

Site Landscaping Details: Implementation Phase

General

The following plan provide details of the proposed landscaping treatments associated with the construction, and subsequent decommissioning of the worker's accommodation at land adjoining the Bla'en Cefn campsite in Penrhyndeudraeth. The temporary accommodation is for the use of the workforce on the upcoming Snowdonia Visual Impact Provision project. This project aims to reduce the visual impact of the National Grid's overhead line above the Dwyryd Estuary, from Minfordd to Llandecwyn, in North Wales. The following recommendations relate to the primary phase of site construction to the decommissioning of the site, post-construction. Details of the site restoration are found on sheet 2 of this submission.

The Site

The site comprises land to the south of the established Bla'en Cefn caravan site, whose northern extent provides seasonal touring caravan pitches. The northern half of the site houses the range of infrastructure such as toilets, shower blocks, amenity buildings an amenity leisure spaces. While not an active part of the site facilities, the southern site extent is used for site maintenance (the storage of land maintenance arisings), machinery storage and as a general utility area. In terms of general landscape management, the southern, candidate area is mainly managed as a mown grass sward, and the hedges and edges are trimmed, as required. There is an informal track loop within the extent, which is used for tractor and maintenance vehicle access at this time.

Phasing

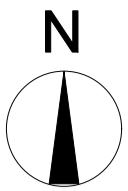
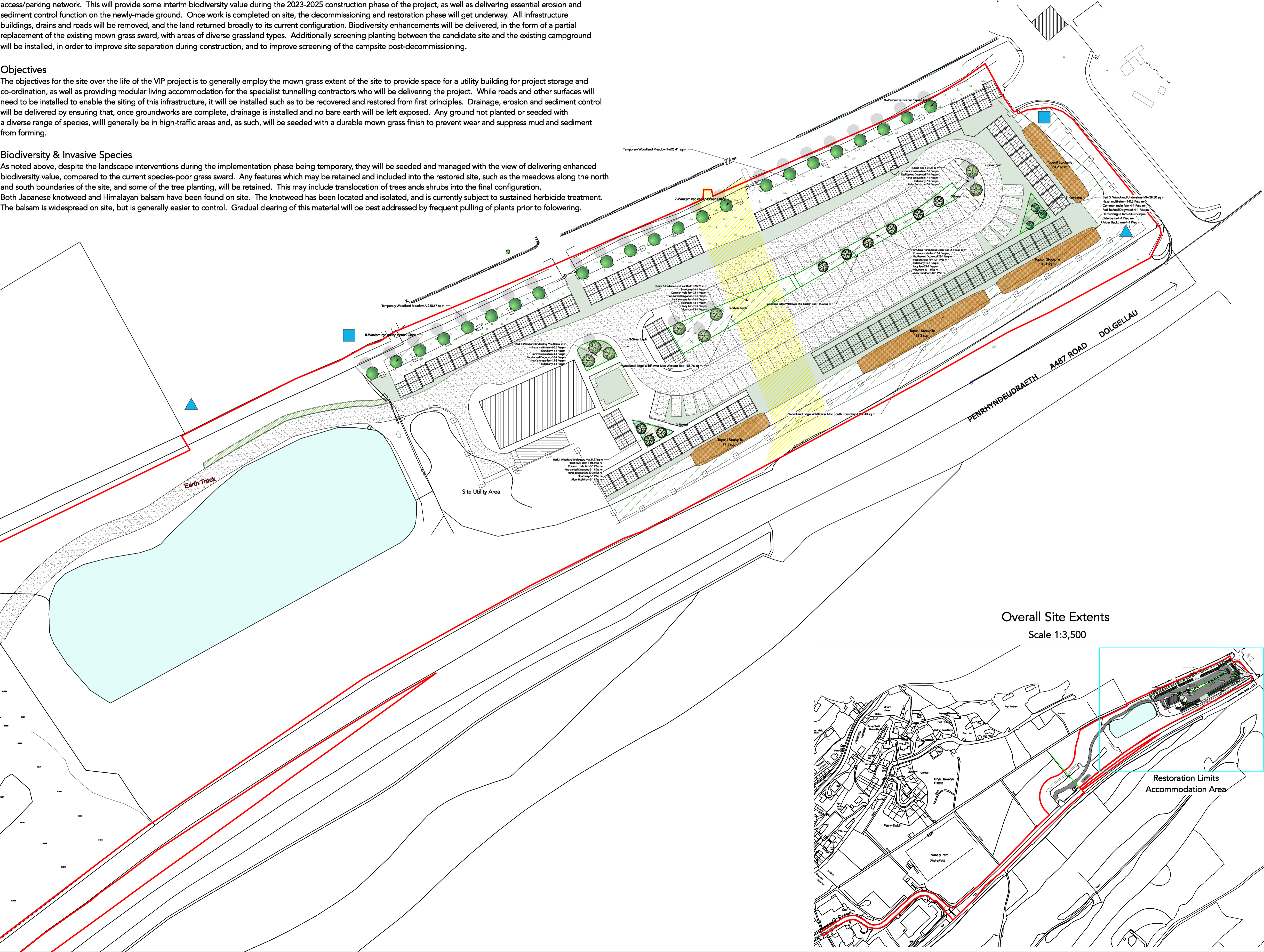
The landscape aspect of the project is to be in two phases. The first phase will provide landscaping around the proposed accommodation blocks, service buildings and access/parking network. This will provide some interim biodiversity value during the 2023-2025 construction phase of the project, as well as delivering essential erosion and sediment control function on the newly-made ground. Once work is completed on site, the decommissioning and restoration phase will get underway. All infrastructure buildings, drains and roads will be removed, and the land returned broadly to its current configuration. Biodiversity enhancements will be delivered, in the form of a partial replacement of the existing mown grass sward, with areas of diverse grassland types. Additionally screening planting between the candidate site and the existing campground will be installed, in order to improve site separation during construction, and to improve screening of the campsite post-decommissioning.

Objectives

The objectives for the site over the life of the VIP project is to generally employ the mown grass extent of the site to provide space for a utility building for project storage and co-ordination, as well as providing modular living accommodation for the specialist tunnelling contractors who will be delivering the project. While roads and other surfaces will need to be installed to enable the siting of this infrastructure, it will be installed such as to be recovered and restored from first principles. Drainage, erosion and sediment control will be delivered by ensuring that, once groundworks are complete, drainage is installed and no bare earth will be left exposed. Any ground not planted or seeded with a diverse range of species, will generally be in high-traffic areas and, as such, will be seeded with a durable mown grass finish to prevent wear and suppress mud and sediment from forming.

Biodiversity & Invasive Species

As noted above, despite the landscape interventions during the implementation phase being temporary, they will be seeded and managed with the view of delivering enhanced biodiversity value, compared to the current species-poor grass sward. Any features which may be retained and included into the restored site, such as the meadows along the north and south boundaries of the site, and some of the tree planting, will be retained. This may include translocation of trees and shrubs into the final configuration. Both Japanese knotweed and Himalayan balsam have been found on site. The knotweed has been located and isolated, and is currently subject to sustained herbicide treatment. The balsam is widespread on site, but is generally easier to control. Gradual clearing of this material will be best addressed by frequent pulling of plants prior to flowering.



KEY

- Standard Wildflower Meadow
- Woodland Edge Wildflowers
- Low Shrub Mix
- Mown Grass
- Large Shrub Mix
- Topsail Stockpiles
- Vivaro Pro Woodstone Bat Box
- 1B Schwegler Nest Box (32mm hole)
- Red Line Site Boundary

TREES: Implementation Phase			
Botanical Name	Common Name	Size	Quantity
Betula pendula	Silver birch	12-14cm heavy standard	8
Sorbus aucuparia	Rosier	standard tree	9
Thuja plicata 'Emerald Giant'	Western red cedar 'Emerald Giant'	H2m RB or 45l	23
Crataegus monogyna	Hawthorn	10-12cm standard tree	3
Corylus avellana	Hazel	H 1.6 multistem	14
Total			57

SHRUBS: Implementation Phase			
Botanical Name	Common Name	Size	Quantity
Frangula alnus	Box elder	2l	46
Dryopteris filix-mas	Male Fern	3l	38
Cornus sanguinea	Red dogwood	3l	84
Asplenium scolopendrium	Hart's tongue fern	2l	63
Sambucus nigra	Elderberry	2l	44
Athyrium filix-femina	Lady fern	3l	54
Viburnum tinus	Viburnum	3l	40
Total			369

NOTE. All plant material shall be of local provenance, where available. UK Provenance Zone 303. Where practicable, locally-collected seed or vegetative material should be sought.

TOTAL AREA SEEDED FOR THIS PHASE
1428.13 SQ.M

EMORSGATE EW1 WOODLAND MIX		
Botanical Name	Common Name	Percentage
Alliaria petiolata	Garlic Mustard	1
Anthriscus sylvestris	Cow Parsley	0.5
Carex divulsa ssp divulsa	Grey Sedge	2
Carex pendula	Pendulous sedge	0.1
Chaerophyllum temulum	Rough Chervil	4
Digitalis purpurea	Foxglove	1
Filipendula ulmaria	Meadowsweet	1.1
Galium album	Hedge Bedstraw	0.5
Geranium pyrenaicum	Hedge Crane's Bill	2
Geum urbanum	Wood avens	0.8
Hyacinthoides non-scripta	Bluebell	1
Silene dioica	Red Campion	5
Silene flos-cuculi	Ragged Robin	1
Agrostis capillaris	Common Bent	1
Anthoxanthum odoratum	Sweet Vernal Grass	2
Brachypodium sylvaticum	False Brome	1
Cynosurus cristatus	Crested Dogtail	50
Deschampsia cespitosa	Tufted Hari Grass	2
Festuca rubra	Red Fescue	20
Poa nemoralis	Wood Meadow Grass	4
TOTAL PERCENT		100

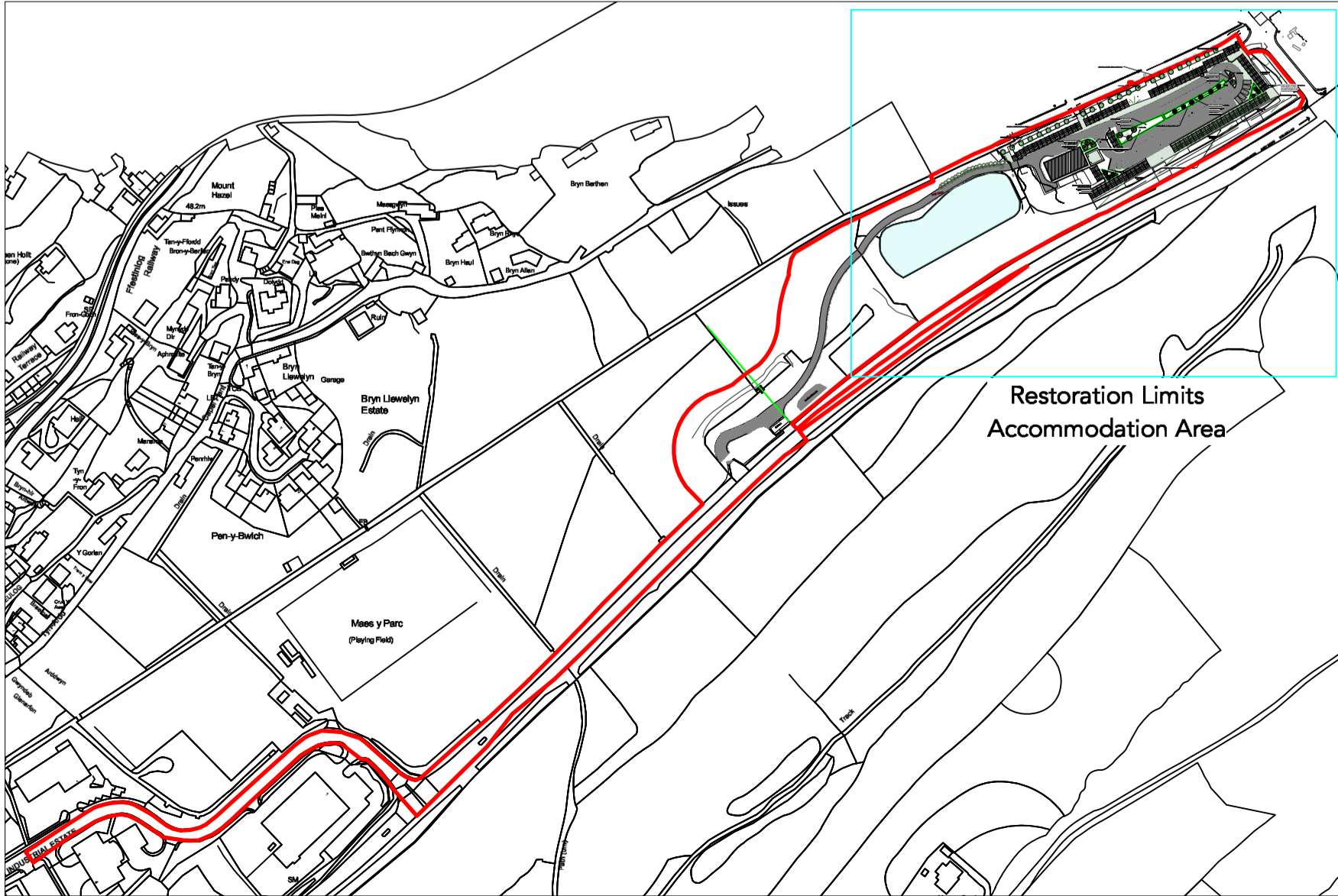
TOTAL AREA SEEDED FOR THIS PHASE
837.08 SQ.M

EMORSGATE EH33 UPLAND MEADOW MIXTURE		
Botanical Name	Common Name	Percentage
Crepis capillaris	Smooth Hawk's-beard	1
Euphrasia officinalis	Eyebright	1
Hypochaeris radicata	Catsear	4
Medicago lupulina	Black Medic	2
Leontodon hispidus	Rough Hawkbit	1
Lotus corniculatus	Birdsfoot Trefoil	1
Plantago lanceolata	Ribwort Plantain	18
Prunella vulgaris	Selfheal	1
Ranunculus acris p	Meadow Buttercup	10
Rhinanthus minor	Yellow Rattle	8
Trifolium pratense	Wild Red Clover	4
Agrostis capillaris	Common Bent	5
Anthoxanthum odoratum	Sweet Vernal-Grass	20
Cynosurus cristatus	Crested Dogs-tail	17
Dactylis glomerata	Cocksfoot	5
Festuca rubra	Red Fescue	2
TOTAL PERCENT		100

Bat & Bird Boxes
2 no. Vivaro Pro Woodstone Bat Box
<https://www.nhbs.com/vivaro-pro-woodstone-bat-box>
2 no. 1B Schwegler Nest Box (32mm hole)
<https://www.nhbs.com/1b-schwegler-nest-box>

Overall Site Extents

Scale 1:3,500



02/11/2023	P04	Red Line Amended
18/10/2023	P03	Revision made in response to NRW feedback.
09/10/2023	P02	Revision of Red Line Boundary
04/09/2023	P01	Final revisions and plant details.

Date	No.	Zone	Revision Notes
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Project Title
Blaen Cefn Landscape Restoration Strategy

Sheet Title
Landscaping Plan: Implementation Phase

Sheet Scale
1:450 @A1

Drawn By
SF

Sheet No.
C0233-HUK-GES-CG-DR-X-0002

File Name
WUK_23_052 Blaen Cefn Restoration Plan 02.11.23.v01

Sheet Code
S1 SHARED - SUITABLE FOR COORDINATION

Site Restoration Details

General
This current plan prescribes how the Bla'en Cefn site is to be restored following the removal of the project infrastructure, described on sheet 1. The original, broad configuration of the site is to be maintained, such that the owners retain access to the area, further to the management of the wider leisure site. This includes the maintenance of an access track width which allows room for tractors and trailers to navigate. Crucially, the maintenance of a clear access track, ensures that vehicles do not stray onto the seeded meadow areas proposed. Soil compaction to carefully cultivated and seeded soils can be extremely damaging and is difficult to remedy.

Transition to Restoration
As stated on the previous sheet, an objective of the demobilisation of the accommodation phase will be to preserve as much of the temporary landscaping as is practicable. This will involve the judicious fencing-off of as much of the meadow areas as possible, protected existing and planted tree from damage during operations, and lifting and translocating the majority of the plants into the revised configuration. The net effect of this will be that the restoration phase will be more of an extension of the primary work, than starting again from scratch.

Management & Maintenance
A consistent characteristic of perennial wildflower meadows, is that they require diligent and well-directed maintenance in order to thrive. Carefully-targeted weed control and mowing is essential to limit the growth of grass and pernicious weeds, in order to encourage the appearance of forbs (flowering plants). Depending on when the site is ready for restoration, an autumn or spring sowing into well-prepared soil of reduced fertility (fertile stored topsoil can be used for mown grass or amenity areas) would be optimum. The emerging plants may be the subject of an early cut (March of year one), but then should generally need only be cut in late summer, and the cuttings removed. Some of this wildflower hay may be dried and re-dressed into the meadow where coverage is bare. Please see the excerpt in the bottom-right of this sheet from Emorsgate seeds for further, general wildflower establishment advice.

Biodiversity
The biodiversity objectives for the site are to be placed in the context of it remaining a functional utility area for the owners. The provision of sufficient working space will ensure that the Bla'en Cefn caravan site continues to function well, while allocating previously low-biodiversity spaces to landscapes of far greater biodiversity value. Additionally, the institution of regimes of 1-2 meadow cuts versus 15-20 grass cuts per year amounts to significant carbon savings, which aggregate year-on-year for as long as this low-carbon approach is maintained.

Wildflower Management Advice

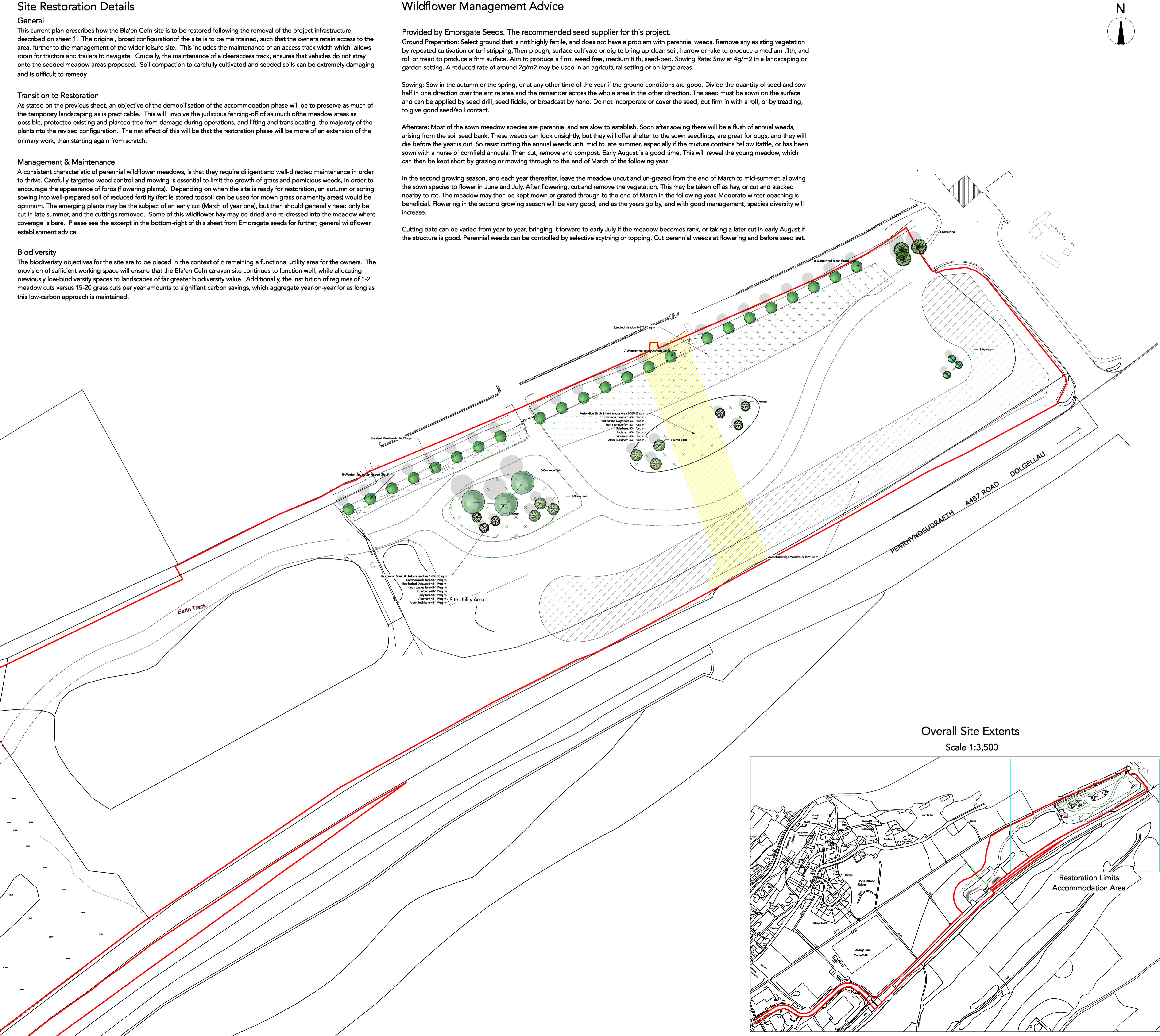
Provided by Emorsgate Seeds. The recommended seed supplier for this project.
Ground Preparation: Select ground that is not highly fertile, and does not have a problem with perennial weeds. Remove any existing vegetation by repeated cultivation or turf stripping. Then plough, surface cultivate or dig to bring up clean soil, harrow or rake to produce a medium tilth, and roll or tread to produce a firm surface. Aim to produce a firm, weed free, medium tilth, seed-bed. Sowing Rate: Sow at 4g/m2 in a landscaping or garden setting. A reduced rate of around 2g/m2 may be used in an agricultural setting or on large areas.

Sowing: Sow in the autumn or the spring, or at any other time of the year if the ground conditions are good. Divide the quantity of seed and sow half in one direction over the entire area and the remainder across the whole area in the other direction. The seed must be sown on the surface and can be applied by seed drill, seed fiddle, or broadcast by hand. Do not incorporate or cover the seed, but firm in with a roll, or by treading, to give good seed/soil contact.

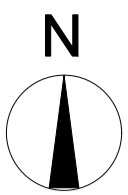
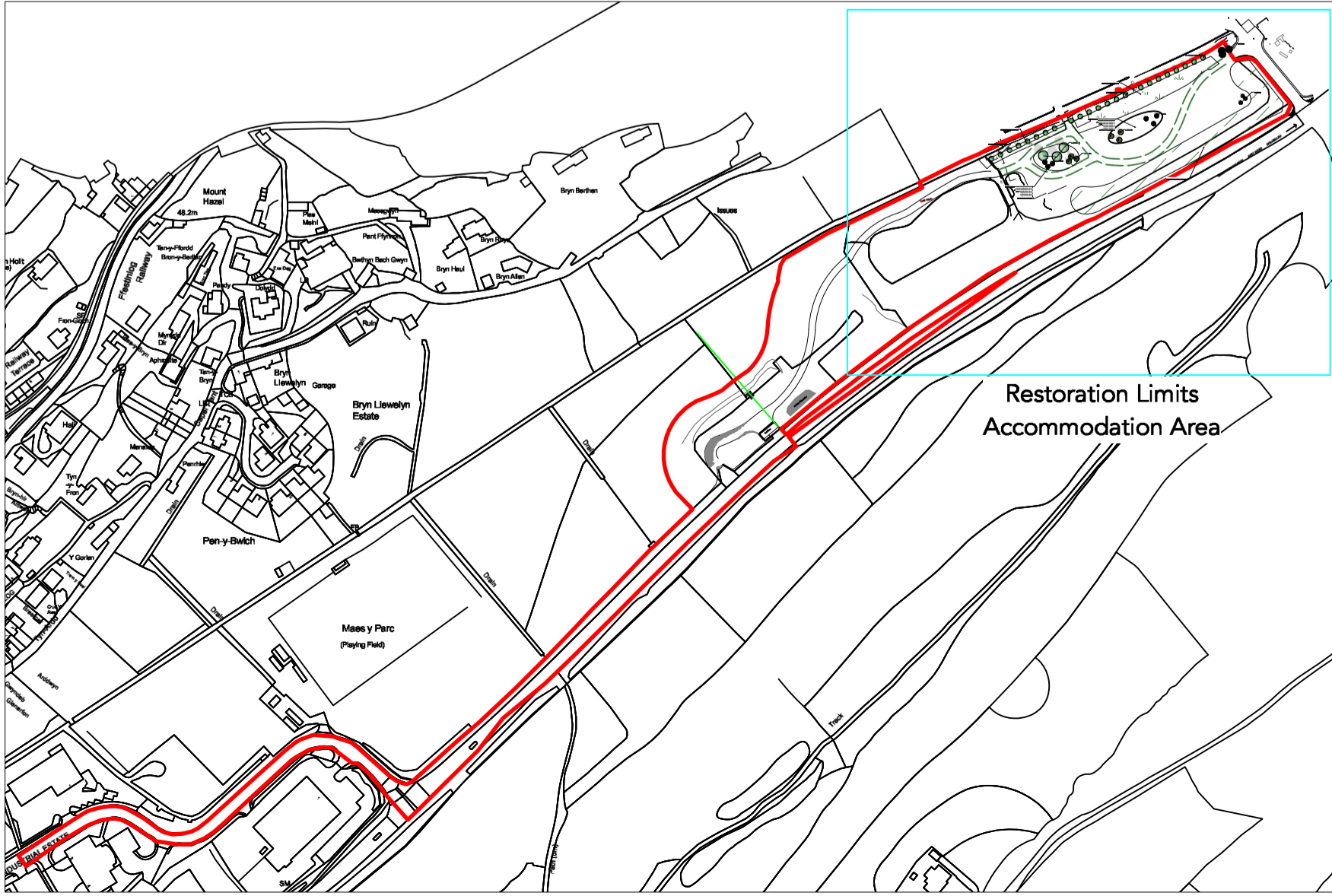
Aftercare: Most of the sown meadow species are perennial and are slow to establish. Soon after sowing there will be a flush of annual weeds, arising from the soil seed bank. These weeds can look unsightly, but they will offer shelter to the sown seedlings, are great for bugs, and they will die before the year is out. So resist cutting the annual weeds until mid to late summer, especially if the mixture contains Yellow Rattle, or has been sown with a nurse of cornfield annuals. Then cut, remove and compost. Early August is a good time. This will reveal the young meadow, which can then be kept short by grazing or mowing through to the end of March of the following year.

In the second growing season, and each year thereafter, leave the meadow uncut and un-grazed from the end of March to mid-summer, allowing the sown species to flower in June and July. After flowering, cut and remove the vegetation. This may be taken off as hay, or cut and stacked nearby to rot. The meadow may then be kept mown or grazed through to the end of March in the following year. Moderate winter poaching is beneficial. Flowering in the second growing season will be very good, and as the years go by, and with good management, species diversity will increase.

Cutting date can be varied from year to year, bringing it forward to early July if the meadow becomes rank, or taking a later cut in early August if the structure is good. Perennial weeds can be controlled by selective scything or topping. Cut perennial weeds at flowering and before seed set.



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Scale 1:3,500



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- Topsoil Stockpiles
- Red Line Site Boundary

TREES: Restoration Phase

Botanical Name	Common N Size	Quantity
Betula pendula	Silver birch 12-14cm heavy standard	6
Sorbus aucuparia	Rosier standard tree	6
Quercus petraea	Seaside oak 12-14 heavy standard	3
Pinus sylvestris	Scots pine H 2m RB	3
Cotoneaster monogyna	Hawthorn 10-12cm standard tree	3
Corylus avellana	Hazel H 1.6 multistem	14
	Total	35

SHRUBS: Restoration Phase

Botanical Name	Common Name	Size	Quantity
Fraxinus alnus	Box elder	2l	46
Dryopteris filix-mas	Male Fern	3l	38
Cornus sanguinea	Red dogwood	3l	84
Asplenium scolopendrium	Hart's tongue fern	2l	63
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Aspidium filix-terrestris	Lady fern	3l	54
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2214.91 SQ.M

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Botanical Name	Common Name	Percentage
Alliaria petiolata	Garlic Mustard	1
Anthriscus sylvestris	Cow Parsley	0.5
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Carex pendula	Pendulous sedge	0.1
Chaerophyllum temulum	Rough Chervil	4
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Brachypodium sylvaticum	False Brome	1
Cynosurus cristatus	Crested Dogstail	50
Deschampsia cespitosa	Tufted Hair Grass	2
Festuca rubra	Red Fescue	20
Poa nemoralis	Wood Meadow Grass	4
	TOTAL PERCENT	100

TOTAL AREA SEEDED FOR THIS PHASE
1070.12 SQ.M

EMORSGATE EH33 UPLAND MEADOW MIXTURE

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Leontodon hispidus	Rough Hawkbit	1
Lotus corniculatus	Birdsfoot Trefoil	1
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