



Package 8

Pikenaze Whole Site Works Package

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1. Works Quantities

Table 1, shows the proposed work quantities for Package 8a, Pikenaze.

Table 1 Package 8a: Proposed Work Quantities

| Treatment (units) | Package 8a Total |
|--|---------------------------------------|
| Geotextile (m ²) | 21,482 |
| Lime, Seed & Fertiliser (ha) | 2.20 |
| Year 2 Lime and Fertiliser (ha) | 2.20 |
| Re-profiling (m) | 12,259 |
| Sedge/dwarf shrub Plug plants for Geotextile (@10,000 per ha) (ha) | 2.15 |
| Gully Blocking: Stone (Dam Units) | 122 (91.5 tonnes, at 94 locations) |

Standard works specifications can be found in the main tender document Appendix 9. Site specific works technique information is included here in section 4.

Maps are included in section, 5, comprising the below:

- Map 1: Site Location Overview
- Map 2: Access and Lift Site Overview.
- Map 3: Wike lift site
- Map 4: Re-profiling, geotextile, lime, seed, fertiliser and plug plants
- Map 5: Stone dams
- Map 6: Previous Restoration Works

2. Works Dates

2.1. Start Date:

15th August 2022

2.2. End Date

28th February 2025

2.3. Restricted Dates

Grouse season 2022: Specific shooting dates between 12th August and 10th December 2022 due to location of lift site on edge of grouse moor. Specific dates TBC. Contractor to allow for up to 30 days downtime per year associated with shoot restrictions during this period.

Nesting bird season 2023: 1st April 2023 to 15th Aug 2023,

Grouse season 2023: Specific shooting dates between 12th August and 10th December 2023 due to location of lift site on edge of grouse moor. Specific dates TBC. Contractor to allow for up to 30 days downtime per year associated with shoot restrictions during this period.

Nesting bird season 2024: 1st April 2024 to 15th Aug 2024

Grouse season 2024: Specific shooting dates between 12th August and 10th December 2024 due to location of lift site on edge of grouse moor. Specific dates TBC. Contractor to allow for up to 30 days downtime per year associated with shoot restrictions during this period.

2.4. Works Phasing

Table 1 below provides suggested outline phasing/timing of the different works elements. These are based on completing the works within the dates stipulated in section 2.1, 2.2 and 2.3. The Contractor is required to provide their proposed detailed programme for the works as part of the tender.

The machine work (re-profiling) may either be undertaken wholly within the 2022-2023 works season, split over the 2022-2023 and 2023-2024 works season if required (as indicated in table below). The geotextile application and subsequent LSF/plug plant applications shall be matched accordingly.

Table 2 Suggested Outline Works Phasing

| Year | Period | Works element |
|--|---|--|
| 2022-2023 | April 2022 to July 2022 | Contractor prepares/finalises HSSE & CDM documentation. |
| | August 2022 to March 2023 | Supply, fly & install stone dams (whole site) |
| | | Machine work: Gully side and hagg edge re-profiling (part A) |
| | | Geotextile Application (part A) |
| February 2023 to March 2023 | Initial lime, seed and fertiliser application (hand) (part A) | |
| 2023-2024 | April 2023– July 2023 | Update/prepare/finalise HSSE & CDM documentation (as required) |
| | August 2023 to March 2024 | Continuing Machine Work (if not completed 2022-2023): Hagg edge and Gully side reprofiling. (part B) |
| | | Geotextile Application (part B) |
| | | |
| | February 2024 to March 2024 | Initial lime, seed and fertiliser application (hand) (part B) |
| Apply Maintenance (year 2) Lime and Fertiliser (hand) (part A) | | |
| Vascular Plug planting into bare peat restoration areas (part A) | | |
| 2024-2025 | April 2024 to July 2024 | Update/prepare/finalise HSSE & CDM documentation (as required) |
| | August 2024 to March 2025 | |
| | | |
| | | |
| | February 2025 to March 2025 | Apply Maintenance (year 2) Lime and Fertiliser (hand) (part B) |
| Vascular Plug planting into bare peat restoration areas (part B) | | |

3. Works Site Details

3.1. Work Site Name:

Pikenaze

3.2. Work Site Grid Reference

Approximate site centre at OS GR SE 13376 02577

3.3. Description of location:

The Works Site is part of the Pikenaze stakeholder area at the head of the Longdendale valley, located approximately 7.5km southwest of the town of Holmfirth and approximately 1km west of the hamlet of Dunford Bridge, and is located within the county of Derbyshire.

The Pikenaze stakeholder area is approximately 957 ha, owned by United Utilities. The site predominantly comprises catchment for tributaries of the River Etherow and Heyden Clough which drain into the United Utilities owned Woodhead Reservoir, at the head of a chain of reservoirs in the Longdendale valley. The site primarily comprises a combination of blanket bog, acid grassland and dry/dwarf shrub heath habitat, but with a few small areas of plantation woodland and grazed in-bye land associated with Pikenaze Farm within the southwest of the stakeholder area. Approximately 695ha of the site is considered “deep peat” (from Natural England Status of Peat report).

The site lies within the South Pennine Moors ‘Special Area of Conservation’ (SAC) and the Peak District Moors ‘Special Protection Area’ (SPA). The site is located within the Peak District National Park. The site lies within the Dark Peak SSSI, including some or all of SSSI units 239, 240, 241 and 242. The SSSI units are indicated on Figure 1 (inset below).

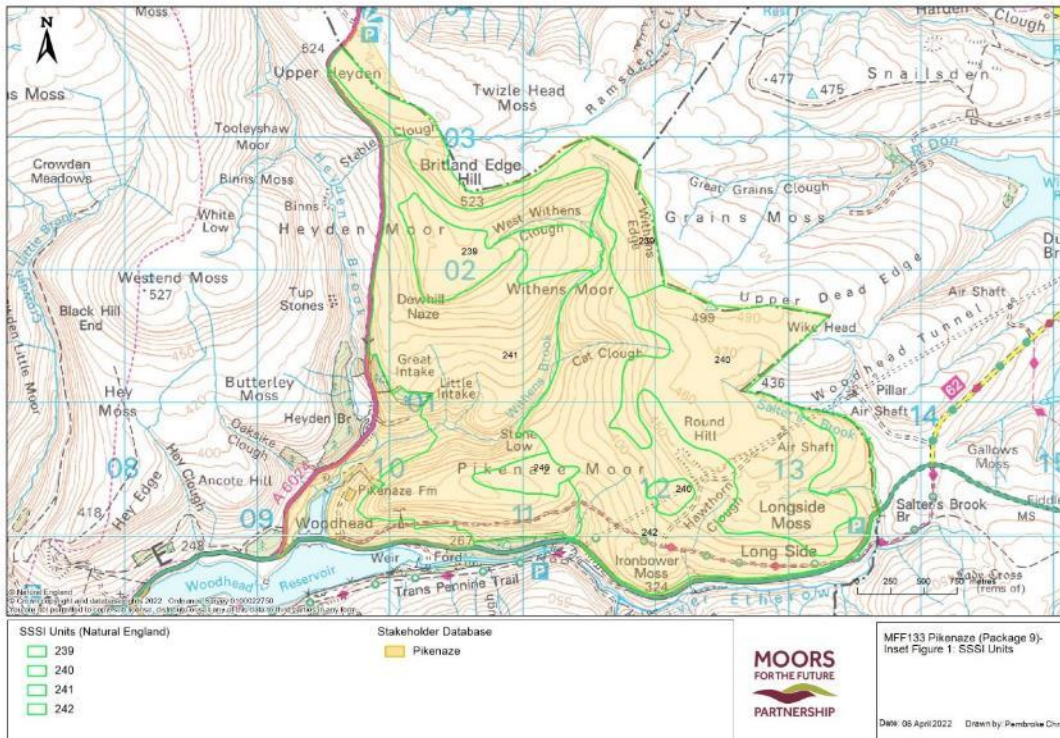


Figure 1 Inset map of SSSI units at the work site

3.4. Description of Site Areas

The site predominantly comprises a number of levels of gently sloping deep peat blanket bog, separated by a number of “edges” generally comprising thinly vegetated rocky soils on steep slopes, surrounding the significant valley of Withens Brook, fed by West Withens Clough, Withens Clough and Cat Clough.

The flatter blanket bog areas are typically dominated by *Molinia* (purple moor grass), common cotton grass and/or hares tail cotton grass in varying proportions. In some places, rushes (mostly soft rush) are abundant and often associated with wetter flushes. The steeper ground is often vegetated with matt grass, purple moor grass, hares tail cotton grass and some dwarf shrub. Some bracken is present.

See Maps in Section 0.

3.5. Specified Access Points:

It may be necessary to use a combination of access points for works in different locations across the site (see Map 2). The suggested/proposed access points are:

- Machine Access:
 - Suggested access points for low ground pressure machinery include the following:
 - from SE 13421 99813 on A628 Woodhead Pass via existing track (byway-Longdendale trail) along Long Side, then northeast past disused Quarry then north onto and over open moorland (Round Hill). For access to various areas

- including Round Hill, Redhole Spring, Wike Head, Withens Edge, Cat Clough, Audenshaw Clough areas.
- From SE 09606 03652 near Upper Heyden over open moorland above Hagg Edge, south of summit layby on north of A6024 Holme Moss. For Access to “Top Edge” leading to Britland Edge Hill. May require creating temporary access points in stock fences. Existing gates/access points should be used where practicable.
- From SE 09943 02798 approximately 150metres north of layby at SE 09912 02654 on west A6024. South east then south across open moorland/hillside. For access to Dewhill Naze and associated areas. Will require creating temporary access points in stock fence. Existing gates/access points should be used where practicable.
- The tenderer may propose additional/alternative machine access routes with their submission; the contractor should inspect and satisfy themselves of the suitability of these or any alternative routes prior to tender.
- The tenderer is advised to inspect the proposed machine access route in advance of tendering to assess suitability and to determine the need for ground protection/support to allow access/prevent damage.
- Pedestrian access:
 - As per machine access routes, or
 - From Wike airlift site, via informal path and stile at SE 12854 01039
 - The contractor may propose alternative pedestrian access routes.

3.6. Delivery and Lift Site:

- Delivery site name: Wike Track entrance
 - Suggested site for stone deliveries at entrance to track.
 - Grid Reference: SE 14070 00664
 - The track from the delivery site to the suggested airlifting site is not considered suitable for 20t tipper wagons; Stone to be forwarded from Delivery site at entrance to Lift Site by Contractor using suitable plant and machinery;
 - Trackway/ground protection not envisaged to be required.
 - Traffic management may be required during unloading of stone deliveries; contractor to evaluate.
- Lift Site Name: Wike
 - Suggested lift site location is at Wike, at end of track from Goddards Lane.
 - Grid reference SE 13504 01083. This is indicated on Maps 2 and 3.
 - Description and Surfacing: A relatively flat grassed area is present at the end of the track.
 - Trackway not required.
 - Traffic management is not envisaged to be necessary.
 - Storage of materials is allowed at the lift site. The contractor shall allow for appropriate security.
 - Refuelling is allowed at the lift site.
- Potential alternative delivery and lift include YW car park at Holme Moss Summit (SE 09778 03892). However this may conflict with other airlifting operations and so is not preferred.

-
- The tenderer is advised to inspect their proposed delivery and lift sites in advance of tendering to assess suitability and to determine the need for traffic management, ground protection and security measures.
 - The Contractor may wish to propose the use of different lift sites through the programme, if beneficial for execution of the works.
 - The use of any such lift sites are subject to MFFP obtaining relevant stakeholder consents/permissions.

3.7. Access Restrictions:

Contractor access is to be restricted to daylight hours only during the Contract Period.

There is a locked gate restricting access to the Wike Head Lift Site off Goddards Lane. Access will be arranged for the Contractor. Locks and access arrangements for other routes will be confirmed if requested.

Where practicable, existing crossing points are to be used, in preference to breaking fences for new access points.

Previous works have been undertaken on the site, but predominantly limited to sphagnum planting and vegetation management. The contractor shall, so far as is practicable, avoid disturbing or damaging these completed works, although machine and pedestrian access across the wider areas previously subject to sphagnum planting and vegetation management is considered acceptable. Maps indicating locations of such previous works are included as Map 6.

The Authority cannot confirm what rights there are (if any) to use any car parking or access routes or their suitability (whether of a safety nature or otherwise) for any use (including but not limited to in connection with the Works. Such information is for indicative purposes only and without any liability or obligation on the Authority. The Contractor agrees and confirms that it has not placed any reliance on such information and that it uses such car parking or access routes wholly at its own risk. Contractors should satisfy themselves as to the safety, suitability and rights to use such car parking and access routes.

3.8. Public Rights of Way / Footpaths:

The site and access route is located within Access Land pursuant to the CRoW Act and there are a number of informal paths in vicinity of the access route and works site. A By-way open to all traffic crosses the south of the site, and forms part of the Longdendale Trail, National Cycle Route no. 62 and Transpennine Trail. There is also a short section of public footpath which joins this from the A628 to the south, and a short connecting spur which the national trail and cycle route take to connect to continuation across the A628 (offsite) along the former Woodhead railway line. It should be acknowledged that Windle Edge road (from which access to the suggested Wike Lift site is gained) is also part of the Trans Pennine Trail and National Cycle route no. 62.

3.9. Vehicles allowed on Works Site:

Contractors may park vehicles on suitable firm ground adjacent to the Longdendale Trail or at disused quarries to south of Round Hill, accessed by existing made track. Parking is also possible at the end of the existing made track at the Wike lift site. Alternatively, laybys are present to the east of the site along the A6024. The access point from Linshaw Road must remain clear at all times for emergency access.

Contractors should satisfy themselves as to the safety, suitability and rights to use such car parking and access routes. Upon request, permission can be sought for parking of contractor's personnel vehicles on existing track near disused quarry/airshaft at Round Hill.

Only suitably low ground pressure vehicles (<3psi) may be taken onto the works site for machine works, cutting, refuelling or transport of required materials associated with the works. Vehicles shall not be used for the sole purpose of personnel transport.

Access for excavators and other low ground pressure vehicles can be made at the access points and outline route as per section 3.5. Contractors should assess to their own satisfaction the exact route to be taken.

3.10. Livestock:

Sheep and cattle graze portions of the Work Site seasonally. The contractor must ensure their works do not allow livestock to escape.

3.11. Hazards associated with the Works Site:

Known hazards will be identified to the Contractor in the MFFP CDM2015 Pre-Construction Information provided at the pre-start meeting prior to the Works.

The Works Site is on open moorland at high altitude and includes waterlogged areas, deep peat, gullies, stream channels, steep slopes and unstable ground.

The Work Site is on Open Access land (pursuant to the CROW Act) so the Contractor must be aware of and have due regard to members of the public, who may be present at the Site, and ensure appropriate mitigation measures are in place.

The Holme Moss TV mast is located to the northwest of the site. Under certain weather conditions, there is a risk of falling ice from the mast/cables in the immediate vicinity of the mast.

The Lift site is within a stakeholder area more widely managed as a grouse moor. Works will be undertaken during the grouse shooting season (12 August – 5 December). However, there should be no airlifting on specific shoot days (works will stand down for shoot days and there will be no contractor access to the lift site).

The former Woodhead Railway tunnels pass below the southwest of the site, oriented NE to SW. A number of above ground structures (including open and capped air shafts), former quarries and spoil heaps associated with the former tunnels and construction works are present at the site.

High Voltage electricity cables run belowground through the former Woodhead Railway Tunnels beneath the south of the site.

UXO hazard is considered to be LOW (from Zetica Bomb Risk Mapping).

No other known belowground services/utilities at the site.

No known aboveground/overhead services at the site

3.12. SSSI

The site is located within the Dark Peak SSSI. SSSI Consent/Assent will be arranged by MFFP in coordination with United Utilities. No works shall commence prior to confirmation from MFFP that SSSI consent/assent has been granted.

3.13. Scheduled Ancient Monuments and other Archaeology

There are no Scheduled Monuments or Listed buildings recorded within the Pikenaze site. Based on previous engagement with the PDNPA cultural heritage team, a number of features of potential archaeological/historical interest may be considered present at the site. These include features present along the northern boundary (former boundary markers). Such features will likely require exclusion zones/and or consideration in developing work plans.

There may also be archaeological interest in the basal peat deposits based on the presence of previous Mesolithic age flint finds in proximity to the site, which are interpreted to represent the potential for a flint production site or temporary settlement. These *may* require amendment to standard methodologies for machine excavation works (i.e. re-profiling)

A Historic Environment Assessment will be undertaken by MFFP and further clarification on exclusion zones or other mitigation will be provided upon completion of this assessment.

4. Work Techniques- Site Specific Details

All works to be undertaken according to MFFP standard specifications, except where amended below. Site specific details pertaining to the proposed works are outlined in following sections, to be read in conjunction with the MFFP standard specifications.

4.1. Re-profiling

Approximately 12,259 linear metres of re-profiling is proposed at Pikenaze to stabilise and facilitate re-vegetation of bare and over-steep gully sides and hagg edges.

Photo 1 shows an example of where re-profiling is needed on a bare and eroding hagg edge to aid stabilisation and allow bare peat restoration techniques to be applied. The overhanging vegetation at the top can be seen in this photo.

Where possible, existing vegetation should be used to re-vegetate/ stabilise the re-profiled slopes. Where potential for flow along the toe of the slope is present, the turves should be placed along the toe of the slope, rather than at the crest. This will help prevent erosion of the toe of the slope.

Where existing vegetation is not sufficient to revegetate the re-profiled slopes, the re-profiling will be followed-up by bare peat restoration techniques (i.e. geotextile and application of Lime, Seed and Fertiliser); likely necessary for majority of the larger re-profiling sections identified at Pikenaze. Following establishment of nurse-crop grasses, planting of native plug plants into the re-profiled areas is proposed to aid re-colonisation (see section 1).



Photo 1 Photo showing typical bare peat hagg edge identified for re-profiling.

The slope should, in general, be re-profiled to an angle of 45 degrees or less, however techniques at individual locations may vary, dependent upon local conditions and constraints.

Stone dams may be used in conjunction with proposed re-profiling of gully sides. Stone Dams are specified in section 4.2

4.2. Gully Blocking- Stone dams

Proposed stone dams include “standard” single and multi-unit stone dam constructions in erosion gullies, as shown in Photo 2. These may comprise part-width baffles or full-width stone dams, where appropriate. The exact design of such measures will require further consideration and specification prior to the works, given some or all of the stone dams may be placed prior to completion of re-profiling works. The locations of stone dams are indicated on Map 5.



Photo 2 Photo showing typical location for stone dam; here a two unit stone dam has been proposed due to the width, height and potential sediment load of the gully. The gully sides shown here are approximately 2.25m in height and will also be subject to re-profiling and subsequent bare peat revegetation techniques

4.3. Bare Peat Restoration: Geotextile & LSF application

Bare peat at the Pikenaze site predominantly relates to bare and eroding/unstable hagg edges or Gully sides, however some small areas of bare peat exist associated with gentle gully sides/hagg edges and some isolated peat pans. These bare and/or eroding peat areas often show little or no sign of recovering fully and intervention is needed to prevent loss of peat. For steep gully sides/hagg edges (i.e. photo 1), re-profiling to reduce the slope angle is considered necessary to help stabilise and revegetate such bare peat. Re-profiling work is outlined in section 4.1, however the subsequent bare peat restoration works are key to ensuring revegetation of re-profiled slopes.

Photo 3 shows a typical area of bare peat on a shallow slope/peat pan. There is limited or very sparse vegetation present with the exception of isolated clumps of cotton grass and edges are showing signs of active erosion due to exposure to freeze-thaw, wind and rain.



Photo 3 Photo showing gently sloping bare peat proposed for re-vegetation techniques without re-profiling (foreground).

The process for revegetating the bare peat should follow Moors for the Future Partnership's standard methodology:

1. Apply Geotextile and pin in place following standard specification.
2. Apply lime, seed and fertiliser

Geotextile has been selected for use at this site due to stakeholder request. The Contractor shall supply the required quantity of geotextile, which shall comprise an open netting (hole size approx. 10-30mm) and composed of plastic-free biodegradable materials. The surveyed locations and quantities assume geotextile sourced with nominal roll width of approximately 1m (geojute typically available in 1.22m wide rolls) and cut to length.

Map 4 gives an overview of the nature of the bare peat restoration works, principally associated with areas proposed for re-profiling. It should be noted however that some of the re-profiling will be re-vegetated with existing in-situ vegetation/overhanging turves and some bare peat restoration will be undertaken outwith reprofiling (predominantly at the top of Withens Clough).

Due to the typically small and/or linear nature of the areas identified for bare peat restoration, the geotextile locations have not been separately identified on Map 4 for the purpose of this tender

document; however the geotextile is predominantly directly associated with the reprofiling work, or otherwise in the same vicinity. Additional (more detailed) data showing individual surveyed quantities of geotextile will be available following tender award.

The contractor should use the provided information to determine the best methods for transporting geotextile on to and around Site. Implications for transporting geotextile to specific locations on the ground should be considered.

Lime, seed and fertiliser (LSF) should be applied following completion of re-profiling (where required) and geotextile application. Based on the small extent and/or linear nature of the identified bare peat and re-profiling areas, it is envisaged that lime, seed and fertiliser application would be undertaken by hand rather than through helicopter based aerial application. The contractor should consider and specify in their tender return the proposed methodology for hand application to ensure consistent even application (i.e. pre-weighed bags of materials and use of backpack spreaders or similar). LSF to be supplied by the Authority. It is suggested that initial LSF materials are transported on to site in pre-weighed sealed bags associated with quantities of geotextiles, however the contractor should propose their own methodology.

Allowance should be made for 2 years of lime and fertiliser application (i.e. year one lime, seed and fertiliser applied after geotextile application, then maintenance lime and fertiliser in year 2). Further detail on maintenance lime and fertiliser is included in section 4.5

Following establishment of nurse crop vegetation on such identified bare peat areas, planting with suitable vascular plant species (such as plug plants of native dwarf shrubs and sedges) is recommended to further promote re-colonisation by native moorland species. Further information is provided in section 4.4.

4.4. Vascular Plug Planting

Where plug planting is proposed into areas treated using bare peat restoration techniques (predominantly re-profiled drip edges and gully sides), an equivalent planting density of 10,000 plugs per ha has been proposed (1 plug per 1 m²). The plug planting is proposed to be undertaken approximately 12 months after geotextile and initial LSF application, in order to allow for any settlement of the re-profiled slopes and allow nurse crop grasses to become established increase plug plant colonisation success.

The plugs are likely to comprise 90% common cotton grass (*Eriophorum angustifolium*) and 10% Crowberry (*Empetrum nigrum*). The crowberry plugs should be planted in drier areas, typically towards tops of reprofiled slopes.

The contractor shall specify in their tender return the proposed methodology for transporting materials (i.e. plug plants) on to site and method for waste removal.

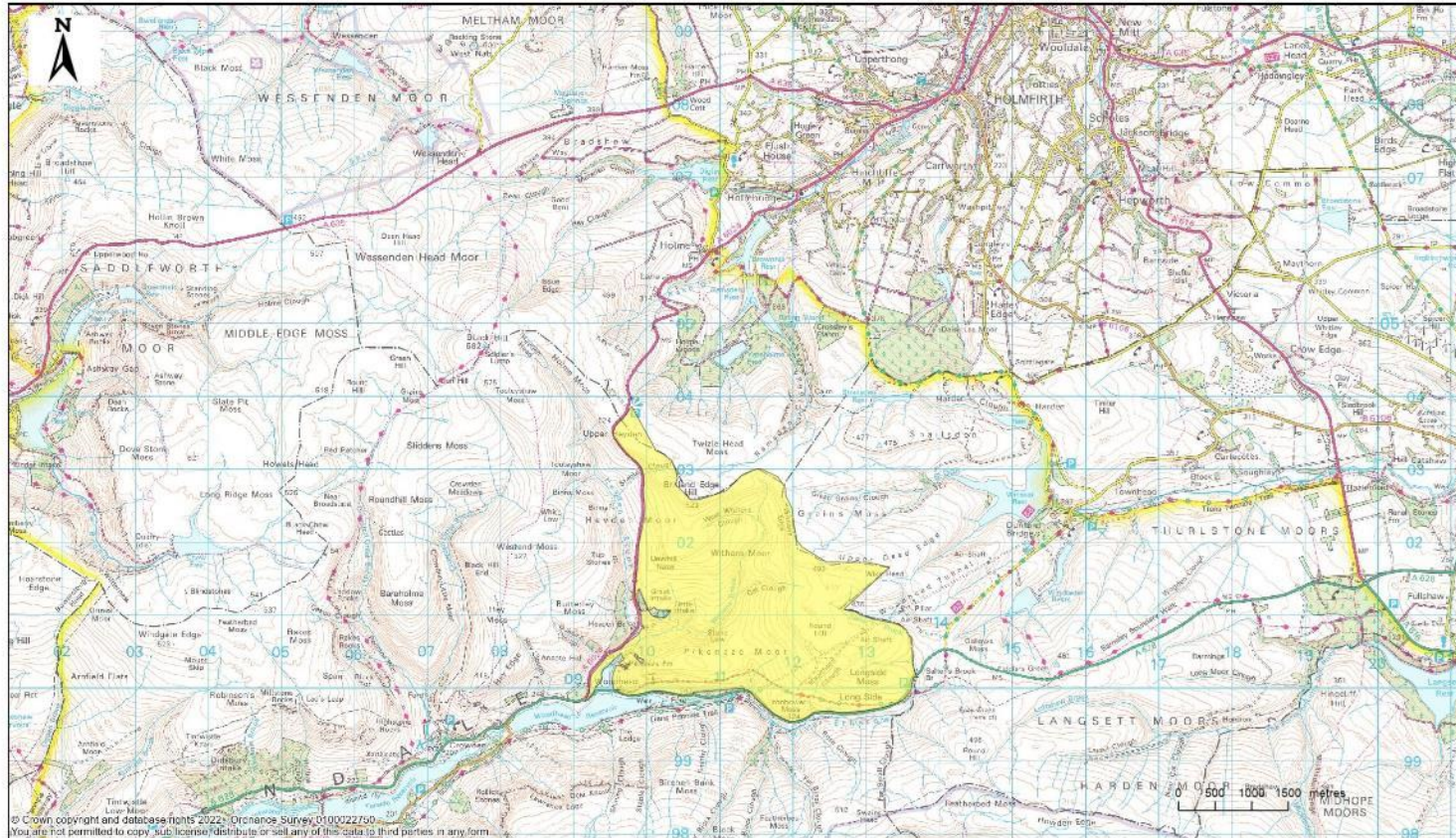
The location of plug planting is as per Map 4.

4.5. Maintenance Lime and Fertiliser

Follow-up ("maintenance") lime and fertiliser application will be applied approximately 12 months after initial LSF application; and thus is anticipated for February 2024. The contractor shall specify in their tender return the proposed methodology for transporting materials on to site and method for waste removal.

Maps

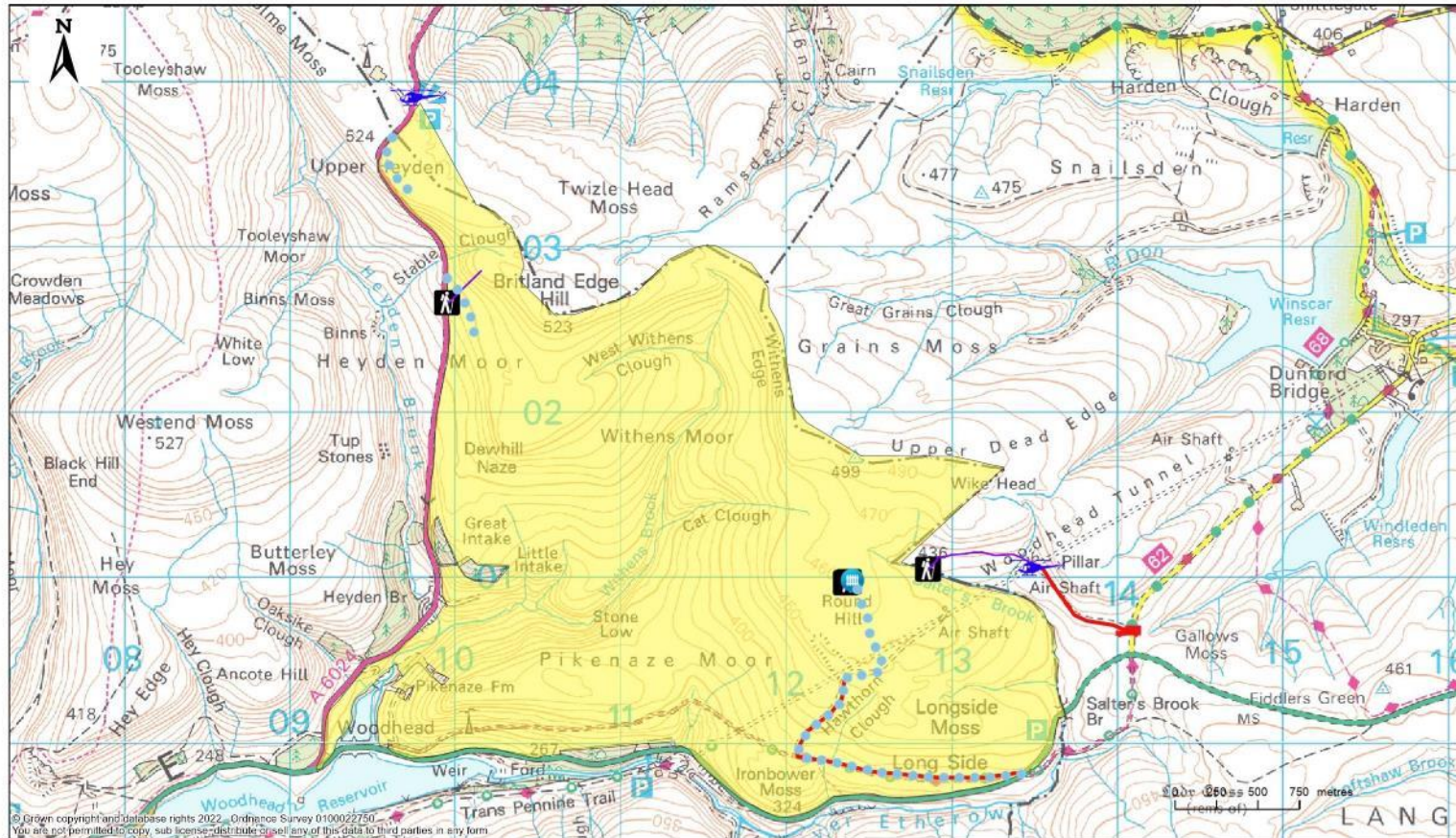
- Map 1: Site Location Overview
- Map 2: Access and Lift Site Overview.
- Map 3: Wike Lift Site
- Map 4: Re-profiling, Geotextile, lime, seed, fertiliser and plug plants
- Map 5: Stone dam locations
- Map 6: Previous Restoration Works



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Stakeholder Database

 Pakenaze



MFFP Lift Sites and Access

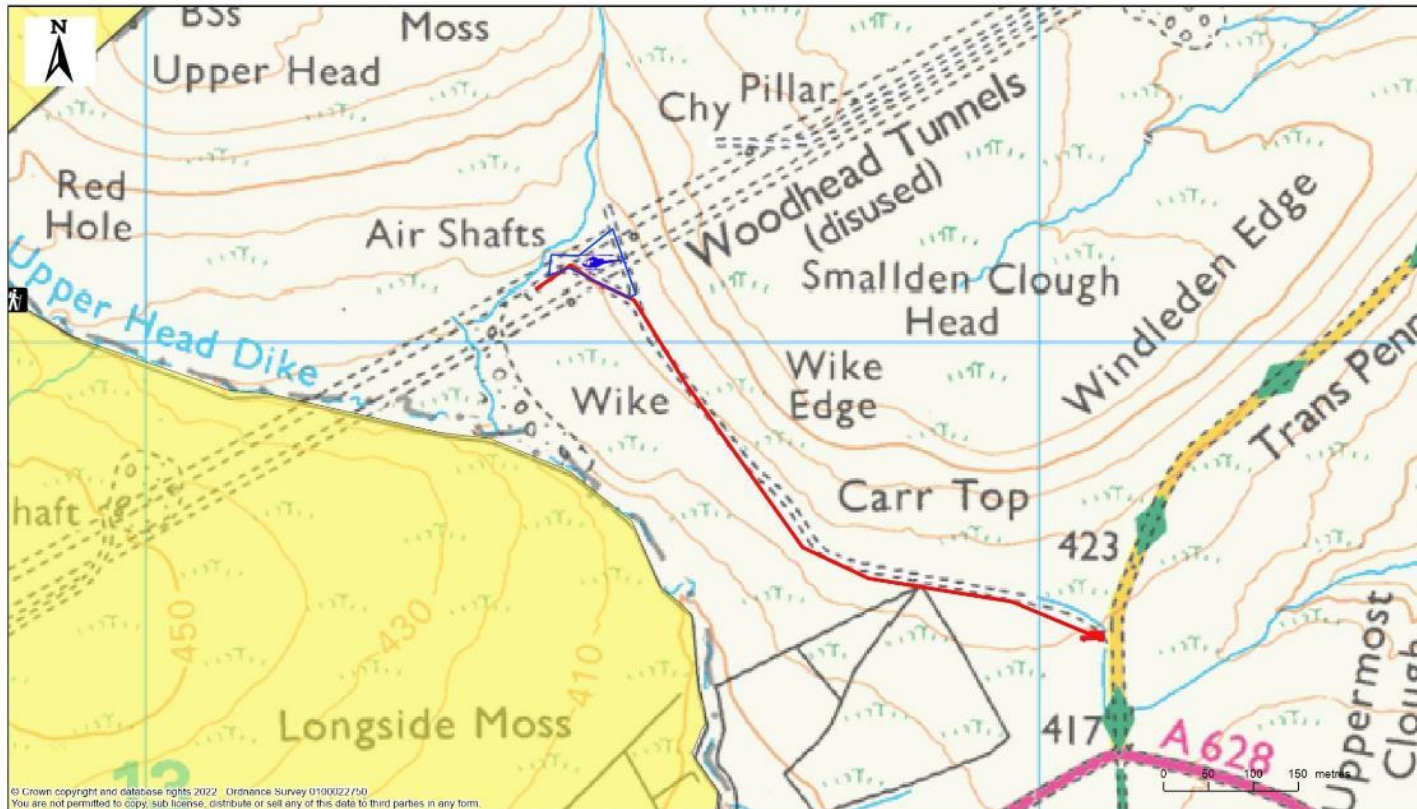
- Lift Site
- Machine Access
- 4x4 Access
- Pedestrian Access
- Field Gate
- Stile
- Storage Area
- Delivery Site

Pikenaze

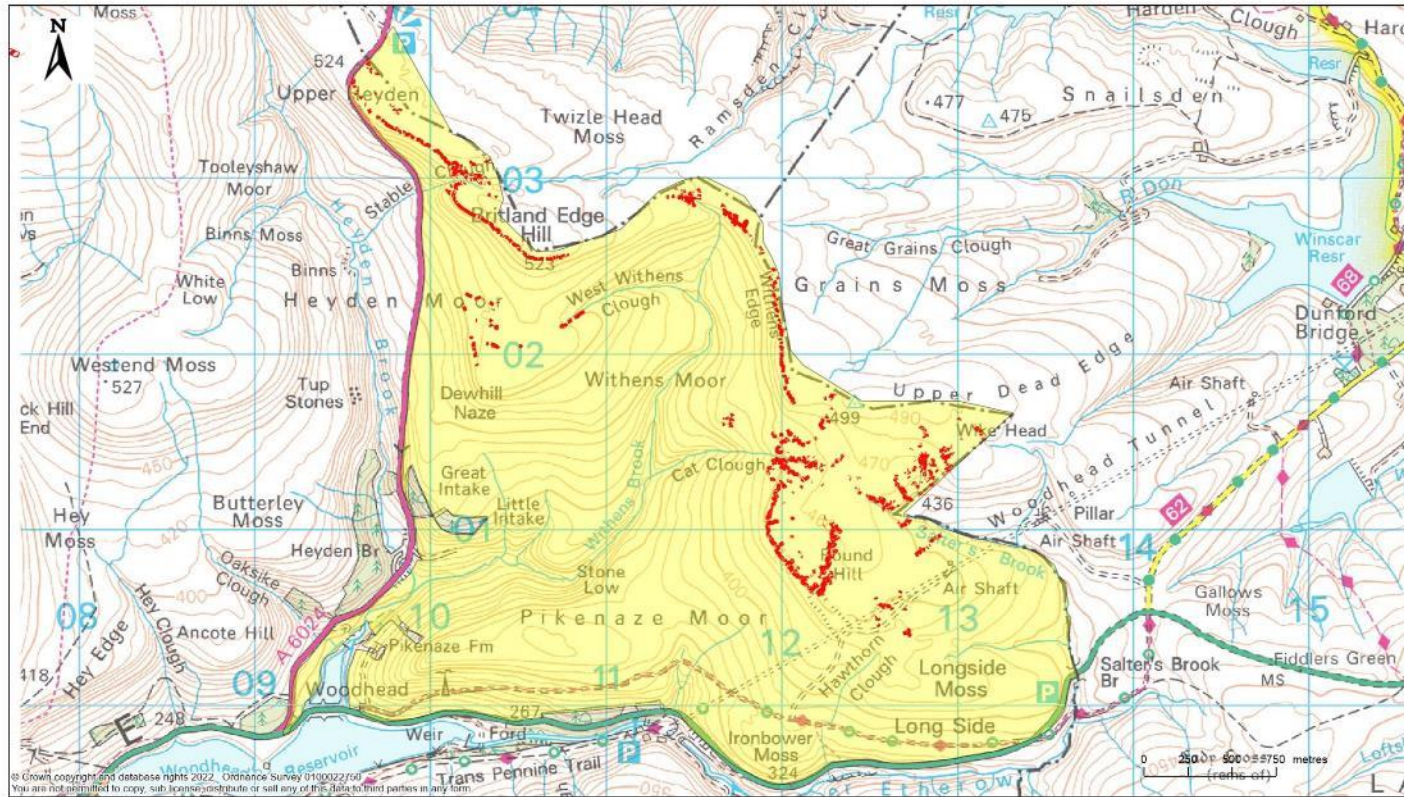
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MFF133 Pikenaze (Package 9)-
Map 2: Access Routes and Lift
Sites

Date: 08 April 2022 Drawn by: Pembroke Chris



| MFFP Lift Sites and Access | |
|----------------------------|-------------------|
| | Lift Site |
| | Machine Access |
| | 4x4 Access |
| | Pedestrian Access |
| | Field Gate |
| | Stile |
| | Storage Area |
| | Delivery Site |
| | Pikenaze |



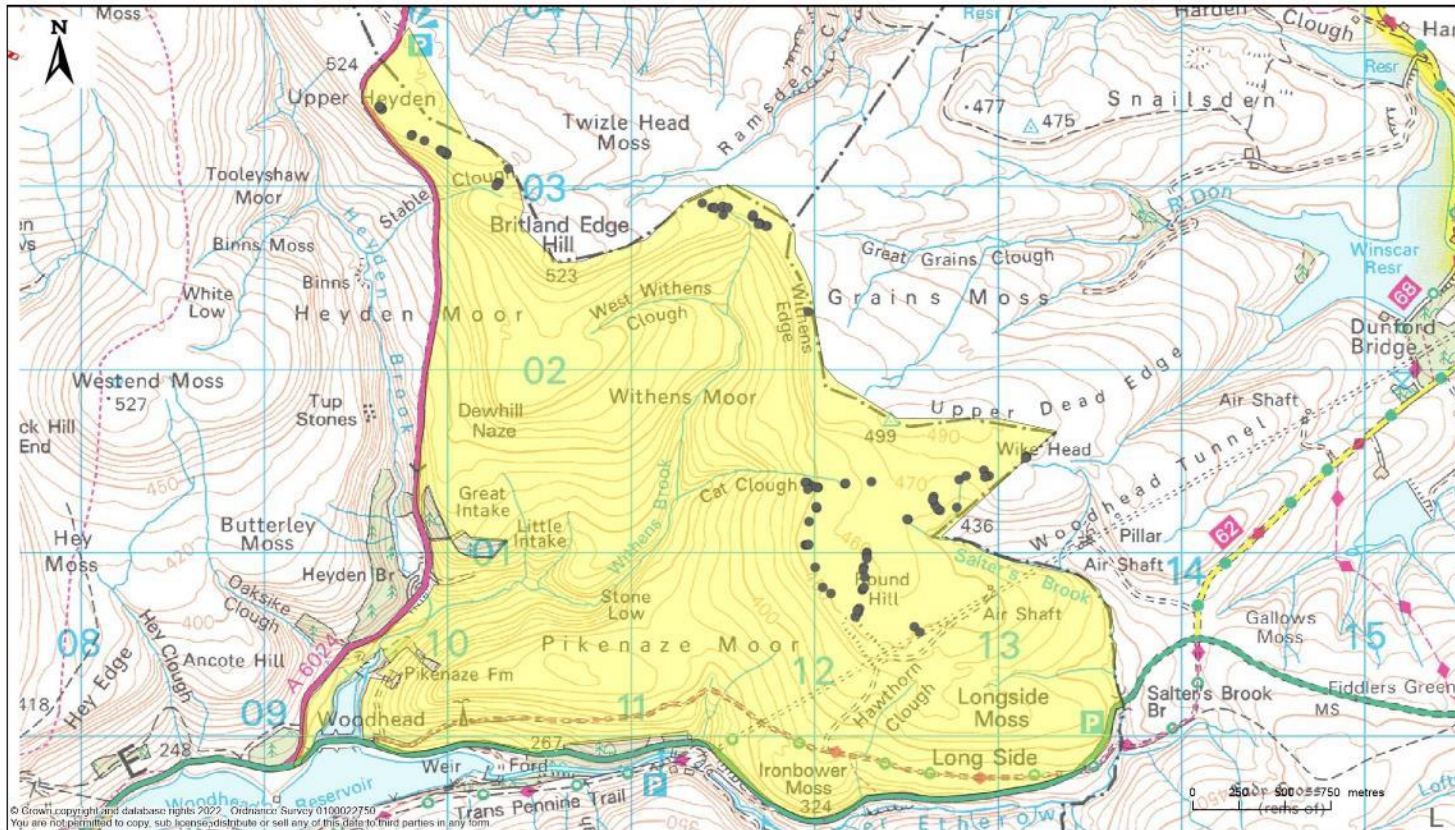
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Pikenaze Survey Lines

— Re-profiling, geotextile, lime, seed, fertiliser and plug plants

Stakeholder Database

■ Pikenaze

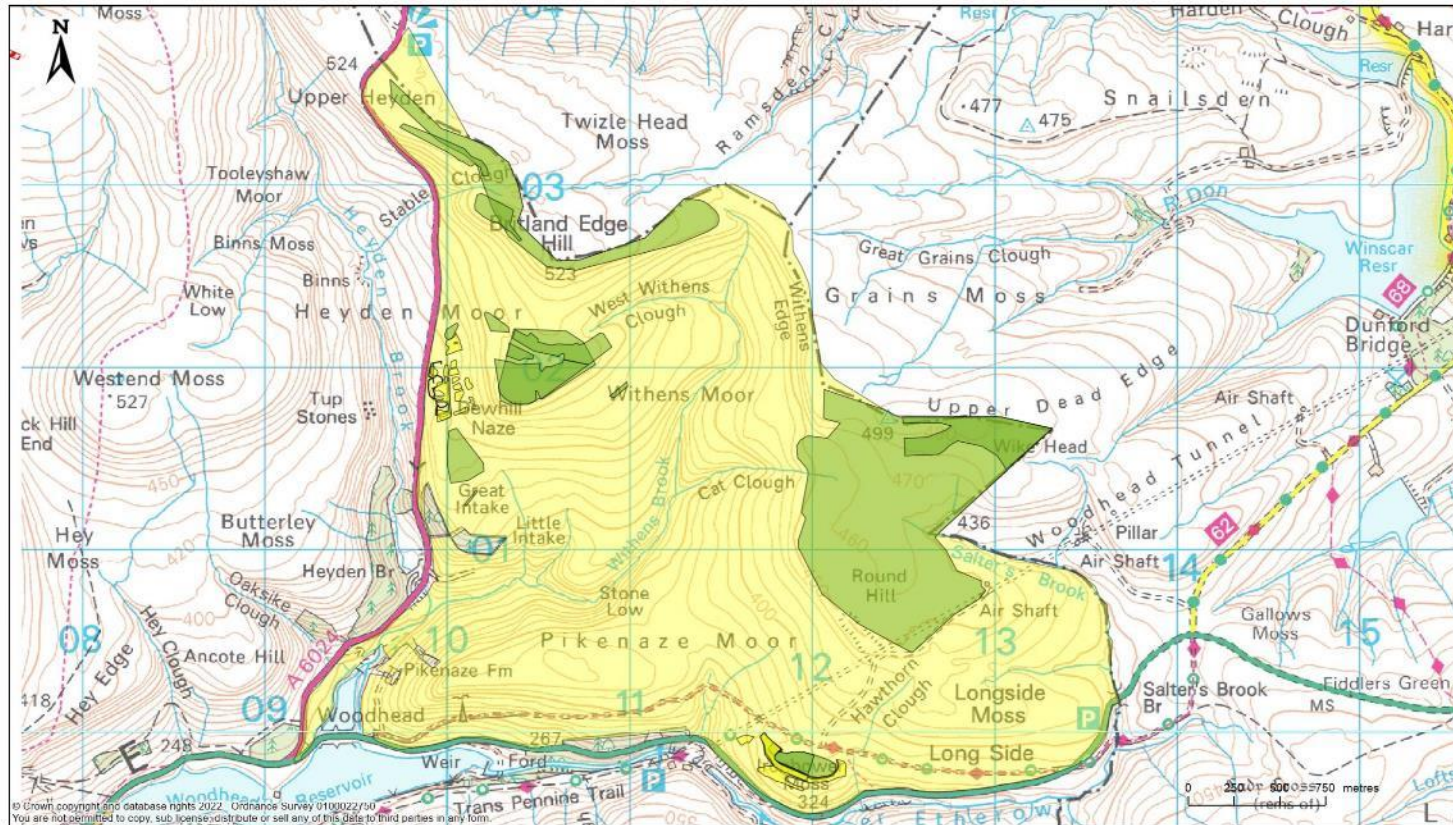


Pikenaze Survey Points

- Gully Blocking, Stone

Stakeholder Database

- Pikenaze



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MFFP Completed Works - March 2022

Completed works - lines

- Fencing
- Footpath
- Re-profiling
- Walling

Completed works - areas

- Bracken control
- Brash, lime, seed and fertiliser
- Bunding
- Cutting
- Geo-textile

Completed works - areas

- Gully blocking
- Molinia Control
- Tree Planting
- Dwarf shrub plug/ seed
- Scrape creation
- Sphagnum inoculation