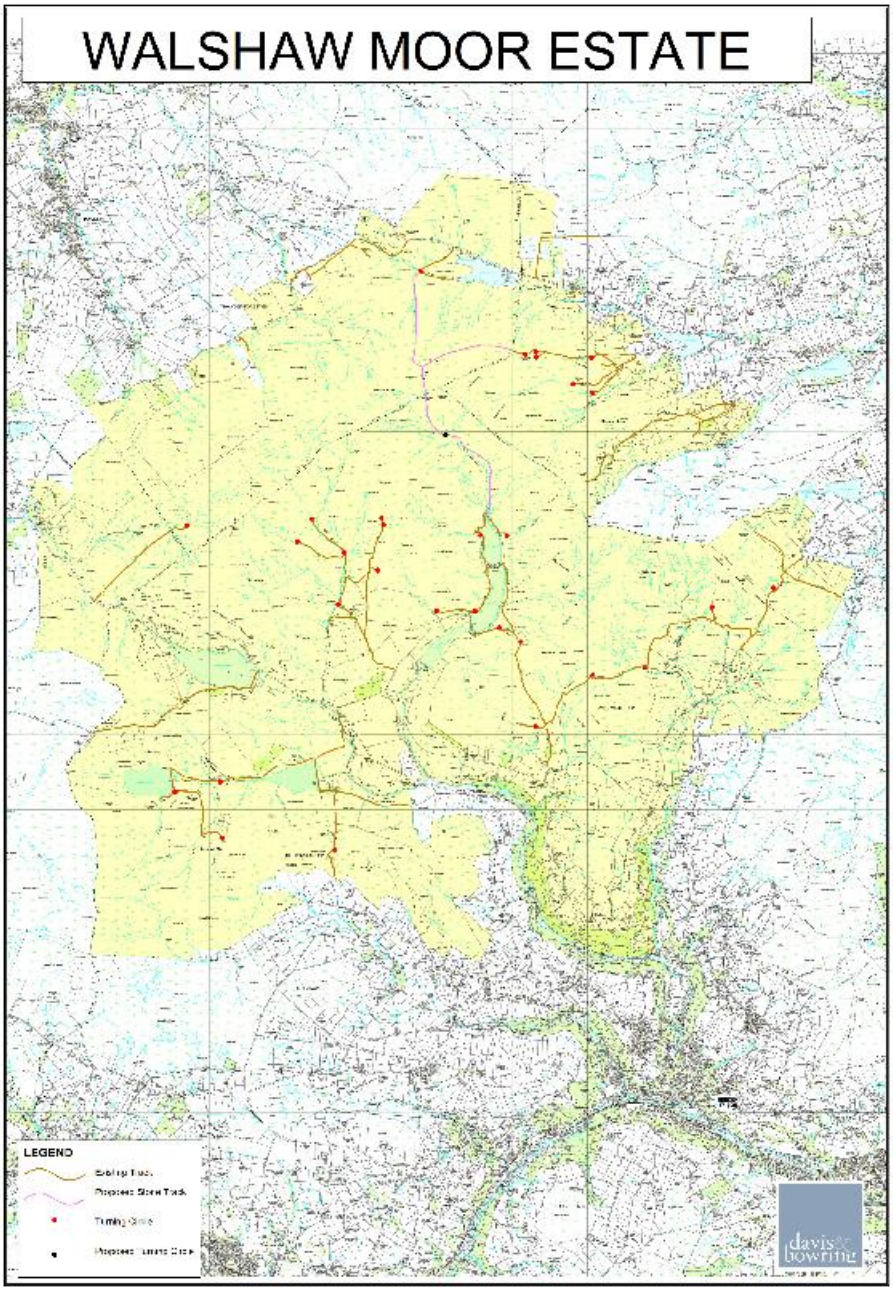
SECRETARY OF STATE FOR THE ENVIRONMENT 1998 South Pennine Moors Phase 2 SPA Citation via *http://publications.naturalengland.org.uk/publication/4885083764817920*

## Document Control

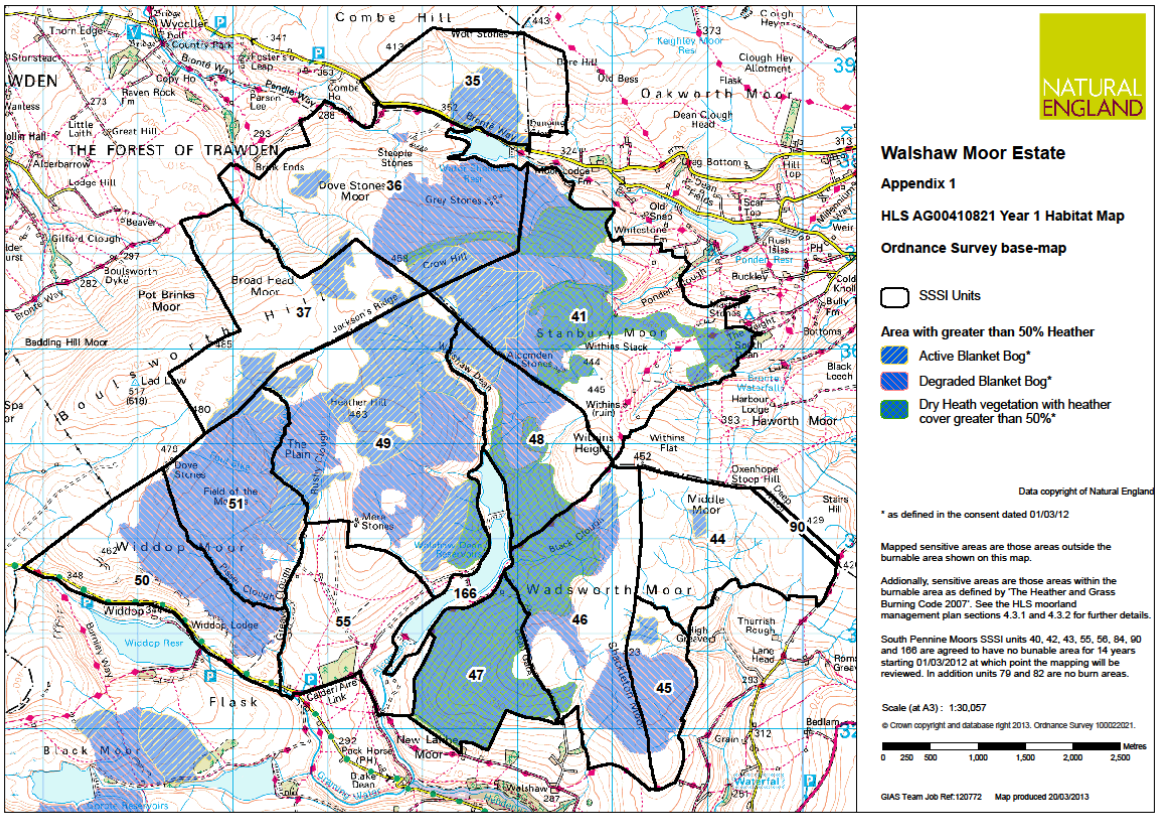
| | | |
|---|---|---|
| **Assessment prepared and completed by** | [redacted] | [redacted] |
| **Date** | November 2017, Updated January 2018 | |
| **Peer-reviewed by** | *Where relevant* | *Insert role / job title and team* |
| **Date** | N/A | |
| FOR HIGH-RISK CASES AND/OR REFUSED OR CONDITIONED SSSI CONSENTS ONLY [see User Notes] | | |
| **HRA checked and referred to Protected Sites Team by:** | *N/A reviewed via project team and HRCP* | |
| **Date** | | |
| **Advice given by Protected Sites Team:** | *N/A advised via HRCP* | |
| **Date** | | |
| **Case referred to High Risk Casework Panel by** | *Adelle Rowe* | *Area Manager Area 3* |
| **Date** | *Final hearing 6th November 2017* | |
| | | |

| | | |
|---|---|---|
| **Consent/Assent/ Permission/ Authorisation issued by:** | *Adelle Rowe* | *Area Manager Area 3* |
| **Date** | *23rd January 2018* | |

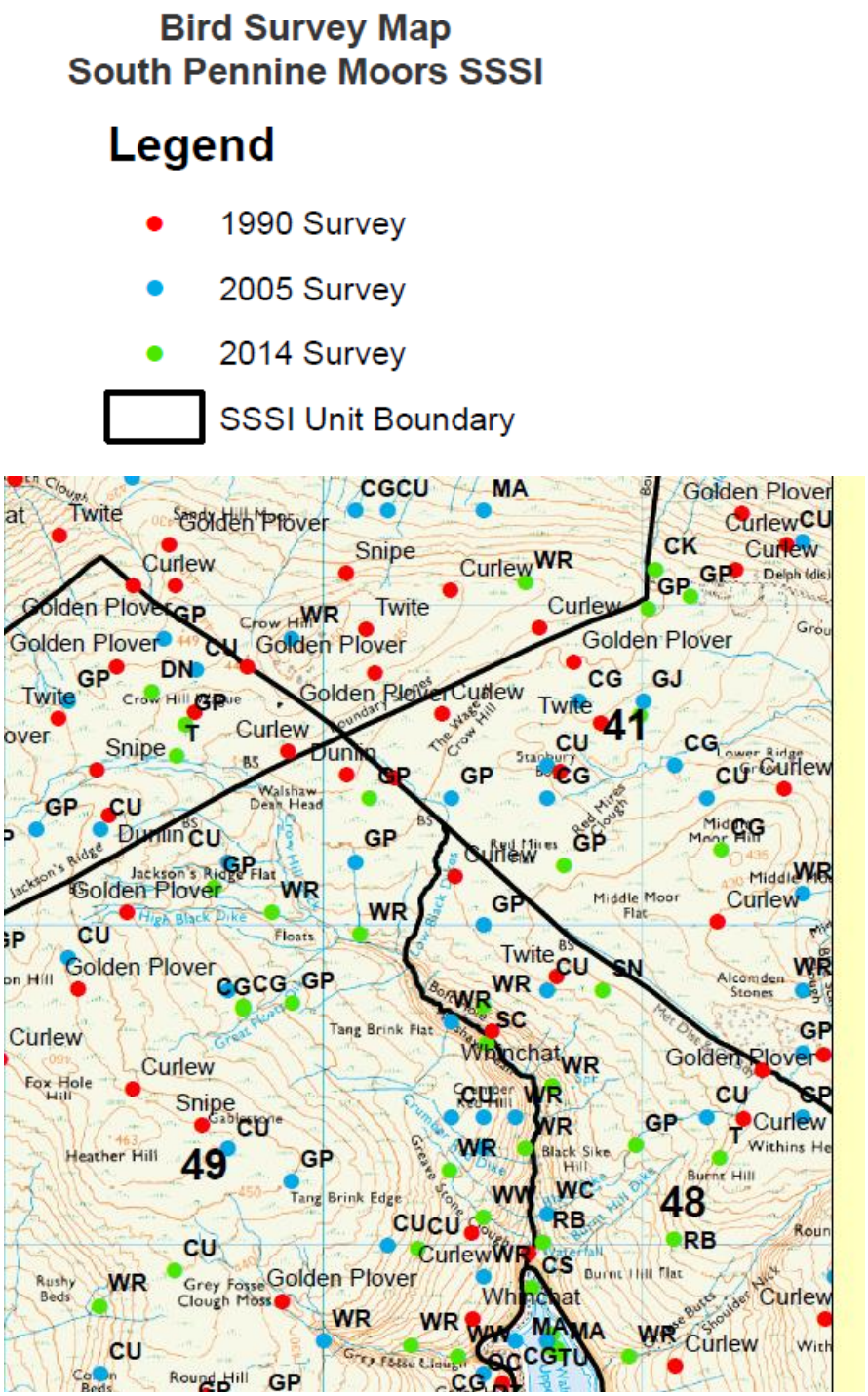
## Appendix 1 Existing and Proposed Tracks



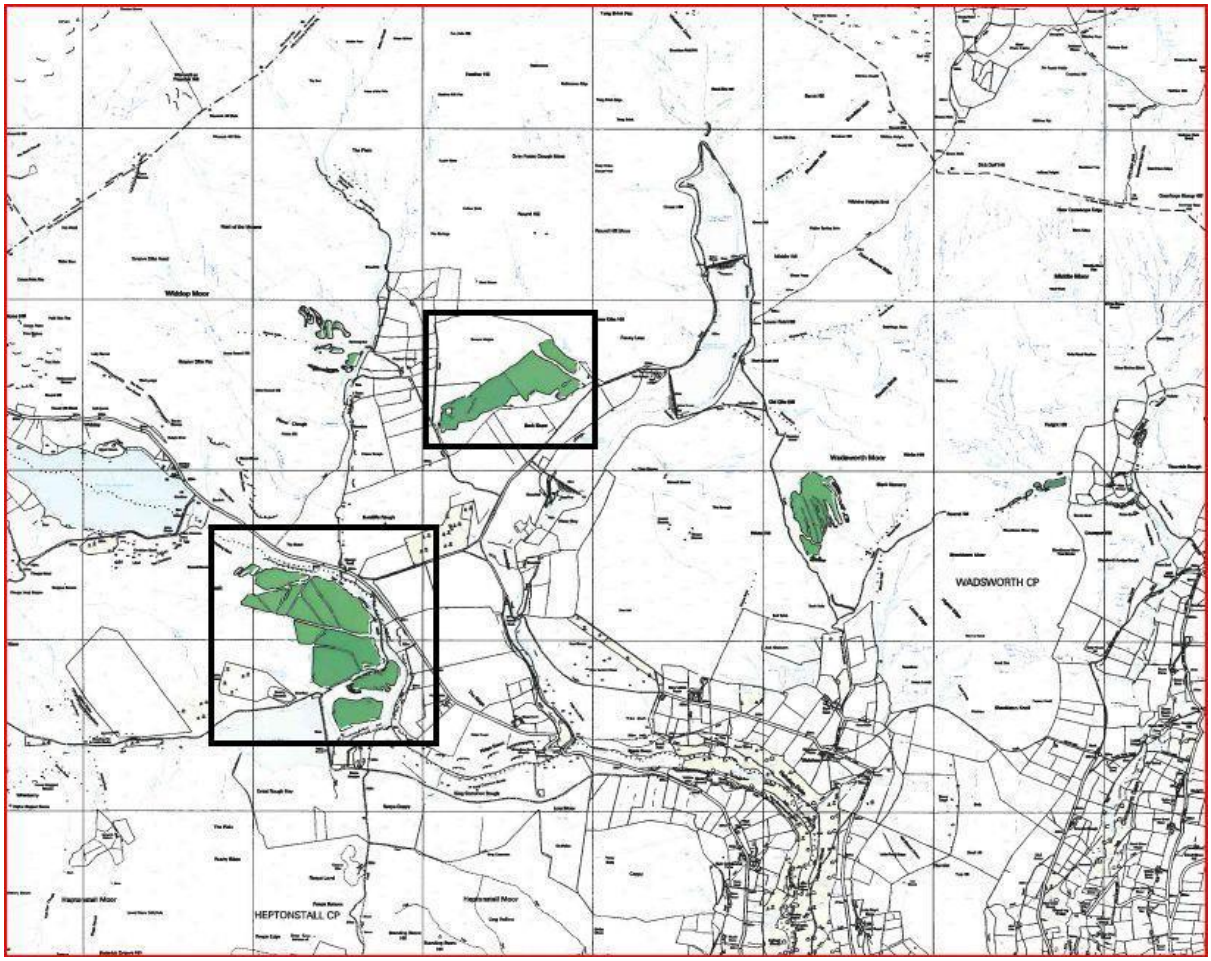
## Appendix 2 Habitat Map



## Appendix 3 Bird Survey Data – Map Extract



## Appendix 4 Location of areas of *Molinia* previously treated



## Appendix 5 R. Howson File Note: Proposed stone road

FILE NOTE

*Hypothetical firefighting without proposed stone road*

In the event of a wildfire as shown via the red crosshatch with a westerly wind, the fire would be fought as follows by estate staff. The tracked dumper stored at New Laithe Farm would be transported from A to B along the green route on a low loader behind a tractor. In the first event a tracked dumper carrying a 1,000 litres water tank and a high pressure water dispenser would be taken. To get from A to B this would take an estimated 35 minutes. The first tracked dumper would then make its way along the blue route from A to B and being fighting the fire. In order to traverse from B to the fire is envisaged approximately 50 minutes travel time. The tractor and low loader would then return back to New Laithe to pick up a second tracked dumper.

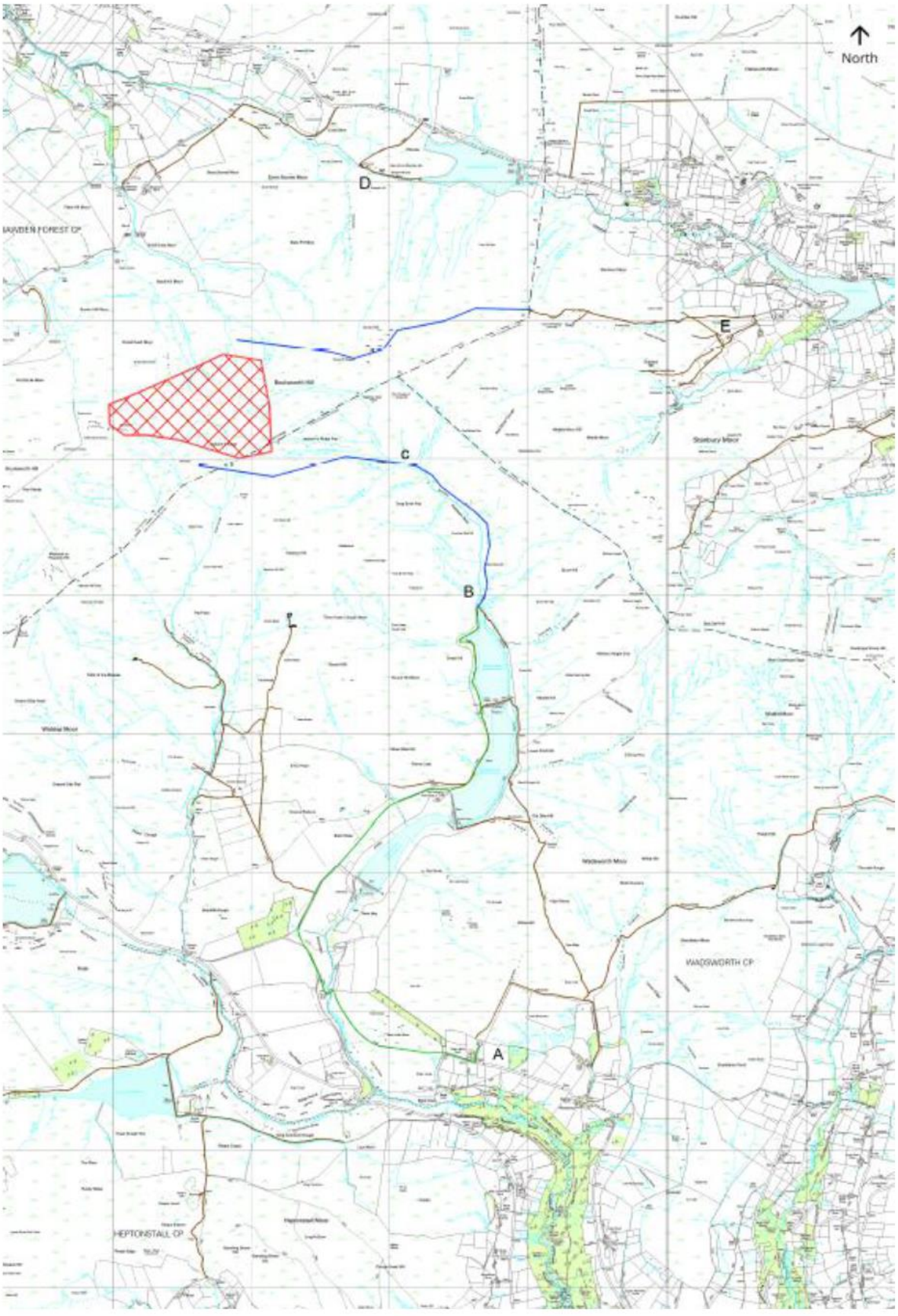
At the same time as deploying the first vehicle from New Laithe a second tracked dumper would be deployed from Ponden. This vehicle would track from E to the fire with an approximately travel time of one hour. Again, once emptied the only possible point to refill is Walshaw Dean Upper or Watersheddles with near identical travel times. The first tracked dumper would commence battling the fire to try and contain it and would use 1,000 litres of water in approximately 45 minutes.

During a prolonged dry spell the only place to fill with water would be Walshaw Dean Upper. Vehicles would therefore have to travel back from the fire to point B in order to replenish water with an estimated turnaround time of 95 minutes.

In the meantime Fire and Rescue Services would be deployed and transported to site using ATV's etc, although their resource would be minimal and limited to floggers only. They would not be able to progress beyond point B and D, this would prevent them from utilising the fire engine in any way.

The above does not allow time for estate staff to travel from their current place of work back to Ponden or New Laithe which could add in excess of 50 minutes, depending on the location.

# Assessment of plans and projects under regulations 21 and 63 of the Conservation of Habitats and Species Regulations 2017 as amended ('Habitats Regulations Assessment')



*Firefighting with new road*

In the event of a wildfire as shown via the red crosshatch with a westerly wind, the fire would be fought in the far more efficient way, utilising the new road network.

Initially a tractor and trailer transporting a tracked dumper fitted with 1,000 litre water tank would be deployed from New Laithe, point A to point C, at which point the tracked vehicle would make its way from the drop off point to the fire. Estimated travel time 55 minutes. It would commence fighting the fire and the tractor and trailer would return to New Laithe to pick up a second tracked dumper.

In the meantime a third tracked dumper would be deployed from Ponden along the proposed new road shown orange and then on to the front of the fire with an estimated travel time of 45 minutes.

In the meantime Fire and Rescue Services would attend site from both Lancashire and West Yorkshire. The Lancashire team would enter the site from Watersheddles Reservoir and set up a temporary reservoir at C. Water would then be ferried from Watersheddles to this temporary reservoir from the north with West Yorkshire Fire and Rescue doing the same from the south entering at Walshaw Dean Upper, point B. The two fire services would ferry water to site as well as men with floggers to try and contain the fire with the aid of the estate equipment.

The tracked dumpers would then refill with water from C rather than travelling to Walshaw Dene Upper or Watersheddles. The estimated travel time is approximately 20 – 25 minutes to this location, thus saving circa 35 minutes. In the event of the fire becoming uncontrollable the road would also act as a natural fire break and allow for the Fire and Rescue Service to dampen the road and adjoining vegetation as the fire progressed.

The proposed track overcomes the biggest logistical issue in fighting moorland wildfires in that it allows the swift deployment of water, machinery and manpower into the heart of the estate. It is clear to see from the above and attached plans how this will alter firefighting in the event of one occurring. Whilst the estate is well resourced with all terrain vehicles carrying firefighting equipment, they are simply rendered useless without the ability to promptly refill their tanks and get back to the fire promptly.

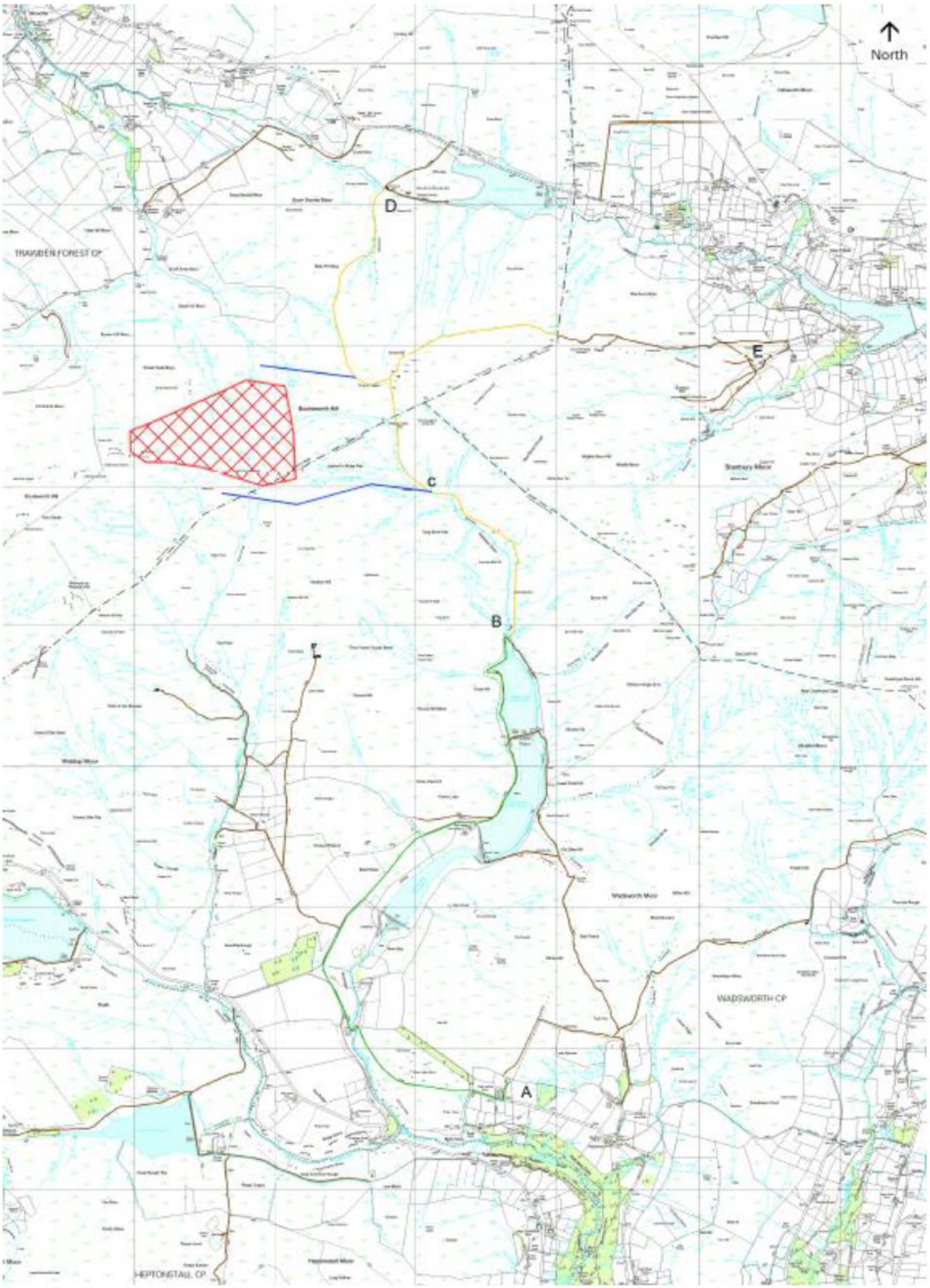
Historically the estate has deployed machines on the moor during prolonged dry spells leaving them in strategic locations. However due to a number of thefts and vandalism this is no longer feasible as when the machines are required they have found them to be either damaged or parts stolen.

Whilst there maybe other roads which appear to provide access, they are not suitable for transportation of a tractor and low loader carrying tracked dumpers.

Furthermore, these routes do not provide access to an adequate water supply for refilling over prolonged dry spells. During these spells, the fire will soon burn into the peat thus requiring greater amounts of water to suppress the fire and long term damage caused.

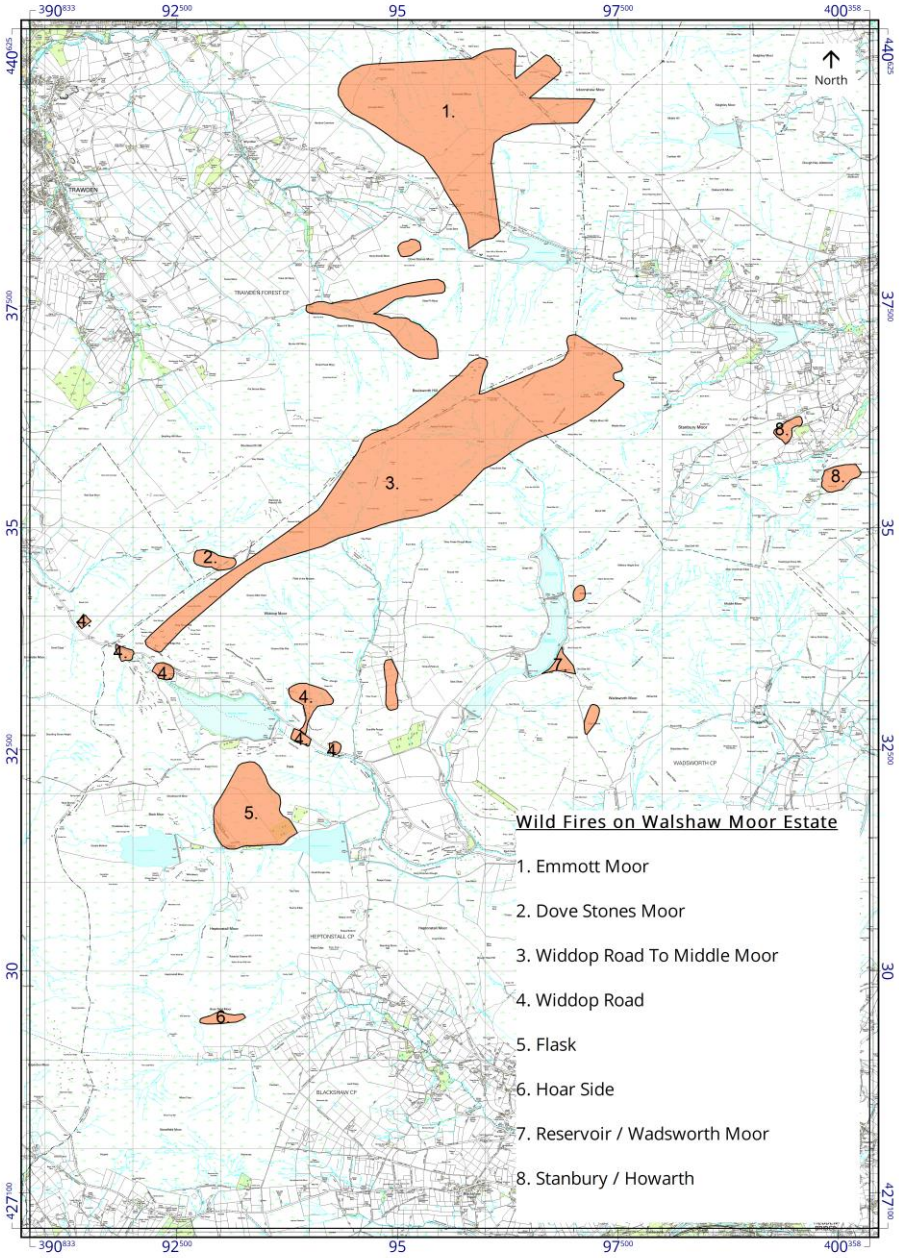
RJH
25.08.17

# Assessment of plans and projects under regulations 21 and 63 of the Conservation of Habitats and Species Regulations 2017 as amended ('Habitats Regulations Assessment')




For internal use only

## Appendix 6 Wildfire map



## Appendix 7: Causes of Wildfires (provided by Walshaw Moor Estate Ltd)

### Wild Fires on Walshaw Moor Estate

1. Emmott Moor – Arson (Lunch Hut – near Steeple Stones)
Started by arson by children at Peat House Lunch Hut. Crossed road and took Emmott Moor. Burnt for 10 days. Until rain.

2. Dove Stones Moor – Walkers – camp fire

3. Widdop Road to Middle Moor – Unknown (Back fire – East wind)
burnt for 2 weeks. Very dry May. Suspected fire lit by walkers accidently. Fire lit up in the mornings and burnt in. burnt until rain. 20 Estate staff / helpers stayed on the Moor for duration.

4. Widdop Road – Various roadside fires – arson and unknown

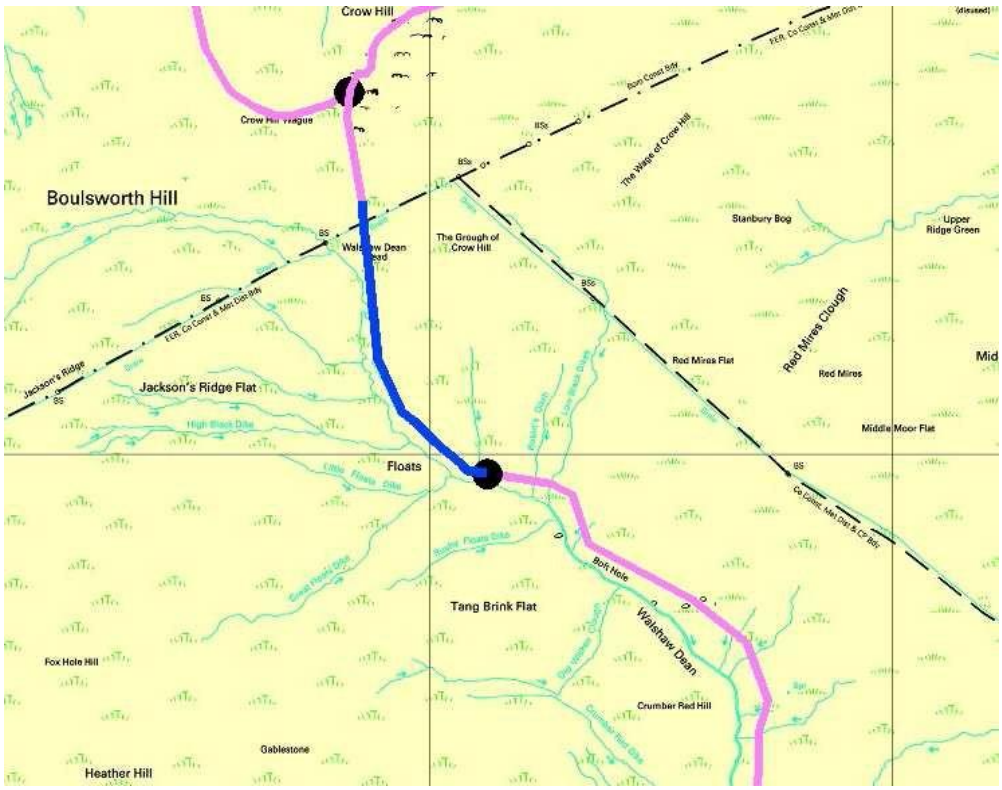
5. Flask – Arson
Started by arson at Lunch Hut burnt for three days.

6. Hoar Side – Arson

7. Reservoir / Wadworth Moor – Arson and camp fire

8. Stanbury / Howarth – Unknown

## Appendix 8 Track construction map




Floating track construction to be used on section shown blue.

## Appendix 8 Track construction map

Floating railroad track constructed in 2015 – photograph taken in 2017.

# Assessment of plans and projects under regulations 21 and 63 of the Conservation of Habitats and Species Regulations 2017 as amended ('Habitats Regulations Assessment')